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Abstract–In this edition of the Meteoritical Bulletin, 1443 approved meteorite names with their relevant data are reported, one from a specific location within Africa, 211 from Northwest Africa, 5 from KOREAMET, 598 from the Chinese Antarctic Expedition, 23 from the Americas, 151 from Asia, three from Australia, two from Europe, two from NOVA, and 447 from ANSMET that were not reported in the Meteoritical Bulletin no. 87. Also reported are 4 falls from the Americas. Some highlights of approved meteorites are 10 lunar (including NWA 5000, an 11.528 kg sample), 3 Martian, 4 irons (one from Indonesia), 2 ureilites, 5 mesosiderites, 1 pallasite, 6 brachinites, 3 CV3s, 4 CO3s, 8 CMs, 12 CK3s, and many more. Finally, the Committee on Nomenclature of the Meteoritical Society announces two new names series in North America.

AFRICA

Morocco

Anoual **32°44′4.5″N, 2°57′28.7″W**

Anoual, Morocco
Find: 3 May 2006
Achondrite (lunar, mare basalt/gabbro breccia)

History: Nomads from near Anoual (a village located in the east of Morocco between Bouarfa and Talsint; about 40 km ENE of the latter) learned that the small odd stones that had been found close to their settlement in June and July of 2005 were indeed a meteorite from the Moon (NWA 2727). After extensive searching and screening of the soil, Mr. Boujena recovered 12 pieces for a total mass of 5.92 g, over an area about 5 m in diameter. The small size of the pieces can be explained by the brecciated character of the stone. Ph. Thomas visited the place in May 2006 and May 2007, participated in the search, took pictures, in particular of the investigated soil, and registered the GPS coordinates.

Physical characteristics: Tan greenish stones devoid of fusion crust.

Petrography: (A. Jambon, O. Boudouma, and D. Badia. *UPVI*). Breccia composed dominantly of two lithologies: A phyric basalt and a gabbro. Basalt with subhedral olivine phenocrysts (<1 mm; 20 vol%) slightly resorbed in a finely crystallized groundmass. Highly fractured gabbro clasts. Small doleritic clasts with zoned pyroxenes. Mafic areas of once molten rock with olivine needles. One clast of quenched basaltic melt with numerous zirconolite needles (0.7 vol%; 0.1 mm) silica and celsian K-feldspar. Ilmenite, troilite, chromite. Plagioclase and clinopyroxene. Carbonate fills the largest fractures.

Geochemistry: (EMPA) Olivine ($Fa_{45–28}$, with few crystals >Fa_{45}; FeO/MnO = 97). Pyroxene: from (Mg# = 0.80) pigeonite (Wo_{10}) and augite (Wo_{45}) to pyroxferroite ($Fs_{70}Wo_{25}$; FeO/MnO = 70). Plagioclase ($An_{91–83}$). Spinel ($Cr_{66}Sp_{25}Us_3Mt_6$).

Classification: Achondrite (lunar, mare basalt/gabbro breccia). Paired with NWA 2727/3160 (and potentially NWA 3333).

Type specimens: A total of 1.205 g of sample (one polished section) is on deposit at *UPVI*. *Thomas* holds the main mass.
Submitted by: H. Chennaoui, *FSAC*.

Table 1 lists all approved meteorite names and relevant data from specific locations within Africa.

Northwest Africa

Northwest Africa 1232
Morocco
Find: May 2001
Carbonaceous chondrite (CO3)
History: In May 2001, B. Fecay and C. Bidaut purchased the stone in Zagora, Morocco.
Physical characteristics: A single piece weighing 1900 g. Approximately 40% of its surface is covered by fusion crust.
Petrography: (M. Kiriishi and K. Tomeoka, *UKobe*) Two different lithologies separated by a sharp boundary; lithology A is dark gray and lithology B is light gray. Both lithologies contain well-defined chondrules set in a fine-grained matrix. Lithology A consists of ~53% chondrules, ~2% CAIs, and ~7% AOIs (all vol%), whereas lithology B consists of ~50% chondrules, ~3% CAIs, and ~5% AOIs (all vol%). Chondrules in lithology A range in apparent diameter from 50–510 m with an average of ~128 m, whereas those in lithology B range from 50–500 μm (average ~147 μm).
Mineral compositions and geochemistry: Lithology A: Chondrule olivine (Fa_3–Fa_{20}; mean Fa_{11}). CAI minerals: Spinel (mean Hc_{33}), anorthite (An_{99}), melilite and minor nepheline. Lithology B: Chondrule olivine (Fa_{15}–Fa_{40}; mean Fa_{30}), CAI minerals: Spinel (mean Hc_{51}), diopside ($En_{51}Wo_{49}$), fassaite, minor nepheline.
Classification: Carbonaceous chodrite (CO3).
Type specimens: A total of 52 g are on deposit at *UKobe*. *Fectay* holds the main mass.
Submitted by: K. Tomeoka, *UKobe*.

Northwest Africa 2800
Morocco
Find: July 2007
Achondrite (Martian, basalitic shergottite)
History and physical characteristics: A 686 g stone was purchased in Morocco in July 2007 by an anonymous buyer. NWA 2800 is a complete and lightly weathered stone with significant desert ablation that has eroded most of the fusion crust and imparted a dull to shiny sheen to the surface.
Petrography: (T. Bunch and J. Wittke, *NAU*: A. Irving, *UWS*) This basaltic shergottite is very coarse-grained with ophitic to mostly subophitic texture with orientated elongated crystals together with prominent patches of pyroxferroite breakdown phases. Maskelynite long dimensions reach 6 mm and several pyroxene crystals are blade-like with dimensions of 7.3 × 0.4 mm. Pigeonite and augite show prominent {100} simple twinning, extensive sector compositional zoning and exsolution lamellae, in addition to shock lamellae. Patches of possible decomposed pyroxferroite contain symplectites of fayalite, silica and Fe-rich pyroxene with associated Cl-apatite, merrillite, ulvöspinel, ilmenite with included pyrrhotite, silica needles (up to 2 mm in length), and silica-rich glasses. Interstitial pockets of late-stage residuum ("chaotic" zones), which are typically contiguous to patches of pyroxferroite decomposition, consist of K-feldspar and plagioclase hopper and acicular crystals, clusters of anhedral fayalite grains, solitary euhedral fayalite crystals, silica crystals, and graphic intergrowths of silica and plagioclase, all of which are set in an inhomogeneous glassy mesostasis. Modal analyses in vol%: plagioclase (maskelynite) = 47; pyroxenes = 39; decomposed patches = 10; late stage residuum = 2 and oxides = 2.
Mineral compositions: Main body pigeonites are zoned ($Fs_{38.7}$–$Fs_{60.1}$; $Wo_{10.2}$–$Wo_{19.1}$; FeO/MnO = 33–41). Augite and subcalcic augite are zoned ($Fs_{26.3}$–$Fs_{69.1}$; $Wo_{35.3}$–$Wo_{23.3}$). Maskelynite shows a wide range of cation deficiency in stoichiometry in all analyses ($An_{55.5}Or_{0.6}$–$An_{72.3}Or_{3.8}$; [n = 25). Plagioclase ($An_{73.9}Or_{5.6}$) in graphic intergrowths and K-feldspar ($Or_{59}Ab_{31}$) hopper crystals. Symplectite fayalite ($Fa_{94.7}$) and solitary fayalite ($Fa_{89.3}$; CaO = 0.35 wt%) in chaotic zones.
Classification: Achondrite (Martian, basaltic shergottite). NWA 2800 is very similar in texture, mineral content, and phase compositions to the Los Angeles basaltic shergottite.
Type specimens: A total of 20.3 g is on deposit at *NAU*. The main mass holder is anonymous.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 2994
Northwest Africa
Find: 2007
Chondrite (ungrouped)
History and physical characteristics: A 4756 g unbrecciated, complete stone was purchased in Morocco in July 2007. This greenish stone is desert-polished to a high degree with only patches of semi-polished black fusion crust. Large, dark green olivine and orthopyroxene porphyroblasts on the surface range in size from a few to 38 mm. One centimeter-sized metal blob, together with minor metal enclaves of several millimeters, is also a prominent surface characteristic. Only minor iron oxide staining is present as a chemical weathering signature; alteration veining is not evident.
Petrography: (T. Bunch and J. Wittke, *NAU*; A. Irving, *UWS*) A remarkable, recrystallized stone with textures that range from porphyroblastic to poikiloblastic. Grain boundaries are irregular with few 120° triple junctions. Both olivine poikiloblasts (with orthopyroxene and opaque inclusions) and orthopyroxene poikiloblasts (with olivine inclusions) are common. Grain size, exclusive of

porphyroblasts, is 0.1 to 1.6 mm in largest dimension. Scarce, highly modified relict chondrule fragments (2 per 1.6 mm^2) are present and are evident only as patches of recrystallized barred olivine and felsic mesostasis (one example has an annular olivine ring). SEM-BSE integrated grayscale modal analyses, in vol%: olivine = 45; orthopyroxene = 42; augite = 3; plagioclase = 3; FeS = 3; chromite = 2; metal = 2 with a trace amount of merrillite.

Mineral compositions: Olivine ($Fa_{37.3}$; FeO/MnO = 81–88), orthopyroxene ($Fs_{29.5}Wo_{3.1}$; FeO/MnO = 53–58), augite ($Fs_{12.1}Wo_{45.7}$), plagioclase ($An_{53.3}Or_{0.8}$; FeO = 0.38 wt%); chromite (cr# = 71; TiO_2 = 1.91, MgO = [both 2.66 wt%]), kamacite (Ni = 6.0 wt%) and taenite (Ni = 25.6 wt%). Oxygen isotopes: (D. Rumble, *CIW*) Replicate analyses of acid-washed material by laser fluorination gave, respectively: $\delta^{17}O$, –0.007 and +0.078; $\delta^{18}O$, 3.331 and 3.355, $\Delta^{17}O$, –1.6769 and –1.687 (all ‰).

Classification: Chondrite (ungrouped); S1, minor weathering.

Type specimens: A total of 23 g is on deposit at *NAU*. The main mass holder is anonymous.

Northwest Africa 3190

Northwest Africa
Find: 2006
Achondrite (lunar, mingled breccia)

History and physical characteristics: A. Aaronson purchased a 40.7 g partially crusted, complete stone in Rissani, Morocco in December 2006. The hand specimen exhibits an abundance of large (between 0.6 and 2.1 mm in diameter) anorthositic clasts. The weathered portion of the crust is pale vermillion to light brown; the fresher crust is dark gray to black.

Petrography: (T. Bunch and J. Wittke, *NAU*; A. Irving, *UWS*) This mingled breccia contains anorthositic lithologies that include anorthosite, anorthositic norites, gabbros, and troctolites, in addition to variolitic and subophitic basalt clasts, breccia-within-breccia clasts, and an abundance of olivine and plagioclase fragments. Melt and fragmental matrices are heterogeneously distributed. The interior shows very low weathering effects.

Mineral compositions: Anorthositic norite orthopyroxene ($Fs_{28.5}Wo_{3.8}$; FeO/MnO = 65). Olivine gabbro contains olivine ($Fa_{26.2}$; FeO/MnO = 96), plagioclase ($An_{92.3}$), subcalcic pyroxene ($Fs_{21.6}Wo_{14.4}$; FeO/MnO = 48), and ilmenite with MgO = 6.5 wt%. Variolitic basalt has olivine ($Fa_{35.7}$; FeO/MnO = 103), pigeonite ($Fs_{24.6}Wo_{8.7}$) and plagioclase ($An_{95.5}$). Bulk composition: (R. Korotev, *WUSL*) FeO = 9.6 wt%, Sm = 3.9 ppm, Th = 1.4 ppm, Ir = 6.5 ppb.

Classification: Achondrite (lunar, mingled breccia). Probably paired with NWA 2995, based on essentially identical bulk compositions.

Type specimens: A total of 8.8 g is on deposit at *NAU*. The main mass holder is anonymous.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 3341

Morocco
Find: Purchased in 2001
Achondrite (lodranite)

History: A single stone of 91 g was bought in Rissani, Morocco, in 2001.

Physical characteristics: It is oblong shaped, ~5 cm in length, and ~2 cm in diameter. The fusion crust is altered and reddish dark brown. Discrete regmaglypts are visible. One side is broken, altered, and covered with desert varnish. A few open fractures are filled with sand grains in their widest end.

Petrography: (A. Jambon, O. Boudouma, and D. Badia; *UPVI*). In thin section, interstitial metal patches up to a few mm are observed in addition to numerous sulfide patches with the same texture, about half as big. A network of once-molten material at grain boundaries and in the fissures is observed. Both ends of the stone are significantly altered.

Aggregates of polyhedral olivine and orthopyroxene with interstitial minor phases exhibit triple junctions. Mode: olivine 41.4%, opx 32.1%, cpx 7.2%, chromite 4.4%, phosphate 3.0%, kamacite 5.2% troilite (partly oxidized) 6.1%, feldspar (mixed Na-K-Ca) 0.5%. A few internal open fractures and pores amount to less than 1%.

Mineral compositions and geochemistry: Olivine (Fo_{88}) zoned near the rims to (Fo_{76}). Pyroxene ($En_{85}Fs_{13}Wo_2$). Minor clinopyroxene, chromite, and Ca phosphate. Kamacite (Ni = 4 wt%) and troilite.

Classification: Achondrite (lodranite).

Type specimens: A total sample mass of 18.2 g and one polished section are on deposit at *UPVI*. *Hmani* holds the main mass (67.2 g and one end cut of 4.5 g).

Submitted by: A. Jambon, *UPVI*.

Northwest Africa 4421 **~32°19′N, ~4°4′W**

Morocco
Find: May 2006
Carbonaceous chondrite (CO3)

History: One sample, said to have been found in the Gourrama area in the province of Er Rachidia, Morocco, and was purchased by P. Thomas in May 2006.

Physical characteristics: A complete stone, weighing 249.73 g, entirely covered with a black, crackled fusion crust.

Petrography: (M. Bourot-Denise, *MNHN*). The average grain size of chondrules and chondrule fragments is around 100 µm. The largest chondrule is porphyritic and 1000 µm in diameter. Matrix is abundant, fine, and moderately altered; it is sulfide-rich (troilite, pyrrhotite, pentlandite). In the polished section studied, many CAIs and a few AOAs are present, with dimensions comparable to those of chondrules. In BSE images, 90% of the chondrules and chondrule fragments appear FeO-poor, and their olivines are not zoned. The only FeO-rich silicates are in porphyritic (type II) chondrule fragments. Opaque nodules contain metal and

sulfides and are associated with magnetite. Small silicate melt pockets are blackened by tiny metal and sulfide droplets.
Geochemistry: Olivine (mean $Fa_{23.9\pm22.1}$, range $Fa_{0.46–55.1}$; Cr_2O_3 = 0.28, CaO = 0.25 [both in wt%]); low-Ca pyroxene (mean $Fs_{8.5\pm8.2}$, range $Fs_{1.4–25.6}$). Magnetic susceptibility (J. Gattacceca, *CEREGE*) logχ = 4.57 (10^{-9} m^3/kg) is consistent with a CO carbonaceous chondrite.
Classification: Carbonaceous chondrite (CO3, estimated subtype 3.2); moderate shock and weathering.
Type specimens: A total of 20.04 g of sample (3 pieces) and one thin section are on deposit at *MNHN*. *Thomas* holds the main mass.
Submitted by: M. Bourot-Denise, *MNHN*.

Northwest Africa 4422 **~32°16′N, ~3°28′W**
Morocco
Find: May 2006
Carbonaceous chondrite (CK4)
History: P. Thomas purchased one stone, said to have been found in Beni Tajjite in the province of Figuig, Morocco, in May 2006.
Physical characteristics: One complete, pyramid-shaped stone weighing 147.72 g, entirely covered with a very black fusion crust; the crust is very thin on one face.
Petrography: (M. Bourot-Denise, *MNHN*) Chondrule and CAI dimensions are between 500 and 1000 μm; CAIs are relatively abundant. Magnetite is the most abundant opaque; it rims chondrules and CAIs, makes up big nodules in association with sulfide, or is scattered as small angular grains in matrix and chondrule rims. Matrix is completely recrystallized. BSE images show that all silicates are equilibrated, even though the chondritic texture is well preserved. The polished section studied contains a 3000 μm diameter chondrule whose core of pyroxene laths is surrounded by a double rim peppered with small magnetites.
Geochemistry: Olivine (mean $Fa_{30.2\pm0.3}$) and low-Ca pyroxene are homogeneous. Magnetite, Cr_2O_3 = 3.79, MgO = 0.16 (both in wt%), in the equilibrated CK domain. Plagioclase, An in the range 34.8–72.3. Magnetic susceptibility: (J. Gattacceca, *CEREGE*) = logχ = 4.93 10^{-9} m^3/kg.
Classification: Carbonaceous chondrite (CK4); minimal shock, moderate weathering.
Type specimens: A total of 21.4 g of sample (1 sawn fragment with crust) and one polished mount are on deposit at *MNHN*. *Thomas* holds the main mass.
Submitted by: M. Bourot-Denise, *MNHN*.

Northwest Africa 4423
Morocco
Find: May 2006
Carbonaceous chondrite (CK3)
History: A stone, said to have been found near Hammada du Guir, Morocco, was purchased by P. Thomas in May 2006.
Physical characteristics: One stone, weighing 91.94 g, entirely covered with a very black fusion crust.
Petrography: (M. Bourot-Denise, *MNHN*) Chondrules and CAIs are clearly visible to the naked eye and are mm-sized; CAIs are particularly abundant. Magnetite, the most abundant opaque mineral, makes large nodules around chondrules or, in association with sulfides (mostly pyrrhotite), in the matrix; it is also found as smaller grains rimming chondrules, AOAs and CAIs, and in chondrule rims; very small flecks of magnetite are located in a few areas of finer matrix. In BSE images, the chondrite appears not to be completely equilibrated, with zoned olivines and low-Ca pyroxenes in POP chondrules. Outside chondrules, high-Ca pyroxene is augite and diopside. The studied polished section features a large CAI, 3000 μm in size, rimmed with small magnetites.
Geochemistry: Olivine (mean Fa = 16.4 ± 12.7, range 0.31–32.7), low-Ca pyroxene (Fs = 7.9 ± 8.6, range 1.1–24.1; magnetite (Cr_2O_3 = 2.35, MgO = 0.84 [both in wt%]), plagioclase ($An_{22.6–77.6}$). Magnetic susceptibility: (J. Gattacceca, *CEREGE*) = logχ = 4.7 10^{-9} m^3/kg.
Classification: Carbonaceous chondrite (CK3; estimated subtype 3.8); minimal shock and moderate weathering.
Type specimens: A total of 19.1 g of sample (4 sawn fragments) and one polished mount is on deposit at *MNHN*. *Thomas* holds the main mass.
Submitted by: M. Bourot-Denise, *MNHN*.

Northwest Africa 4425
Algeria
Find: May 2006
Carbonaceous chondrite (CK3)
History: A stone was purchased by P. Thomas in May 2006.
Physical characteristics: A complete, ventifacted stone weighing 579 g, without fusion crust. It has a brownish color indicating significant terrestrial alteration.
Petrography: (M. Bourot-Denise, *MNHN*) Chondrules are mm-sized. Most CAIs are also visible to the naked eye. The type specimen contains a CAI 1.5 cm in diameter rimmed with spinel and diopside. Chondrules are generally porphyritic with wide rims, and contain magnetite beads. Large opaque nodules of magnetite and sulfide are present in the matrix. Matrix is either crystallized or fine, with abundant small magnetite crystals. BSE images indicate that this chondrite is not completely equilibrated; olivines and pyroxene in porphyritic chondrules are zoned. In the type specimen, there is an angular clast, 2 cm in diameter, containing small, porphyritic pyroxene chondrules (100–500 μm); chondrules and well-crystallized matrix are completely equilibrated; magnetite is finely scattered through the clast and does not make up nodules as in the host; the interface between the clast and the host is highlighted by small, euhedral magnetites.
Geochemistry: Olivine ($Fa_{13.6\pm12.6}$; range $Fa_{0.54–34.1}$), low-Ca pyroxene ($Fs_{16.8\pm11.0}$; range $Fs_{2.8–30.7}$), magnetite

(Cr_2O_3 = 2.6–3.7, MgO = 0.87–1.15 [both wt%]) all in the CK3 domain. Pyroxene in the angular clast: $Fs_{23.35\pm0.86}$. Magnetic susceptibility (J. Gattacceca, *CEREGE*) logχ = 4.6 10^{-9} m^3/kg.

Classification: Carbonaceous chondrite (CK3, estimated subtype 3.8); minimal shock and moderate weathering.

Type specimens: A total of 32.8 g of sample (1 sawn fragment) and two polished mounts are on deposit at *MNHN*. *Thomas* holds the main mass.

Submitted by: M. Bourot-Denise, *MNHN*.

Northwest Africa 4503

Northwest Africa
Find: 2007
Achondrite (lunar, anorthositic breccia)

History and physical characteristics: A 70 g partially crusted stone was purchased in January 2007 by A. Aaronson and sold to a collector in July 2007. The fusion crust is dark to light brown and vermillion in translucent areas.

Petrography: (T. Bunch, J. Wittke, *NAU*; A. Irving, *UWS*) This feldspathic melt breccia is dominated by very fine- to medium-grained anorthositic lithologies that are typically enriched in olivine (anorthositic troctolites and gabbros) together with a large fraction of plagioclase, olivine, and exsolution-textured pyroxene fragments. Shock-melt clasts, K-, Ba-rich glasses, and fayalite-pyroxene-quartz igneous lithologies are also present. One granophyre clast shows a granophyric or micrographic texture of oriented quartz inclusions in alkali feldspar surrounded by shock-melted plagioclase. Most of the matrix is glassy and vesicular with included mineral fragments. Weathering effects are minimal.

Mineral compositions: Gabbro: olivine ($Fa_{34.8}$; FeO/MnO = 88), augite ($Fs_{14.6}Wo_{41.8}$; FeO/MnO = 42), plagioclase ($An_{97.6}$), chromite (cr# = 74). Troctolite: olivine ($Fa_{27.9}$; FeO/MnO = 83). Norite: orthopyroxene ($Fs_{24.8}Wo_{2.5}$; FeO/MnO = 55), augite ($Fs_{20.4}Wo_{38.9}$). Basaltic pyroxene fragments, host = $Fs_{46.9}Wo_{2.4}$, exsolution lamellae = $Fs_{19.8}Wo_{43.4}$. Granophyre K-feldspar ($Or_{72}Ab_{18.3}$).

Classification: Achondrite (lunar, anorthositic breccia).

Type specimens: A total of 14 g is on deposit at *NAU*. The main mass holder is anonymous.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4541

Algeria
Find: 2006
Achondrite (eucrite, basaltic, monomict breccia)

History and physical characteristics: Found in Algeria and purchased from a dealer in Erfoud, Morocco by S. Turecki in 2006. The single 168 g stone has a fresh black fusion crust.

Petrography: (J. Wittke and T. Bunch, *NAU*) Fine-grained (<0.35 mm), subophitic basalt breccia, dominated by sub-rounded clasts that are set in a cataclastic matrix.

Mineral compositions and geochemistry: Pigeonite ($Fe_{54.7–59.4}Wo_{4.4–7.3}$; FeO/MnO = 31–34 g/g), augite ($Fs_{38}Wo_{46.5}$), plagioclase ($An_{94.3}$), chromite (Cr/(Cr + Al) = 0.85), with minor ilmenite and silica.

Classification: Achondrite (eucritic, basaltic, monomict breccia), minimal to moderate shock, minimal weathering.

Type specimens: A 20 g sample is on deposit at *NAU*. *Turecki* is the main mass holder.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4545

Algeria
Find: 2006
Rumuruti chondrite (R4)

History and physical characteristics: The meteorite was recovered in the southern Algerian desert in March 2006 and purchased in Munich, Germany in October 2006 by Michael Farmer. It is a greenish gray, 119 g stone covered with a very fresh black fusion crust.

Petrography: (T. Bunch and J. Wittke, *NAU*) Millimeter-wide cataclastic veins are pervasive throughout the stone. Many small (<0.2 mm) clusters of pyrrhotite, pentlandite, and high-silica glass intergrowths occur in the matrix. A few of the small chondrules are rimmed by sulfides.

Mineral compositions and geochemistry: Olivine ($Fa_{37.5}$; FeO/MnO = 77–83), Ca-pyroxene ($Fs_{11.8}Wo_{44.6}$), FeS (Ni = 2.32 wt%), glass (SiO_2 = 71.1 wt%, Al_2O_3 = 21.4 wt%, Na_2O = 6.4 wt%; CaO = 1.43 wt%; FeO = 1.72 wt%).

Classification: Rumuruti chondrite (R4); minimal shock, almost no weathering.

Type specimens: A 21 g sample is on deposit at *NAU*. *Farmer* is the main mass holder.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4549

Northwest Africa
Find: 2006
Ordinary chondrite (LL3.1)

History and physical characteristics: Collected in the western part of the Sahara and purchased by A. Aaronson in Rissani, Morocco in May 2006. It is a 64 g, reddish brown stone with very little fusion crust.

Petrography: (T. Bunch and J. Wittke, *NAU*) A chondrule-rich (76 vol%) ordinary chondrite with low metal (≤1 vol%) and several subrounded to subangular poikilitic clasts (1.5–2.4 mm in diameter) of anhedral orthopyroxene host and round olivine inclusions.

Mineral compositions and geochemistry: Olivine ($Fa_{8.8–38.0}$; FeO/MnO = 28–122; Cr_2O_3 = 0.07–0.34 wt%; CaO = 0.16–0.54 wt%). Orthopyroxene ($Fs_{6.3–27.6}$). Orthopyroxene oikocrysts ($Fs_{16.4}$; FeO/MnO = 67), olivine chadacrysts ($Fa_{28.3}$; FeO/MnO = 94). Oxygen isotopes: (D. Rumble, *CIW*) A cleaned and metal-free sample was analyzed by laser fluorination. Replicate analyses are respectively, $\delta^{17}O$ = 4.100 and 3.800; $\delta^{18}O$ = 6.02 and 5.697; $\Delta^{17}O$ = 0.9315 and 0.8032 (all‰).

Classification: Ordinary chondrite (LL3.1); S2, W1.

Type specimens: An 13.2 g sample is on deposit at *NAU*. *Aaronson* holds the main mass.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 4650
Algeria
Find: 2006
Enstatite chondrite (EL6)
History and physical characteristics: A single 339 g stone was found in the southern Algerian desert in 2006 and purchased in Erfoud, Morocco in July 2006. The stone is moderately weathered on the surface and somewhat flaky with little remaining fusion crust.
Petrography: (T. Bunch and J. Wittke, *NAU*) Highly recrystallized with rare, barely discernible chondrule fragments. Very high metal content (28 vol%) that is distributed throughout the matrix as small (<0.5 mm) irregularly shaped grains, as large blobs (2–4 mm), and as coarse grains (~1 mm) in metal-rich recrystallized veins. Graphite is commonly included in large metal grains.
Mineral compositions and geochemistry: Enstatite ($Fs_{0–0.7}$; many grains have <0.02 wt% FeO), plagioclase ($An_{17.4}$), metal (Ni = 5.6–6.4 wt%; Si = 1.15 wt%), FeS (Cr = 1.84 wt%; Ti = 1.18 wt%), oldhamite (Fe = 0.65 wt%; Mn = 0.92 wt%; Mg = 0.48 wt%), daubreelite (Cr = 35.6 wt%; Fe = 15.3 wt%; Mn = 3.5 wt%), alabandite (Mn = 3.3 wt%; Mg = 4.9 wt%) together with small niningerite and SiC grains.
Classification: Enstatite chondrite (EL6).
Type specimens: A 24.1 g sample is on deposit at *NAU*. *Aaronson* holds the main mass.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 4654
Algeria
Find: 2006
Achondrite (diogenite)
History and physical description: A 49 g stone with patchy fresh fusion crust was found in Algeria in 2006 and purchased in Erfoud, Morocco by A. Aaronson in July 2006.
Petrography: (J. Wittke and T. Bunch, *NAU*) Coarse-grained orthopyroxene (<7 mm in diameter) enclose large chromite grains (1 to 2.6 mm). Tiny troilite grains (<0.02 mm) are widespread in the matrix.
Mineral compositions and geochemistry: Orthopyroxene ($Fs_{21.6–22.6}Wo_{1.7–2.1}$), chromite (Cr/(Cr + Al) = 0.79).
Classification: Achondrite (diogenite); minimal shock and weathering.
Type specimens: A 10.2 g specimen is on deposit at *NAU*. *Aaronson* holds the main mass.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 4657
Algeria
Find: 2006
Carbonaceous chondrite (CK4)
History and physical characteristics: Purchased by B. Reed from a dealer in Erfoud, Morocco, in 2006. The single stone is a light greenish gray, 417 g stone that is partially crusted on ~70% of the surface and moderately to heavily desert-etched on the remaining surface.
Petrography: (J. Wittke and T. Bunch, *NAU*) Contains ~18 vol% well-defined chondrules, some of which are up to 2 mm in diameter. The matrix is partially recrystallized with tiny plagioclase grains intermingled with amorphous plagioclase aggregates. Chondrule glass is mostly devitrified.
Mineral compositions and geochemistry: Olivine shows a narrow spread in FeO, although at lower values ($Fa_{27.3–28.2}$) compared with typical CK chondrites; FeO/MnO = 95–123. Orthopyroxene ($Fs_{23.8}Wo_{2.2}$), magnetite (Cr_2O_3 = 3.79 wt%; Al_2O_3 = 1.56 wt%; NiO = 0.90 wt%), plagioclase ($An_{27.9–49}$).
Classification: Carbonaceous chondrite (CK4); moderate weathering and minimal shock.
Type specimens: A 23 g sample is on deposit at *NAU*. *Reed* holds the main mass.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 4661
Algeria
Find: 2005
Carbonaceous chondrite (CK3)
History and physical characteristics: A 42 g dark stone with partial fusion crust and deep, desert ablation etching was found in Algeria in 2005 and purchased in Rissani in 2006 by H. Burkhard.
Petrography: (J. Wittke and T. Bunch, *NAU*) Fresh light gray interior with unusually large chondrules (up to 3 mm; mean = 0.95 mm) for a CK chondrite. Chondrules have sharply defined boundaries and contain clear glass. Inclusions of chlorapatite occur in matrix magnetite. Isotropic clumps of near plagioclase compositions are heterogeneously dispersed within the matrix.
Mineral compositions and geochemistry: Olivine ($Fa_{21.5–37.4}$; FeO/MnO = 90–177), Ca-pyroxene ($Fs_{9.1–14.2}Wo_{45–49.7}$), plagioclase ($An_{27.8–73.2}$; isotropic); magnetite (Cr_2O_3 = 1.79–2.25 wt%, Al_2O_3 = 1.22–2.28 wt%, MgO = 0.25–0.42 wt%, NiO = 0.25–0.45 wt%.
Classification: Carbonaceous chondrite (CK3); minimal weathering and shock.
Type specimens: An 8.3 g sample is on deposit at *NAU*. *Burkhard* owns the main mass.
Submitted by: T. Bunch, *NAU*.

Northwest Africa 4663
Northwest Africa
Find: 2006
Achondrite (lodranite)
History and physical characteristics: A 564 dark stone with desert varnish with almost no fusion crust was found in the Sahara in 2006 and purchased by A. Aaronson in October 2006.

Petrography: (T. Bunch and J. Wittke, *NAU*) Protogranular texture with a grain size (metal excluded) of 0.2 to 1.65 mm; the mean is 0.9 mm. Metal grains are as large as 2.2 mm, the mean is 1.25 mm. Oikocrysts of orthopyroxene enclose olivine, a poikilitic texture, and Ca pyroxene contains very thin (<0.002 mm) orthopyroxene exsolution lamellae. Irregular patches of vermicular FeS (<0.01 mm) occur mostly within orthopyroxene. Mineral modes (vol%) are: orthopyroxene = 36, olivine = 30, metal and oxidized metal = 17, troilite = 8, diopside = 8, and plagioclase = 1.

Mineral compositions and geochemistry: Orthopyroxene ($Fs_{10.0–10.3}Wo_{2.2–2.8}$; FeO/MnO = 13), olivine ($Fa_{5.4–6.1}$; FeO/MnO = 17), diopside ($Fs_{4.3}Wo_{45.9}$), metal (Ni = 4.7–10.3 wt%) and plagioclase ($An_{20}Or_{2.7}$). Oxygen isotopes: (D. Rumble, CIW) A cleaned and metal-free sample was analyzed by laser fluorination. Replicate analyses are respectively, $\delta^{17}O = -1.025$ and -0.917; $\delta^{18}O = 1.15$ and 1.20; $\delta^{17}O = 4.13$ and 4.01 (all ‰).

Classification: Achondrite (lodranite); minimal shock and minimal to moderate weathering.

Type specimens: A 23 g sample is on deposit at *NAU*. *Aaronson* holds the main mass.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4664

Algeria
Find: 2006
Achondrite (diogenite, polymict breccia)

History and physical characteristics: Many stones that weigh ~20 kg were purchased in Rissani, Morocco in July 2006 by A. Aaronson and are part of a large strewn field in which at least 30 kg have been recovered.

Petrography: (T. Bunch and J. Wittke, *NAU*) A moderately shocked diogenite cataclastic breccia. Samples range from very matrix-rich to those that are matrix-poor and are composed of closely packed clasts. Mineral modes (vol%): orthopyroxene = 92, olivine = 4, plagioclase = 2, augite = 2, chromite and FeS = 1. Trace amounts of silica and metal are also present. The sample has as least two lithologies: one contains orthopyroxene with lowest FeO and without olivine; the other contains olivine with slightly more FeO-rich orthopyroxene. Orthopyroxene grains show minor amounts of shock lamellae and well-developed undulatory extinction. Plagioclase is partially isotropic.

Mineral compositions and geochemistry: Orthopyroxene ($Fs_{17.8–23}Wo_{1.1–2.8}$; FeO/MnO = 30–37), olivine ($Fa_{24.1–32.6}$; FeO/MnO = 52–56), plagioclase (An_{79}), chromite (Cr/(Cr + Al) = 0.67).

Classification: Achondrite (diogenite, polymict breccia); moderate shock, minimal weathering. Most likely paired with NWA 4473.

Type sample: A 34 g sample is on deposit at *NAU*. *Aaronson* holds the main mass.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4721

Northwest Africa
Find: February 3, 2005
Carbonaceous chondrite (CK4)

History: A single stone was purchased at Tucson Gem and Mineral Show from a Moroccan mineral dealer on February 3, 2005.

Physical characteristics: One stone of 7.3 g. Dark gray stone partly covered with black fusion crust.

Petrography: (K. Yamada and M. Kimura, *Ibaraki*) Consists of several porphyritic chondrule remnants (up to ~1 mm in diameter), mineral fragments including abundant magnetite, and recrystallized fine-grained matrix; olivine ($Fa_{25–30}$; average 27.1; NiO up to 0.7 wt%), low-Ca pyroxene ($Fs_{23–28}Wo_{0.3–7}$; average 24.6 and 1.5); Ca pyroxene ($Fs_{8–15}Wo_{32–48}$; average 10.0 and 43.7); plagioclase ($An_{16–66}Or_{0.7–4}$; average 34.9 and 2.3); magnetite (Cr_2O_3 up to 3.5% and Al_2O_3 up to 1.7% wt%).

Classification: Carbonaceous chondrite (CK4); S2, moderate weathering.

Type specimens: A total of 1.53g of sample on deposit at *NUM*. *Hori* holds the main mass.

Submitted by: M. Kimura, *Ibaraki*.

Northwest Africa 4724

Morocco
Find: January 2006
Carbonaceous chondrite (CK3)

History: The sample was purchased in Erfoud, Morocco in January 2006 by C. Giessler.

Physical characteristics: One stone weighing 35 g; slightly brown colored; 80% covered with fusion crust.

Petrography: (M. Bourot-Denise, *MNHN*) Obvious chondrules with most having a diameter in the range of 500–1500 μm; the largest are porphyritic olivine chondrules (largest chondrule studied section is 5000 μm in size). A large (1.5 cm) spinel-rich CAI also occurs; there are also many smaller CAIs. Magnetite is abundant and is associated with sulfides (troilite + pyrrhotite + pentlandite) in large nodules in between chondrules, in small isolated grains between clinopyroxene and plagioclase laths in the crystalline matrix, and as very small grains interspersed in the matrix around CAIs and chondrules. Magnetite beads also occur inside porphyritic chondrules. BSE images show that most olivines in porphyritic chondrules are unequilibrated with an FeO-poor core. Low-Ca pyroxene in the outer part of these chondrules is equilibrated. Outside of chondrules, clinopyroxene is dominant with a variable composition. Terrestrial weathering seems to have little affected the minerals, but the sample studied is crossed by a few veinlets filled with calcite.

Geochemistry: Chondrule olivine, Fa in the range 0.37–25.53; recrystallized matrix olivine ($Fa_{29.05–33.23}$, mean $Fa_{30.85}$; CaO = 0.29, NiO = 0.22 [both in wt%]). Chondrule Low-Ca pyroxene ($Fs_{21.8±1.3}$); outside chondrules,

composition varies from pigeonite to augite to diopside. Plagioclase outside chondrules ($An_{21.4–40.7}$).
Magnetic susceptibility: (J. Gattacceca, CEREGE) logχ = 4.5×10^{-9} m^3/kg log = 4.5).
Classification: Carbonaceous chondrite (CK3; estimated subtype 3.8); minimal shock and moderate weathering.
Type specimens: A total of 9.5 g of sample (1 sawn fragment) and two polished mounts on deposit at *MNHN*. *Giessler* holds the main mass.
Submitted by: M. Bourot-Denise, *MNHN*.

Northwest Africa 4725
Morocco
Find: March 2006
Ordinary chondrite (H/L3)
History: C. Giessler purchased the stone in Agadir, Morocco in March 2006.
Physical characteristics: The stone has a mass of 19 g.
Petrography: The meteorite is rich in small chondrules with abundant metal. BSE images indicate that it is an unequilibrated chondrite. Only the largest olivines in type I porphyritic chondrules are zoned, equilibrated low-Ca pyroxenes are enriched in FeO at the edges of these chondrules and along their cleavages. Metal and sulfide are associated in large nodules between chondrules and make up droplets in small melt pockets scattered through the whole sample. Sulfide fills cracks in silicates within chondrules. Large kamacite grains are always polycrystalline.
Geochemistry: Olivine, Fa = 16.3 ± 9.1, range 5.8–36.3; low-Ca pyroxene, Fs = 5.17 ± 3.09, range 2.5–16.2.
Classification: Ordinary chondrite (H/L3; estimated subtype 3.6); S4, W2.
Type specimens: A total of 3.9 g of sample (1 sawn fragment) and one polished mount is on deposit at *MNHN*. *Giessler* holds the main mass.

Northwest Africa 4734
Rissani, Morocco
Find: October 2006
Achondrite (lunar)
History: Two pieces were purchased from nomads in Erfoud, Morocco in October 2006 and February 2007.
Physical characteristics: A. Habibi purchased two pieces with a total mass of 477 g in Rissani, Morocco; several other pieces of the same stone totaling 895 g are with Ait Elkaid in Rissani, Morocco. Dull black/brown fusion crust is nearly complete and inside slightly tarnished where absent. It is a gray, coarse-grained, pristine magmatic rock consisting of millimeter-sized phenocrysts of mainly pyroxene and plagioclase.
Petrography: (A. Jambon, O. Boudouma, and D. Badia, *UPVI*). The texture is best described as shergottite-like. Pyroxene grains are highly fractured while plagioclase laths, partly transformed to maskelynite, are only affected by a small number of fractures. Silica and silica-feldspar glass are minor components. A few patches of impact melt are also observed. Ilmenite, baddeleyite, zirconolite, tranquilityite, pyrrhotite, and metal. Fayalite associated with silica probably results from the dissociation of iron rich pyroxene. Modal mineralogy (vol%): Cpx 50, plagioclase + K-feldspar 32, silica + glass 7.5, opaques (ilmenite, Ti-magnetite, pyrrhotite) + fayalite 7, voids + fractures 3.
Geochemistry: Mineralogy by EMP and SEM. (Trace and major element analyses ICP-MS and ICP-AES, J.-A. Barrat, *UBO*). Pyroxene grains are complexly zoned ($En_{65}Fs_{21}Wo_{13}$ to $En_2Fs_{83}Wo_{15}$; FeO/MnO = 78 [average]). A few compositions correspond to pyroxferroite. Plagioclase is normally zoned from $An_{75–91}$ (average An_{89}) with minor olivine ($Fa_{80–95}$). Chondrite normalized REE pattern with an enrichment of 53 (La) to 40 (Yb). Trace element pattern with negative anomalies of Sr and Eu. Interstitial glass is high in silica (75 wt%) and contains microcrysts of K-feldspar with a significant celsian component. The chemistry and major and trace elements are identical to NWA 032-479-773 and LAP 02205-02224-02226-02436-03632. The texture is very similar to that of the LAP specimens. The very low abundance of olivine and the relative abundance of silica in NWA 4734 are the main differences beside the grain size and the slightly different composition of the major phases.
Classification: Achondrite (lunar); extensive shock.
Type specimens: A total of 20 g of sample and one polished section is on deposit at *UPVI*. *Mbarek Ait Elkaid* holds the main masses.
Submitted by: A. Jambon, *UPVI*.

The description of NWA 4734 was submitted as a monzogabbro, but the Nomenclature Committee was not convinced by the materials submitted that this was a correct sub-classification for this sample.

Northwest Africa 4757
Morocco
Find: October 2004
Carbonaceous chondrite (CM)
History: An anonymous buyer purchased the stone in Munich, Germany in October 2004.
Physical characteristics: The single piece weighing 5 g is black and covered with black fusion crust.
Petrography: (M. A. Ivanova, *Vernad.*) The meteorite consists of fine-grained phyllosilicate matrix material, relict chondrules, sometimes with haloes, and relict aggregates embedded in altered matrix. All silicates from the objects in the meteorite are altered and replaced by phyllosilicate. Only one tiny grain of olivine was found in the matrix. The minor phases are ilmenite, chromite, sulfides, kamacite, taenite, tetrataenite, phosphates, Ca,Mg carbonates. Abundant phylosilicates in the matrix are mostly serpentine.

Geochemistry: Mineralogy: olivine (Fa_{10}; Fe/Mn=52, CaO = 0.06; MnO = 0.19 [both wt%]). Bulk composition (wt%): Al_2O_3 = 2.3, TiO_2 = 0.09, FeO = 32.0, MgO = 22.7, MnO = 0.34, CaO = 2.4, Na_2O = 0.26, K2O = 0.15, S = 5.3. Oxygen isotopic compositions: (I. A Franchi and R. C. Greenwood, *OU*, by laser fluorination): $\delta^{17}O$ = 12.84; $\delta^{18}O$ = 23.83; $\Delta^{17}O$ = 0.45 (all ‰).
Classification: Carbonaceous chondrite (CM); minor weathering.
Type specimens: A total of 1 g sample and one thin section are on deposit at *Vernad*. An anonymous buyer holds the main mass.

Northwest Africa 4797
Morocco
Find: 2001
Achondrite (Martian, shergottite)
History: Found in 2001 near Missour, Morocco and acquired by Morocco Import of Erfoud, Morocco.
Physical characteristics: A single, dense, broken stone (15.0 g) with fusion crust on one side and visible regions of pale gray; vesicular glass interstitial to coarse silicate grains (Fig. 1). Several thin, dark-colored shock veins crosscut the specimen.
Petrography: (A. Irving and S. Kuehner, *UWS*; T. Bunch and J. Wittke, *NAU*) This very fresh specimen is predominantly a peridotite composed mostly of olivine chadacrysts (up to 1.5 mm) and zoned clinopyroxene oikocrysts (subcalcic augite and pigeonite, up to 9 mm across) with interstitial regions (apparently originally intercumulus) now consisting of vesicular glass containing sparse, very small, birefringent plagioclase microlites. Accessory phases are Ti-chromite, Mg-ilmenite (some with associated tiny baddeleyite grains), merrillite, and pyrrhotite. A shock injection vein (~1 mm wide) contains reacted xenocrysts and polycrystalline fragments of the peridotite material enclosed in a vesicular aggregate of fine grained (5–10 microns) interlocking olivine, augite and glass, and both margins of the vein exhibit even finer grained (<2 microns) selvedges against the peridotite wallrock. This entire specimen has experienced very high shock pressures.
Geochemistry: Peridotite lithology: olivine ($Fa_{31.3–32.7}$, FeO/MnO = 49.3–53.0), augite ($Fs_{14.6–16.0}Wo_{35.3–29.9}$, FeO/MnO = 23.8–26.2), interstitial pigeonite ($Fs_{25.2–26.3}Wo_{14.8–7.9}$, FeO/MnO = 27.8–31.8), plagioclase microlites in interstitial glass ($An_{56.8}Or_{0.8}$). Shock vein: olivine ($Fa_{23.7–28.7}$, FeO/MnO = 39.5–48.0, P_2O_5 = 0.28–0.46 wt%), augite ($Fs_{14.3–16.3}Wo_{41.4–36.4}$, FeO/MnO = 24.7–26.7), glass (average of 6 analyses, in wt%: SiO_2 = 58.7, TiO_2 = 1.4, Al_2O_3 = 14.3, FeO = 6.5, MnO = 0.22, MgO = 2.1, CaO = 11.8, Na_2O = 2.7, K_2O = 0.12, P_2O_5 = 1.8, SO_3 = 0.17, Cl = 0.05).
Bulk composition: (R. Korotev, *WUSL*; INAA data) FeO = 19.6, Na_2O = 0.40 (both wt%), Ni = 330, La = 0.69, Sm = 0.52, Eu = 0.18, Tb = 0.19, Yb = 0.57, Lu = 0.080, Hf = 0.5 (all ppm). The chondrite-normalized rare earth element pattern is subparallel to that for Zagami, but at about half the absolute abundances, and there is a small negative Eu anomaly.

Fig. 1. Image of NWA 4797 with 1 cm^3 block.

Classification: Achondrite (Martian, shergottite); extensive shock.
Specimens: A total of 3.3 g of sample, one polished thin section and one polished mount are on deposit at *UWS*. *Morocco Import* holds the main mass.
Submitted by: A. Irving, *UWS*.

Northwest Africa 4819
Northwest Africa
Find: 2007
Achondrite (lunar, feldspathic breccia)
History and physical characteristics: A single 234 g crusted stone was purchased in Rissani, Morocco in 2007. The crust is fresh with dark gray to black crusted areas and vermillion to light brown in abraded to weathered areas; some areas show melt bubbles and flow. A network of thin fractures is filled with weathering products.
Petrography: (T. Bunch and J. Wittke, *NAU*; A. Irving, *UWS*) This stone is very dark, well indurated, and is fine-grained with few clasts that exceed one mm in diameter. No evidence of flow orientation was observed. NWA 4819 is a regolith breccia and has two unusual characteristics for a lunar sample: (1) a relatively large amount of homogeneously distributed fine-grained metallic nickel-iron (2 wt%) and troilite (1.5 wt%) and (2) a large population of pyroxene fragments. Most lithic clasts follow the ferroan anorthositic trend and include anorthosites, fine-grained anorthositic norites, gabbros, and troctolites, in addition to shock melt clast, K-rich glass, and spherules. No intact basaltic clasts were observed and all clasts are crushed to some extent.
Mineral compositions and geochemistry: Host

orthopyroxene ($Fs_{48.9–67.5}Wo_{2.2–4.3}$; FeO/MnO = 56), exsolution lamellae ($Fs_{24.4–41.4}Wo_{12.3–32.9}$; FeO/MnO = 60). Anorthositic norite: orthopyroxene ($Fs_{35.4}Wo_{4.3}$) and plagioclase ($An_{96.5}$). Anorthositic troctolite olivine ($Fa_{28.1}$; FeO/MnO = 105), pigeonite ($Fs_{26.9}Wo_{5.9}$; FeO/MnO = 54), plagioclase (An_{97}) and chromite (cr# = 80). Kamacite (mean Ni = 6.2, Co = 0.77 (both wt%) and taenite (Ni = 8.2–23.6 wt%). Bulk composition: (R. Korotev, *WUSL*): FeO = 7.0% wt%, Ni = 290 ppm, Sm = 3.4 ppm, Th = 1.5 ppm, Ir = 12 ppb.

Classification: Achondrite (lunar, feldspathic breccia).

Type specimens: A total of 20.3 g is on deposit at *NAU*. The main mass holder is anonymous.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4872

Algeria
Find: 2007
Achondrite (brachinite)

History and physical characteristics: A 3000 g partially crusted complete stone was purchased in Rissani, Morocco in 2007. This stone is very dark on both crusted and wind eroded surfaces and has a low weathering grade.

Petrography: (T. Bunch and J. Wittke, *NAU*) Protogranular texture with a strong bimodal olivine grain size: medium-sized grains range from 0.3 to 1.1 mm (mean = 0.6 mm) and the smaller grains range from 0.02 to 0.3 mm (mean = 0.18 mm). Small metal grains are oxidized. Mineral modes (in vol%): olivine = 85; Ca pyroxene = 3; chromite = 5; Cl apatite = 3; metal = 2; sulfides = 2.

Mineral compositions: Olivine ($Fa_{35.1}$; FeO/MnO = 81), Ca-pyroxene ($Fs_{10.3}Wo_{47}$), chromite (Cr/(Cr + Al) = 0.74), metal (Ni = 3.5 wt%), with pentlandite and troilite. Oxygen isotopes: (D. Rumble, CIW) Replicate analyses of acid-washed material by laser fluorination gave, respectively: $\delta^{17}O$, –0.229 and –0.254; $\delta^{18}O$, 2.061 and 2.012; and $\Delta^{17}O$, 4.354 and 4.308 (all ‰).

Classification: Achondrite (brachinite); moderate shock and minimal to moderate weathering.

Type specimens: A total of 20.4 g is on deposit at *NAU*. *Aaronson* is the main mass holder.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4874

Algeria
Find: 2007
Achondrite (brachinite)

History and physical characteristics: A 28 g nearly complete single stone was purchased in Erfoud, Morocco in 2007. The stone is partially crusted and has a low degree of surface weathering with limonitic staining.

Petrography: (T. Bunch and J. Wittke, *NAU*) Dunitic rock with a medium-grained (mean size = 0.6 mm) protogranular texture. Mineral modes (vol%): olivine = 90; Ca-pyroxene = 4; chromite = 3; plagioclase = 2; merrillite =1 and metal = 1.

Mineral compositions: Olivine is very homogeneous at ($Fa_{34.1}$; FeO/MnO = 80). Augite ($Fs_{12}Wo_{48.3}$), plagioclase ($An_{40.7}$), metal (Ni = 3.15 wt%) and chromite (Cr/(Cr + Al) = 0.73).

Classification: Achondrite (brachinite); moderate shock.

Type specimens: A total of 6 g is on deposit at *NAU*. *Aaronson* holds the main mass.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4876

Northwest Africa
Find: 2007
Achondrite (brachinite)

History and physical characteristics: A 130 g stone was purchased in Tagounit, Morocco in June 2007. Surface is well polished by desert wind ablation with very little oxidation.

Petrography: (J. Wittke and T. Bunch, *NAU*) Dunitic rock with very fine- to medium-grained (0.02 to 1.35 mm) protogranular texture. Mineral modes (vol%): olivine = 90, Ca-pyroxene = 5, plagioclase = 2, chromite, metal, and FeS = 3. No phosphates were found.

Mineral compositions: Olivine ($Fa_{33.4}$; FeO/MnO = 68), Ca pyroxene ($Fs_{13}Wo_{43.8}$), plagioclase ($An_{38.1}$), chromite (Cr/(Cr + Al) = 0.73), and metal (Ni = 4.1–6.4 wt%).

Classification: Achondrite (brachinite); moderate shock and minimal weathering.

Type specimens: A total of 20.2 g is on deposit at *NAU*. The main mass holder is anonymous.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 4881

Mauritania or Algeria
Find: 2005
Achondrite (lunar, granulitic breccia)

History: Found in 2005 and purchased by Stefan Ralew in January 2007 from a dealer in Quarzazate, Morocco.

Physical characteristics: A single, broken, irregular conical stone (606 g) partially covered by translucent, pale greenish fusion crust and with a pale gray-brown interior (Fig. 2).

Petrography: (A. Irving and S. Kuehner, *UWS*) Fine-grained recrystallized breccia composed of larger plagioclase grains (converted partially to maskelynite) poikilitically enclosing very small grains (mostly 30–80 microns) of low-Ca pyroxenes, olivine, Ti-chromite, ilmenite, troilite and metal.

Mineral compositions and geochemistry: Olivine ($Fa_{40.4–58.8}$, FeO/MnO = 91–100), plagioclase ($An_{96.1–98}Or_{<0.1}$), pigeonite ($Fs_{32.0–64.5}Wo_{9.5–13.1}$, FeO/MnO = 51.1–62).

Classification: Achondrite (lunar, granulitic breccia). This stone is paired with NWA 3163 (Irving et al. 2006) and NWA 4483; in combination these specimens evidently represent naturally broken pieces from a crusted lunar meteorite

Fig. 2. Image of a hand sample of NWA 4881 with 1 cm^3 block.

weighing at least 2448 g.
Specimens: A total of 20 g of sample and one polished mount are on deposit at *UWS*. *Ralew* holds the main mass.
Submitted by: A. Irving, *UWS*.

Northwest Africa 4882
Algeria
Find: July 2007
Achondrite (brachinite)
History: Purchased by Greg Hupé in July 2007 from a dealer in Tagounite, Morocco.
Physical characteristics: Two dense, dark brown, broken rounded stones (2891 g and 206 g) with weathered fusion crust on some original exterior surfaces and thin desert varnish coatings on hackly broken surfaces.
Petrography: (A. Irving and S. Kuehner, *UWS*) Coarse-grained rock (mostly 0.2–0.8 mm) with protogranular texture, composed predominantly of olivine with subordinate green, Cr-bearing diopside, K-poor plagioclase, chromite, iron sulfide, and kamacite (partially altered to iron hydroxides). Plagioclase is interstitial to mafic silicates and is heterogeneous in distribution. Very fine-grained (2–10 μm), polyphase assemblages composed mostly of orthopyroxene, Ni-bearing pyrrhotite and Ni-free metal with variable amounts of fayalite and chromite occur around larger pyrrhotite grains within olivine, and also as small, isolated apparent inclusions within olivine.
Geochemistry: Olivine ($Fa_{35.0–35.2}$, FeO/MnO = 70.9–71.3), clinopyroxene ($Fs_{9.3}Wo_{47.1}$, FeO/MnO = 38.6, Cr_2O_3 = 0.76wt%, Al_2O_3 = 1.05 wt%), plagioclase ($An_{32.1–37.6}Or_{0.3–0.5}$), chromite [Cr/(Cr + Al) = 0.717, Mg/(Mg + Fe) = 0.239, TiO_2 = 0.71 wt%, ZnO = 0.30 wt%]. Oxygen isotopes: (D. Rumble, *CIW*) Replicate analyses of acid-washed silicate material by laser fluorination gave, respectively, $\delta^{18}O$ = 2.064, 2.095; $\delta^{17}O$ = 4.368, 4.455; $\Delta^{17}O$ = –0.234, –0.248 per mil.
Classification: Achondrite (brachinite). This specimen is very similar in external appearance, texture, and mineral compositions to NWA 4969, with which it may be paired (Wittke et al. 2008). It also is very similar to NWA 3151 in texture, olivine, and plagioclase compositions, and patterns of staining around metal (Irving et al. 2005). However, the clinopyroxenes in these two specimens have somewhat different compositions, and NWA 3151 contains much less plagioclase and lacks the distinctive polyphase assemblages found in NWA 4882.
Specimens: A total of 20.4 g of sample and one polished thin section are on deposit at *UWS*. *GHupé* holds the main mass.
Submitted by: A. Irving, *UWS*.

Northwest Africa 4883
Northwest Africa
Find: July 2007
Achondrite (eucrite, polymict)
History: Purchased by G. Hupé in July 2007 from a dealer in Tagounite, Morocco.
Physical characteristics: A single stone (610 g) with thin, dark brown fusion crust, composed of abundant white, cream and dark gray clasts (up to 6 mm), and less abundant clear, pale bluish to colorless maskelynite crystals (up to 1.2 mm), in a finer grained, medium gray matrix.
Petrography: (A. Irving and S. Kuehner, *UWS*) Complex breccia composed of mineral fragments and lithic clasts in a matrix of the same phases. Mineral fragments include compositionally variable low-Ca pyroxene (mostly unexsolved pigeonite and some orthopyroxene), completely maskelynitized calcic plagioclase, exsolved pigeonite (orthopyroxene with augite lamellae), silica polymorph, ilmenite, chromite, Ni-free metal, and troilite. There also are clasts of both cumulate and basaltic eucrites, and rare Fe-rich clasts composed of ferrosilite ± hedenbergite rimmed by fayalite. Diogenitic orthopyroxene is not abundant and no polycrystalline diogenite clasts were found.
Geochemistry: Pigeonite ($Fs_{30.9–35.1}Wo_{5.8–6.6}$; FeO/MnO = 28.1–32.5). Pigeonite (with rims of ferroan orthopyroxene-$Fs_{55.4}Wo_{2.8}$; FeO/MnO = 35.3. Ferroan pigeonite ($Fs_{62.6}Wo_{5.6}$; FeO/MnO = 34.7). Fe-rich, Ca-rich pigeonite ($Fs_{48.0–51.5}Wo_{10.3–15.4}$; FeO/MnO = 30.3–33.2). Diogenitic orthopyroxene ($Fs_{26.5}Wo_{3.5}$; FeO/MnO = 29.8). Augite ($Fs_{34.6}Wo_{41.6}$; FeO/MnO = 35.8) in intergrowth with fayalite ($Fa_{83.6}$; FeO/MnO = 45.7). Plagioclase (maskelynite, $An_{85.7–88.8}Or_{0.4–0.6}$).
Classification: Achondrite (polymict eucrite); extensive shock. This specimen is distinctive because the large plagioclase grains have been completely transformed to maskelynite, signifying a higher degree of shock than that experienced by most polymict eucrites and howardites.
Specimens: A total of 20.0 g of sample and one polished thin section are on deposit at *UWS*. *GHupé* holds the main mass.
Submitted by: A. Irving, *UWS*.

Northwest Africa 4884

Northwest Africa
Find: July 2007
Achondrite (lunar, mingled basalt-rich breccia)

History: Purchased by Greg Hupé in July 2007 from a dealer in Tagounite, Morocco.

Physical characteristics: A single stone (42 g) partially covered by black fusion crust; interior slices show it to be a breccia composed of white, beige, and light gray clasts in a dark gray matrix (Fig. 3).

Petrography: (A. Irving and S. Kuehner, *UWS*) Regolithic breccia composed of abundant angular mineral and lithic clasts in a sparse vesicular, glassy matrix. Mineral fragments include calcic plagioclase, pigeonite, augite, Ti chromite, ilmenite (one with a tiny baddeleyite inclusion) and silica polymorph. Lithic clasts include several types of mare basalt (a coarse-grained example is composed of olivine + zoned pigeonite + calcic plagioclase + ilmenite + troilite), granophyric intergrowths of Fe-rich augite + fayalitic olivine + silica polymorph, a coarse-grained dunitic or troctolitic rock containing a large metal grain (associated with rutile and secondary ilmenite), and a large "breccia-within-breccia" clast. Mare basalt clasts and debris are predominant over highlands lithologies.

Geochemistry: Olivine clasts ($Fa_{37.0–37.7}$; FeO/MnO = 94–98), olivine in basalt clast ($Fa_{87.9}$; FeO/MnO = 89), plagioclase ($An_{92.4–95.3}Or_{0.5–0.1}$), pigeonite host ($Fs_{52.3}Wo_{10.5}$; FeO/MnO = 65.2), augite lamella ($Fs_{31.9}Wo_{31.9}$; FeO/MnO = 60.3), pigeonite clast ($Fs_{60.1}Wo_{7.0}$; FeO/MnO = 71.1), augite clast ($Fs_{17.2}Wo_{36.9}$; FeO/MnO = 53.3). Bulk composition: (R. Korotev, *WUSL*) FeO = 13.7 wt%; Sm = 3.1 ppm, Th = 0.9 ppm, Ir = 3.4 ppb.

Classification: Achondrite (lunar, mingled basalt-rich breccia).

Specimens: A total of 8.4 g of sample and one polished mount are on deposit at *UWS*. *GHupé* holds the main mass.

Submitted by: A. Irving, *UWS*.

Northwest Africa 4898

Morocco
Find: 2007
Achondrite (lunar basalt)

History: The meteorite was found by an anonymous finder in northwest Africa and bought by the main mass holder in Quarzazate, Morocco.

Physical characteristics: One fragment almost completely covered with fusion crust weighing 137 g was found.

Petrography: (A. Greshake, *MNB*). The meteorite exhibits a spherulitic texture of dominantly lath-shaped plagioclase, pyroxene, and skeletal ilmenite. Olivine occurs as single larger crystals often containing Ti-rich chromite inclusions. Plagioclase is Ca-rich and has been completely transformed into maskelynite during shock metamorphism; pyroxene is compositionally zoned Ti-rich pigeonite and augite. Minor phases include FeNi-metal and troilite.

Fig. 3. Image of a hand sample of NWA 4884.

Geochemistry: Plagioclase ($An_{92.6–96.5}$), olivine ($Fa_{26.3–27.2}$; FeO/MnO = 73–92), pyroxene ($Fs_{25.1–58.7}Wo_{13.2–34}$; FeO/MnO = 42–76).

Classification: Achondrite (lunar basalt); extensive shock, minimal weathering.

Specimens: A total of 21.1 g plus one polished thin section are on deposit at *MNB*. *Ralew* holds the main mass.

Submitted by: A. Greshake, *MNB*.

Northwest Africa 4934

Northwest Africa
Find: October 2007
Achondrite (howardite)

History: Purchased by Greg Hupé in October 2007 from a dealer in Tagounite, Morocco.

Physical characteristics: A single stone (307 g) with patches of weathered fusion crust. The interior contains many dark and light colored clasts (mostly 1–5 mm across), including prominent yellow-green diogenite clasts (up to 14 mm across), in a light gray matrix.

Petrography: (A. Irving and S. Kuehner, *UWS*) Breccia composed of mineral fragments of orthopyroxene, calcic plagioclase, exsolved pigeonite, silica polymorph, ilmenite, chromite and troilite, plus diogenite clasts (composed of orthopyroxene with accessory chromite).

Geochemistry: Orthopyroxene ($Fs_{23.8–33.3}Wo_{2.2–2.5}$; FeO/MnO = 24.4–29.0), orthopyroxene host in exsolved pigeonite ($Fs_{65.1}Wo_{4.3}$; FeO/MnO = 35.2), plagioclase ($An_{90.5–93.4}Or_{0.4–0.1}$).

Classification: Achondrite (howardite). Minimal interior weathering.

Specimens: A total of 20.3 g of sample and one polished thin section are on deposit at *UWS*. *GHupé* holds the main mass.

Submitted by: A. Irving, *UWS*.

Northwest Africa 4969

Northwest Africa
Find: 2007

Achondrite (brachinite)

History and physical characteristics: A 180 g incomplete stone was purchased in Erfoud, Morocco by M. Cimala in 2007. It is partially covered by a thin transparent ablation crust.

Petrography: (J. Wittke and T. Bunch, *NAU*) Fine- to medium-grained (0.1 to 1.2 mm; mean = 0.75 mm) with protogranular texture. Mineral modes (in vol%): olivine = 89, Ca-pyroxene = 6, plagioclase = 2.5, chromite = 1.5; metal and FeS = 1.

Mineral compositions: Olivine is $Fa_{34.7}$, FeO/MnO = 72–75; diopside is $Fs_{10.0}Wo_{46.4}$ (Cr_2O_3 = 0.88–1.2 wt%; Al_2O_3 = 1.24 wt%), FeO/MnO = 42; plagioclase is $An_{34.6}$ and chromite Cr/(Cr + Al) = 0.71. Metal is predominantly taenite (Ni = 20.1 wt%).

Classification: Achondrite (brachinite); moderate shock and minimal weathering.

Type specimens: A total of 20.6 g are on deposit at *NAU*. *Cimala* holds the main mass.

Submitted by: T. Bunch, *NAU*.

Northwest Africa 5000

Morocco

Find: July 2007

Achondrite (lunar, feldspathic breccia)

History: Found in July 2007 in southern Morocco and provided to Adam Hupé in October 2007.

Physical characteristics: A single, large cuboidal stone (11.528 kg) with approximate dimensions 27 cm × 24 cm × 20 cm. One side (which appears to have been embedded downward in light brown mud) has preserved regmaglypts and is partially covered by translucent, pale greenish fusion crust with fine contraction cracks. Abundant large beige to white, coarse-grained clasts up to 8 cm across (some of which have been eroded out on exterior surfaces of the stone, likely by eolian sand blasting) and sparse black, vitreous clasts up to 2 cm across (containing irregular small white inclusions) are set in a dark gray to black, partially glassy breccia matrix. One partially eroded clast exposed on an exterior surface contains both the coarse grained beige lithology and the more resistant black, vitreous lithology in sharp contact.

Petrography: (A. Irving and S. Kuehner, *UWS*) Almost monomict fragmental breccia dominated by Mg-suite olivine gabbro clasts consisting predominantly of coarse-grained (0.5–2 mm) calcic plagioclase, pigeonite (some with fine exsolution lamellae), and olivine with accessory merrillite, Mg-bearing ilmenite, Ti-bearing chromite, baddeleyite, rare zirconolite, silica polymorph, K-feldspar, kamacite, and troilite. Some gabbro clasts have shock injection veins composed mostly of glass containing myriad fine troilite blebs and engulfed mineral fragments. Black, vitreous impact melt clasts consist of sporadic, small angular fragments (apparently surviving relics) of gabbro and related mineral phases in a very fine grained, non-vesicular, ophitic-textured matrix of pigeonite laths (up to 20 microns long × 2 microns wide) and interstitial plagioclase with tiny spherical grains of kamacite, irregular grains of schreibersite and rare troilite.

Geochemistry: Gabbro clasts: plagioclase ($An_{96.1–98.0}Or_{<0.1}$), pigeonite ($Fs_{32.0–64.5}Wo_{6.7–13.1}$; FeO/MnO = 51.1–62.0), olivine in different clasts range from $Fa_{23.9–24.2}$, $Fa_{40.4}$ to $Fa_{58.8}$ (with FeO/MnO = 81–100), chromite [(Cr/(Cr + Al) = 0.737, Mg/(Mg + Fe) = 0.231, TiO_2 = 5.9 wt%], ilmenite (4.1 wt% MgO). Bulk composition: (R. Korotev, *WUSL*) INAA of 6 subsamples gave mean values of 5.3 wt% FeO and 0.4 ppm Th.

Classification: Achondrite (lunar, feldspathic breccia).

Specimens: A total of 40.2 g of sample, two polished mounts and one large polished thin section are on deposit at *UWS*. *AHupé* hold the main mass.

Submitted by: A. Irving, *UWS*.

Northwest Africa 5029

Morocco

Find: March 2003

Achondrite (Martian, basaltic shergottite)

History: In March 2003, B. Fectay and C. Bidaut purchased the stone in M'hamid, Morocco.

Physical characteristics: Individual stone with 60% fusion crust, broken on one face with a total mass of 14.67 g.

Petrography: (T. Mikouchi, *UTok*) The meteorite is mainly composed of 78% pyroxenes and 18% plagioclase (maskelynite). The pyroxenes show an elongated euhedral to subhedral texture reaching 5 mm × ~0.5 mm. Plagioclase is completely transformed to maskelynite, showing an interstitial lath texture (1 × 0.3 mm) to pyroxenes. Minor phases include Ca phosphate, silica, ilmenite, chromite, and Fe sulfide. They are typically present in the mesostasis areas. Shock metamorphism is extensive as suggested by the presence of maskelynite and undulatory extinction of pyroxenes.

Mineral compositions and geochemistry: The pyroxenes are extensively zoned from the Mg-rich low-Ca pyroxene cores ($Mg_{78}Fe_{19}Ca_3$) to Fe-rich, low-Ca pyroxene rims ($Mg_{13}Fe_{72}Ca_{14}$) via augite mantles ($Mg_{45}Fe_{22}Ca_{33}$). The FeO/MnO wt% ratio of pyroxenes (30–40) is within the range of Martian meteorites. Maskelynite is weakly zoned ($An_{55}Ab_{43}Or_2$ to $An_{45}Ab_{51}Or_4$).

Classification: Achondrite (Martian basalitic shergottite). The mineral compositions are close to those of NWA 480/1460, but the texture of this new meteorite is slightly different (e.g., lower abundance of maskelynite).

Type specimens: A total sample mass of 2 g and one thin section are on deposit at *UTok* (T. Mikouchi). A mass of 1 g is also at *IUEM* (J. A. Barrat). *Fectay* holds the main mass.

Submitted by: T. Mikouchi, *UTok*.

Northwest Africa 5134

Northwest Africa

Find: 2005

Achondrite (eucrite)

History: Two stones weighing 61.6 g in total were bought in 2004 in a Saharawi village near Tindouf, Algeria by the astronomer Mario Di Martino.
Physical characteristics: The main mass, weighing 51.4 g, has a small portion of a black fusion crust.
Petrography: (V. Moggi Cecchi, G. Pratesi, *MSP*) A polymict breccia consisting of mineral clasts set into a fine-grained matrix of pigeonite, exsolved low-Ca pyroxene and plagioclase. The large clasts are predominantly plagioclase, pigeonite and exsolved low-Ca clinopyroxene. Minor phases include silica, ilmenite, and Al-Ti chromite. Exsolved pyroxene grains show alternating fine to very fine low-Ca pyroxene and augite lamellae (10 and 2 μm, respectively).
Geochemistry: Plagioclase ($An_{90.9}$), pigeonite ($Fs_{32.7–39.1}Wo_{6.3–7.2}$), augite (lamellae $Fs_{30.6}Wo_{10.5}$), low-Ca pyroxene ($Fs_{37.6}Wo_{1.8}$). Oxygen isotopes: (I. Franchi, R. Greenwood, *OU*) $\delta^{17}O = 1.707$, $\delta^{18}O = 3.707$, $\Delta^{17}O = –0.221$ (all ‰).
Classification: Achondrite (eucrite); moderate shock and minimal weathering.
Type specimens: A total of 15 g specimen and one thin section are on deposit at *MSP*. *DMartino* holds the main mass.
Submitted by: V. Moggi Cecchi, *MSP*.

Table 2 lists all approved meteorite names and relevant data from Northwest Africa.

THE AMERICAS

North America

Canada

Burstall **50°39′N, 109°54′W**
Burstall, Saskatchewan, Canada
Find: 1992
Iron (IAB)
History: Recovered in 1992 by Richard Wagner of Burstall, Saskatchewan, Canada and donated to the *GSC*.
Physical characteristics: The total mass of the meteorite is 360 g. The exterior of the specimen is weathered and shows no remaining fusion crust. The interior of the sample shows oxidation along the boundaries of kamacite lamellae. Oxidation of a freshly cut surface proceeded rapidly, suggesting the presence of chloride and interaction with groundwater.
Petrography: (S. A. Kissin, *LHU*) The cut surface and a polished section display mostly kamacite lamellae, separated by narrow, remnant taenite lamellae.
Mineral compositions and geochemistry: (INAA, ActLab) Ni = 6.57 wt%, Ge = 334 ppm, Ga = 80.4, Ir = 2.24 ppm.
Classification: Iron meteorite (IAB complex), a coarse octahedrite (Og).
Type specimens: The entire sample, including one polished thin section, are on deposit at *GSC*.
Submitted by: S. A. Kissin, *LHU*.

United States

Blue Eagle **38°39.7′N, 115°31.10′W**
Blue Eagle Well, Railroad Valley, Nye County, Nevada, United States
Find: March 2006
Rumuruti chondrite (R3–6)
History: Discovered on a dry lakebed by Ralph Clary, while he was hunting meteorites.
Physical characteristics: 31 minimally fusion crusted fragments totaling 70 g were found.
Petrography: (T. McCoy and L. Welzenback, *SI*). The sample is brecciated, with several 1-4 mm chondritic clasts of variable petrologic type. Approximately 50 vol% consists of well-defined chondrules (up to 1 mm, including PO, PP, BO, C, RP), mineral grains and chondritic fragments (mixed petrologic type up to 6) in a fine-grained silicate matrix. Minor, fine-grained Fe,Ti oxides and sulfides occur scattered throughout the meteorite.
Mineral compositions and geochemistry: Olivine and pyroxene grains were analyzed by EMP. Olivines are nearly homogeneous ($Fa_{38±1.5}$, with a small tail of analyses down to Fa_{10}) and pyroxenes exhibit a larger range ($Fs_{5–31}$).
Classification: Rumuruti chondrite (R3–6); moderate shock and minimal weathering (sulfides are well preserved).
Type specimens: A 13.3 g sample and one thin section are deposit at *SI*. Main mass is located at *TCU*.
Submitted by: L. Welzenback, *SI*.

Sacramento Wash 005 **34°44′48″N, 114°12′36″W**
Mohave County, Arizona, United States
Find: 18 May, 2004
Iron (ungrouped, troilite-rich)
History: These samples were found in the vicinity of the Franconia H5 strewn field. Reportedly hundreds of pieces from this fall, the majority of which are under 1 g, have been found by a number of meteorite hunters as well.
Physical characteristics: The total mass of the two pieces is 52.3 g. A mass of 8.60 g was found by Pete Meyers on May 18, 2004 (UA2006), and a mass of 43.7 g was found by Jim Smaller on October 29, 2005 (UA2026). The surfaces of both samples are indistinguishable. No fusion crust is present, although bluish fusion crust with flow lines was observed on other samples that were studied. Both meteorites are reddish-brown, have rounded edges, mildly weathered surfaces, fresh interiors, and pits on the surface that are due to inclusions that were plucked out during atmospheric entry or weathering.
Petrography: (D. Schrader and D. Lauretta, *UAz*) The meteorites consist predominantly of Fe,Ni metal. Kamacite is the dominant phase, with taenite present as exsolution in the kamacite. Troilite (~19% of surface area) is present as

elongate inclusions in the Fe,Ni metal, up to 2 mm long. Iron-oxide surrounds portions of the troilite inclusions. Other minor phases include Ca phosphates, chromite, and rare metallic copper. A 2 mm silicate inclusion in UA2006 contains Fe,Ni metal, troilite, olivine, pyroxene, plagioclase, Ca phosphate, and chondrules (predominantly POP, but also CC) with apparent diameters of 0.13 mm to 0.35 mm.

Mineral compositions: (D. Schrader, D. Lauretta, K. Domanik, and D. Hill, *UAz*) (EMP at *UAz*) Kamacite, Ni = 6.9 ± 0.7, Co = 0.41 ± 0.03 [averages, wt%]). Taenite, Ni = 25.0 ± 4.8, Co = 0.14 ± 0.08 [averages, wt%]). Silicate inclusion: olivine, $Fa_{16.8–20.6}$ (average = $Fa_{17.5±0.9}$); low-Ca pyroxene $Fs_{14.4–19.9}$ (average = $Fs_{15.5±1.05}$); $Wo_{0.38–3.82}$ (average = $Wo_{1.22±0.71}$).

Classification: Iron (ungrouped, troilite-rich). Yucca's metal and silicate inclusion share affinities to H-type material.

Specimens: A total of 11.35 g is on deposit at *UAz*. Smaller holds the main mass.

Submitted by: D. Schrader, *UAz*.

Turtle Lake **45°20.75′N, 92°3.1′W**

Clayton, Barron County, Wisconsin, USA
Fall: 21 October 1996
Ordinary chondrite (L5)

History: A small stone hit the windshield of a car owned by Mr. Rick Wirth of 971 5th Street, Clayton, Wisconsin, USA on the night of 21 October 1996. The stone made a grapefruit-sized fracture in the windshield of the car, which was parked outside Mr. Wirth's home. On the morning of October 21, one fragment of the stone was discovered lying in the windshield-wiper well, and a second was lying on the snow-covered ground nearby. These two fragments fit together. Lack of fusion crust on one side of the object indicates that a part of the mass was not recovered.

Physical characteristics: The total mass of the two fragments was 89.3 g. The interior of the stone is light gray and includes dark chondrules and metal.

Petrography: (C. Alexander, *UMin*, G. Huss, *UH*) Chondrules and matrix show considerable recrystallization. Clinoenstatite grains are abundant. There are no large plagioclase grains. Olivine grains show undulatory extinction and some planar fractures. There is no evidence of weathering.

Mineral compositions and geochemistry: Mean olivine composition is $Fa_{24.2±0.3}$. Mean low-Ca pyroxene is $Fs_{20.0±0.3}$.

Classification: Ordinary chondrite (L5); S3, W1.

Type specimens: The main mass of 84 g is on deposit in the *UMin*.

New Name Series

The Meteorite Nomenclature Committee of the Meteoritical Society announces the establishment of two new name series for dense collection areas. (1) Stump Spring (SS xxx) in Clark County, Nevada, USA with more than 2600 g of material currently recovered. (2) Copper Mountain (CM xxx) in Mineral County, Nevada, USA with at least 126 g of material recovered to date.

SOUTH AMERICA

Brazil

Patos de Minas (octahedrite) **18°35′S, 46°32′W**

Patos de Minas, Minas Gerais state, Brazil
Find: 1925; main mass in 2002
Iron (IAB complex)

History: A small (18.4 g) endpiece of a badly oxidized octahedrite was found in 1925 at the collection of the Escola de Minas Ouro Preto. In 1960 it was donated to Museu Nacional of Rio de Janeiro. The meteorite was mentioned in the British Museum catalog and the *Handbook of iron meteorites* of Buchwald, when it was named Patos de Minas (octahedrite), or Patos II, to distinguish it from Corrego do Areado, or Patos de Minas (hexahedrite). In 2002, a mass of about 200 kg was found by Paulo Garcia when ploughing the land with a tractor.

Physical characteristics: One mass of about 200 kg has average dimensions of 54 × 33 × 22 cm. It is rough, elongated and very weathered, exhibiting some grooves due to terrestrial corrosion and with no signs of fusion crust.

Description: Polished sections display a poor medium Widmanstätten structure of irregular kamacite lamellae 1.1 ± 0.2 mm (max. 2.4 mm), with the Widmanstätten pattern not very obvious. Aspect ratios (length/width) of individual lamellae range from 1 to 8, most being 4–6. Terrestrial corrosion penetrates to a depth of 5 cm. Troilite nodules are very common. The structure is identical to Patos de Minas (octahedrite) so the two masses are considered to be paired.

Geochemistry: (John T. Wasson, *UCLA*, data obtained by INAA).

Bulk composition: Co = 4.8, Ni = 83 (both mg/g); Ga = 67, Cu = 240, As = 15.4, Ir = 1.3 and Au = 1.7 (all in µg/g).

Classification: Iron (IAB complex); very weathered

Type specimens: A total of 1200 g of sample is on deposit at Museu Nacional/UFRJ/Rio de Janeiro, Brazil. The main mass was recently sold by the finder.

Submitted by: M. Zucolotto.

Chile

Blanca Estela **25°00′S, 69°30′W**

Chile
Find: 2002
Iron (IAB)

History: A single iron mass of 15.6 kg was discovered by "pirquineros," local miners, in the region of the Guanaco

gold mine, NW of Copiapo, northern Chile. The exact find location is withheld. Subsequent to the classification of the first meteorite, two more meteorites of 7 kg and 15 kg have been found in the same area. Their structures and nickel contents indicate that all three meteorites are paired.

Physical characteristics: In the outer parts of the meteorites rust veins follow structure elements.

Petrography: (J. Schlüter, *Hamb*) The bandwidth of kamacite lamellae is 3 mm. The samples on hand for classification show no inclusions.

Geochemistry: Composition of the metal (INAA): (B. Spettel, *MPI*) Co = 4.56, Ni = 66.0 (both mg/g), Ga = 93.6, Ge = 380.0, As = 11.4, Ir = 3.97, Au = 1.45 (all μg/g). Noble gases: (L. Franke, *MPI*) (75.6 mg sample) ^{3}He = 8.55, ^{4}He = 36.7, ^{20}Ne = 0.0790, ^{21}Ne = 0.065, ^{22}Ne = 0.0710, ^{36}Ar =0.45, ^{38}Ar = 0.714, ^{40}Ar = 5.9 (10^{-8} cc STP/g).

Classification: Iron meteorite, (IAB), coarse octahedrite. Noble gas data show that the meteorite is not paired with either Campo del Cielo or Copiapo.

Type specimens: A total of 43.7 g sample is on deposit at *Hamb*. *Gerstenkorn* holds the main mass.

Submitted by: J. Schlüter, *Hamb*.

Columbia

Cali **3°24.3′N, 76°30.6′W**

Santiago de Cali, Columbia
Fall: 6 July 2007, 16:33 local time (UTC–5)
Ordinary chondrite (H/L4)

History: A bright bolide of absolute magnitude –15 ± 5 was widely seen over Colombia, but mainly over several municipalities of the Cauca Valley. Eyewitnesses reported that the fireball traveled from north to south and experienced several fragmentations along its trajectory, causing audible detonations that shattered windows in the town of Restrepo. Acoustic waves were recorded by OSSO. Ten stones were found in the southern part of Cali (Mariano Ramos, Ciudad Cordoba, Antonio Narino, and Laureano Gómez districts), seven of which had penetrated roofs of houses. Two stones (#5, 6) were found by EAC and ASAFI, and the others were purchased by Farmer and other collectors. There have been unsubstantiated reports of additional stones being collected. Stones #1, 2, 3, 4, and 10 were collected immediately after the fall; the others were exposed to weather for days (#5, 6, 7) to weeks (#8, 9).

Physical characteristics: The known stones have the following masses: #1 = 76.6 g; #2 ≈ 33 g (not including part that was lost); #3 = 37.9 g; #4 = 111 g; #5 = 12 g; #6 = 20 g; #7 = 24.9 g; #8 = 66.7 g; #9 = 90.4 g; #10 = 5.6 g; total recovered mass ≈478 g. All specimens exhibit a fresh black fusion crust.

Petrography and mineral compositions: (Jordi Llorca, *UPC*; Josép M. Trigo-Rodríguez, *CSIC-IEEC*; Alan Rubin, *UCLA*; Jeff Grossman, *USGS*) Olivine: $Fa_{22.4\pm0.3}$, n = 20 [*UCLA*], $Fa_{22.5}$, n = 93, PMD_{Fa} = 4% [*USGS*]. Low-Ca pyroxene: $Fs_{12.1\pm5.9}Wo_{0.79\pm0.81}$, n = 24 [*UCLA*], $Fs_{15.8}Wo_{1.3}$, n = 61, PMD_{Fs} = 35% [*USGS*]. Plagioclase: $Ab_{82.5}Or_{1.9}$, n = 6 [*UCLA*]. Metal is mainly present as kamacite with 0.66 wt% Co, n = 10 [*UCLA*]. Metallic Cu grains are common in metal-sulfide assemblages.

Classification: Ordinary chondrite (H/L4); S3, W0. Olivine and kamacite compositions are intermediate between H and L. Olivine is equilibrated, but low-Ca pyroxene is very heterogeneous.

Specimens: Type specimens, 20.5 g (stone #9) SI, 2 g *UCLA* and 2 g *CSIC* (both from stone #6). Other specimens, 20 g *PUJC*, 132 g, *Farmer*. Most of the remaining material has been sold to private collectors.

Submitted by: J. Grossman, *USGS*.

Mexico

El Paso de Aguila **25°22.2′N, 97°22.2′W**

Tamaulipas State, Mexico
Fall: November 1977
Ordinary chondrite (H5)

History: A fall was observed and a single 17.226 kg mass was immediately recovered. No additional masses were ever located. The fall occurred on a ranch beside the main highway between Matamoros and Ciudad Victoria, Mexico, north of the town of El Paso de Aguila. The meteorite has been in the possession of the family of the finder.

Physical characteristics: Single 17.226 kg, fully fusion crusted.

Petrography: (Michael Zolensky, *JSC*) Chondrules in varying stages of metamorphism are apparent. Most silicates exhibit shock darkening.

Mineral compositions and geochemistry: Average olivine ($Fa_{19.2}$, PMD = 0.36; CaO = <0.20 wt%). Average low-calcium pyroxene ($Fs_{18.9}$; PMD = 0.78). Plagioclase ($Ab_{66}Or_{7}$–$Ab_{80}Or_{4}$). Metal and troilite are abundant.

Classification: Ordinary chondrite (H5); S3, minor weathering.

Type specimens: A total 20 g on deposit at *NMNH*. Guinart-Ramírez holds the main mass.

Submitted by: M. Zolensky, *JSC*.

Peru

Carancas **16°39′52″S, 69°02′38″W**

Carancas, Chucuito, Puno, Peru
Fall: 15 September 2007, ~16:45 UTC
Ordinary chondrite (H4–5)

History: A large fireball was witnessed to impact near the community of Carancas, in the province of Chucuito, region of Puno in the country of Peru. It made a sizable impact crater,

~13.8 m in diameter (INGEMMET) or 11–12 m (L. Jackson, *CGS*). Local residents and many others have recovered numerous pieces of the impactor from the sides of the crater and the surrounding area. Mike Farmer brought several samples to the Lunar and Planetary Laboratory of the UAz for classification on October 5, 2007. The total mass is currently unknown. A preliminary report was published on the web by F. Luisa Macedo and O. José Macharé of INGEMMET, Peru (www.ingemmet.gob.pe).

Physical characteristics: Most specimens are without fusion crust and have a gray color with some metal and chondrules visible, although the chondrules are not easily observed. At least one specimen had two different lithologies, the second white in color, indicating it is a breccia. Numerous black shock veins, often on more than one face of a specimen, were observed. At least one large (~2 cm) metal grain was also recovered, with a thin layer of stone attached to it.

Petrography: (H. Connolly, *KCCU*, *UAz*; D. Hill, *UAz*, D. Schrader, *UAz*, K. Domanik, *UAz*, and D. Lauretta, *UAz*). One polished butt and one thin section, of two different samples, were examined. The polished butt contains some relict chondrules with well-defined margins and many textural types present. The thin section shows the rock to have experienced extensive recrystallization of the matrix with few relict chondrules present. Relict chondrules range in size from ~170 μm to 1 mm. Olivine and orthopyroxene were observed with abundant Fe, Ni-metal and Fe-rich sulfide.

Mineral compositions: Olivine ($Fa_{18.4\pm0.5}$) and pyroxene ($Fs_{16.1\pm0.2}$). Oxygen isotopes: (R. Greenwood, *OU*; two analyses) ^{17}O = 3.017, 2.942; ^{18}O = 4.519, 4.344; ^{17}O 0.667, 0.683 (all ‰).

Classification: Ordinary chondrite (H4–5); W0, S3.

Type specimens: A total of 22 g, including 5 thin sections, are on deposit at *UAz*. *Farmer* holds 320 g.

Submitted by: Harold C. Connolly Jr., *KCCU* and *UAz*.

Table 3 lists all approved meteorite names and relevant data from Americas.

ANTARCTICA

ANSMET

Table 4 lists 447 approved meteorites recovered from Antarctica by ANSMET that should have been published in the Meteoritical Bulletin no. 87 and two from the Meteoritical Bulletin no. 92, but were not. For more information on these meteorites, please visit the curation home page of the Johnson Space Center, National Aeronautic and Space Agency, at http: //curator.jsc.nasa.gov.

KOREAMET

Table 5 is a list of approved meteorite recoveries by the Korea Expedition for Antarctic Meteorites (KOREAMET) in 2006. These are the first reported recoveries by KOREAMET.

CHINARE

Table 6 list 598 approved meteorites collected by the China Antarctic Research Expedition (CHINARE) to Grove Mountains, Antarctica, in 2006–2007 and submitted through the Polar Research Institute of China (PRIC). All type specimens and main mass are on deposit at National Astronomical Observatories, Chinese Academy of Science (NAOC).

Grove Mountains 020043 72°59′40″S, 75°12′28″E
Grove Mountains, Antarctica
Found: 1 January 2003
Ordinary chondrite (H4)

History and physical characteristics: It is covered by a brown fusion crust. The stone is 5.5 × 5 × 4.5 cm in size and weighs 56.9 g.

Petrography: (S. Li, S. Wang, and S. Liu, *IGCAS*). The meteorite is mainly composed of low-Ca pyroxene, olivine, diopside, plagioclase, troilite, Fe-Ni alloy, and some chromite and apatite. Ca-poor pyroxene is more abundant than olivine. Chondrules (about 37 vol%) in this meteorite are well-defined with sharp edges, whereas the matrix is characterized by moderate recrystallization. The meteorite belongs to type 4 estimated from its petrology.

Mineral compositions and geochemistry: (S. Li, S. Wang, and S. Liu, IGCAS) Olivine ($Fa_{10.4–12.4}$, average = $Fa_{11.0}$), low-Ca pyroxene ($Fs_{10.1–11.6}$, average = $Fs_{10.8}$), diopside ($Wo_{46.1–47.1}En_{49.0–49.2}Fs_{3.8–4.4}$, average = $Wo_{46.6}En_{49.3}Fs_{4.0}$), plagioclase ($Ab_{55.7–72.5}Or_{2.1–5.0}An_{24.0–42.1}$, average = $Ab_{67.6}Or_{3.4}An_{29.0}$).

Classification: Ordinary chondrite (H4).

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 020124 72°58′43″N, 75°15′39″E
Grove Mountains, Antarctica
Find: 6 January 2003
Mesosiderite

History and physical characteristics: The meteorite was found on blue ice west to the middle segment of the Gale Escarpment in Grove Mountains by X. Xu. It has an irregular shape with rough surface, and most of fusion crust has been lost. The meteorite weighs 1.47 g.

Petrography: (G. Wang and D. Wang, *GIGGCAS*; S. Hu and Y. Lin, *IGGCAS*) The meteorite contains 14 vol% metal. Silicate fraction consists of large fragments of mainly orthopyroxene, pigeonite, and plagioclase, with less abundant silica and a few olivine grains, and fine-grained matrix. Orthopyroxene fragments usually have bright rims but rare exsolutions. All fragments of pigeonite show exsolution of

augite, and normally have rims of the latter. Olivine has rounded shapes. The fine-grained matrix is composed mainly of pyroxenes and plagioclase with minor silica and chromite, showing an ophitic texture.

Mineral compositions and geochemistry: (S. Wen and L. Xu, *IGGCAS*; G. Wang, *GIGCAS*). Orthopyroxene fragments show large variation ($Fs_{23.4–41}$), with FeO content increasing toward the rims and from grains to grains, FeO/MnO = 29; lamellae of augite: ($Fs_{16.5–25.6}Wo_{41.8–43.7}$), pigeonite $Fs_{37.2–54.7}Wo_{2–5}$), Plagioclase ($An_{89–96}$). Individual fragments of olivine is homogeneous, but vary from grains to grains (Fa =34.2–43.4 mol%); kamacite (Ni = 5.02–6.27 wt%, Co = 0.66–0.81 [both wt%]); taenite (Ni = 39.4–40.5 wt%).

Classification: Mesosiderite; extensively weathered.

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 020175 72°58′45″S, 75°15′42″E

Grove Mountains, Antarctica
Find: 7 January 2003
Mesosiderite

History and physical characteristics: J. Li recovered this stone on blue ice in Grove Mountains, Antarctica. It weighs 1.54 g and has an irregular shape. No fusion crust remains.

Petrography: (L. Wang, A. Zhang, *PMO*; H. Wang, J. Cao, *NU*) The stone contains 42.4 vol% metallic Fe-Ni and troilite. The silicate part consists mainly of low-Ca and high-Ca pyroxene (47 vol%), plagioclase (10.1 vol%) and silica (0.5 vol%), with minor olivine. Both low-Ca and high-Ca pyroxene grains show exsolution lamellae. Some low-Ca pyroxene grains exhibit chemical zoning.

Mineral compositions and geochemistry: (L. Wang, A. Zhang, *PMO*; H. Wang, J. Cao, *NU*) Olivine ($Fa_{45.7–46.7}$, average = $Fa_{46.3±0.6}$), pyroxene ($Fs_{12.5–57.0}$, average = $Fs_{34.9±8.4}$; $Wo_{1.5–43.8}$, average = $Wo_{8.0±13.5}$), plagioclase ($An_{85.7–96.6}$, average = $An_{91.2±2.7}$; $Ab_{3.4–12.1}$, average = $Ab_{8.4±2.6}$).

Classification: Mesosiderite.

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 021525 72°57′39″N, 75°14′50″E

Grove Mountains, Antarctica
Find: 14 January 2003
Mesosiderite

History and physical characteristics: The meteorite was found on blue ice west to the middle segment of the Gale Escarpment in Grove Mountains by J. Li. It is an irregular fragment partially covered by black fusion crust. The meteorite weighs 3.87 g.

Petrography: (G. Wang and D. Wang, *GIGCAS*; S. Hu and Y. Lin, *IGGCAS*). The meteorite contains 17 vol% metal. Most large fragments are orthopyroxene that usually have bright rims. Less abundant fragments are pigeonite and plagioclase with several grains of olivine. Pigeonite fragments show exsolution of augite, and olivine grains have coronal outlines decorated with small grains of chromite. The fine-grained matrix has an ophitic texture, consisting of pyroxenes and plagioclase with minor silica and chromite. Phosphates occur mainly close to metal.

Mineral compositions and geochemistry: (L. Xu and W. Shen, *IGGCAS*; G. Wang, *GIGCAS*). Orthopyroxene fragments are very heterogeneous, $Fs_{19.7–55.9}Wo_{1–8}$, FeO/MnO = 25; Lamellae of augite ($Fs_{13–31}Wo_{34–46}$), pigeonite ($Fs_{33–56}Wo_{1–4}$). Relative homogeneous composition of small pyroxenes in matrix, $Fs_{32–36}Wo_{2–3}$; plagioclase: An = 84–96 mol%; olivine has a range of Fa = 32–41 mol%, but homogeneous in individual grains; kamacite (Ni = 5.20–6.49 wt%, Co = 0.60–0.81 wt%); (Ni = 37.0–46.7 wt%).

Classification: Mesosiderite; minimally weathered.

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 021536 72°57′53″S, 75°12′59″E

Grove Mountains, Antarctica
Find: 14 January 2003
Carbonaceous chondrite (CM2)

History and physical characteristics: J. Li recovered this stone on blue ice in Grove Mountains, Antarctica. It weighs 1.45 g and has an irregular shape. Part of black fusion crust remains.

Petrography: (A. Zhang, *PMO*; H. Wang, *NU*) The meteorite contains chondrules, mineral fragments, CAIs, and fine-grained matrix (~70 vol%). Most chondrules are small (200–300 μm in diameter) and a few are up to 2 mm. Type I PO chondrules are dominant, and type I PP and type II PO chondrules are less abundant. Mineral fragments are mainly olivine and pyroxene. There are a few Ca-Al-rich inclusions containing spinel and Al-rich diopside. Metallic Fe-Ni and sulfides are rare. Some olivine fragments show chemical zoning.

Mineral compositions and geochemistry: (A. Zhang, PMO; H. Wang, NU) Minerals in chondrules are olivine ($Fa_{0.5–43.5}$, average = $Fa_{6.7±11.2}$), and low-Ca pyroxene ($Fs_{1.0–6.0}$, average = $Fs_{3.04 ± 2.7}$; $Wo_{0.8–7.9}$, average = $Wo_{1.77±1.8}$).

Classification: Carbonaceous chondrite (CM2).

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 021729 72°47′23″S, 75°17′25″E

Grove Mountains, Antarctica
Find: 20 January 2003
Achondrite (ureilite)

History and physical characteristics: A stone of 2.97 g, mostly black fusion encrusted steon, was recovered from a moraine by J. Li.

Petrography: (A. Zhang, *PMO*; H. Wang, *NU*) It shows a

cumulate texture of coarse-grained olivine and pyroxene (up to 1.8 mm in length). Triple junctions with an angle of 120° are common among coarse-grained silicates. Grain boundaries between olivine and pyroxene are filled with fine-grained graphite and limonite. Olivine has reduced rims composed of fine-grained forsterite and Ni-poor metal, which also occur along fractures within olivine grains. A part of graphite veins intrude into olivine and pyroxene crystals as a plate.

Mineral compositions and geochemistry: (A. Zhang, *PMO*; H. Wang, *NU*) Olivine varies in composition from $Fa_{2.7}$ to $Fa_{23.1}$ with an average of $Fa_{12.9\pm7.6}$. The olivine core has a composition of $Fa_{20.8}$. Pyroxene also has variable composition ($Fs_{3.9–19.7}$, average = $Fs_{14.9\pm5.4}$; $Wo_{9.4–30.3}$, average = $Wo_{12.5\pm5.3}$). The pyroxene core has a composition of $Fs_{19.1}Wo_{10.8}$.

Classification: Achondrite (ureilite).

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 050179 72°57′32″S, 75°13′24″E

Grove Mountains, Antarctica
Find: 7 January 2006
Carbonaceous chondrite (CM2)

History and physical characteristics: The meteorite was found on blue ice west to the middle segment of the Gale Escarpment in Grove Mountains by J. Li. It is a fragment but most surface covered by black fusion crust. Small light gray colored chondrules in dark matrix can be noticed. The meteorite weighs 5.03 g.

Petrography: (Y. Lin, S. Hu, and L. Feng, *IGGCAS*). Chondrules are small, with diameter of <300 mm, except for a few large (500–1000 mm in diameter). Almost all chondrules have accretionary rims, and chondrules/matrix ratio in volume is about 6. Aqueous alteration is highly developed in both chondrules and matrix, producing PCP-rich objects. Only a few large fragments of olivine remain. Minor Ca-carbonates occur as nodules.

Mineral compositions and geochemistry: (S. Hu, T. Liu, and L. Feng, *IGGCAS*). Low Ca-pyroxene contains low FeO, ($Fs_{0.8–8.9}Wo_{0.8–4.1}$), olivine is highly heterogeneous within and among chondrules, with $Fa_{1.0–31}$. Minor phases are kamacite, sulfides, chromite, and Ca carbonates.

Classification: Carbonaceous chondrite (CM2).

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 050212 72°57′11″S, 75°13′58″E

Grove Mountains, Antarctica
Find: 8 January 2006
Mesosiderite

History and physical characteristics: The meteorite was found in a large moraine west to the middle segment of the Gale Escarpment in Grove Mountains by Y. Ju. It has a round shape with a small fraction of black fusion crust remaining. The meteorite weighs 0.96 g.

Petrography: (Y. Lin, S. Hu, and L. Feng, *IGGCAS*) It contains 12.3 vol% of metallic Fe-Ni and is significantly weathered. The silicate part consists of various large fragments of pyroxenes, plagioclase and silica mineral, eucritic lithologies, and fine-grained matrix. All fragments of pigeonite and augite show exsolutions, while those of orthopyroxene rarely contain lamellae of Ca-rich pyroxene, but highly heterogeneous among grains and zoned with bright rims. The fine-grained matrix shows ophitic texture, consisting mainly of pigeonite and plagioclase with less abundant augite, silica and chromite. Minor phosphates occur mainly close to metals.

Mineral compositions and geochemistry: (Y. Lin, S. Hu, L. Xu, and L. Feng, *IGGCAS*). Plagioclase is rather homogeneous, with $An_{95–99}$. The fragments of orthopyroxene are highly heterogeneous, with Fs contents of the cores varying from 18 mol% to 60 mol%. The FeO/MnO (in weight) = 29 ± 3. Low-Ca lamellae ($Fs_{41–60}Wo_{2–6}$) high-Ca lamellae ($Fs_{21–28}Wo_{40–42)}$. Minor olivine (Fa_{67}). Kamacite (Ni = 4.71–6.31 wt%; Cr = 0.65–0.75 wt%); taenite (Ni = 39.9–41.8 wt%); troilite has no detectable Cr by EPMA.

Classification: Mesosiderite, significantly weathered.

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 051523 72°56′6.2″S, 75°18′51″E

Grove Mountains, Antarctica
Find: 11 January 2006
Achondrite (eucrite)

History and physical characteristics: The meteorite was found in a small moraine west to the middle segment of the Gale Escarpment in Grove Mountains by Y. Lin. It has a peanut-like shape most covered by glazy fusion crust. White clasts of plagioclase can be seen under the crust and areas without the crust. The meteorite weighs 0.8 g.

Petrography: (Y. Lin, S. Hu, T. Liu and L. Feng, *IGGCAS*) It consists mainly of coarse-grained pyroxenes and plagioclase. Pyroxenes show exsolution of augite lamellae in pigeonite or vice-versa. The meteorite is heavily shocked and brecciated. Tiny inclusions of chromite in pyroxene are common. Among large fragments of silicates, there is regolith-like matrix. Sulfides occur mainly along cracks and/or boundaries of pyroxenes.

Mineral compositions and geochemistry: (Y. Lin, T. Liu, S. Hu, and L. Feng, *IGGCAS*). Low Ca-pyroxene ($Fs_{54.1–4.1}$; FeO/MnO = 29.4–0.7) augite ($Fs_{22}Wo_{44}$), plagioclase ($An_{87.6–90.2}Ab_{9.6–12.0}$). Olivine ($Fa_{75}$; FeO/MnO = 38–41).

Classification: Achondrite (eucrite); extensively shocked, monomict breccia, minimally weathered.

Type specimens: *PRIC* holds the main mass and a polished section.

Grove Mountains 052382 72°47′15″S, 75°16′38″E

Grove Mountains, Antarctica

Find: 17 January 2006
Achondrite (ureilite)

History and physical characteristics: The meteorite (1.86 g) was found in a large moraine west to the north segment of the Gale Escarpment in Grove Mountains by J. Li. It has a small, bean-like shape of 17 × 17 mm with a flat bottom, which is almost completely covered by black fusions crust. It is hemispherical in shape with a flat bottom, but completely covered by black fusion crust.

Petrography: (B. Miao, Y. Lin, S. Hu, and L. Feng, *IGGCAS*). It consists mainly of olivine, pigeonite, and carbonaceous material containing graphite and diamond. Olivine grains are heavily shocked into small grains of 10–20 μm and shows fine-grained mosaic or granoblastic texture, small amount of glassy material occurs among the fine-grained olivines. Based on the carbonaceous material distribution and reduction zones of olivine, the original outlines of coarse-grained olivine (0.5–1.2 mm) can be readily defined. Reduction zones of olivine which consists of forsterite and poor-Ni Fe metal occur near the carbonaceous patches, Many pigeonite grains have rounded shapes with the size of 0.3–0.8 mm. Diamond and graphite were identified in carbonaceous material by Raman.

Mineral compositions and geochemistry: Olivine (cores = $Fa_{14.2–22.7}$; rims = $Fa_{2.1–13.2}$), pigeonite ($Fs_{10.6–14.0}Wo_{2.1–9.2}$), augite ($Fs_{9.6–11.4}Wo_{19.8–22.8}$), metal (Ni = 0.8–6.5%, Co = 0.56%).

Classification: Achondrite (ureilite), heavily shocked, minor weathering.

Type specimens: *PRIC* holds the main mass and a polished section.

AUSTRALIA

Table 7 lists all approved meteorite names and relevant data from Australia.

ASIA

Indonesia

Lovina **8°39′S, 115°13′E**

Lovina, Bali, Indonesia
Find: January 1981
Iron (ataxite, ungrouped)

History: Found on the beach while the finder was picking seashells at low tide.

Physical characteristics: Striking oblong 8.2 kg, weathered iron with cm-scale pyramids projecting from upper surface (orientation as found on beach) and cm-sized vugs in lower surface. The pyramids have ribs spaced approximately at mm intervals.

Petrography: (R. Flemming, P. Corcoran *UWO*; S. Kissin, *LU*) Initial examination of the meteorite exterior by in situ micro-XRD identified taenite but no kamacite. Awaruite (Ni-dominant alloy) was also identified as co-structural with the taenite. Examination by reflected light microscopy and SEM-EDX of a polished thin section from near the weathered surface of Lovina revealed abundant globular troilite nodules up to 0.8 mm in diameter in a featureless Fe-Ni-Co alloy matrix. The metal contains no kamacite exsolution lamellae nor are there Neumann lines. Many of troilite nodules are partially or totally oxidized and show Ni-enriched awaruite rims in the adjacent metal. Small Cr-oxide grains (~10 μm) occur with the troilite.

Geochemistry: (S. Kissin, *LU*) Bulk composition (INAA): Co = 0.87, Ni = 34.5 (both wt%); Cu = 395, Ga = 22, Ge = 150, As = 5.6, Sb = 390, W <10, Re < 0.01, Ir = 0.252, Pt < 0.5, Au = 0.07, Cr = 321 (all ppm).

Classification: (S. Kissin, *LU*; P. McCausland, *UWO*) Iron (ataxite, ungrouped).

Type specimens: A 32.5 g cut end piece and one polished thin section is deposited at *UWO*. *Richer* holds the main mass.

Submitted by: P. McCausland, *UWO*.

Oman

Dhofar 1269 **18°43′53″N, 54°30′33″E**

Dhofar, Oman
Find: 4 March 2005
Achondrite (diogenite, polymict breccia)

History and physical characteristics: A dark brown, 42 g stone was found in the Dhofar region of Sultanate of Oman by E. Olson on March 4, 2005.

Petrography: (T. Bunch and J. Wittke, *NAU*) A polymict breccia that contains two distinct lithologies: a) coarse-grained orthopyroxene (< 5 mm fragment size), plagioclase, and chromite. b) Partially brecciated gabbro (olivine orthopyroxenite) containing cumulate olivine + orthopyroxene + chromite with plentiful inclusions of FeS. Modal analyses of lithology B made on 4 clasts (vol%): orthopyroxene = 48–65, olivine = 31–49, FeS = 3–5 and chromite = 1.

Mineral compositions and geochemistry: Lithology A: orthopyroxene ($Fs_{21.9}Wo_{2.8}$; FeO/MnO = 30, chromite (Cr/(Cr + Al) = 70). Lithology B: orthopyroxene ($Fs_{23.8}Wo_{3.2}$; FeO/MnO = 29), olivine ($Fa_{29.1}$; FeO/MnO = 48), chromite (Cr/(Cr + Al) = 53), FeS (contains 0.45 wt% Zn and 0.38 wt% Ti), metal (2.8 wt% Ni).

Classification: Achondrite (diogenite, polymict breccia); minimal shock and weathering.

Type specimens: An 8.4 g sample is on deposit at *NAU*. *Olson* holds the main mass.

Submitted by: Ted Bunch, *NAU*.

Dhofar 1429 **18°32′16″N, 54°11′16″E**

Dhofar, Oman
Find: 5 March 2006
Achondrite (eucrite, monomict)

History and physical description: An 89 g stone, covered

with very fresh fusion crust, was found in the Dhofar region of Oman by R. Ward on March 5, 2006.

Petrography: (T. Bunch and J. Wittke, *NAU*) Partially recrystallized monomict breccia. Relict textures include fine-grained subophitic transitional to variolitic textures. The matrix is a mixture of finely comminuted to recrystallized zones. Narrow shock veins transect the specimen. Plagioclase in relict basalt clasts is partially converted to maskelynite.

Mineral compositions and geochemistry: Relict basalt clasts: orthopyroxene ($Fs_{60.3}Wo_{2.2}$; FeO/MnO = 32), pigeonite ($Fs_{51.2}Wo_{12.3}$; FeO/MnO = 30), augite ($Fs_{25}Wo_{45.3}$), chromite (Cr/(Cr + Al) = 81) and metal (Ni = 0.27 wt%).

Classification: Achondrite (eucrite, monomict breccia); medium to extensive shock, minimal weathering.

Type specimens: A sample of 18.8 g is on deposit at *NAU*. *Ward* holds the main mass.

Submitted by: Ted Bunch, *NAU*.

Dhofar 1430 **18°34′10″N, 54°14′24″E**

Dhofar, Oman
Find: 6 March 2006
Carbonaceous chondrite (CK3)

History and physical characteristics: A 185 g complete, poorly crusted stone was found in the Dhofar region of Sultanate of Oman by M. Farmer and R. Ward on March 6, 2006.

Petrography: (J. Wittke and T. Bunch, *NAU*) Greenish gray stone that has a poorly crystallized matrix of olivine, augite, plagioclase, feldspathic glasses, orthopyroxene, Cr-magnetite, ilmenite, pyrite, pyrrhotite, and pentlandite. Contains many heavily mantled chondrules (up to 1.4 mm in diameter), compound chondrules, relict dusty olivine grains within porphyritic chondrules, single crystals of zoned olivine (0.3–0.85 mm in diameter) and poorly crystallized, plagioclase-rich objects.

Mineral compositions and geochemistry: Matrix olivine ($Fa_{29.3–34.5}$, NiO = 0.78 wt%, FeO/MnO = 95–133); orthopyroxene ($Fs_{23.3}Wo_{2.3}$); augite ($Fs_{12}Wo_{24.3}$); plagioclase/feldspathic glasses ($An_{38–78}$) and Cr-magnetite (Cr_2O_3 = up to 6.6 wt%).

Classification: Carbonaceous chondrite (CK3), minor shock, minor to moderate weathering.

Type specimens: A sample of 20.1 g is on deposit at *NAU*. Ward holds the main mass.

Submitted by: Ted Bunch, *NAU*.

Dhofar 1436 **18°25.4′N, 54°25.4′E**

Dhofar, Oman
Find: 8 December 2004
Achondrite (lunar feldspathic impact-melt breccia)

History: This meteorite was discovered by an anonymous finder on a limestone plateau in the Dhofar region in Oman, far from other known lunar meteorites.

Physical characteristics: A single brownish green stone of 24.2 g total weight. Fusion crust is absent.

Petrography: (Lorenz C. and Nazarov M., *Vernad*) The meteorite is an impact melt breccia, consisting of lithic and mineral clasts embedded in a partly devitrified glassy matrix with abundant bubbles. The lithic clasts are mainly impact melt breccias and rocks of anorthositic, gabbro-anorthositic, and gabbro-noritic compositions. Granular breccia clasts are also present. Lithic fragments range from 0.01 to 7 mm in size. Major minerals are pyroxene and feldspar, with minor olivine. Accessories are silica, chromite, ilmenite, Ca-phosphate, troilite and FeNi metal.

Mineral composition and geochemistry: (Lorenz C., Kononkova N., *Vernad*, EMP): Feldspar ($An_{92.5–98.7}Ab_{1.1–7.2}$); orthopyroxene ($En_{68.2–84.1}Wo_{0.2–5.0}$; Fe/Mn 62); clinopyroxene ($En_{13.4–63.7}Wo_{12.8–40.5}$; Fe/Mn 63); olivine ($Fo_{42.6–72.7}$; Fe/Mn 96); spinel is Al-Ti chromite. Average glassy matrix composition: SiO_2 = 45.1, TiO_2 = 0.26, Al_2O_3 = 30.8, FeO = 4.49, MgO = 3.94, CaO = 16.7, Na_2O = 0.48, K_2O = 0.04 [all wt%]. Oxygen isotopes: (I. A. Franchi, *OU*) $\delta^{17}O$ = 3.286; $\delta^{18}O$ = 6.244 (both ‰).

Classification: Achondrite (lunar feldspathic impact-melt breccia); minor weathering.

Specimens: A type specimen of 5.2 g and one thin section are on deposit at *Vernad*. An anonymous collector holds the main mass.

Submitted by: Marina Ivanova, *Vernad*.

Jiddat al Harasis 203 **19°58.980′N, 56°24.821′E**

Oman
Find: 25 December 2002
Mesosiderite (2C)

History: Thirty-one specimens (total mass >46.2 kg) belonging to the same fall event were recovered in 2003–2005 in adjacent areas of JaH and RaS.

Physical characteristics: We describe the best-characterized specimen of this group, 1231.2 g, found by A. Al-Kathiri, M. Eggimann, and S. Lorenzetti. Strongly weathered surface; partial disintegration. Large pyroxene clasts are visible on surface.

Petrography: (E. Gnos, *MHNGE*; B. Hofmann, *NMBE*; A. Al-Kathiri, *UBE/MCI*) The stone has a brecciated texture with a recrystallized matrix. Poikilitic minerals are absent. Point counting in reflected light (n = 500) yielded in vol%, orthopyroxene (some large clasts exceed 5 cm in size) = 68.8, plagioclase (+ silica + phosphate) = 7.8, metal/oxide = 17.2, troilite = 4.6, and isolated, up to 6.5 mm-sized olivine clasts = 1.6. Many orthopyroxene crystals contain abundant sulfide and metallic inclusions along healed cracks. Metal is heavily weathered (80–100%), troilite shows partial oxidation.

Mineral composition and geochemistry: Microprobe analyses of pyroxene yielded a compositional range of $Fs_{31.0–33.3}Wo_{1.8–40}$ (average $Fs_{28.4}Wo_{2.5}$). Bulk composition: After subtraction of metal-derived Fe from bulk analyses and assuming a Fe/Mn ratio of the non-metal fraction of 30, a diogenitic composition with SiO_2 = 51.0, Al_2O_3 = 3.9, MgO = 21.5, CaO = 3.6, and Na_2O = 0.23 (all wt%; (REE ~ 2 × CI).

Normative plagioclase in silicate fraction is <12 wt%. Estimated primary metal content is 23.5 wt%. Oxygen isotopes: (I. A. Franchi and R. C. Greenwood, *OU*) $\delta^{17}O$ = 1.403, $\delta^{18}O$ = 3.143, and $\delta^{17}O$ = –0.232 (mean of 2 analyses).
Classification: Mesosiderite (2C); minimal shock, extensive weathering. Classification as 2C mesosiderite is based on low plagioclase content and recrystallized matrix without poikilitic minerals.
Specimens: Type specimen and main mass at *NMBE*.
Submitted by: Beda Hofmann, *NMBE*.

Ramlat as Sahmah 201 20°0.486′N, 56°24.889′E
Oman
Find: 24 December 2002
Rumuruti chondrite (R5)
History: A complete stone of 249.42 g was found during a systematic search for meteorites by A. Al-Kathiri, M. Eggimann, and S. Lorenzetti.
Physical characteristics: Complete rounded stone, dark greenish grey, without fusion crust and a mass of 249.42 g. Petrography: (E. Gnos, *MHNGE*; B. Hofmann, *NMBE*; A. Al-Kathiri, *UBE/MCI*) The stone is brecciated and consists mainly of olivine and plagioclase and abundant troilite and pentlandite.
Mineral composition and geochemistry: Olivine has an average composition of $Fa_{39.1}$ (EMP) and $Fa_{38.8}$ (XRD). Plagioclase shows a compositional range from An_{20}–An_{21}. Oxygen isotopes: (I.A. Franchi and R.C. Greenwood, *OU*) $\delta^{17}O$ = 5.909, $\delta^{18}O$ = 5.838, and $\Delta^{17}O$ = 2.873.
Classification: Rumuruti chondrite (R5); S3, minor to partial weathering of troilite. Another six petrographically identical and most likely paired stones were found in adjacent areas of RaS and JaH in 2005 (mass of likely paired stones is 796.4 g), which are JaH 234/236/239/249 and RaS 249/254.
Specimens: The entire samples is on deposit at *NMBE*.
Submitted by: Beda Hofmann, *NMBE*.

Ramlat as Sahmah 211 20°35.152′N, 55°52.351′E
Oman
Find: 16 January 2003
Ungrouped chondrite
History: A single stone was found during a search for meteorites by A. Al-Kathiri, M. Eggimann, B. Hofmann and U. Krähenbühl.
Physical characteristics: Angular brown stone, partially covered with thick black fusion crust.
Petrography: (E. Gnos, *MHNGE*; B. Hofmann, *NMBE*; A. Al-Kathiri, *UBE/MCI*) The metal content is very low and its distribution is inhomogeneous and clustered, forming isolated nuggets up to 5 mm. Only few relic chondrules can be recognized. Silicate and spinel grains contain abundant metal-sulfide droplets (micron-sized intergrowths). Ilmenite grains are also present. Shock stage S1, weathering W3 as based on finely distributed metal, only.
Mineral composition and geochemistry: Average olivine composition is $Fa_{31.3}$, ($Fa_{30.0}$ XRD, M. Eggimann, *UBE*); average orthopyroxene composition is $Fs_{26.2}Wo_{2.0}$. Plagioclase (50–200 μm) shows a compositional range from $An_{10.3}$ to $An_{11.6}$. Oxygen isotopes: (I. A. Franchi and R. C. Greenwood, *OU*): $\delta^{17}O$ = 4.603, $\delta^{18}O$ = 6.561, and $\Delta^{17}O$ = 1.191 (all ‰). The $\delta^{17}O$ value fits the LL field but $\delta^{18}O$ is approximately 1 ‰ more positive.
Classification: Ungrouped chondrite related to ordinary chondrites (LL6) that deviates from this group in metal distribution and O isotopes.
Specimens: Type specimen and main mass *NMBE*.
Submitted by: Beda Hofmann, *NMBE*.

Ramlat as Sahmah 221 0°31.912′N, 56°2.941′E
Oman
Find: 19 January 2003
Carbonaceous chondrite (CV3)
History: A fragmented stone was found by A. Al-Kathiri, M. Eggimann, B. Hofmann, and U. Krähenbühl during a search for meteorites.
Physical characteristics: The dark gray stone (3 fragments totaling 48.29 g) shows oriented fusion crust flow lines.
Petrography and geochemistry: (E. Gnos, *UBE*; B. Hofmann, *NMBE*; A. Al-Kathiri, *UBE*) The composition of olivine ranges from $Fa_{1.8–6.0}$, low-Ca pyroxene show compositions in the range of $Fs_{2.5–2.8}Wo_{1.3–2.6}$. CAIs are predominantly of the fluffy type. The matrix/chondrules + aggregates ratio is 0.51. Red chondrules dominate over blue chondrules in cathodoluminescence images indicating metamorphic grade 3.2. Oxidation of sulfides is minor.
Classification: Carbonaceous chondrite (CV3), minimal shock.
Specimens: The entire sample is on deposit at *NMBE*.

Sayh al Uhaymir 449 21°2.4′N, 57°18.9′E
Oman
Find: 19 March 2006
Lunar (feldspathic impact-melt breccia)
History: This meteorite was found on a limestone plateau in the Dhofar desert of Oman, far from any other known lunar meteorites.
Physical characteristics: A single brownish to dark green stone weighing 16.5 g, with no fusion crust.
Petrography: (M. A. Ivanova and M. A. Nazarov, *Vernad*) The meteorite is a clast-rich impact-melt breccia containing numerous mineral fragments and lithic clasts embedded in a fine-grained impact-melt matrix. The lithic clast population is dominated by impact-melt breccias of anorthositic, gabbroic, and noritic compositions. The size range of the clasts is 0.01–10 mm, and the main minerals are pyroxene, feldspar, and minor olivine, silica, chromite, ilmenite, Ca-phosphate, troilite and FeNi metal.

Mineral composition and geochemistry: (M. A. Ivanova and N. N. Kononkova, *Vernad*.) Feldspar ($An_{93.4–97.4}Ab_{2.5–9.2}$), clinopyroxene ($En_{6.5–71.1}Wo_{5.1–44.1}$; Fe/Mn = 61), orthopyroxene ($En_{53.2–79.5}Wo_{3.3–4.7}$; Fe/Mn = 59); olivine ($Fo_{50.5–76.7}$; Fe/Mn = 96), ilmenite (MgO = 3.6 wt%). Average glassy matrix composition: SiO_2 = 46.2, TiO_2 = 0.33, Al_2O_3 = 25.6, FeO = 5.80, MgO = 4.85, CaO = 15.33, Na_2O = 0.38 (all in wt%).
Classification: Lunar (feldspathic impact melt breccia); minor weathering, Fe hydroxides are present.
Specimens: A type specimen of 3.6 g and one thin section are on deposit at *Vernad*. An anonymous finder holds the main mass of the meteorite.
Submitted by: Marina A. Ivanova, *Vernad*.

Thumrayt 001 **17°35′N, 54°21′E**
Thumrayt, Oman
Find: November 2006
Pallasite (main group)
History: The meteorite was found by M. Farmer in November 2006. An additional 41 pieces within an area of 0.5 miles by 3.5 miles were collected by M. Farmer and R. Ward.
Physical characteristics: The meteorite was found as a small strewn field comprising of 42 pieces with a total mass of 2.48 kg. The surface of the meteorite is weathered, it displays exposed crystals and the metal portion is gray to reddish brown.
Petrography: (D. Schrader, *UAz*) The meteorite is predominantly Fe,Ni metal, with angular (larger crystals) to sub-rounded (only the small crystals) olivine crystals ranging in apparent long axis from 0.02 to 4 cm. The crystals are sometimes associated with schreibersite, troilite, chromite, and calcium phosphate. One area of chromite borders both olivine and Fe,Ni metal and contains angular and rounded troilite grains.
Mineral compositions and geochemistry: (D. Schrader, K. Domanik, and D. Hill, *UAz*) $Fo_{83.8–87.3}$ (average $Fa_{86.7±0.4}$); kamacite (Ni = 4.7 ± 1.2, Co = 0.6 ± 0.04 [averages, wt%]), and Ni-rich Fe,Ni metal (up to Ni 46.5 wt%), schreibersite;, troilite, Ca phosphate, chromite. Bulk composition: (D. Schrader, D. Lauretta, and J. Goreva, UAz; ICP-MS) Fe = 87.7, Ni = 11.0, Co = 0.56, S = 0.36, P = 0.43 [all wt%]; Cr = 3043, Ge = 4.4, Ga = 11.2, Cu = 235, Pt = 10.4, As = 13.9 [all ppm]; Se = 2234, Mo = 34879, Ru = 2230, Pd = 1133, Rh = 0361, V = 11294, Sb = 0091, Re = 0120, Mn = 307125, Ag = 0553, and Zn = 2257 (all ppb). Os and Ir below detection limit.
Classification: Pallasite (main group).
Type specimens: A total of 21 g of sample are on deposit at UAz. *Ward* holds the main mass.
Submitted by: D. Schrader, *UAz*.

Table 8 lists all approved meteorite names and relevant data from Asia.

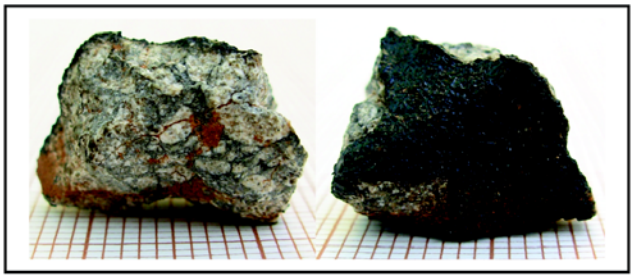

Fig. 4. Image of a hand sample of Puerto Lápice with 1 mm grid paper for scale.

EUROPE

Puerto Lápice **39°21′N, 3°31′W**
Ciudad Real, Castilla-La Mancha, Spain
Fall: 10 May 2007, 19:57 local time (UT +2h)
Achondrite (eucrite, brecciated)
History: At 17:57 P.M. (UT) on May 10, 2007, a brilliant fireball of absolute magnitude −14 ± 4 was widely seen all over Spain. The fireball traveled from the south to the north and experienced various explosions along its trajectory. The Spanish Fireball Network (SPMN) and numerous images taken by observers documented the fall.
Physical characteristics: The first specimen (5.7 g) was found in an olive grove by Thomas Grau on June 3 at 39°21.893′N, 3°31.321′W. Other specimens were found nearby on June 8–9 by Thomas Grau (4.5 g, 3.0 g, 3.8 g, and 5.8 g), on June 13 by Jose Vicente Casado (2.7 g), on July 4 by Jose Maria Madiedo (Univ. Huelva) (6.0 g) and Jose Vicente Casado (1 g), and on July 11 by Francisco Ocaña (5.9 g). Another 22 pieces have been found since then, and the total mass recovered is 0.5 kg. All the specimens exhibit wrinkled and extremely shiny black fusion crusts.
Petrography and mineral compositions: (Jordi Llorca and Ignasi Casanova, *UPC*; Josép M. Trigo-Rodríguez, *CSIC*; Addi Bischoff, *IfP*). The meteorite exhibits areas with basaltic texture as well as recrystallized portions. Low-Ca pyroxene ($Fs_{59–61}$; range $Fs_{53–65}$; $Fe/Mn_{30.6±0.9}$) and the mean composition of plagioclase ($An_{86.5}$; range $An_{77–93}$). Bulk Fe/Mn = 34.5.
Classification: Achondrite (eucrite, brecciated); moderate shock, no weathering.
Type specimens: A total sample mass of 22.1 g is on deposit at the *UPC*.
Submitted by: J. Llorca, *CSIC*.

Ulyanovsk **54°21′53.81″N, 48°35′29.21″E**
Ulyanovsk, Russia
Find: 24 May 2006
Ordinary chondrite (H5)

History: One stone of the meteorite was found by S. G. Bildzyukevich, in Zavolzhsky District of Ulyanovsk, in a

vacant lot near the intersection of Antonov and Ulyanovsky Avenues. A part of the meteorite was sticking out of the ground by ~2 cm and was thus polished by tires of cars going to the nearby repair shop. A sample of the meteorite was given to the meteorite collection of the Russian Academy of Sciences by members of the Russian Society of Meteoritical Admirers, D. A. Kazakov and Dr. A. K. Stanyukovich.

Physical characteristics: One 4680 g sample with a polyhedron shape, 16 × 16 × 12 cm in size. The surface was slightly covered by iron hydroxides.

Petrography: (Lorenz C. A., Ivanova M. A., *Vernad*.) The meteorite contains olivine, pyroxene, FeNi-metal, sulfides, chromites and abundant (~80%) chondrules and their fragments. The chondrules range in size from 0.2 to 0.7 mm in apparent diameter to 0.3 mm. The chondrule margins are not clear and the meteorite contains a large variation in the textural types of chondrules including BO, PO, POP, and PP.

Geochemistry: (Ivanova M. A., *Vernad*.) Olivine ($Fa_{17.9}$) and orthopyroxene ($Fs_{16.1}Wo_{1.2}$).

Classification: Ordinary chondrites (H5); S3, W2.

Type specimens: A total of 960 g of sample and one thin section are on deposit at Vernadsky. D. A. Kazakov, A. K. Stanyukovich, and S. P. Vasiliev hold the main mass.

Submitted by: M. Ivanova, *Vernad*.

Table 9 lists approved meteorites names and relevant data for recoveries from Europe.

NOVA

Table 10 lists approved meteorites names and relevant data for recoveries from unknown or uncertain locations that have been approved to bear the NOVA name series.

ERRATA

Errata to previous editions of the Meteoritical Bulletin.

The following descriptions should have appeared in the Meteoritical Bulletin no. 92.

Adam Thalha **22°59.613′N, 10°09.218′W**
Mauritania
Find: January 28, 2005
Ordinary chondrite (LL3)

History: Annick Goueslain and Jean Luc Parodi discovered two stones in the Mauritanian Sahara while searching for meteorites.

Physical characteristics: The two fresh-looking stones are partially covered with fusion crust; their masses are 145 and 114.3 g, respectively.

Petrography: (M. Bourot-Denise, *MNHN*) The chondritic texture is intact, and opaques are present as nodules interspersed between chondrules; large type II chondrules are by far the most abundant among chondrules and very big (0.5–>1 cm in size); white, pyroxene chondrules are especially common; in type I porphyritic chondrules, no FeO zoning is seen in olivine. Matrix in between chondrules is most of the time pervaded by a mixture of silicate-, metal-, and sulfide-forming droplets (melted material) in the vicinity of large opaque grains.

Geochemistry: Olivine ($Fa_{10.4±12.2}$, range $Fa_{0.72–39.8}$; CaO content up to 0.6 and Cr_2O_3 content up to 0.55 [both in wt%]); low-Ca pyroxene ($Fs_{14.1±6.5}$, range $Fs_{4.1–21.2}$).

Classification: Ordinary chondrite (LL3; estimated subtype 3.2); S4, W2.

Type specimens: A total of 21 g of sample and four polished mounts are on deposit at *MNHN*. In addition, *MNHN* holds a nearly complete stone of 120.8 g. *Goueslain* and *Parodi* hold the remaining mass.

REFERENCES

Irving A. J., Kuehner S. M., Korotev R. L., Rumble D. and Hupé G. 2006. Mafic granulitic impactite Northwest Africa 3163: A unique meteorite from the deep lunar crust (abstract #1365). 37th Lunar and Planetary Science Conference. CD-ROM.

Irving A. J., Kuehner S. M., and Rumble D. 2005. Brachinite NWA 3151 and (?)brachinite NWA 595 (#5213). *Meteoritics & Planetary Science* 40:A73.

Wittke J. H., Bunch T. E., Irving A. J., Kuehner S. M. and Rumble D. 2008. Petrological and oxygen isotopic diversity among brachinites NWA 4872, NWA 4874, NWA 4882, and NWA 4969: How many ancient parent bodies? (abstract #1974). 39th Lunar and Planetary Science Conference. CD-ROM.

ABBREVIATIONS

Classifiers, Type Specimen Locations, Finders, and Holders of Main Masses

A key to abbreviations for addresses used in the Meteoritical Bulletin is found at our web site, http://tin.er.usgs.gov/meteor/MetBullAddresses.php.

Listed throughout most of the tables within the "Info" column are relevant data on who classified the samples, where the type specimen is located, etc. Below is a key to the abbreviations used within this edition.

AMusS-1: Classified: R. Pickard, *BORF*. Type specimen, *AMAS*. Main mass: *Shute*.

AMusS-2: Classified: R. Pickard, P. Williams and M. Clissold, *BORF*. Type specimen, *AMusS*. Main mass: K. Varvel.

AMusS-3: Classified: R. Pickard, P. Williams and M. Clissold, *BORF*. Type specimen, *AMusS*. Main mass: C. Brandl.

AMusS-4: Classified: R. Pickard, P. Williams and M. Clissold, *BORF*. Type specimen, *AMusS*. Main mass: *Bessey* and *Pickard*.

AMusS-5: Classified: R. Pickard, P. Williams and M. Clissold, *BORF*. Type specimen, *AMusS*. Main mass: *Kuntz*.
Bart-1: Classified: R. Bartoschewitz. Type specimen: *Kiel*. Main mass: Anonymous.
Bart-2: Classified: R. Bartoschewitz. Type specimen: *Kiel*. Main mass: *Barto*. Finder: C. Bartoschewitz.
Bart-2: Classified: R. Bartoschewitz. Type specimen: *Kiel*. Main mass: *Barto*. Finder: R. Bartoschewitz.
Bern-1: Classified: E. Gnos, *MHNGE* and A. Al-Kathiri, *UBE/MCI*. Type specimen and main mass: *NMBE*. Finders: E. Gnos, *MHNGE*; B. Hofmann, *NMBE* and A. Al-Kathiri, *UBE/MCI*.
Bern-2: Classified: E. Gnos, *MHNGE*, B. Hofmann, *NMBE* and A. Al-Kathiri, *UBE/MCI*; analysts E. Gnos, *MHNGE* and A. Al-Kathiri *UBE/MCI*. Type specimen: *NMBE*. Finders: B. Hofmann, *NMBE*, A. Al-Kathiri, *UBE/MCI*, U. Krähenbühl, and M. Eggimann.
Bern-5: Classified: E. Gnos, *MHNGE*; B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: E. Gnos, *MHNGE*; B. Hofmann, *NMBE*; A.Al-Kathiri *UBE/MCI*.
Bern-6: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: E. Gnos, *MHNGE*; S. Lorenzetti; A. Al-Kathiri, *UBE/MCI*.
Bern-7: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: S. Bartels, J. Bühler, B. Hofmann, *NMBE*; I. Leya, S. Lorenzetti.
Bern-8: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: M. Eggimann, E. Gnos, *MHNGE*; B. Hofmann, *NMBE*; L. Huber, and M. Tschudin.
Bern-9: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: M. Eggimann, E. Gnos, *MHNGE*; B. Hofmann, *NMBE*, L. Huber, M. Tschudin, A. Al-Kathiri; *UBE/MCI*.
Bern-10: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: M. Eggimann, *UBE*; E. Gnos, B. Hofmann, A. Al-Kathiri, *UBE/MCI*.
Bern-11: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: M. Eggimann, *UBE*; E. Gnos, B. Hofmann.
Bern-12: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen: *NMBE*. Finders: M. Eggimann and E. Gnos, *MHNGE*.
Bern-14: Classified: E. Gnos, *MHNGE* and B. Hofmann, *NMBE*. Type specimen and main mass: *NMBE*. Finders: M. Eggimann, E. Gnos, *MHNGE* and A. Al-Kathiri, *UBE/MCI*.
Bern-15: Classified by A. Al-Kathiri, *UBE/MCI*, E. Gnos, *IGS* and B. Hofmann, *NMBE*. Analyst: E. Gnos. Type specimen and main mass: *NMBE*. Finders: Bühler, M. Eggimann, E. Gnos, *IGS*; R. Wieler.
Bern-16: Classified: E. Gnos, *MHNGE*, B. Hofmann, *NMBE* and A. Al-Kathiri, *UBE*, *MCI*. Type specimen: *NMBE*. Main mass: *SQU*.
Harper-1: Classified: P. Sipiera. Type specimen: DuPont. Main mass: Finder.
HIGP-1: Classified: G. Huss, *HIGP*. Type specimen: *ASU*. Main mass: Skip Wilson.
IfP-1: Classified: A. Bischoff, *IfP*. Type specimen: *IfP*.
JNV-1: Classified: M. S. Sisodia, R. P. Tripathi and G. Parthasarathy, *JNV*. Noble gases: N. Bhandari, S. V. S. Murty, P. N. Shukla, A. D. Shukla, R. Mahajan, *PRL* and G. Parthasarathy, *NGRIH*. Type specimen *PRL*; Oxygen isotopes: I. Franchi, *OU*. Main mass: *JNV*.
KOREAMET-1: B-G Choi, *Seoul* and A. Rubin, *UCLA*. Type specimen or main mass: *Seoul* and *KPRI*.
MNHN-1: Classified: M. Bourot-Denise, *MNHN*. Type specimen, *MNHN*. Main mass: *Giessler*.
MSP-1: V. Moggi Cecchi, *MSP*. Type specimen: *MSP*. Main mass: *Chin*.
MSP-2: V. Moggi Cecchi, *MSP*. Type specimen: *MSP*. Main mass: Bettini.
MSP-3: V. Moggi Cecchi, *MSP*. Type specimen: *MSP*. Main mass: *MSP*.
MNB-1: Classified: A. Greshake, *MNB*. Type specimen, *MNB*. Main mass: *Ralew*.
MNB-2: Classified: A. Greshake, *MNB*. Type specimen, *MNB*. Main mass: *Strufe*.
MNB-3: Classified: A. Greshake, *MNB*. Type specimen, *MNB*. Main mass: *Stehilk*.
MNB-4: Classified: A. Greshake, *MNB*. Type specimen, *MNB*. Main mass: Giessler.
MNB-5: Classified: A. Greshake, *MNB*. Type specimen, *MNB*. Main mass: *JNMC*.
NAU-1: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Ralew*.
NAU-2: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Hermann*.
NAU-3: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Reed*.
NAU-3: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *PSF*.
NAU-4: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: Anonymous.
NAU-5: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Farmer*.
NAU-6: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Olsen*.
NAU-7: Classified: T. Bunch, *NAU*. Type specimen: *NAU*. Main mass: *Wittke*.
NAU-8: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *PSF*.
NAU-9: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *Thompson*.
NAU-10: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *GHupé*.
NAU-11: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *Cimala*.
NAU-12: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: Bunch and Wittke.

NAU-13: Classified: T. Bunch, *NAU*. Type specimen: *PSF*. Main mass: *Aaronson*.
NAU-14: Classified: T. Bunch, *NAU*. Type specimen: NAU. Main mass: Anonymous.
NUM-1: Classified: R. Seki and M. Kimura, *Ibaraki*. Type specimen, *NUM*. Main mass: *HM*.
NUM-2: Classified: H. Fukuda and M. Kimura, *Ibaraki*. Type specimen, *NUM*. Main mass: *HM*.
NUM-3: Classified: K. Yamada and M. Kimura, *Ibaraki*. Type specimen, *NUM*. Main mass: *HM*.
PSF-1: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: *Kuyken*.
PSF-2: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: *Cucchiera*.
PSF-3: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: Sipiera.
PSF-4: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: Kuntz.
PSF-5: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: Bunch, *NAU*.
PSF-6: P. Sipiera, *PSF*. Type specimen: *PSF*. Main mass: Wragg.
UAz-1: Classified: D. Schrader. Type specimen: *UAz*. Main mass: D. *Schrader*.
UAz-2: Classified: D. Schrader. Type specimen: *UAz*. Main mass: *Ward*.
UCLA-1: Classifed: A. Rubin, *UCLA*. Type specimen: *UCLA*. Main mass: *Stanley*.
UCLA-2: Classified: A. Rubin, *UCLA*. Type specimen: *UCLA*. Main mass: *Matson*.
UCLA-3: Classified: A. Rubin, *UCLA*. Type specimen: *UCLA*.
UCLA-4: Classified: A. Rubin, *UCLA*. Type specimen: *UCLA*. Main mass: M. Bento.
UCLA-5: A. Rubin, *UCLA*. Type specimen: *UCLA*. Main mass: *Gregory*.
UCLA-5: A. Rubin, *UCLA*. Type specimen: *UCLA*. Main mass: *Tutorow*.
UCLA-6: A. Rubin, *UCLA*. Type specimen: *PSF*. Main mass: *Morgan*.
Vernad-1: Classified: M. Ivanova, *Vernad*. Type specimen: *Vernad*. Main mass: *Burkard* and *Horst*.
Vernad-2: Classified: Lorenz, *Vernad*. Type specimen: *Vernad*. Main mass: *Stehlik*.
Vernad-3: Classified: Lorenz, *Vernad*. Type specimen: *Vernad*. Main mass: *Burkard*.
WAM-1: Classified: P. Downes and A. Bevan, *WAM*. Type specimen: *WAM*.

ADDITIONAL ABBREVIATIONS USED WITHIN THE TEXT

For chondrule textural types: BO = barred olivine, GO = granular olivine, PO = porphyritic olivine, POP = porphyritic olivine pyroxene, PP = porphyritic pyroxene.
Abbreviations for the location of meteorites recovered by ANSMET: ALH = Allan Hills, CRS = Mount Cranfield, CMS = Cumulus Hills; DOM = Dominion Range; GRO = Grosvenor Mountains; LAP = LaPaz Icefield; LAR = Larkman Nunatak; MAC = MacAlpine Hills; MCY = MacKay Glacier, MIL = Miller Range; PRA = Mount Pratt; RBT = Roberts Massif; SAN = Sandford Cliffs, and TYR = Taylor Glacier.

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Table 1. Approved meteorite names and relevant data of recoveries from specific locations within Africa.

Name	Location of recovery	Date of recovery or purchase	Find/ Fall	Latitude (N)	Longitude (W)	Mass (g)	Type specimen mass (g)	Number of pieces	Class	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus	Info
Morocco Anoual	Anoual, Morocco	3 May 2006	Find	32°44′4.5″	2°57′28.7″	5.92	1.205	12	Lunar							See separate entry

Table 2. List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 717	Tucson, AZ, USA		105	1	EL6	20				0.52	1.3		UCLA-5	
NWA 1232	Zagora, Morocco	01-May-08	1900	1	CO3	52							See separate entry	
NWA 1710	Erfoud	Mar-06	5.6	1	LL4	1	S1	W1	27.70	22.96	0.51		MSP-1	+ 1 PTS, MSP 2263
NWA 2176	Erfoud	2003	1200.0	5	LL4	22.2	S3	W1	32.06	26.04	2.07		MSP-1	+ 1 PTS
NWA 2513	Erfoud	2003	17.8	1	L5	5.8	S3	W2	24.72	20.66	1.47		MSP-1	+ 1 PTS
NWA 2731	Morocco	2002	9.5	1	LL5	2.2	S3	W1	29.4	24.2	1.5		PFS-1	
NWA 2732	Morocco	2004	116.5	1	L5	20	S3	W2	24.4	21	1.3		PFS-1	
NWA 2749	Erfoud	2003	1300	1	H5	20	S3	W3	18.2	16.5	1.4		PSF-2	
NWA 2800	Morocco	07-Jul-08	686	1	Martian	20.3							See separate entry	
NWA 2788	Erfoud, Morocco	28-Jun-09	1390	1	Pra	23			21.4	7.4	49.8		NAU-7	Olv ($Fa_{21.4}$;FeO/MnO = $_{57–61}$), Opx ($Fs_{18.0}$ $Wo_{3.0}$), $An_{53.9}Or_{2.9}$, Cpx ($Fs_{7.4}Wo_{49.8}$); probably paired with NWA 3133
NWA 2994	Morocco	July 2007	4756	1	Chon-ung	23							See separate entry	
NWA 3190	Rissani, Morocco	06-Dec-08			Lunar								See separate entry	
NWA 3215	Erfoud, Morocco	2005	96.5	8	L5	20	S3	W3	25.01	21.92	1.61		MSP-1	+ 1 PTS
NWA 3341	Rissani, Morocco	2001			Lod								See separate entry	
NWA 4159	Morocco	2002	611	1	L5	122	S2	W2	24.5	21.5	1.7		NAU-8	
NWA 4162	Morocco	2002	469	1	L6	94	S3	W3	25	21.7	1.4		NAU-8	
NWA 4163	Morocco	2002	461.5	1	L4	92	S2	W2	24.6	21	1.6		NAU-8	
NWA 4164	Morocco	2002	459	1	L5	90	S2	W2	24.6	20.3	1.6		PSF-3	
NWA 4166	Morocco	2002	397	1	L5	78	S3	W2	25	21	1.7		PSF-3	
NWA 4167	Morocco	2002	368	1	L5	74	S3	W2	24.9	21.1	1.9		NAU-8	
NWA 4168	Morocco	2002	367.5	1	L4	74	S2	W2	26.3	9.2	0.8		PSF-3	
NWA 4169	Morocco	2002	362	1	H4	72	S3	W3	19	17.3	1.3		NAU-8	
NWA 4170	Morocco	2002	349	1	L4	70	S2	W1	24.4	20.9	1.4		NAU-8	
NWA 4171	Morocco	2002	345	1	L6	70	S3	W2	26.2	18.4	1.3		PSF-3	
NWA 4172	Morocco	2002	327	1	L5	65	S2	W2	25.2	21.3	1.4		NAU-8	
NWA 4173	Morocco	2002	325	1	H4	65	S2	W2	18.7	15.8	1.3		NAU-8	
NWA 4174	Morocco	2002	284.5	1	L4	56	S3	W4	25	21.2	1.6		NAU-8	
NWA 4175	Morocco	2002	279.5	1	L3.8	56	S3	W2	17–33.1	17.2–26.6			NAU-8	Shock breccia
NWA 4176	Morocco	2002	267	1	LL4	54	S3–4	W2	26.9	22.4	1.5		NAU-8	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 4177	Morocco	2002	245	1	L4	50	S2	W2	24.7	21	1.7		NAU-8	
NWA 4178	Morocco	2002	244	1	H4	48	S2	W2	17.9	16.4	1.9		NAU-8	
NWA 4179	Morocco	2002	242.5	1	L5	48	S3	W2	24.8	21.4	1.5		NAU-8	
NWA 4180	Morocco	2002	230	1	L4-5	46	S2–4	W2	25.1	21.8	1.3		NAU-8	Polymict breccia
NWA 4181	Morocco	2002	224	1	L4	44	S2	W2	25	21.2	1.4		NAU-8	
NWA 4184	Morocco	2002	166	1	L6	34	S2	W2	25.3	20.4	1.6		PSF-3	
NWA 4186	Morocco	2002	136.5	1	H4	28	S2	W2	18.1	16.4	1.6		NAU-8	
NWA 4187	Morocco	2002	120.5	1	LL5	24	S2	W2	26.8	22.5	1.5		NAU-8	
NWA 4288	Erfoud, Morocco	Nov-05	170	1	R4	20	S2	W2	39.2	cpx Fs 10.8	45.9		NAU-9	
NWA 4409	Erfoud, Morocco	Jan-06	1107	1	H5	21.7	S2	W2	17.2	15.6	1.5		NAU-10	
NWA 4411	Erfoud, Morocco	Jan-06	212	1	H6	20	S2	W2	18	15.7	1.9		NAU-10	
NWA 4412	Erfoud, Morocco	Jan-06	877	1	L3.8	21.2	S2	W2	17.2–26.2	18.2–23.0			NAU-10	
NWA 4413	Erfoud, Morocco	Jan-06	151	1	L6	20	S2	W1	23.7	20.2	2.2		NAU-10	
NWA 4421	Found in Gourrama, Er Rachidia, Morocco	May-06	249.73	1	CO3	30.04							See separate entry	32°19'N, ~4°4'W
NWA 4422	Found in Beni, Tajjite, Figuig, Morocco	May-06	147.72	1	CK4	21.4							See separate entry	~32°16'N, ~3°28'W
NWA 4423	Found in Hammada, du Guir, Morocco	May-06	91.91	1	CK3	19.1							See separate entry	
NWA 4425	Algeria	2006			CK3								See separate entry	
NWA 4429	Algeria, purchased in Morocco	2005	412	1	L4	22.1	S2	W2	24.4	20.4			NAU-11	
NWA 4430	Morocco	2005	1444	1	L3.8	37.8	S2	W2	23.4–31	20.8–28.1			NAU-11	
NWA 4431	Algeria, purchased in Morocco	2005	450	Many	L5	21.7	S2	W2	23.4	20.4			NAU-11	
NWA 4432	Algeria, purchased in Agadir, Morocco	2005; 12-2005	1440	1	L4	34.5	S3	W3	23.9	20.5			NAU-11	
NWA 4433	Algeria, purchased in Morocco	2005	160	1	LL5	20.8	S6	W3	27.7	24.3			NAU-11	Partial melt breccia
NWA 4434	Algeria, purchased in Morocco	2005	1000	1	LL4	26.7	S2	W2	27.1	24.3			NAU-11	
NWA 4436	Algeria, purchased in Morocco	2006; February 2006	1726	2	L4	21.4	S2	W2	23.8	20.6			NAU-11	
NWA 4437	Algeria, purchased in Rissani, Morocco	2005; April 2005	935	1	LL4	21.9	S3	W2	27.7	22.7			NAU-11	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 4440	Algeria, purchased in Erfoud, Morocco	2005; March 2006	403	14	H4	20.8	S6	W1	17.3	15.7			NAU-10	Shock darkened
NWA 4443	Algeria, purchased in Erfoud, Morocco	2005; March 2006	118	1	H4	21.2	S2	W2	17	15.4			NAU-10	
NWA 4445	Erfoud, Morocco	2005	1316	78	L3.8	22.8	S2–3	W1	24.5	21.4	1.5		NAU-10	Polymict breccia
NWA 4491	Erfoud, Morocco	2005	894	1	L4	86	S2–4	W2	23.8	20			NAU-12	Shock darkened
NWA 4503	Northwest Africa	January 2007	70	1	Lunar	14							See separate entry	
NWA 4541	Erfoud, Morocco	2006	168	1	Euc	20							See separate entry	
NWA 4545	Algeria/ Munich, Germany	Mar-06/ Oct-06	119	1	R4	21							See separate entry	
NWA 4549	Rissani, Morocco	06-May-08	64	1	LL3.1	13.2							See separate entry	
NWA 4571	Sainte-Marie, France	28-Jun-06	285	1	L5/6	22.0	S4	W4	25	21			IfP-1	Sv, shock darkening
NWA 4572	Sainte-Marie, France	28-Jun-06	86	2	LL3	17.3	S2	W3	25 ± 7	13 ± 9			IfP-1	
NWA 4573	Sainte-Marie, France	21-Jun-10	97	1	LL6	19.2	S2	W1	30	24.5			IfP-1	Br, sv
NWA 4575	Sainte-Marie, France	21-Jun-10	92	1	LL6	18.5	S3	W1	30.5	25			IfP-1	Br, sv
NWA 4578	Münster	15-Nov-08	10	1	L6	2.1	S2	W2	26	21			IfP-1	Extremely high FeNi-metal abundance
NWA 4580	Munich	4-Nov-10	431	1	L5-6	21.2	S4	W1–2	24	20			IfP-1	Br, sv, shock darkening
NWA 4581	Munich	4-Nov-10	214	1	H6	21.2	S1	W1	19.5	16.5			IfP-1	Metal veins
NWA 4582	Munich	4-Nov-10	224	2	H4-6	20.1	S3	W1	19.5	17			IfP-1	Br, sv
NWA 4584	Munich	4-Nov-10	638	1	L5-6	20.3		W2	23.5	20			IfP-1	Br
NWA 4591	Morocco	2003	707	1	H5	20.01	S1	W3	18.1	16.2	1.28		Vernad-1	
NWA 4592	Morocco	2003	67	1	H5	13.83	S1	W2	18.2	16.0	1.47		Vernad-1	
NWA 4593	Morocco	2003	113	1	H5	20.66	S2	W3	17.7	15.9	1.35		Vernad-1	
NWA 4594	Morocco	2003	907	1	L6	26.54	S3	W1	24.5	20.6	1.47		Vernad-1	
NWA 4595	Morocco	2003	315	1	LL6	22.24	S2	W3	27.2	23.9	1.99		Vernad-1	
NWA 4596	Morocco	2003	55	1	H5	13.53	S1	W2	17.7	15.9	1.3		Vernad-1	
NWA 4597	Morocco	2003	534	1	H6	42.81	S1	W2	17.8	16.7	1.53		Vernad-1	
NWA 4598	Morocco	2003	44	1	L5	8.82	S2	W2	25.8	22.1	1.7		Vernad-1	
NWA 4599	Morocco	2003	58	1	L4	12.02	S2	W1	22.8	20.8	1.1		Vernad-1	
NWA 4600	Morocco	2003	1095	1	L6	28.27	S2	W3	24	20.1	1.64		Vernad-1	
NWA 4601	Morocco	2003	1550	1	L5	210.0	S2	W2	24.5	21.9	1.6		Vernad-1	
NWA 4602	Morocco	2003	521	1	H5	20.56	S2	W2	17.7	16.9	1.1		Vernad-1	
NWA 4603	Morocco	2003	531	1	H4	41.32	S3	W2	18.8	16.7	1.6		Vernad-1	
NWA 4604	Morocco	2003	327	1	H5	20.78	S2	W2	17.7	17.2	1.7		Vernad-1	
NWA 4673	Morocco	2003	163	1	H5	20.04	S2	W3	17.9	15.9	1.5		Vernad-1	
NWA 4674	Morocco	2003	237	1	H6	20.21	S1	W3	18.4	17.2	1.5		Vernad-1	
NWA 4650	Algeria/Erfoud, Morocco	06-Jul-08	339	1	EL6	24.1							See separate entry	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 4654	Algeria/Erfoud, Morocco	07-Jul-08	49	1	Dio	10.2							See separate entry	
NWA 4657	Erfoud, Morocco	2006	417	1	CK4	23							See separate entry	
NWA 4661	Rissani, Morocco	2005	42	1	CK3	8.3							See separate entry	
NWA 4663		2006	564	1	Lod	23							See separate entry	
NWA 4664	Rissani, Morocco	2006	20 kg	Many	Dio	34							See separate entry	
NWA 4715	Erfoud	2005	466	12	H5	20	S2	W4	18.9	16.5 ± 0.5			AMusS-2	
NWA 4716	Erfoud	2006	2880	45	H6	20	S4	W5	19.3	17.0 ± 0.5			AMusS-3	
NWA 4717	Morocco	2006	1318	1	H 3.8	21	S2	W3	18.8	17.0 ± 0.5			AMusS-3	
NWA 4718	Tucson, USA	26-Jan-05	8.8	1	H5	6	S3	W2	19	17	1.4		NUM-1	Cut fragment with dark brown fusion crust
NWA 4719	Tucson, AZ, USA	26-Feb-05	812	1	L6	46.6	S4	W2	25	21	1.5		NUM-2	Stone mainly covered with black fusion crust; abundant shock veins with ringwoodite
NWA 4720	Tucson, AZ, USA	03-Feb-05	151.7	1	L3	20.6	S2	W2	6–32 (ave. 25)	5–32 (ave.16)	0–6		NAU-3	Brown stone without fusion crust; abundant clinoenstatite and clean glass in chondrules
NWA 4721	Tucson, AZ, USA	3 February 2005	7.3	1	CK4	1.53	S2	W2	25–30 (ave. 27)	23–28 (ave.2 5)	0–7			See separate entry
NWA 4723	Erfoud, Morocco	Jan-2006	2200	1	L3	99.3	S2	W2	18.52–25.11	2.95–21.81 (13.57 ± 4.76)		4.4	MNHN/ Bourot-Denise/ Giessler	One big single stone with ~70% crust; estimated subtype 3.8
NWA 4724	Erfoud, Morocco	06-Jan-08	35	1	CK3	9.5							See separate entry	
NWA 4725		Mar-2006			H/L3.6								See separate entry	
NWA 4726	Agadir, Morocco	Mar-2006	488	Many	L/H5	21.9	S3	W2	24.67 ± 0.31	22.06 ± 1.33		4.98	MNHN-1	Individuals, some fragments; breccia
NWA 4734	Rissani, Morocco	October 2006	477	2	Lunar	20								See separate entry
NWA 4754	Erfoud Morocco	2006	263	1	L5	25	S4	W3	24.7	21			Australian Museum Sydney/C.J Lebel/ Ray Pickard, Prof Peter Williams, Meagan E Clissold/C. J. Lebel	
NWA 4756	Erfoud Morocco	2006	2000	Many	LL6	20.1	S3	W2	29.2	24.5 ± 0.5			AMusS-4	Large troilite inclusions up to 7 mm
NWA 4757	Munich, Germany	Oct-06	5	1	CM	1							See separate entry	
NWA 4772	No data	No data	9.7	Fragments	L5	2.12	S2	W3	23.5 ± 0.5	19.5	1		UCLA-5	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 4773	No data	No data	249.8	26	L5	59	S3	W3	23.7 ± 0.5				UCLA-5	
NWA 4774	No data	No data	9.1	28	LL6	1.92	S4	W1	27.7 ± 0.4				UCLA-5	
NWA 4775	No data	No data	22.7	55	LL5	4.69	S2	W2	27.7 ± 0.4				UCLA-5	
NWA 4776	No data	No data	25.3	70	LL6	5.19	S4	W1	28.2 ± 0.8				UCLA-5	
NWA 4777	No data	No data	1396.6	32	H4	261.5	S1	W3	17.3 ± 0.3				UCLA-5	
NWA 4796	Erfoud, Morocco	May 2006	2559	5	L4–6 brecciated	22	S3	W1	24	20.5			AMusS-5	
NWA 4796	Erfoud, Morocco	May 2006	2559	5	L4–6 brecciated	22	S3	W1	24	20.5			AMusS-5	Fknutz, Montbelaird, France. Likely paired with NWA 869
NWA 4797	Missour, Morocco	2001			Martian									See separate entry
NWA 4809	Erfoud, Morocco	2006	1780	1	LL4	21.6	S3	W2	27.8	23	1.9		NAU-1	
NWA 4810	Erfoud	2006	31	1	CK4	6.4	S2	W2	27.9–29.3				NAU-1	2.96 wt% Cr_2O_3 in magnetite
NWA 4811	Erfoud, Morocco	2006	79	1	CK5	15.9	S2	W2	30.9				NAU-1	3.1 wt% Cr_2O_3 in magnetite
NWA 4813	Erfoud	2006	255	1	CK5	20	S2	W2	31.2				NAU-1	2.76 wt% Cr_2O_3 in magnetite
NWA 4815	Erfoud	2006	59	1	LL4	12	S3	W2	28	23.8	1.8		NAU-1	
NWA 4819	Rissani, Morocco	2007			Lunar								See separate entry	
NWA 4828	Erfoud	2007	120	1	L4	34.8	S2	W2–3	23.7	20.5	2		NAU-2	
NWA 4829	Erfoud	2007	5000	1	H4	34.9	S2	W3	18.7	16.2	1.8		NAU-3	
NWA 4840	Morocco	2005	3450	1	L6	686	S3	W2	25.2	20.7	1.4		PSF-4	
NWA 4841	Midelt, Morocco	May-2005	1000	1	LL5	20	S3	W2	28.3	23.4	1.3		PSF-4	Shock breccia
NWA 4842	Erfoud, Morocco	Apr-2006	2700	4	LL3	29.5	S2	W3	7.9–44.2	2.4–24.8			PSF-4	
NWA 4843	Rissani, Morocco	Apr-2006	120	1	LL3.8	21.4	S2	W2	18.5–32	19–24.3	1.4		NAU-3	
NWA 4845	Erfoud, Morocco	Apr-2006	366	1	LL6	22	S3	W3	30.2	23.4	1.6		PSF-4	
NWA 4846	Zeida, Morocco	Apr-2006	250	1	LL5	22	S3	W2	30.2	23.5	1.6		PSF-4	
NWA 4847	Erfoud, Morocco	Apr-2006	53.3	1	H6	10.7	S3	W4	19.8	16.8	1.2		PSF-4	
NWA 4848	St. Marie, France	2-Apr-2010	2900	1	L5	69	S3	W3	25.6	20.4	1.4		PSF-4	
NWA 4849	Morocco	2002	2688	1	L6	32	S3	W3	25.8	21.6	0.2		PSF-6	
NWA 4850	Morocco	2002	1830	1	L6	22	S3	W3	26	20.9	0.1		PSF-6	
NWA 4851	Morocco	17-Sep-2011	6293	50	L6	23	S3	W1	24.3	20.4	1.7		UCLA-5	
NWA 4853	Morocco	2002	87.8	1	H5	20	S2	W3	17.6	16.1	1.2		NAU-3	
NWA 4854	Morocco	2002	79.2	1	H5	20	S2	W3	18.6	16.4	1.4		NAU-3	
NWA 4855	Morocco	2002	49.7	1	LL6	20	S2	W3	26.9	22	1.6		NAU-3	
NWA 4872	Rissani, Morocco	30-Jun-09	3000	1	Brach	20.4							See separate entry	
NWA 4874	Erfoud, Morocco	2007			Brach								See separate entry	
NWA 4876	Tagounit, Morocco	June 2007	130	1	Brach	20.2							See separate entry	
NWA 4881	Quarzazate, Morocco	January 2007	606	1	Lunar	20							See separate entry	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 4882	Tagounit, Morocco	July 2007	2891; 206	2	Brach	20.4								See separate entry
NWA 4883	Tagounit, Morocco	July 2007	610	1	Euc	20								See separate entry
NWA 4884	Tagounit, Morocco	July 2007	42	1	Lunar	8.4								See separate entry
NWA 4888	Rissani, Morocco	2006	530	6	LL6	22.3	S3	W2	32.3	24.6			MNB-1	
NWA 4892	Erfoud, Morocco	2005	21	4	L6	4.2	S3	W2	24.9	21			MNB-1	
NWA 4898	Quarzazate, Morocco	30-Jun-09	137	1	Lunar	21.1								See separate entry
NWA 4897	Erfoud, Morocco	2007	25	1	CK5	5.1	S2	W2	29.8	25.7			MNB-1	
NWA 4911	Erfoud, Morocco	2007	388.8	1	LL6	28	S2	W2	29.2	23.9			MNB-2	
NWA 4912	Erfoud, Morocco	2007	220.6	1	L5,IM	21.9	S4-IM	W1	23.3	20.7			MNB-2	
NWA 4914	Erfoud, Morocco	2007	1206.8	1	H4	22.5	S2	W1	21.7	15.5–19.7			MNB-2	
NWA 4917	Erfoud, Morocco	2007	49.5	1	LL6	12.4	S3	W1	29.3	24.5			MNB-2	
NWA 4918	Erfoud, Morocco	2007	225.3	2	H6	22.7	S2	W0	18.3	16.9			MNB-2	
NWA 4934	Tagounit, Morocco	October 2007	307	1	How	20.3								See separate entry
NWA 4961	Erfoud	2004	23	1	L3–5	4.7	S2–4	W3	17–25.6	17.1–24.5			NAU-11	Polymict breccia
NWA 4969	Erfoud, Morocco	2007	180	1	Brach	20.6								See separate entry
NWA 4982	Morocco	2004	1200	1	L6	37.6	S3	W1–2	24.2	20.3			MNB-3	
NWA 4983	Morocco	2004	45	1	LL6 breccia	11	S3	W1	27.8	23.1			MNB-3	
NWA 4984	Morocco	2004	710	1	H6	26.9	S3	W2	18.3	16.4			MNB-3	
NWA 4985	Morocco	2004	400	1	L6	34.7	S3	W2	24	21			MNB-3	
NWA 4986	Morocco	2004	120	1	H6 breccia	23.6	S2	W1	18.2	16.4			MNB-3	
NWA 4987	Morocco	2005	200	1	L6	20	S4	W1	23.7	19.9			MNB-3	
NWA 4988	Morocco	2005	950	1	LL6 breccia	29.3	S2	W1	29.8	25.1			MNB-3	
NWA 4989	Morocco	2005	310	1	LL6	20.3	S3	W2	28.2	23.8			MNB-3	
NWA 4990	Morocco	2005	70	1	L type impact melt	15.5	Melted	W1	24.3	20.9			MNB-3	
NWA 4991	Morocco	2005	210	1	L4–6	22.3	S3	W1–2	25.9	9.9–22.8			MNB-3	
NWA 4992	Morocco	2005	170	1	H4	31.6	S2	W2–3	13.7	5.2–16.9			MNB-3	
NWA 4994	Morocco	2005	75	1	H6 breccia	15.9	S2	W1	19	17			MNB-3	
NWA 4996	Morocco	2006	3960	3	L5	35.7	S2	W1	24.9	21.1			MNB-3	
NWA 4998	Morocco	2006	220	1	LL6	24.5	S3	W1	30.5	24.8			MNB-3	
NWA 4999	Morocco	2006	240	1	LL6	21.8	S3	W2	31	23.9			MNB-3	
NWA 5000	Find in Morocco	October 2007	11.528 kg	1	Lunar	40.2								See separate entry
NWA 5001	Morocco	2006	170	1	L6	26.1	S3	W2	25.4	21.5			MNB-3	
NWA 5002	Morocco	2006	120	1	LL6	24.3	S2	W2	28.8	24			MNB-3	
NWA 5003	Morocco	2006	95	1	H5	21.2	S2	W1	18.7	16.8			MNB-3	
NWA 5004	Morocco	2006	90	1	H4	20.2	S2	W1	17.7	11.5–19.6			MNB-3	
NWA 5008	Morocco	2006	42	1	L5	9.2	S2	W3	24.5	20.9			MNB-3	
NWA 5011	Morocco	2005	4500	Many	L6	23.8	S6	W3	24.6	21.4			MNB-3	
NWA 5013	Morocco	2007	290	1	L6	35.4	S3	W2–3	24.9	20.8			MNB-3	

Table 2. *Continued.* List of approved meteorites recovered from Northwest Africa.

Name	Location of purchase	Date of recovery	Mass (g)	Number of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus (logχ 10^{-9} m^3/kg)	Info	Comments
NWA 5014	Morocco	2007	280	1	LL5	26	S3	W2	27.6	22.7			MNB-3	
NWA 5015	Morocco	2007	140	1	H4/5	24.5	S1	W2	17.3	15.4			MNB-3	
NWA 5016	Morocco	2007	141	2	LL5	22.6	S2	W1	28.7	23.8			MNB-3	
NWA 5017	Morocco	2006	176	2	H4	21.3	S1	W2–3	16.8	7.2–17.5			MNB-4	
NWA 5020	Los Angeles, CA	April 2002	1802	13	H4	35.8	S2	W3	18.4 ± 0.3				UCLA-5	See separate entry
NWA 5021	Los Angeles, CA	April 2002	68.6	1	L4	13.86	S2	W2	23.2 ± 0.2				UCLA-5	See separate entry
NWA 5022	Los Angeles, CA	April 2002	275.18	46	L6	22.4	S5	W2	24.3 ± 0.4				UCLA-5	See separate entry
NWA 5023	Los Angeles, CA	April 2002	548.6	111	H5	35	S3	W5	18.5 ± 0.4				UCLA-5	See separate entry
NWA 5027	Erfoud, Morocco/ Denver, CO	2007	4500	1	L5	37	S2	W2	23.5 ± 0.4	20.0 ± 0.4	2.5 ± 0.6		UCLA-6	
NWA 5029	M'hamid, Morocco	March 2003	14.67	1	Martian	2								See separate entry
NWA 5031	Munich, Germany	Nov-2007	164.4	1	L5	21.8	S3	W2	23.7	20.3			MBN-5	
NWA 5032	Munich, Germany	Nov-2007	162	1	L6	23.2	S2	W1	23.6	20.7			MBN-5	
NWA 5033	Munich, Germany	Nov-2007	171.2	1	H5	22	S2	W2	17.8	15.8			MBN-5	
NWA 5034	Munich, Germany	Nov-2007	72.1	1	H5	16.2	S2	W1	17.9	16.1			MBN-5	
NWA 5038	Erfoud, Morocco	2007	710	1	L6 impact melt breccia	24.1	S4 impact melted	W1	23.8	20.6			MBN-5	
NWA 5039	Erfoud, Morocco	2005	76	1	H5	16	S2	W3	17.4	15.3			MBN-5	
NWA 5040	Morocco	2003	986	1	H5	35.13	S2	W2	17.9	16.5	1.1		Vernad-3	
NWA 5041	Morocco	2003	305	1	L6	20.99	S2	W2	23.6	20.1	1.6		Vernad-3	
NWA 5042	Munich	2002	2099	1	L5	23.6	S2	W2	22.2	18.3	1.26		Vernad-2	
NWA 5043	Munich	2002	1873	1	LL6	26.15	S2	W1	27.3	22.4	1.58		Vernad-2	
NWA 5044	Munich	2005	460	1	L5	26	S2	W3	24	21.7	1.58		Vernad-2	
NWA 5045	Munich	2004	200	1	H5	24.5	S1	W3	18.3	16.4	2.32		Vernad-2	
NWA 5046	Munich	2004	95	1	LL5	19	S3	W3	27.3	24.7	1.75		Vernad-2	
NWA 5047	Munich	2004	65	1	L5	14.7	S3	W1	24.8	21.5	1.94		Vernad-2	
NWA 5198	Morocco	2006	82	1	LL5	26.6	S5	W2	28.8	23.8	1.8		NAU-4	Shock veined
NWA 5203	Morocco	2007	268	1	L4	20	S3	W2	27.6	23.6	1.8		NAU-13	
NWA 5081	Erfoud, Morocco	2005	461.5	1	H4	20.5	S1	W3	18.52	19.24	1.13		MSP-2	+ 1 PTS, MSP 5053
NWA 5082	Munich, Germany	2006	867	1	LL5	21.5	S1	W0	32.14	25.59	1.54		MSP-3	+ 1 PTS, MSP 5054
NWA 5083	Algeria	2005	1382	1	H3.9	21.2	S2	W1	18.39	18.58	1.10		MSP-3	+ 1 PTS, MSP 2418
NWA 5134	Tindouf, Algeria	2005	61.6	2	Euc	15								See separate entry
NWA 5213	Morocco	2007	467	1	LL melt	28.4								See separate entry

For class (which refers to classification): acp = acapulcoite; ang = angrite; aung = achondrite, ungrouped; brach = brachinite; dio = diogenite; euc = eucrite; how = howardite; imr = impact-melt rock; lod = lodranite; mes = mesosiderite; pra = primitive achondrite; ure = ureilite; chon-ung = ungrouped chondrite.
Shock stage (SS): min = minimal, mod = moderate; ext = extensive; IM= impact melt.
Weathering grade (WG): min = minimal, mod = moderate; ext = extensive.
All meteorites are find and purchased unless otherwise stated.

Table 3. Approved meteorite names and relevant data of recoveries from the Americas.

Name	Abbrev.	Location of recovery	Type of find site	Date of recovery	Find/ Fall	Latitude	Longitude	Mass (g)	No. of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info
North America																	
Canada																	
Burstall		Burstall, Saskatchewan, Canada		1992	Find	50°39′N	109°54′W	360	1	Iron (IAB)	360						See separate entry
United States of America																	
Blue Eagle		Nye County, NV, USA			Find			70	31	R3–6	13.3						See separate entry
Bluewing 029	BW 029	Pershing County, NV, USA	Dry lake	1-Jun-2006	Find	40°15.768′N	118°57.547′W	83.8	1	H6	23	S2	W2	17.8	16.0 ± 0.5		AMS-1
Coyote Dry Lake 274	CyDL 274	San Bernardino County, CA, USA	Dry lake	17-Sep-2006	Find	35°3.541′N	116°46.135′W	7.5	1	H4	1.6	S2	W5	17.8 ± 0.3	10		UCLA-1
Coyote Dry Lake 275	CyDL 275	San Bernardino County, CA, USA	Dry lake	21-Oct-2006	Find	35°3.073′N	116°46.045′W	16.2	1	H4	3.3	S2	W5	17.9 ± 0.2	9		UCLA-1
Coyote Dry Lake 276	CyDL 276	San Bernardino County, CA, USA	Dry lake	18-Nov-2006	Find	35°4.271′N	116°46.297′W	47.2	1	H6	11.4	S2	W3	17.8 ± 0.2	13		UCLA-1
Coyote Dry Lake 277	CyDL 277	San Bernardino County, CA, USA	Dry lake	18-Nov-2006	Find	35°4.452′N	116°45.822′W	21.3	1	H5	5.9	S2	W3	17.7 ± 0.1	8		UCLA-1
Harper Dry Lake 017	HrDL 017	San Bernardino County, CA, USA	Dry lake	6-Jan-2007	Find	35°2.461′N	117°16.479′W	16.4	1	H6	3.4	S5	W3	18.0 ± 0.4	10		UCLA-1
Harper Dry Lake 019	HrDL 019	San Bernardino County, CA, USA	Dry lake	6-Jan-2007	Find	35°2.409′N	117°16.370′W	118.7	1	L6	20.2	S2	W3	24.5 ± 0.7	8		UCLA-1
Kackley		Republic County, KS, USA	Edge of a field	11-May-2006	Find	39°42.98′N	97°51.27′W	1368.0	1	H4	20.0	S3	W1	18.6	17.7		Harper-1
Lucerne Valley 057	LV 057	San Bernardino County, CA, USA	Dry lake	13-Sep-2005	Find	34°29.160′N	116°58.365′W	13.15	1	L6	3.46	S3	W4	24.6 ± 1.5			UCLA-2
Lucerne Valley 058	LV 058	San Bernardino County, CA, USA	Dry lake	10-Feb-2006	Find	34°30.655′N	116°56.377′W	0.85	1	L6	0.85	S2	W3	23.9 ± 0.7			UCLA-3
Red Dry Lake 063	RdDL 063	Mohave County, AZ, USA	Dry lake	12-Aug-2006	Find	35°38.00′N	114°5.00′W	6	1	H4	6	S2	W3	18.1 ± 0.2	16.2	1.7	UCLA-3
Red Dry Lake 064	RdDL 064	Mohave County, AZ, USA	Dry lake	12-Aug-2006	Find	35°38.48′N	114°5.40′W	6	1	H5	6	S2	W2	18.4 ± 0.4	15.7	1.0	UCLA-3
Red Dry Lake 065	RdDL 065	Mohave County, AZ, USA	Dry lake	12-Aug-2006	Find	35°38.82′N	114°5.73′W	3	1	L6	3	S3	W2	23.6 ± 0.2	19.7	1.3	UCLA-3
Roosevelt County 108	RC 108	Roosevelt County, New Mexico		2004	Find	34°13′N	103°11′W	23.23	1	H5	4.75	3	5	18.7 ± 0.4	16.1 ± 0.5	1.24 ± 0.29	HIGP-1
Sacramento Wash 005	SaW 005	Mohave County, AZ, USA		18-May-04	Find	34°44′48″N	114°12′36″W	52.3	2	Iron, ung	11.5						See separate entry
Turtle Lake		Clayton, Barron County, WI, USA	Residential area	21-Oct-96	Fall	45°20.75′N	92°3.1′W	89.3	1	L5	84						See separate entry
South America																	
Brazil																	
Patos de Minas (octahedrite)		Patos de Minas, Minas Gerais state, Brazil		1925/2002	Find	18°35′S	46°32′W	218.4	2	Iron IAB	1200						See separate entry
Chile																	
Blanca Estela		Chile	Farm	2002	Find	25°00′S	69°30′W	15,600	1	Iron IAB	43.7						See separate entry

Table 3. *Continued.* Approved meteorite names and relevant data of recoveries from the Americas.

Name	Abbrev.	Location of recovery	Type of find site	Date of recovery	Find/ Fall	Latitude	Longitude	Mass (g)	No. of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info
Colombia																	
Cali		Sanitago de Cali, Colombia		6-Jul-07	Fall	3º24.3′N	76°30.6′W	>478	Many	H/L4	24.5						See separate entry
Mexico																	
El Paso de Aguila				Nov-77	Fall	25°22.2′N	97°22.2′W	17,226	1	H5	20						See separate entry
Peru																	
Desaguadero		Carancas, Chucuito, Puno, Peru	Villiage area	15-Sept-07	Fall	16°39′52″S	69°02′38″W	Metric tons?	Many	H4–5	22						See separate entry
New dense collection areas																	
United States of America																	
Stump Spring	SS xxx	Clark County, NV, USA			Finds	35°59′N	115°47′W										
Copper Mountain	CM xxx	Mineral County, NV, USA			Finds	38°55.981′N	118°18.607′W										

Table 4. Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
Meteorite Hills							
MET 00481	L5	208.37	B				
MET 00482	LL6	175.28	A/B				
MET 00483	LL5	251.9	A/B				
MET 00484	L5	233.7	B/C				
MET 00485	LL6	221.9	C				
MET 00486	L5	157.548	B/C				
MET 00487	L5	159.199	B				
MET 00488	L5	132.449	C				
MET 00489	L3.6	232	A/B	14	31	4	22
MET 00490	LL5	100.92	B/C				
MET 00491	LL6	106.568	A	30	30	24	24
MET 00492	L5	159.973	B/C				
MET 00493	L5	39	C				
MET 00494	L5	156.832	C				
MET 00495	LL6	266.5	A	28	28	23	23
MET 00496	L5	128.789	B/C				
MET 00497	LL6	221.6	C				
MET 00498	L6	112.458	C				
MET 00499	L6	111.693	C				
MET 00500	L6	230.7	C				
MET 00501	LL6	101.46	A/B				
MET 00502	LL5	130.784	C				
MET 00503	LL6	152.121	B/C				
MET 00504	L5	165.896	B/C				
MET 00505	LL5	174.571	C				
MET 00506	H3.4	301.1	B	4	27	2	16
MET 00507	L5	105.13	B/C				
MET 00508	LL6	68.594	B/C				
MET 00509	LL6	180.894	B/C				
MET 00510	LL5	186.55	B				
MET 00511	L5	131.7	B/C				
MET 00512	LL5	93.4	B/C				
MET 00513	L5	148.29	C				
MET 00514	L5	275.1	B				
MET 00515	LL6	304.8	B/C				
MET 00516	L5	117.6	C				
MET 00517	LL4	247	B/C				
MET 00518	LL6	247.8	B				
MET 00519	LL6	210.8	B				
MET 00520	L5	263.4	B				
MET 00521	LL5	134.049	B				
MET 00522	L5	115.736	B/C				
MET 00523	LL6	60.781	B/C				
MET 00524	L6	226	B				
MET 00525	H5	135.1	B/C	19	19	16	16
MET 00526	H3.2	208.2	B/C	1	19	3	28
MET 00527	L5	225	C				
MET 00528	H5	104.9	B/C	20	20	17	17
MET 00529	H6	152.6	B/C	19	19	17	17
MET 00530	LL5	106.17	C				
MET 00531	LL6	193.914	A/B				
MET 00532	L5	132.597	B				
MET 00533	LL5	127.556	C				
MET 00534	L6	97.57	C				
MET 00535	L4	159.083	C				
MET 00536	L6	137.193	C				
MET 00537	L6	148.754	C				
MET 00538	L5	77.16	B/C				
MET 00539	LL5	193.651	B				
MET 00540	LL6	103.176	B/C				
MET 00541	LL5	125.821	A				
MET 00542	L6	80.298	C				
MET 00543	L6	25.4	C				
MET 00544	L5	52.652	B/C				
MET 00545	L5	59.757	B/C				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
MET 00546	LL5	75.871	B				
MET 00547	LL6	68.5	B				
MET 00548	L5	89.7	B				
MET 00549	L5	101.476	B/C				
MET 00550	LL6	104.52	B/C				
MET 00551	LL6	58.63	C				
MET 00552	H3.4	97.3	B/C	1	17	1	15
MET 00553	L5	74.34	B/C				
MET 00554	L6	67.08	B/C				
MET 00555	L5	91.05	B/C				
MET 00556	L5	66.46	B/C				
MET 00557	L5	49.5	B/C				
MET 00558	L5	157.04	B/C				
MET 00559	L6	95.02	B/C				
MET 00560	LL5	61.81	A/B				
MET 00561	L5	80.189	C				
MET 00562	L5	78.491	B/C				
MET 00563	L5	48.2	C				
MET 00564	L5	53.58	C				
MET 00565	L5	109.96	B/C				
MET 00566	L5	143.768	C				
MET 00567	L5	40.4	B/C				
MET 00568	L6	63.34	C				
MET 00569	L6	110.342	B				
MET 00570	H3.8	157.015	C	13	19	12	17
MET 00571	LL6	114.331	B				
MET 00572	H4	95.803	B	19	19	8	20
MET 00573	LL6	70.964	A/B				
MET 00574	LL5	106.456	A				
MET 00575	L5	99.156	C				
MET 00576	L6	9.5	C				
MET 00577	LL6	15.6	A/B				
MET 00578	L6	64.332	B				
MET 00579	L6	55.858	C				
MET 00581	LL6	100.21	C				
MET 00582	L5	176.83	C				
MET 00583	L5	51.8	B/C				
MET 00584	LL5	87.53	A/B				
MET 00585	L5	74.22	C				
MET 00586	L5	93.13	CE				
MET 00587	LL5	44.8	A/B				
MET 00588	LL5	50.85	B/C				
MET 00589	H6	89.29	B/C				
MET 00590	LL6	90.02	C				
MET 00591	H6	114.819	C				
MET 00592	L5	95.782	C				
MET 00593	LL5	53.827	B				
MET 00594	LL6	99.514	C				
MET 00595	LL6	66.532	C				
MET 00596	LL6	62.274	A/B				
MET 00597	LL6	94.841	C				
MET 00598	L6	96.485	C				
MET 00599	LL6	72.18	A/B				
MET 00600	LL6	78.475	B/C				
MET 00601	LL6	58.558	B/C				
MET 00602	L6	121.256	C				
MET 00603	LL6	67.677	A/B				
MET 00604	L6	74.052	C				
MET 00605	L5	102.88	B				
MET 00606	L5	70.607	B/C				
MET 00607	H3.4	76.55	B	3	25	7	18
MET 00608	L5	85.778	C				
MET 00609	LL6	65.812	B/C				
MET 00610	H6	118.26	B				
MET 00611	H6	113.77	B/C				
MET 00612	L5	110.51	BE				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
MET 00613	H6	53.37	B/C				
MET 00614	L5	81.89	B/C				
MET 00615	H6	166.85	B				
MET 00616	LL6	97.51	B				
MET 00617	LL6	114.01	B				
MET 00618	L5	67.12	A/B				
MET 00619	H6	71.18	B/C				
MET 00620	H6	125.207	CE				
MET 00621	L3.6	88.835	B	10	28	3	17
MET 00622	LL5	87.65	B				
MET 00623	L6	52.569	C				
MET 00624	L5	103.912	A/B				
MET 00625	H6	106.486	C				
MET 00626	H6	100.778	C				
MET 00627	LL5	80.741	B/C				
MET 00628	H6	40.7	B/C				
MET 00629	LL6	17.6	B				
MET 00630	CM2	10.796	A	0	2	2	7
MET 00631	L5	5.8	B				
MET 00632	CM2	9.078	A	1	30	1	5
MET 00633	CM2	20.439	B/CE	0	27	1	4
MET 00634	CV3	3.064	B	3	41	1	2
MET 00635	CM2	2.27	A	0	35	1	1
MET 00636	EH4	2.509	C			0	1
MET 00637	L4	7.2	C				
MET 00638	LL6	7.5	C				
MET 00639	CM2	13.428	A	0	41	2	6
MET 00640	L5	3.5	C				
MET 00641	L5	27.1	A/B				
MET 00642	LL6	47.8	C				
MET 00643	LL6	30.7	B/C				
MET 00644	LL6	55.095	C				
MET 00645	L5	27.4	C				
MET 00646	LL6	34.8	B/C				
MET 00647	LL6	55.983	C				
MET 00648	L6	20.4	C				
MET 00649	LL6	20.6	C				
MET 00650	H6	34.2	C	19	19	17	17
MET 00651	LL6	38.5	A				
MET 00652	LL6	16.2	A/B				
MET 00653	L5	17	C				
MET 00654	H6	40.5	C				
MET 00655	L6	43.1	C				
MET 00656	L5	32.8	C				
MET 00657	L5	38.9	C				
MET 00658	L6	46.4	C				
MET 00659	L6	40.4	B				
MET 00660	L4	33.8	B/C				
MET 00661	H6	19.4	B/CE				
MET 00662	H6	45.1	B/C				
MET 00663	L5	15.6	B/CE				
MET 00664	L4	16.7	B/C				
MET 00665	LL6	30	B/CE				
MET 00666	L5	15	B				
MET 00670	L6	21.9	C				
MET 00671	H6	12.5	C				
MET 00672	L6	6.8	C				
MET 00673	L6	26.1	C				
MET 00674	LL6	46.6	B/C				
MET 00675	LL6	16.2	C				
MET 00676	L6	13.4	C				
MET 00677	L5	34.3	B/C				
MET 00678	L6	27.8	C				
MET 00679	L6	23.9	C				
MET 00680	LL5	22.3	B/C				
MET 00681	L5	22.5	B				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
MET 00682	L6	31.4	C				
MET 00683	H5	15.3	B/C				
MET 00684	L5	14.9	B				
MET 00685	L6	14.9	C				
MET 00686	LL6	23.1	B/C				
MET 00687	L6	4.6	C				
MET 00688	L6	7.3	C				
MET 00689	L6	7	B				
MET 00690	L6	47.6	C				
MET 00691	L6	37.6	C				
MET 00692	LL6	7.3	A/B				
MET 00693	L6	15.2	B				
MET 00694	CO3	15.9	A/B	17	32	2	8
MET 00695	L6	20.2	C				
MET 00696	H6	51.2	B/C				
MET 00697	L6	24.5	C				
MET 00698	LL6	14.4	C				
MET 00699	L5	56.4	B				
MET 00709	IIIAB	6.8					
MET 00720	LL6	34.1	B				
MET 00721	H5	17.3	B/C				
MET 00722	H5	25.6	B/C				
MET 00723	LL6	27.6	A/B				
MET 00724	IIIAB	3.3					
MET 00725	H5	41.8	B/C				
MET 00726	IIIAB	3.1					
MET 00727	H6	13.2	B/C				
MET 00728	LL5	9.4	A				
MET 00729	L5	2.6	A/B				
MET 00730	L5	15.3	C				
MET 00731	L5	13.4	C				
MET 00732	H6	4.1	C				
MET 00733	L4	9	A/B				
MET 00734	LL6	19.4	B/C				
MET 00735	L5	3.4	C				
MET 00736	LL6	7.3	B/C				
MET 00737	CO3	23.2	A/B	0	33	1	5
MET 00738	H5	36.4	B/C				
MET 00739	CK4	9.2	B	30	30	25	25
MET 00740	L5	27.2	B/C				
MET 00741	LL6	44.8	B/C				
MET 00742	CV3	1.2	B	1	11	1	9
MET 00743	L5	9.4	C				
MET 00744	LL6	4.6	A/B				
MET 00745	L6	2.2	C				
MET 00746	L5	20.4	B/C				
MET 00747	CV3	5	B	1	21	1	6
MET 00748	H6	2.1	C				
MET 00749	H6	12.4	C				
MET 00750	LL6	32.9	A/B				
MET 00751	H6	13.7	C				
MET 00752	H6	6.3	C				
MET 00753	L5	7.5	C				
MET 00754	L6	4.2	C	24	24	20	20
MET 00755	H6	4.1	C				
MET 00756	H6	1.4	C				
MET 00757	H6	8.4	C				
MET 00758	LL6	3	A/B				
MET 00759	LL5	8.3	A				
MET 00760	LL6	10.1	A/B				
MET 00761	CV3	6	B	1	12	0	1
MET 00762	L5	24.2	C				
MET 00763	L5	0.2	B				
MET 00764	L5	3.4	C				
MET 00765	L5	12.5	C				
MET 00766	L6	15.7	C				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
MET 00767	LL5	16	A/B				
MET 00768	L5	8.1	C				
MET 00769	L5	37.1	B				
MET 00770	L5	33	B/C				
MET 00771	LL5	36.6	A/B				
MET 00772	LL5	5.9	C				
MET 00773	H5	14	C				
MET 00774	L5	26.9	C				
MET 00775	LL6	24.2	B				
MET 00776	L6	7.6	C				
MET 00777	H6	62.8	C				
MET 00778	H5	52.8	C				
MET 00779	H5	32.6	C				
MET 00780	H5	15.4	C				
MET 00927	H6	15.2	C				
Miller Range							
MIL 05018	H6	670.6	B/C				
Queen Alexandra Range							
QUE 99690	LL5	2.5	B/C				
QUE 99691	LL5	2.4	B/C				
QUE 99692	LL5	3.5	A/B				
QUE 99693	LL5	2.3	B/C				
QUE 99694	LL5	3	B/C				
QUE 99695	LL5	0.69	B/C				
QUE 99696	LL5	1.71	B/C				
QUE 99697	H5	7.7	C	19	19	17	17
QUE 99698	LL5	3.4	A/B				
QUE 99699	LL5	23.5	A/B				
QUE 99700	LL6	3.8	B	27	27	23	23
QUE 99701	LL5	3.9	B				
QUE 99702	LL5	1.62	B				
QUE 99703	LL5	2.1	B				
QUE 99704	LL6	4.2	B				
QUE 99705	LL5	8.4	B/C				
QUE 99706	LL5	1.89	B/C				
QUE 99707	LL5	3.3	C				
QUE 99708	LL5	1.9	C				
QUE 99709	LL5	3.1	B				
QUE 99710	LL5	8.4	B/C				
QUE 99711	LL5	5.2	A/B				
QUE 99712	LL5	1.03	B/C				
QUE 99713	LL5	1.52	B/C				
QUE 99714	LL5	3	A/B				
QUE 99715	LL5	2.5	A/B				
QUE 99716	LL5	0.65	B/C				
QUE 99717	LL5	5.1	A/B				
QUE 99718	LL5	2.9	B/C				
QUE 99719	LL5	0.46	C				
QUE 99720	LL5	23.2	A/B				
QUE 99721	LL5	14.4	A/B				
QUE 99722	LL5	15.1	A/B				
QUE 99723	L6	7.5	A/B				
QUE 99724	L5	3.4	A/B				
QUE 99725	LL5	2.7	A/B				
QUE 99726	LL5	0.22	A/B				
QUE 99727	LL5	0.53	A/B				
QUE 99728	LL5	0.76	A/B				
QUE 99729	LL5	0.6	A/B				
QUE 99730	H5	7.3	C				
QUE 99731	LL5	12.4	B				
QUE 99732	LL5	3.7	C				
QUE 99733	LL5	9.6	B				
QUE 99734	LL5	10.9	C				
QUE 99735	LL5	18.7	B				
QUE 99736	LL5	5.2	B				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
QUE 99737	LL5	4.1	C				
QUE 99738	LL5	6.1	B				
QUE 99739	LL5	4.7	C				
QUE 99740	L6	2.4	C				
QUE 99741	LL5	0.51	B				
QUE 99742	LL5	0.34	B				
QUE 99743	LL5	1.05	B				
QUE 99744	L5	1.15	B/C				
QUE 99745	LL5	1.29	B				
QUE 99746	LL5	3.4	B				
QUE 99747	L5	0.99	B/C				
QUE 99748	LL5	1.14	B				
QUE 99749	LL5	2	B				
QUE 99750	LL5	0.5	B/C				
QUE 99751	LL5	1.3	B/C				
QUE 99752	CM2	1.4	C	0	23	2	10
QUE 99753	LL5	3.5	B				
QUE 99754	LL6	0.6	B				
QUE 99755	L6	1	C				
QUE 99756	LL5	2.3	B/C				
QUE 99757	LL5	1.5	B				
QUE 99758	LL5	0.4	B				
QUE 99759	LL5	1.7	B				
QUE 99760	H5	3.3	C				
QUE 99761	LL5	5.1	B				
QUE 99762	LL5	6.2	B/C				
QUE 99763	LL5	1.49	A/B				
QUE 99764	LL5	0.89	B/C				
QUE 99765	LL5	5.3	B				
QUE 99766	LL5	2.1	B/C				
QUE 99767	LL5	1.35	B/C				
QUE 99768	LL5	1.52	B/C				
QUE 99769	LL5	2.5	B/C				
QUE 99770	H5	0.55	B/C				
QUE 99771	L6	0.55	B/C				
QUE 99772	LL5	3.5	A/B				
QUE 99773	LL5	1.43	A/B				
QUE 99774	LL5	3.1	A/B				
QUE 99775	H4	0.98	B/C	18	18	17	17
QUE 99776	H4	3.1	B/C	19	19	1	16
QUE 99777	LL5	4.2	A/B				
QUE 99778	LL5	13.5	A/B				
QUE 99779	LL5	6.9	A/B				
QUE 99780	L5	136.5	B/C				
QUE 99781	L5	69.7	B/C				
QUE 99782	LL5	39.1	A/B				
QUE 99783	L5	34.5	B/C				
QUE 99784	LL5	49	A/B				
QUE 99785	LL5	24.1	A/B				
QUE 99786	LL6	96.4	A/B				
QUE 99787	LL5	33.7	B				
QUE 99788	LL5	15.3	B				
QUE 99789	H5	14.1	B/C				
QUE 99800	LL5	15	A/B				
QUE 99801	LL5	2.1	B/C				
QUE 99802	LL5	3.7	B/C				
QUE 99803	LL5	2.7	A/B				
QUE 99804	LL5	2.3	B/C				
QUE 99805	LL5	1.45	B/C				
QUE 99806	LL5	1.27	B/C				
QUE 99807	LL5	22.4	B/C				
QUE 99808	LL5	13.9	B/C				
QUE 99809	LL5	3	B/C				
QUE 99810	LL5	10.1	A/B				
QUE 99811	LL5	3.6	A/B				
QUE 99812	LL5	3.6	A/B				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
QUE 99813	LL6	1.39	A/B				
QUE 99814	LL5	2.1	B/C				
QUE 99815	LL5	4.2	A/B				
QUE 99816	LL5	0.46	B/C				
QUE 99817	LL6	0.43	B/C				
QUE 99819	LL5	0.61	A/B				
QUE 99820	LL5	38.2	B				
QUE 99821	LL5	40.6	B				
QUE 99822	H5	23.4	C				
QUE 99823	LL5	42	A/B				
QUE 99824	LL5	22.7	B				
QUE 99825	L6	48.9	B/C				
QUE 99826	LL5	39.8	B				
QUE 99827	LL5	54.2	B				
QUE 99828	LL5	26	B/C				
QUE 99829	LL5	14.8	A/B				
QUE 99830	LL5	5.3	A/B				
QUE 99831	LL5	9.7	A/B				
QUE 99832	LL5	6.4	A/B				
QUE 99833	LL5	6.8	A/B				
QUE 99834	LL5	5.5	B/C				
QUE 99835	LL5	1.48	A/B				
QUE 99836	LL5	3.7	A/B				
QUE 99837	LL5	0.22	A/B				
QUE 99839	LL5	1.77	A/B				
QUE 99840	LL5	0.4	C				
QUE 99841	LL5	0.33	C				
QUE 99842	LL5	0.86	C				

Table 4. *Continued.* Approved meteorite names and relevant data from ANSMET that were not published in Meteoritical Bulletins 87 and 92.

Name	Class	Mass (g)	WG	Fa min (mol%)	Fa max (mol%)	Fs min (mol%)	Fs max (mol%)
QUE 99843	LL5	6.4	B				
QUE 99844	LL5	0.78	B				
QUE 99845	LL6	0.66	B				
QUE 99846	LL5	1.15	B/C				
QUE 99847	LL5	1.24	B/C				
QUE 99848	L5	17.7	B/C				
QUE 99849	LL5	14.9	B				
QUE 99850	L5	0.65	B/C	24	24	21	21
QUE 99851	LL5	6	B/C				
QUE 99852	LL5	3	B/C				
QUE 99853	LL5	3.4	B/C				
QUE 99854	LL5	1.25	B/C				
QUE 99855	LL5	12.1	B				
QUE 99856	LL5	2.8	B				
QUE 99857	LL5	13.9	B/C				
QUE 99858	LL5	28.3	B				
QUE 99859	LL5	1.28	A/B				
QUE 99860	LL5	0.9	B				
QUE 99861	LL5-6	3.2	A/B				
QUE 99862	LL5	23.9	B				
QUE 99863	LL5	15.2	A/B				
QUE 99864	LL5	3.5	B				
QUE 99865	LL5	33	B				
QUE 99866	LL5	4.3	A/B				
QUE 99867	H5	3.6	B/C				
QUE 99868	LL5	9.5	B				
QUE 99869	LL5	12.5	B				

Table 5. Approved meteorite names and relevant data for recoveries from the 2007 field season of KOREAMET.

Proposed name	Location of recovery	Date of recovery	Latitude (S)	Longitude (W)	Mass (g)	Number of pieces	Class	SS	WG	Fa (mol%)	Fs (mol%)
Thiel Mountain											
TIL 06001	Moulton Escarpment	28-Jan-07	85°10.02′	94°45.00′	193	1	H6	S2	W1	17.3	15.8
TIL 06002	Moulton Escarpment	28-Jan-07	85°09.98′	94°43.00′	224	1	L6	S3	W1	23.5	19.6
TIL 06003	Moulton Escarpment	28-Jan-07	85°09.88′	94°32.93′	266	1	L6	S3	W1	23.9	20.0
TIL 06004	Moulton Escarpment	28-Jan-07	85°09.72′	94°32.85′	280	1	L5	S2	W1	23.2	20.4
TIL 06005	Moulton Escarpment	28-Jan-07	85°09.62′	94°33.72′	432	1	H4	S2	W1	17.1	16.9

Table 6. Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 020001	23-Dec-2002	73°05'50"	75°10'30"	3.37	1	L4	S2	W1	26.2	14.1	2.1	GUT	
GRV 020002	23-Dec-2002	73°05'48"	75°10'30"	4.89	1	LL5	S3	W1	30.1	24.4	2.0	GUT	
GRV 020003	23-Dec-2002	73°06'15"	75°10'46"	4.76	1	LL5	S2	W1	28.9	23.2	2.8	GUT	
GRV 020004	25-Dec-2002	73°05'53"	75°10'42"	2.24	1	H4	S2	W2	18.5	16.7	1.3	GUT	
GRV 020006	25-Dec-2002	73°05'47"	75°12'09"	1.67	1	L3	S2	W1	1.2–38.5	2.7–24.4	0.2–4.4	GUT	
GRV 020007	25-Dec-2002	73°05'23"	75°11'22"	25.94	1	H4	S2	W2	17.0	15.8	1.2	GIGCAS	
GRV 020008	26-Dec-2002	73°05'53"	75°12'33"	6.17	1	H4	S2	W1	18.0	16.1	1.3	GIGCAS	
GRV 020009	26-Dec-2002	73°05'32"	75°11'36"	2.11	1	H5	S2	W1	20.4	17.9	1.2	NU	
GRV 020011	26-Dec-2002	73°06'48"	75°06'14"	0.55	1	L3	S2	W2	1.1–43.8	1.6–34.7	0–4.8	PMO	
GRV 020012	26-Dec-2002	73°06'14"	75°10'12"	1.33	1	LL5	S2	W1	30.1	24.7	1.9	PMO	
GRV 020014	26-Dec-2002	73°06'18"	75°10'17"	2.72	1	LL4	S2	W1	30.3	25.0	1.8	NU	
GRV 020016	26-Dec-2002	73°05'49"	75°11'54"	1.53	1	H3	S2	W2	9.3–25.6	6.7–19.2	0.3–8.7	GIGCAS	
GRV 020018	27-Dec-2002	73°05'37"	75°11'26"	2.5	1	H5	S2	W2	20.5	18.4	1.2	PMO	
GRV 020019	27-Dec-2002	73°05'02"	75°12'59"	10.10	1	LL5	S3	W2	31.6	27.2	2.4	GIGCAS	
GRV 020020	27-Dec-2002	73°05'10"	75°14'03"	2.56	1	L6	S2	W2	26.5	22.6	1.5	PMO	
GRV 020021	27-Dec-2002	73°05'11"	75°13'59"	11.30	1	LL4	S3	W2	27.5	23.7	1.2	GIGCAS	
GRV 020022	27-Dec-2002	73°05'09"	75°12'27"	3.4	1	H4	S3	W1	18.0	18.6	2.0	IGCAS	
GRV 020023	28-Dec-2002	73°05'09"	75°12'30"	2.69	1	H5	S3	W1	18.4	17.0	1.4	IGCAS	
GRV 020024	29-Dec-2002	73°05'02"	75°12'30"	8.09	1	H5	S3	W1	19.9	17.1	1.2	IGCAS	
GRV 020026	28-Dec-2002	73°04'30"	75°15'19"	12	1	H5	S5	W1	20.4	18.2	1.3	NU	
GRV 020027	30-Dec-2002	73°04'09"	75°16'37"	428.8	1	L6	S4	W1	25.8	21.9	1.7	IGCAS	
GRV 020028	31-Dec-2002	73°04'23"	75°16'08"	10.1	1	LL4	S3	W1	28.2	23.1	1.5	IGCAS	
GRV 020030	28-Dec-2002	73°04'28"	75°16'27"	0.5	1	H4	S2	W1	17.6	16.1	1.6	GUT	
GRV 020031	28-Dec-2002	73°05'09"	75°13'12"	1.93	1	H6	S2	W1	19.5	17.2	1.4	PMO	
GRV 020032	28-Dec-2002	73°06'51"	75°10'08"	1.91	1	LL3	S2	W1	0.7–37.0	4.0–29.1	0.2–1.6	GUT	
GRV 020033	28-Dec-2002	73°06'15"	75°10'04"	1.51	1	LL4	S3	W2	27.2	20.1	1.7	GUT	
GRV 020034	28-Dec-2002	73°06'12"	75°10'25"	24.6	1	LL3	S2	W1	14.9–27.9	12.2–26.6	0.4–2.6	GUT	
GRV 020035	29-Dec-2002	73°06'29"	75°12'15"	6.32	1	L3	S2	W2	0.5–41.4	2.2–32.9	0–6.4	PMO	
GRV 020036	30-Dec-2002	73°05'56"	75°10'30"	1.1	1	LL3	S2	W1	4.6–27.3	11.5–29.6	0.3–2.5	GUT	
GRV 020037	30-Dec-2002	73°06'20"	75°10'14"	1.64	1	LL4	S2	W1	28.4	23.8	1.5	GIGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 020038	30-Dec-2002	73°08'37"	75°03'27"	25.60	1	L4	S3	W1	25.7	22.0	1.7	GIGCAS	
GRV 020040	30-Dec-2002	73°08'05"	75°02'34"	31.70	1	L5	S3	W2	24.4	21.0	1.3	GIGCAS	
GRV 020041	30-Dec-2002	73°06'19"	75°09'08"	1.41	1	LL4	S2	W2	28.1	23.6	1.9	GIGCAS	
GRV 020042	1-Jan-2003	73°00'23"	75°11'32"	2.16	1	H4	S2	W2	18.2	16.2	1.3	GIGCAS	
GRV 020043	1-Jan-2003	72°59'40"	75°12'28"	56.9	1	H4	S3	W3	11.0	10.8	1.2	IGCAS	
GRV 020044	2-Jan-2003	72°59'38"	75°12'45"	5.52	1	H3	S2	W1	19.7 (15.7–21.0)	12.6 (6.7–18.4)	0.7	IGCAS	
GRV 020045	3-Jan-2003	72°59'30"	75°12'38"	1.96	1	H3	S3	W1	19.5 (17.8–22.5)	17.9 (15.3–22.0)	0.7	IGCAS	
GRV 020046	1-Jan-2003	72°59'55"	75°14'10"	3	1	L6	S2	W1	25.7	21.8	1.6	PMO	
GRV 020049	4-Jan-2003	72°59'40"	75°12'34"	1.22	1	L4	S2	W1	25.1	21.2	1.6	IGCAS	
GRV 020050	1-Jan-2003	72°59'59"	75°12'35"	3.13	1	H5	S3	W1	18.8	16.9	1.1	PMO	
GRV 020051	5-Jan-2003	72°59'30"	75°13'40"	1.36	1	H4	S2	W1	19.5	17.4	1.5	IGCAS	
GRV 020052	1-Jan-2003	73°01'02"	75°15'20"	12.1	1	H5	S2	W2	20.0	17.9	1.5	PMO	
GRV 020053	1-Jan-2003	73°00'36"	75°13'40"	10.5	1	L6	S5	W2	26.3	22.2	1.8	PMO	
GRV 020054	1-Jan-2003	73°00'58"	75°11'10"	2.16	1	H3	S4	W1	12.0–24.7	6.6–18.3	0–2.0	PMO	
GRV 020055	2-Jan-2003	72°59'56"	75°11'50"	3.01	1	H5	S2	W3	19.3	17.4	2.0	PMO	
GRV 020056	2-Jan-2003	72°59'55"	75°11'53"	5.46	1	L6	S4	W2	24.3	20.1	2.4	GUT	
GRV 020057	2-Jan-2003	72°59'49"	75°12'22"	14.1	1	L5	S3	W2	24.2	20.8	1.8	GUT	
GRV 020058	2-Jan-2003	72°59'40"	75°12'20"	2.53	1	L5	S2	W2	26.3	22.3	1.5	PMO	
GRV 020059	2-Jan-2003	72°59'39"	75°12'19"	209	1	L4	S5	W1	25.5	21.7	1.5	NU	
GRV 020060	2-Jan-2003	72°59'35"	75°12'00"	21.2	1	L5	S4	W2	24.2	20.6	1.9	GUT	
GRV 020061	2-Jan-2003	72°59'57"	75°13'40"	6.55	1	L6	S2	W1	26.9	22.8	1.4	PMO	
GRV 020062	2-Jan-2003	72°59?50"	75°13'10"	2.26	1	L6	S2	W1	26.6	22.5	1.4	PMO	
GRV 020063	2-Jan-2003	72°59?40"	75°13'00"	2.86	1	L6	S2	W1	26.9	22.6	1.6	PMO	
GRV 020064	2-Jan-2003	72°59?48"	75°13'11"	1.99	1	L5	S3	W2	24.3	20.6	1.6	GUT	
GRV 020065	2-Jan-2003	72°59?49"	75°13'23"	2.33	1	H5	S2	W2	17.9	15.6	1.1	GUT	
GRV 020066	2-Jan-2003	72°59'57"	75°14'20"	1.76	1	H4	S2	W3	17.4	16.5	1.7	GIGCAS	
GRV 020068	2-Jan-2003	72°59'42"	75°12'21"	623.80	1	L5	S3	W2	24.6	21.2	1.5	GIGCAS	
GRV 020069	2-Jan-2003	72°59'44"	75°12'28"	171.50	1	L5	S3	W1	24.4	20.8	1.7	GIGCAS	
GRV 020070	2-Jan-2003	72°59'57"	75°12'10"	7.91	1	H4	S2	W1	18.4	16.4	1.3	GIGCAS	
GRV 020071	2-Jan-2003	72°59'56"	75°12'15"	4.51	1	H5	S2	W3	18.2	16.6	1.2	GIGCAS	
GRV 020072	6-Jan-2003	72°59'54"	75°11'45"	13	1	H6	S3	W1	20.6	18.5	1.3	IGCAS	
GRV 020073	7-Jan-2003	72°59'56"	75°12'46"	9	1	L6	S3	W1	26.6	22.4	1.8	IGCAS	
GRV 020074	8-Jan-2003	72°59'45"	75°12'35"	1.48	1	H4	S3	W1	19.6	17.6	1.5	IGCAS	
GRV 020076	9-Jan-2003	72°59'43"	75°12'16"	37.3	1	H5	S3	W1	18.9	16.6	1.8	IGCAS	
GRV 020077	10-Jan-2003	72°59'40"	75°12'18"	1.31	1	H5	S3	W1	20.0	17.6	1.4	IGCAS	
GRV 020080	3-Jan-2003	72°59'25"	75°16'40"	5.77	1	H5	S2	W2	19.1	16.2	1.0	GUT	
GRV 020081	3-Jan-2003	72°59'44"	75°13'14"	5.03	1	L6	S3	W2	24.9	20.9	1.7	GUT	
GRV 020083	3-Jan-2003	72°59'47"	75°12'46"	1.12	1	H4	S2	W1	19.2	16.5	1.5	GUT	
GRV 020084	4-Jan-2003	72°59'48"	75°12'30"	7.73	1	L5	S3	W1	25.4	21.2	1.5	GUT	
GRV 020085	4-Jan-2003	72°59'47"	75°12'28"	2.08	1	L5	S3	W1	24.6	20.8	1.4	GUT	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 020087	4-Jan-2003	73°00'08"	75°16'59"	2.07	1	H5	S3	W2	18.4	16.6	1.2	GIGCAS	
GRV 020088	4-Jan-2003	73°00'13"	75°15'10"	3.02	1	H4	S2	W1	18.6	17.0	1.3	GIGCAS	
GRV 020089	4-Jan-2003	73°00'13"	75°15'05"	4.56	1	H5	S2	W3	18.7	16.9	1.4	GIGCAS	
GRV 020091	4-Jan-2003	72°59'45"	75°13'39"	5.32	1	H4	S2	W2	18.2	16.4	1.6	GIGCAS	
GRV 020092	4-Jan-2003	72°59'45"	75°12'24"	1.26	1	H5	S2	W1	18.4	16.6	1.3	GIGCAS	
GRV 020093	11-Jan-2003	72°59'44"	75°12'23"	1.06	1	H6	S3	W1	19.9	17.1	1.3	IGCAS	
GRV 020095	12-Jan-2003	72°59'43"	75°12'24"	6.05	1	L6	S5	W1	26.5	22.2	1.3	IGCAS	
GRV 020096	13-Jan-2003	72°59'49"	75°12'22"	1.79	1	L5	S3	W1	24.7	20.2	1.5	IGCAS	
GRV 020097	14-Jan-2003	72°59'40"	75°12'15"	131.2	1	H5	S2	W1	19.5	18.9	1.4	IGCAS	
GRV 020098	15-Jan-2003	72°59'40"	75°12'16"	122.7	1	H6	S2	W1	21.0	17.8	1.6	IGCAS	
GRV 020100	6-Jan-2003	72°59'50"	75°12'14"	7.25	1	H4	S2	W1	18.3	16.7	1.3	GUT	
GRV 020101	6-Jan-2003	72°59'39"	75°12'16"	2.59	1	H5	S2	W3	18.3	16.4	1.3	GUT	
GRV 020102	6-Jan-2003	72°59'48"	75°13'05"	4.23	1	H5	S4	W2	18.1	16.0	1.1	GUT	
GRV 020104	6-Jan-2003	72°58'53"	75°15'36"	26.1	1	LL3	S2	W1	0.7–28.1	2.0–19.8	0.1–3.1	GUT	
GRV 020105	6-Jan-2003	72°58'51"	75°15'20"	24.4	1	LL3	S1	W2	3.3–29.7	3.2–20.8	0.2–3.1	GUT	
GRV 020106	6-Jan-2003	72°58'51"	75°15'22"	13.90	1	L3	S2	W1	7.5–36.2	2.0–43.3	0.2–5.0	GIGCAS	
GRV 020107	6-Jan-2003	72°58'48"	75°15'23"	3.68	1	L5	S3	W2	24.2	20.7	1.3	GIGCAS	
GRV 020108	6-Jan-2003	72°58'49"	75°15'20"	5.79	1	H4	S2	W2	18.5	16.5	1.1	GIGCAS	
GRV 020109	6-Jan-2003	72°58'49"	75°15'17"	2.02	1	H4	S2	W2	18.6	16.5	1.2	GIGCAS	
GRV 020110	6-Jan-2003	72°58'53"	75°14'59"	3.06	1	H4	S2	W1	18.7	16.6	1.2	GIGCAS	
GRV 020111	16-Jan-2003	72°58'47"	75°15'23"	2.18	1	L3	S2	W1	23.9 (0.7–33.7)	20.1 (9.7–30.6)	1.9	IGCAS	
GRV 020112	17-Jan-2003	72°58'50"	75°15'20"	1.6	1	H3	S2	W1	19.3 (17.7–25.4)	16.7 (15.6–18.9)	2.3	IGCAS	
GRV 020113	18-Jan-2003	72°58'48"	75°15'36"	1.28	1	H4	S2	W1	19.5	17.7	1.3	IGCAS	
GRV 020114	19-Jan-2003	72°58'55"	75°15'06"	1	1	L3	S2	W1	25.8 (23.0–29.9)	16.3 (8.3–23.9)	1.1	IGCAS	
GRV 020115	20-Jan-2003	72°58'43"	75°15'58"	8.34	1	L6	S2	W1	25.8	22.0	1.7	IGCAS	
GRV 020117	6-Jan-2003	72°58'36"	75°16'01"	3.51	1	L5	S2	W2	23.8	20.4	0.8	GUT	
GRV 020118	6-Jan-2003	72°58'45"	75°15'57"	8.12	1	H4	S2	W2	19.0	16.6	1.2	GUT	
GRV 020119	6-Jan-2003	72°58'44"	75°15'53"	36.4	1	H4	S2	W2	18.5	16.3	0.9	GUT	
GRV 020120	6-Jan-2003	72°58'45"	75°15'29"	1.73	1	H5	S2	W2	19.3	17.0	1.3	GUT	
GRV 020121	6-Jan-2003	72°58'42"	75°15'32"	14.5	1	H5	S2	W2	18.3	16.3	1.5	GUT	
GRV 020122	6-Jan-2003	72°58'38"	75°15'37"	13.8	1	H6	S2	W2	20.3	17.8	1.4	PMO	
GRV 020123	6-Jan-2003	72°58'40"	75°15'36"	3.39	1	H5	S2	W2	19.2	17.2	1.4	GIGCAS	
GRV 020124	6-Jan-2003	72°58'43"	75°15'39"	1.47	1	Mesosiderite						GIGCAS	See separate entry
GRV 020125	6-Jan-2003	72°58'46"	75°15'37"	2.10	1	L5	S3	W2	24.9	21.4	1.4	GIGCAS	
GRV 020126	6-Jan-2003	72°58'39"	75°15?39"	4.79	1	H5	S2	W1	19.9	17.6	1.4	PMO	
GRV 020127	6-Jan-2003	72°58'50"	75°15'45"	6.77	1	L5	S3	W2	24.7	18.7	1.4	GIGCAS	
GRV 020128	6-Jan-2003	72°58'53"	75°15'50"	11.7	1	H5	S2	W1	20.1	17.7	1.4	PMO	
GRV 020130	6-Jan-2003	72°58'36"	75°15'37"	139.70	1	H4	S2	W2	18.6	16.6	1.1	GIGCAS	
GRV 020131	21-Jan-2003	72°58'37"	75°15'40"	3.81	1	L6	S2	W1	26.0	21.8	1.4	IGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 020132	22-Jan-2003	72°58'38"	75°15'41"	1.9	1	L6	S2	W1	25.8	21.7	1.6	IGCAS	
GRV 020134	23-Jan-2003	72°58'41"	75°15'38"	16.4	1	L6	S2	W1	26.4	22.2	1.5	IGCAS	
GRV 020135	6-Jan-2003	72°58'48"	75°15'32"	12.3	1	L5	S4	W1	25.2	21.2	1.4	PMO	
GRV 020136	6-Jan-2003	72°58'45"	75°15'46"	3.31	1	L4	S2	W1	23.8	20.3	1.1	PMO	
GRV 020137	6-Jan-2003	72°58'50"	75°15'30"	8.75	1	L3	S2	W1	1.3–48.3	3.5–41.2	0.3–6.0	PMO	
GRV 020138	6-Jan-2003	72°58'43"	75°15'18"	2.27	1	L6	S2	W1	26.0	22.1	1.5	NU	
GRV 020139	6-Jan-2003	72°58'42"	75°15'26"	3.25	1	H6	S2	W2	20.1	17.7	1.4	PMO	
GRV 020140	6-Jan-2003	72°58'38"	75°15'31"	7.08	1	H6	S2	W2	19.9	17.5	1.3	PMO	
GRV 020142	6-Jan-2003	72°58'40"	75°15'28"	1.13	1	L6	S2	W2	26.1	22.0	1.5	PMO	
GRV 020143	6-Jan-2003	72°58'37"	75°15'25"	2.28	1	L6	S2	W2	25.8	21.9	1.3	PMO	
GRV 020144	6-Jan-2003	72°58'40"	75°15'42"	1.96	1	H5	S2	W2	19.6	17.3	1.9	NU	
GRV 020145	6-Jan-2003	72°58'39"	75°15'19"	1.69	1	L5	S2	W1	26.1	22.4	1.3	NU	
GRV 020146	6-Jan-2003	72°58'35"	75°16'02"	2.28	1	H6	S2	W2	19.7	17.9	1.3	NU	
GRV 020147	6-Jan-2003	72°58'39"	75°15'55"	2.9	1	H5	S2	W2	19.7	17.3	1.3	PMO	
GRV 020148	6-Jan-2003	72°58'39"	75°15'57"	6.88	1	L5	S2	W1	26.4	22.4	1.4	PMO	
GRV 020149	6-Jan-2003	72°58'37"	75°16'03"	8.89	1	L5	S2	W1	25.7	21.9	1.3	NU	
GRV 020150	6-Jan-2003	72°58'40"	75°15'56"	2.02	1	H6	S2	W1	20.7	18.3	1.4	PMO	
GRV 020151	6-Jan-2003	72°58'47"	75°15'48"	1.45	1	L6	S2	W1	25.4	21.6	1.3	PMO	
GRV 020152	6-Jan-2003	72°58'47"	75°15'49"	2.53	1	L6	S2	W1	26.8	22.2	1.5	PMO	
GRV 020153	24-Jan-2003	72°58'50"	75°15'51"	1.6	1	H5	S2	W1	20.1	17.6	1.5	IGCAS	
GRV 020154	25-Jan-2003	72°58'51"	75°15'40"	1.51	1	L5	S2	W1	26.6	22.0	1.6	IGCAS	
GRV 020156	6-Jan-2003	72°58'38"	75°16'05"	2.65	1	L5	S3	W1	24.2	20.6	1.6	GUT	
GRV 020157	6-Jan-2003	72°58'38"	75°16'04"	4.8	1	L5	S3	W1	24.1	20.2	1.5	GUT	
GRV 020159	6-Jan-2003	72°58'43"	75°15'40"	1.54	1	L5	S2	W2	25.0	21.2	1.5	GUT	
GRV 020160	6-Jan-2003	72°58'42"	75°15'38"	3.72	1	H5	S2	W2	18.4	16.2	1.2	GUT	
GRV 020161	6-Jan-2003	72°58?44"	75°15'40"	7.6	1	L6	S4	W2	25.2	21.1	1.4	GUT	
GRV 020162	7-Jan-2003	72°58'34"	75°16'01"	2.31	1	H3	S2	W2	1.7–30.8	5.6–20.4	0.1–1.6	GIGCAS	
GRV 020163	7-Jan-2003	72°58'35"	75°15'54"	3.42	1	L6	S4	W2	24.7	21.0	1.5	GIGCAS	
GRV 020164	7-Jan-2003	72°58'36"	75°15'57"	5.20	1	L3	S2	W2	12.1–31.7	3.9–19.1	0.1–6.9	GIGCAS	
GRV 020165	7-Jan-2003	72°58'35"	75°15'47"	6.96	1	L3	S2	W1	12.7–32.7	19.3–20.7	0.4–1.9	GIGCAS	
GRV 020166	7-Jan-2003	72°58'39"	75°15'47"	8.02	1	H3	S2	W2	0.5–27.1	1.0–19.9	0.2–2.9	GIGCAS	
GRV 020167	26-Jan-2003	72°58'41"	75°15'49"	7.48	1	L6	S3	W1	25.8	21.7	1.6	IGCAS	
GRV 020169	7-Jan-2003	72°58'41"	75°15'37"	4.78	1	L3	S2	W1	9.0–43.4	0.6–26.8	0–4.9	PMO	
GRV 020172	7-Jan-2003	72°58'39"	75°15'47"	1.05	1	L6	S2	W1	26.4	22.6	1.5	PMO	
GRV 020173	7-Jan-2003	72°58'35"	75°15'50"	2.62	1	L4	S2	W1	26.0	22.2	1.4	PMO	
GRV 020174	20-Jan-2003	72°46'54"	75°18'10"	56.05	1	L6	S2	W1	25.7	21.9	1.4	NU	
GRV 020175	7-Jan-2003	72°58'45"	75°15'42"	1.54	1	Mesosiderite			45.7–46.7	12.5–57.0	1.5–43.8	PMO	See separate entry
GRV 020178	7-Jan-2003	72°58'41"	75°15'43"	1.6	1	H6	S2	W1	19.4	17.4	1.3	NU	
GRV 020179	7-Jan-2003	72°58'45"	75°16'01"	1.29	1	L5	S2	W1	26.1	21.8	2.0	NU	
GRV 020181	7-Jan-2003	72°59'40"	75°15'52"	23.1	1	H6	S2	W1	20.0	17.6	0.9	NU	
GRV 020182	7-Jan-2003	72°59'40"	75°15'49"	1.04	1	L6	S2	W1	26.2	22.1	1.5	PMO	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 020184	7-Jan-2003	72°58'41"	75°15'47"	3.17	1	L5	S2	W2	25.9	22.2	1.3	PMO	
GRV 020185	7-Jan-2003	72°58'39"	75°16'02"	1.6	1	H6	S3	W1	19.8	17.7	1.5	NU	
GRV 020186	7-Jan-2003	72°58'43"	75°15'33"	37.8	1	H5	S2	W1	20.1	17.8	1.4	NU	
GRV 020187	7-Jan-2003	72°58'42"	75°15'34"	1.54	1	L6	S2	W1	25.2	20.9	1.5	PMO	
GRV 020188	8-Jan-2003	72°59'04"	75°13'30"	558.6	1	L6	S5	W1	26.0	22.0	1.5	PMO	
GRV 020199	27-Jan-2003	72°59'33"	75°12'23"	38.3	1	H5	S3	W1	19.9	17.6	1.3	IGCAS	
GRV 021474	12-Jan-2003	72°56'45"	75°16'00"	30.9	1	L6	S2	W1	24.2	20.5	1.4	NU	
GRV 021475	28-Jan-2003	72°56'35"	75°16'30"	183.7	1	L6	S2	W1	25.2	22.1	1.4	IGCAS	
GRV 021477	12-Jan-2003	72°56'30"	75°17'31"	58.5	1	L6	S2	W1	26.4	22.5	1.4	PMO	
GRV 021478	29-Jan-2003	72°56'06"	75°19'30"	104.5	1	L6	S2	W1	26.4	21.9	1.5	IGCAS	
GRV 021480	30-Jan-2003	72°56'07"	75°19'29"	12.9	1	H5	S3	W1	18.3	15.9	1.6	IGCAS	
GRV 021482	13-Jan-2003	72°56'23"	75°18'05"	199.9	1	L6	S3	W1	24.0	20.2	1.7	GUT	
GRV 021485	13-Jan-2003	72°56'05"	75°19'00"	60.5	1	H5	S2	W2	18.1	15.9	1.7	GUT	
GRV 021486	13-Jan-2003	72°56?05"	75°18'57"	82.1	1	H5	S2	W2	18.9	16.7	1.6	GUT	
GRV 021489	13-Jan-2003	72°56?08"	75°20'47"	56.2	1	L6	S3	W1	24.3	20.3	1.7	GUT	
GRV 021491	13-Jan-2003	72°56?12"	75°20'42"	1716.5	1	L6	S4	W1	24.2	20.5	1.5	GUT	
GRV 021492	13-Jan-2003	72°58'01"	75°16'24"	241.20	1	H4	S2	W1	18.1	16.0	1.1	GIGCAS	
GRV 021495	13-Jan-2003	72°56'48"	75°18'21"	43.70	1	L5	S3	W2	24.2	20.8	1.7	GIGCAS	
GRV 021499	13-Jan-2003	72°56'35"	75°17'48"	57.10	1	L5	S3	W1	23.1	19.9	1.4	GIGCAS	
GRV 021500	13-Jan-2003	72°56'57"	75°17'33"	12.83	1	L5	S4	W2	23.7	20.8	1.8	GIGCAS	
GRV 021501	13-Jan-2003	72°56'40"	75°17'55"	17.37	1	L5	S3	W1	24.0	20.7	1.5	GIGCAS	
GRV 021502	31-Jan-2003	72°57'06"	75°16'25"	17.41	1	L6	S3	W1	26.0	21.9	1.6	IGCAS	
GRV 021503	1-Feb-2003	72°56'54"	75°15'56"	23.56	1	L6	S3	W1	26.1	21.8	1.6	IGCAS	
GRV 021504	2-Feb-2003	72°56'55"	75°15'54"	17.81	1	L6	S3	W1	26.1	21.8	1.7	IGCAS	
GRV 021506	3-Feb-2003	72°56'42"	75°15'39"	39.13	1	L6	S3	W1	26.1	22.5	1.6	IGCAS	
GRV 021508	4-Feb-2003	72°56'47"	75°17'00"	278.2	1	H4	S3	W1	20.6	18.1	1.3	IGCAS	
GRV 021510	13-Jan-2003	72°56'12"	75°18'05"	462.7	1	H4	S3	W1	18.3	16.0	0.9	GUT	
GRV 021511	13-Jan-2003	72°56'07"	75°19'12"	11.5	1	H6	S1	W3	18.2	16.3	1.5	GUT	
GRV 021514	13-Jan-2003	72°56'05"	75°19'13"	30.82	1	H6	S2	W1	18.4	16.2	1.3	GUT	
GRV 021515	13-Jan-2003	72°56'57"	75°15'31"	61.32	1	L6	S3	W1	24.3	20.4	1.6	GUT	
GRV 021516	13-Jan-2003	72°56'05"	75°19'13"	88.91	1	H5	S2	W2	18.1	16.5	1.2	GUT	
GRV 021517	13-Jan-2003	72°56'10"	75°18'49"	96.36	1	H5	S2	W3	18.9	17.0	1.6	GIGCAS	
GRV 021518	13-Jan-2003	72°56'11"	75°18'51"	54.14	1	H5	S2	W2	18.9	16.5	1.6	GIGCAS	
GRV 021522	14-Jan-2003	72°57'34"	75°14'13"	1.18	1	H6	S5	W1	17.3	15.6	1.0	GIGCAS	
GRV 021525	14-Jan-2003	72°57'39"	75°14'50"	3.87	1	Mesosiderite						GIGCAS	See separate entry
GRV 021536	14-Jan-2003	72°57?53"	75°12'59"	1.45	1	CM2		–	0.5–43.5	1.–6.	0.8–7.9	PMO	See separate entry
GRV 021548	14-Jan-2003	72°57'46"	75°14'46"	31.81	1	L5	S3	W2	24.1	20.9	1.6	GIGCAS	
GRV 021549	5-Feb-2003	72°56'05"	75°19'18"	16.26	1	H4	S2	W1	17.6	17.4	1.0	IGCAS	
GRV 021550	6-Feb-2003	72°56'05"	75°19'13"	18.63	1	H4	S2	W1	19.5	16.7	1.0	IGCAS	
GRV 021564	7-Feb-2003	72°56'03"	75°19'20"	13.69	1	H5	S2	W1	18.4	16.3	1.4	IGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 021566	8-Feb-2003	72°56'18"	75°17'23"	13.48	1	H4	S2	W1	19.0	17.3	1.3	IGCAS	
GRV 021569	9-Feb-2003	72°56'25"	75°17'09"	19.67	1	H4	S2	W1	20.0	17.5	1.4	IGCAS	
GRV 021570	14-Jan-2003	72°56'00"	75°20'07"	24.36	1	H5	S2	W2	18.8	17.0	1.8	GUT	
GRV 021571	14-Jan-2003	72°56'03"	75°19'33"	112.54	1	H5	S2	W2	18.7	16.4	1.3	GUT	
GRV 021572	14-Jan-2003	72°56'18"	75°17'23"	56.95	1	L4	S2	W1	23.5	20.1	1.1	GUT	
GRV 021573	14-Jan-2003	72°56'36"	75°16'18"	47.17	1	L6	S4	W1	25.0	20.9	1.7	GUT	
GRV 021574	14-Jan-2003	72°57'47"	75°14'21"	19.19	1	L6	S3	W1	23.9	20.3	1.6	GUT	
GRV 021576	14-Jan-2003	72°57'50"	75°12'58"	105.88	1	H4	S2	W1	18.7	17.0	1.3	GIGCAS	
GRV 021578	14-Jan-2003	72°57'46"	75°14'20"	14.42	1	L6	S3	W1	24.3	21.0	1.7	GIGCAS	
GRV 021582	14-Jan-2003	72°57'47"	75°13'28"	44.22	1	L5	S3	W2	24.2	20.5	1.7	GIGCAS	
GRV 021586	14-Jan-2003	72°57'43"	75°15'20"	11.59	1	L5	S3	W2	24.3	21.0	1.5	GIGCAS	
GRV 021587	14-Jan-2003	72°57'50"	75°13'31"	31.33	1	L5	S3	W2	24.2	20.5	1.6	GIGCAS	
GRV 021589	10-Feb-2003	72°57'57"	75°13'48"	67.42	1	H5	S3	W1	19.2	18.4	1.3	IGCAS	
GRV 021590	11-Feb-2003	72°56'08"	75°17'54"	16.49	1	H5	S3	W1	19.2	16.8	1.7	IGCAS	
GRV 021593	12-Feb-2003	72°51'16"	75°12'39"	28.09	1	H4	S4	W1	19.1	16.9	1.7	IGCAS	
GRV 021595	13-Feb-2003	72°49'28"	75°17'30"	22.53	1	L6	S3	W1	26.3	21.8	1.4	IGCAS	
GRV 021597	14-Feb-2003	72°49'29"	75°17'29"	26.77	1	L6	S3	W1	26.0	21.7	1.6	IGCAS	
GRV 021598	17-Jan-2003	72°49'30"	75°21'24"	79.76	1	H6	S1	W3	18.9	16.6	1.5	GUT	
GRV 021600	17-Jan-2003	72°49'30"	75°21'23"	24.51	1	H4	S3	W2	17.7	15.8	1.1	GUT	
GRV 021602	17-Jan-2003	72°49'30"	75°21'24"	13.59	1	H5	S2	W2	18.1	16.0	1.4	GUT	
GRV 021604	18-Jan-2003	72°56'30"	75°16'39"	371.1	1	H5	S2	W2	18.6	16.5	1.7	GUT	
GRV 021610	19-Jan-2003	72°49'28"	75°17'30"	49.85	1	L5	S3	W1	24.7	21.0	1.9	GUT	
GRV 021611	20-Jan-2003	72°46'31"	75°19'29"	26.72	1	H5	S2	W2	18.0	16.0	1.3	GIGCAS	
GRV 021614	20-Jan-2003	72°46'24"	75°19'56"	47.32	1	L5	S4	W2	23.4	20.2	1.6	GIGCAS	
GRV 021643	20-Jan-2003	72°46'22"	75°20'44"	12.81	1	L4	S3	W2	24.0	20.4	1.4	GIGCAS	
GRV 021649	20-Jan-2003	72°46'24"	75°20'00"	13.90	1	L6	S5	W2	23.0	20.1	1.6	GIGCAS	
GRV 021651	20-Jan-2003	72°46'35"	75°20'52"	35.15	1	L5	S2	W2	24.6	21.1	1.6	GIGCAS	
GRV 021652	15-Feb-2003	72°46'28"	75°20'03"	57.89	1	L5	S3	W1	25.8	21.6	1.7	IGCAS	
GRV 021654	16-Feb-2003	72°46'24"	75°19'55"	16.56	1	L4	S3	W1	25.6	21.9	1.7	IGCAS	
GRV 021668	17-Feb-2003	72°46'43"	75°19'48"	88.53	1	L4	S3	W1	25.1	21.6	1.7	IGCAS	
GRV 021669	18-Feb-2003	72°46'42"	75°19'49"	406.1	1	L5	S3	W1	26.1	22.1	1.6	IGCAS	
GRV 021670	19-Feb-2003	72°46'43"	75°19'54"	282.4	1	L5	S3	W1	26.0	21.9	1.7	IGCAS	
GRV 021671	20-Jan-2003	72°46'43"	75°19'51"	37.8	1	L6	S3	W2	23.4	20.7	1.7	GUT	
GRV 021672	20-Jan-2003	72°46'43"	75°19'47"	265.2	1	L6	S3	W2	23.3	20.0	1.7	GUT	
GRV 021673	20-Jan-2003	72°46'41"	75°20'03"	187.38	1	L5	S3	W1	24.0	20.7	1.5	GUT	
GRV 021674	20-Jan-2003	72°46'41"	75°20'14"	83.65	1	L5	S5	W1	24.5	20.6	1.6	PMO	
GRV 021675	20-Jan-2003	72°46'41"	75°20'05"	56.25	1	L6	S5	W1	25.7	21.7	1.7	PMO	
GRV 021676	20-Jan-2003	72°46'40"	75°19'56"	51.6	1	L6	S3	W1	26.2	22.2	1.7	PMO	
GRV 021677	20-Jan-2003	72°46'40"	75°19'57"	37.9	1	L6	S5	W1	25.5	21.7	1.5	NU	
GRV 021678	20-Jan-2003	72°46'38"	75°20'16"	32.65	1	L6	S5	W1	25.2	21.5	1.5	PMO	
GRV 021679	20-Jan-2003	72°46'38"	75°20'20"	27.55	1	L5	S6	W2	25.0	21.4	1.6	PMO	
GRV 021680	20-Jan-2003	72°46'38"	75°20'27"	21.01	1	L5	S5	W1	25.8	22.2	1.5	NU	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 021700	20-Jan-2003	72°46'24"	75°20'54"	17.31	1	H6	S2	W2	20.6	18.4	1.0	NU	
GRV 021706	20-Jan-2003	72°46'25"	75°19'11"	16.99	1	L6	S2	W1	26.5	22.4	1.5	PMO	
GRV 021712	20-Jan-2003	72°47'25"	75°17'42"	285.3	1	L5	S3	W3	23.8	20.3	1.7	GUT	
GRV 021713	20-Jan-2003	72°47'24"	75°17'45"	147.89	1	L6	S3	W3	24.1	20.3	1.8	GUT	
GRV 021714	20-Jan-2003	72°47'24"	75°17'50"	136.81	1	L6	S4	W2	23.4	20.2	1.8	GIGCAS	
GRV 021715	20-Jan-2003	72°47'24"	75°17'47"	1.47	1	H5	S4	W2	17.4	15.4	1.1	GIGCAS	
GRV 021722	20-Jan-2003	72°47'26"	75°16'58"	33.21	1	L6	S4	W2	23.7	20.4	1.7	GIGCAS	
GRV 021723	20-Jan-2003	72°47'26"	75°16'37"	25.55	1	L6	S3	W2	23.3	20.1	1.7	GIGCAS	
GRV 021724	20-Jan-2003	72°47'23"	75°17'50"	22.02	1	L5	S4	W2	23.4	20.2	1.5	GIGCAS	
GRV 021725	20-Feb-2003	72°47'23"	75°17'31"	24.99	1	L5	S2	W1	26.1	21.8	1.5	IGCAS	
GRV 021726	21-Feb-2003	72°47'24"	75°17'22"	11.24	1	L4	S3	W1	25.3	21.5	1.8	IGCAS	
GRV 021729	20-Jan-2003	72°47'23"	75°17'25"	2.97	1	Ureilite		–	2.7–23.1	3.9–19.7	9.4–30.3	PMO	See separate entry
GRV 021785	22-Feb-2003	72°46'30"	75°20'20"	71.74	1	L5	S3	W1	25.6	21.6	1.4	IGCAS	
GRV 021786	23-Feb-2003	72°46'31"	75°20'20"	72.49	1	L6	S3	W1	25.1	21.5	1.7	IGCAS	
GRV 021787	24-Feb-2003	72°46'30"	75°20'30"	70.11	1	L6	S3	W1	26.3	21.4	1.7	IGCAS	
GRV 021789	20-Jan-2003	72°46'28"	75°20'00"	35.11	1	H5	S1	W2	18.7	16.5	0.8	GUT	
GRV 021790	20-Jan-2003	72°46'29"	75°20'01"	12.62	1	L6	S4	W2	23.6	20.0	1.6	GUT	
GRV 021791	20-Jan-2003	72°46'25"	75°19'20"	102.02	1	L5	S3	W2	24.3	20.4	1.8	GUT	
GRV 021792	20-Jan-2003	72°46'25"	75°19'21"	88.64	1	L6	S4	W3	23.7	20.2	1.7	GUT	
GRV 021793	20-Jan-2003	72°46'25"	75°19'22"	49.78	1	L6	S3	W1	24.2	20.5	1.8	GUT	
GRV 021794	20-Jan-2003	72°46'25"	75°19'23"	44.50	1	L5	S3	W2	24.2	20.9	1.6	GIGCAS	
GRV 021795	20-Jan-2003	72°46'26"	75°19'26"	41.78	1	H5	S2	W2	18.5	16.6	1.4	GIGCAS	
GRV 021796	20-Jan-2003	72°46'26"	75°19'27"	55.32	1	L6	S4	W2	23.7	20.4	1.6	GIGCAS	
GRV 021797	20-Jan-2003	72°46'26"	75°19'28"	99.66	1	L6	S3	W1	23.5	20.1	1.7	GIGCAS	
GRV 021799	20-Jan-2003	72°46'24"	75°20'01"	49.78	1	L6	S4	W2	23.2	20.1	1.5	GIGCAS	
GRV 021800	25-Feb-2003	72°46'24"	75°20'02"	14.06	1	L4	S3	W1	25.3	21.6	1.6	IGCAS	
GRV 021801	26-Feb-2003	72°46'24"	75°20'03"	28.08	1	L5	S2	W1	24.9	21.8	1.6	IGCAS	
GRV 021802	27-Feb-2003	72°46'24"	75°20'04"	175	1	L5	S2	W1	25.8	21.6	1.5	IGCAS	
GRV 021803	28-Feb-2003	72°46'27"	75°20'20"	115.9	1	L5	S4	W1	25.4	21.4	1.7	IGCAS	
GRV 021804	1-Mar-2003	72°46'30"	75°19'46"	46.13	1	L5	S4	W1	25.6	21.5	1.7	IGCAS	
GRV 021805	20-Jan-2003	72°46'29"	75°19'51"	179.05	1	L6	S3	W2	23.9	20.2	1.7	GUT	
GRV 021806	20-Jan-2003	72°46'29"	75°19'51"	58.6	1	L5	S3	W1	24.3	20.3	1.7	GUT	
GRV 021944	20-Jan-2003	72°46'35"	75°19'20"	11.44	1	L6	S3	W2	23.6	20.1	1.6	GUT	
GRV 022022	20-Jan-2003	72°46'58"	75°18'09"	228.6	1	L5	S3	W2	23.9	20.2	1.8	GUT	
GRV 022023	20-Jan-2003	72°46'59"	75°18'10"	102.91	1	L5	S4	W1	23.8	20.0	1.7	GUT	
GRV 022024	20-Jan-2003	72°47'01"	75°17'58"	405.90	1	L5	S3	W1	23.4	20.1	1.6	GIGCAS	
GRV 022025	20-Jan-2003	72°47'01"	75°17'47"	101.39	1	L6	S3	W2	23.4	20.2	1.8	GIGCAS	
GRV 022026	20-Jan-2003	72°47'00"	75°17'48"	73.32	1	L5	S3	W2	23.5	20.2	1.8	GIGCAS	
GRV 022027	20-Jan-2003	72°46'59"	75°17'54"	169.65	1	L5	S4	W2	23.4	20.1	1.6	GIGCAS	
GRV 022028	20-Jan-2003	72°46'57"	75°18'01"	244.90	1	L5	S3	W2	23.9	20.4	1.5	GIGCAS	
GRV 022029	20-Jan-2003	72°46'57"	75°18'01"	245.5	1	L6	S3	W1	25.2	21.3	1.6	PMO	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 022030	20-Jan-2003	72°46'57"	75°18'01"	119.14	1	L5	S5	W1	25.2	22.2	1.6	NU	
GRV 022031	20-Jan-2003	72°46'57"	75°18'02"	39.86	1	L6	S5	W1	25.3	21.3	1.5	PMO	
GRV 022032	20-Jan-2003	72°46'57"	75°18'06"	204.8	1	L6	S5	W1	25.2	21.7	1.7	PMO	
GRV 022033	20-Jan-2003	72°46'56"	75°18'08"	398.7	1	L5	S3	W1	25.9	22.0	1.5	PMO	
GRV 022034	20-Jan-2003	72°46'55"	75°18'09"	345	1	L5	S4	W2	25.9	21.8	1.7	PMO	
GRV 022035	20-Jan-2003	72°46'55"	75°18'07"	107.26	1	L6	S3	W1	24.6	21.2	1.6	PMO	
GRV 022036	20-Jan-2003	72°46'55"	75°18'07"	96.54	1	L5	S5	W1	24.6	21.0	1.6	PMO	
GRV 022037	20-Jan-2003	72°46'56"	75°18'04"	935.9	1	L6	S5	W1	25.1	21.3	1.5	PMO	
GRV 022038	2-Mar-2003	72°46'54"	75°18'10"	1012	1	L5	S3	W1	25.3	22.2	1.6	IGCAS	
GRV 022039	3-Mar-2003	72°46'43"	75°18'55"	160.67	1	L5	S3	W1	24.8	20.9	1.5	IGCAS	
GRV 022040	4-Mar-2003	72°46'43"	75°18'55"	589.5	1	L5	S3	W1	24.8	21.5	1.6	IGCAS	
GRV 022041	5-Mar-2003	72°46'43"	75°18'55"	96.74	1	L5	S4	W1	25.6	21.5	1.7	IGCAS	
GRV 022042	6-Mar-2003	72°46'43"	75°18'55"	218.1	1	L5	S2	W1	26.7	21.5	2.3	IGCAS	
GRV 022043	20-Jan-2003	72°46'43"	75°18'55"	208.7	1	L6	S3	W2	23.4	20.0	1.6	GUT	
GRV 022044	20-Jan-2003	72°46'43"	75°18'55"	152.14	1	L6	S3	W2	23.9	20.2	1.6	GUT	
GRV 022045	20-Jan-2003	72°46'43"	75°18'55"	47.76	1	L6	S3	W1	24.3	20.3	1.8	GUT	
GRV 022112	20-Jan-2003	72°46'45"	75°18'38"	365.6	1	L6	S3	W3	23.4	20.1	1.7	GUT	
GRV 022113	20-Jan-2003	72°46'45"	75°18'38"	33.49	1	L6	S3	W1	23.7	19.9	1.9	GUT	
GRV 022114	20-Jan-2003	72°46'45"	75°18'38"	171.43	1	L6	S3	W2	23.1	19.9	1.7	GIGCAS	
GRV 022115	20-Jan-2003	72°46'45"	75°18'38"	79.63	1	L6	S5	W1	25.8	21.4	1.5	NU	
GRV 022116	20-Jan-2003	72°46'45"	75°18'38"	69.62	1	L6	S5	W1	25.0	21.1	1.6	NU	
GRV 022117	20-Jan-2003	72°46'45"	75°18'38"	32.28	1	L5	S2	W1	25.9	22.0	1.4	NU	
GRV 022118	20-Jan-2003	72°46'45"	75°18'38"	46.03	1	L6	S5	W1	26.2	22.6	3.4	NU	
GRV 022119	20-Jan-2003	72°46'44"	75°18'49"	27.2	1	L5	S5	W1	24.8	21.8	1.6	NU	
GRV 022120	20-Jan-2003	72°46'44"	75°18'49"	363	1	L6	S5	W1	25.9	22.2	1.5	NU	
GRV 022121	20-Jan-2003	72°46'44"	75°18'49"	107.56	1	L6	S5	W2	24.1	20.3	1.5	PMO	
GRV 022122	20-Jan-2003	72°46'44"	75°18'49"	45.92	1	L6	S2	W1	25.6	21.6	1.5	PMO	
GRV 022123	20-Jan-2003	72°46'44"	75°18'49"	103.12	1	L5	S2	W3	24.3	20.9	1.7	PMO	
GRV 022124	20-Jan-2003	72°46'44"	75°18'49"	22.75	1	L6	S2	W2	25.5	21.9	1.6	PMO	
GRV 022125	20-Jan-2003	72°46'44"	75°18'49"	47.14	1	L6	S2	W1	24.8	21.2	1.5	NU	
GRV 022126	20-Jan-2003	72°46'44"	75°18'49"	47.98	1	L5	S3	W2	23.5	20.5	1.8	GIGCAS	
GRV 022127	20-Jan-2003	72°46'44"	75°18'49"	39.15	1	L5	S3	W2	23.9	20.7	1.6	GIGCAS	
GRV 022128	20-Jan-2003	72°46'44"	75°18'49"	31.14	1	L5	S3	W2	23.6	20.4	1.6	GIGCAS	
GRV 022129	20-Jan-2003	72°46'44"	75°18'49"	30.24	1	L6	S3	W2	23.6	20.4	1.8	GIGCAS	
GRV 022130	7-Mar-2003	72°46'44"	75°18'49"	30.54	1	L6	S3	W1	24.5	21.7	1.6	IGCAS	
GRV 022131	8-Mar-2003	72°46'44"	75°18'49"	24.75	1	L6	S3	W1	25.5	21.8	1.3	IGCAS	
GRV 022132	9-Mar-2003	72°46'44"	75°18'49"	23.92	1	L6	S3	W1	25.4	21.3	2.1	IGCAS	
GRV 022133	10-Mar-2003	72°46'44"	75°18'49"	21.37	1	L6	S3	W1	25.2	21.3	1.7	IGCAS	
GRV 022134	11-Mar-2003	72°46'44"	75°18'49"	19.99	1	L6	S3	W2	25.7	21.5	1.4	IGCAS	
GRV 022135	20-Jan-2003	72°46'44"	75°18'49"	17.33	1	L6	S4	W1	23.5	20.3	1.8	GUT	
GRV 022136	20-Jan-2003	72°46'44"	75°18'49"	12.34	1	L6	S4	W1	23.9	20.3	1.8	GUT	
GRV 022138	20-Jan-2003	72°46'44"	75°18'49"	69.47	1	L6	S3	W1	24.7	20.4	1.9	GUT	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 022139	20-Jan-2003	72°46'44"	75°18'49"	40.9	1	L6	S4	W1	23.6	20.2	1.7	GUT	
GRV 022140	20-Jan-2003	72°46'44"	75°18'49"	36.35	1	L6	S3	W1	23.7	20.5	1.6	GUT	
GRV 022141	20-Jan-2003	72°46'44"	75°18'49"	26.60	1	L5	S4	W1	23.6	20.5	1.6	GIGCAS	
GRV 022142	20-Jan-2003	72°46'44"	75°18'49"	23.31	1	L5	S4	W2	24.0	20.7	1.6	GIGCAS	
GRV 022143	20-Jan-2003	72°46'44"	75°18'49"	14.71	1	L5	S4	W2	23.4	20.1	1.6	GIGCAS	
GRV 022145	20-Jan-2003	72°46'44"	75°18'49"	31.80	1	L6	S3	W1	23.5	19.9	1.6	GIGCAS	
GRV 022146	20-Jan-2003	72°46'44"	75°18'49"	20.67	1	L5	S4	W2	23.7	20.4	1.7	GIGCAS	
GRV 022147	12-Mar-2003	72°46'44"	75°18'49"	21.15	1	L6	S4	W1	25.7	21.2	1.7	IGCAS	
GRV 022148	13-Mar-2003	72°46'44"	75°18'49"	17.15	1	L6	S4	W1	25.3	21.3	1.7	IGCAS	
GRV 022149	14-Mar-2003	72°46'44"	75°18'49"	17.21	1	L6	S4	W1	26.0	21.3	1.7	IGCAS	
GRV 022150	15-Mar-2003	72°46'44"	75°18'49"	14.34	1	L5	S4	W1	23.7	18.2	1.3	IGCAS	
GRV 022151	16-Mar-2003	72°46'44"	75°18'49"	12.54	1	L5	S4	W1	25.2	22.3	1.7	IGCAS	
GRV 022153	20-Jan-2003	72°46'44"	75°18'49?"	19.66	1	L6	S4	W1	23.9	20.1	2.0	GUT	
GRV 022154	20-Jan-2003	72°46'44"	75°18'49?"	19.87	1	L6	S2	W3	23.2	20.2	1.7	GUT	
GRV 022155	20-Jan-2003	72°46'44"	75°18'49?"	21.02	1	L6	S3	W2	23.8	20.3	1.5	GUT	
GRV 022156	20-Jan-2003	72°46'44"	75°18'49"	18.51	1	L6	S3	W3	23.8	20.3	1.6	GUT	
GRV 022157	20-Jan-2003	72°46'44"	75°18'49"	15.36	1	L6	S4	W3	23.9	20.1	1.7	GUT	
GRV 022158	20-Jan-2003	72°46'44"	75°18'49"	14.20	1	L6	S4	W2	23.6	20.6	1.6	GIGCAS	
GRV 022159	20-Jan-2003	72°46'54"	75°18'14"	13.03	1	L5	S3	W2	23.4	20.0	1.7	GIGCAS	
GRV 022160	20-Jan-2003	72°46'54"	75°18'14"	610.10	1	L5	S3	W2	23.7	20.4	1.8	GIGCAS	
GRV 022161	20-Jan-2003	72°46'54"	75°18'14"	26.54	1	L5	S4	W2	24.0	20.6	1.6	GIGCAS	
GRV 022162	20-Jan-2003	72°46'54"	75°18'14"	140.96	1	L6	S3	W2	24.1	20.6	1.5	GIGCAS	
GRV 022163	17-Mar-2003	72°46'54"	75°18'14"	94.29	1	L5	S3	W1	25.8	21.4	1.6	IGCAS	
GRV 022164	18-Mar-2003	72°46'54"	75°18'14"	14.91	1	L6	S4	W1	25.6	22.8	1.6	IGCAS	
GRV 022168	19-Mar-2003	72°46'54"	75°18'14"	139.67	1	L5	S4	W1	25.2	21.2	1.6	IGCAS	
GRV 022169	20-Mar-2003	72°46'54"	75°18'10"	93.07	1	L5	S4	W1	25.4	21.5	2.4	IGCAS	
GRV 022170	21-Mar-2003	72°46'54"	75°18'10"	79.97	1	L5	S4	W1	25.4	22.6	1.8	IGCAS	
GRV 022172	20-Jan-2003	72°46'54"	75°18's10"	56.95	1	L6	S4	W1	23.7	20.0	1.7	GUT	
GRV 022173	20-Jan-2003	72°46'54"	75°18'10"	68.33	1	L6	S4	W1	24.1	20.3	1.9	GUT	
GRV 022174	20-Jan-2003	72°46'54"	75°18'10"	56.05	1	L6	S3	W1	23.7	20.1	1.6	GUT	
GRV 022175	20-Jan-2003	72°46'54"	75°18'10"	44.46	1	L6	S4	W1	23.7	19.9	1.7	GUT	
GRV 022176	20-Jan-2003	72°46'54"	75°18'10"	36.6	1	L6	S5	W1	23.7	20.2	1.6	GUT	
GRV 022177	20-Jan-2003	72°46'54"	75°18'10"	34.47	1	L5	S4	W2	23.6	20.2	1.6	GIGCAS	
GRV 022178	20-Jan-2003	72°46'54"	75°18'10"	23.94	1	L6	S3	W2	23.7	20.3	1.7	GIGCAS	
GRV 022185	20-Jan-2003	72°46'52"	75°17'32"	13.26	1	L5	S3	W2	23.8	20.5	1.8	GIGCAS	
GRV 022186	20-Jan-2003	72°46'52"	75°17'32"	11.99	1	L5	S3	W2	23.5	20.4	1.7	GIGCAS	
GRV 022190	20-Jan-2003	72°46'53"	75°18'20"	42.08	1	L5	S3	W2	23.6	20.2	1.6	GIGCAS	
GRV 022191	22-Mar-2003	72°46'53"	75°18'20"	18.76	1	L5	S5	W1	26.0	21.7	1.7	IGCAS	
GRV 022192	23-Mar-2003	72°46'53"	75°18'20"	19.03	1	L5	S4	W1	25.4	20.7	1.6	IGCAS	
GRV 022193	24-Mar-2003	72°46'53"	75°18'20"	14.8	1	L5	S4	W1	25.4	21.9	1.7	IGCAS	
GRV 022194	25-Mar-2003	72°46'53"	75°18'20"	15.57	1	L6	S5	W1	25.8	21.3	1.8	IGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 022199	26-Mar-2003	72°46'51"	75°18'08"	30.08	1	L5	S3	W1	25.6	22.1	1.6	IGCAS	
GRV 022200	20-Jan-2003	72°46'51"	75°18'08"	27.79	1	L6	S3	W1	23.6	20.0	1.7	GUT	
GRV 022201	20-Jan-2003	72°46'51"	75°18'08"	17.37	1	L6	S4	W1	23.7	19.8	1.7	GUT	
GRV 022202	20-Jan-2003	72°46'51"	75°18'08"	13.9	1	L6	S3	W1	23.7	20.2	1.8	GUT	
GRV 022203	20-Jan-2003	72°46'51"	75°18'08"	16.21	1	L6	S3	W1	23.3	19.9	1.8	GUT	
GRV 022204	20-Jan-2003	72°46'51"	75°18'08"	13.98	1	L6	S4	W2	23.5	20.4	1.9	GUT	
GRV 022206	20-Jan-2003	72°46'51"	75°18'08"	22.50	1	L5	S3	W2	23.7	20.8	1.7	GIGCAS	
GRV 022207	20-Jan-2003	72°46'51"	75°18'08"	15.83	1	L5	S4	W2	23.4	20.0	1.6	GIGCAS	
GRV 022210	20-Jan-2003	72°46'42"	75°19'15"	11.76	1	L5	S3	W1	23.3	20.4	1.7	GIGCAS	
GRV 022211	20-Jan-2003	72°46'42"	75°19'15"	11.09	1	L5	S3	W2	23.5	20.2	1.7	GIGCAS	
GRV 022212	20-Jan-2003	72°46'42"	75°19'15"	12.07	1	L5	S3	W1	23.9	20.4	1.6	GIGCAS	
GRV 022219	27-Mar-2003	72°46'42"	75°19'15"	100.95	1	L5	S4	W1	25.6	22.0	1.6	IGCAS	
GRV 022220	28-Mar-2003	72°46'42"	75°19'15"	12.01	1	L6	S3	W1	26.3	22.0	1.7	IGCAS	
GRV 022221	29-Mar-2003	72°46'42"	75°19'15"	29.09	1	L4	S4	W1	25.0	21.1	1.6	IGCAS	
GRV 022222	30-Mar-2003	72°46'42"	75°19'15"	125.96	1	L5	S3	W1	25.5	21.6	1.8	IGCAS	
GRV 022223	31-Mar-2003	72°46'42"	75°19'15"	71.24	1	L6	S3	W1	25.8	21.5	1.9	IGCAS	
GRV 022224	20-Jan-2003	72°46'42"	75°19'15"	15.45	1	L6	S3	W1	24.1	20.5	1.7	GUT	
GRV 022227	20-Jan-2003	72°46'42"	75°19'15"	14.1	1	L6	S3	W1	24.0	20.2	1.6	GUT	
GRV 022228	20-Jan-2003	72°46'42"	75°19'15"	46.45	1	L6	S3	W2	23.4	19.9	1.6	GUT	
GRV 022229	20-Jan-2003	72°46'42"	75°19'15"	18.68	1	L6	S3	W1	23.3	19.5	1.6	GUT	
GRV 022230	20-Jan-2003	72°46'43"	75°18'55"	14.76	1	L6	S4	W1	23.9	20.2	1.8	GUT	
GRV 022237	20-Jan-2003	72°46'43"	75°18'55"	14.11	1	L6	S3	W3	24.5	20.7	1.5	GIGCAS	
GRV 022282	20-Jan-2003	72°46'42"	75°18'50"	43.30	1	L6	S3	W1	24.1	20.6	1.6	GIGCAS	
GRV 022284	20-Jan-2003	72°46'47"	75°17'34"	11.92	1	L5	S3	W2	23.9	20.7	1.7	GIGCAS	
GRV 022285	20-Jan-2003	72°46'47"	75°17'34"	37.06	1	L5	S3	W1	23.8	20.4	1.7	GIGCAS	
GRV 022287	20-Jan-2003	72°46'47"	75°17'34"	11.07	1	L5	S4	W1	23.4	20.2	1.7	GIGCAS	
GRV 022288	1-Apr-2003	72°46'47"	75°17'34"	33.02	1	L6	S3	W1	25.6	21.5	1.7	IGCAS	
GRV 022289	2-Apr-2003	72°46'47"	75°17'34"	38.14	1	L6	S4	W1	24.1	22.1	1.7	IGCAS	
GRV 022291	3-Apr-2003	72°46'46"	75°17'43"	12.24	1	L5	S2	W1	25.1	22.5	1.6	IGCAS	
GRV 022443	4-Apr-2003	72°46'23"	75°20'21"	720.9	1	L5	S3	W1	25.0	21.9	1.59	IGCAS	
GRV 022444	5-Apr-2003	72°46'23"	75°20'21"	679.2	1	L5	S3	W1	25.4	21.4	1.65	IGCAS	
GRV 022445	21-Jan-2003	72°46'23"	75°20'21"	115.76	1	L6	S2	W1	25.3	21.7	1.6	PMO	
GRV 022446	21-Jan-2003	72°46'23"	75°20'21"	97.22	1	L5	S2	W1	25.3	21.6	1.8	PMO	
GRV 022447	21-Jan-2003	72°46'23"	75°20'21"	81.16	1	L6	S5	W1	25.3	21.8	1.5	PMO	
GRV 022448	21-Jan-2003	72°46'23"	75°20'21"	62.35	1	L5	S2	W1	25.8	21.6	1.7	PMO	
GRV 022449	21-Jan-2003	72°46'23"	75°20'21"	31.93	1	L6	S5	W1	25.4	21.3	1.7	PMO	
GRV 022450	21-Jan-2003	72°46'23"	75°20'21"	27.11	1	L5	S5	W1	25.9	22.1	1.6	PMO	
GRV 022451	21-Jan-2003	72°46'23"	75°20'22"	18.53	1	H6	S2	W2	20.1	17.9	1.2	PMO	
GRV 022452	21-Jan-2003	72°46'24"	75°19'43"	21.25	1	L6	S2	W2	24.9	21.4	1.5	PMO	
GRV 022453	21-Jan-2003	72°46'24"	75°19'43"	16.27	1	L6	S2	W1	25.2	21.4	1.4	PMO	
GRV 022454	21-Jan-2003	72°46'24"	75°19'43"	16.77	1	L5	S4	W1	25.8	22.3	1.4	PMO	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 022455	21-Jan-2003	72°46'24"	75°19'43"	14.75	1	L3	S4	W1	23.9–28.4	20.5–25.4	1.2–1.7	PMO	
GRV 022460	21-Jan-2003	72°46'26"	75°19'37"	14.7	1	L5	S2	W1	25.2	21.4	1.6	PMO	
GRV 022462	21-Jan-2003	72°46'26"	75°19'37"	2.62	1	LL6	S2	W3	28.5	23.7	2	PMO	
GRV 050004	1-Jan-2006	73°06'17"	75°10'47"	9.15	1	LL4	S2	W1	29.6	24.8	1.8	NAOC	
GRV 050010	1-Jan-2006	73°06'49"	75°12'16"	4.58	1	H5	S2	W1	17.3	15.4	1.0	IGGCAS	
GRV 050014	1-Jan-2006	73°06'14"	75°10'32"	6.31	1	LL6	S2	W1	29.7	24.7	2.1	NAOC	
GRV 050020	2-Jan-2006	73°06'24"	75°10'23"	2.16	1	L3	S3	W1	23.4 (13.3–36.7)	6.4 (3.9–8.8)	0.4 (0.2–0.8)	NAOC	
GRV 050021	3-Jan-2006	73°04'34"	75°15'36"	2.88	1	H5	S3	W1	19.5	17.0	1.3	NAOC	
GRV 050025	4-Jan-2006	72°59'45"	75°11'07"	1.77	1	H3	S2	W1	16.2 (15.4–18.1)	14.3 (12.9–15.4)	0.7 (0.2–1.2)	NAOC	
GRV 050026	4-Jan-2006	72°59'35"	75°12'26"	68.63	1	H5	S2	W1	18.0	16.5	1.2	NAOC	
GRV 050028	4-Jan-2006	72°59'44"	75°11'41"	8.91	1	H4	S2	W1	17.1	15.9	0.9	NAOC	
GRV 050033	5-Jan-2006	72°59'49"	75°13'06"	628	1	L6	S3	W2	25.2	21.1	1.7	NAOC	
GRV 050034	5-Jan-2006	72°59'52"	75°13'10"	38.13	1	L6	S5	W2	23.8	20.4	1.6	IGGCAS	
GRV 050036	5-Jan-2006	72°59'55"	75°12'41"	11.37	1	L5	S2	W2	24.5	20.5	1.6	IGGCAS	
GRV 050039	5-Jan-2006	72°59'55"	75°11'37"	1.82	1	H6	S2	W1	18.6	16.6	1.2	IGGCAS	
GRV 050041	5-Jan-2006	72°59'44"	75°12'22"	3.49	1	H5	S2	W2	18.8	16.5	1.3	IGGCAS	
GRV 050042	5-Jan-2006	72°59'48"	75°13'06"	180.49	1	L5	S2	W2	24.0	20.4	1.6	IGGCAS	
GRV 050043	5-Jan-2006	72°59'48"	75°13'05"	128.89	1	L6	S3	W2	24.5	20.7	1.6	IGGCAS	
GRV 050071	5-Jan-2006	72°59'26"	75°13'40"	24.27	1	H5	S5	W3	18.2	15.3	1.2	IGGCAS	
GRV 050074	5-Jan-2006	72°59'46"	75°11'14"	3.24	1	H5	S3	W2	18.8	16.8	1.5	IGGCAS	
GRV 050081	5-Jan-2006	73°00'11"	75°10'24"	3.49	1	H5	S2	W1	18.4	16.2	1.3	IGGCAS	
GRV 050087	5-Jan-2006	72°59'23"	75°12'21"	8.88	1	H5	S2	W3	19.2	17.1	1.3	IGGCAS	
GRV 050089	5-Jan-2006	72°59'09"	75°10'02"	910	1	H4	S2	W1	18.6	16.3	1.1	IGGCAS	
GRV 050092	5-Jan-2006	73°00'13"	75°10'24"	1.07	1	H6	S2	W1	19.0	16.9	1.3	NAOC	
GRV 050099	6-Jan-2006	72°59'33"	75°14'01"	8.76	1	H5	S2	W1	19.1	16.8	1.1	NAOC	
GRV 050104	6-Jan-2006	72°58'43"	75°16'00"	2.87	1	L6	S2	W1	25.5	21.5	1.6	NAOC	
GRV 050111	6-Jan-2006	72°58'46"	75°15'47"	5.99	1	L5	S3	W1	24.7	21.1	1.5	NAOC	
GRV 050115	6-Jan-2006	72°58'39"	75°16'04"	4.59	1	H3	S3	W2	17.6 (7.3–21.9)			NAOC	
GRV 050122	6-Jan-2006	72°58'33"	75°16'05"	7.79	1	H4	S2	W1	19.0	16.6	1.5	NAOC	
GRV 050123	6-Jan-2006	72°59'04"	75°15'32"	2.79	1	L6	S4	W1	25.9	21.6	1.5	NAOC	
GRV 050128	6-Jan-2006	72°58'42"	75°15'37"	3695	1	L6	S2	W2	25.4	21.5	1.3	NAOC	
GRV 050129	6-Jan-2006	72°58'59"	75°15'28"	18.88	1	H6	S1	W1	19.1	16.8	1.5	NAOC	
GRV 050132	6-Jan-2006	72°58'53"	75°15'28"	0.36	1	L4	S1	W1	25.6	21.5	1.4	NAOC	
GRV 050165	6-Jan-2006	72°58'37"	75°15'45"	3.08	1	H3	S2	W2	19.1 (1.4–32.9)	10.7 (1.6–19.7)	0.6	IGGCAS	
GRV 050173	6-Jan-2006	72°58'48"	75°14'55"	2.21	1	L5	S2	W1	24.9	21.0	1.4	IGGCAS	
GRV 050177	7-Jan-2006	72°57'47"	75°12'55"	3.48	1	L4	S2	W2	23.1	20.0	1.0	IGGCAS	
GRV 050179	7-Jan-2006	72°57'32"	75°13'24"	5.03	1	CM2						IGGCAS	See separate entry

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 050181	7-Jan-2006	72°57'54"	75°13'38"	111.5	1	H5	S2	W2	17.9	16.1	1.3	IGGCAS	
GRV 050182	7-Jan-2006	72°57'33"	75°14'11"	26.93	1	L5	S2	W1	24.1	20.2	1.5	IGGCAS	
GRV 050189	7-Jan-2006	72°58'30"	75°16'12"	22.02	1	H3	S2	W2	15.6 (0.7–31.0)	8.5 (0.6–17.7)	1.2	IGGCAS	
GRV 050193	7-Jan-2006	72°59'01"	75°14'17"	298	1	H4	S2	W2	18.3	16.2	1.2	IGGCAS	
GRV 050199	7-Jan-2006	72°57'14"	75°14'03"	80.4	1	L5	S2	W2	24.4	20.6	1.5	IGGCAS	
GRV 050200	7-Jan-2006	72°58'50"	75°15'06"	84.01	1	H3	S2	W1	17.3 (1.0–33.2)	16.0 (2.6–32.8)	1.4	IGGCAS	
GRV 050207	7-Jan-2006	72°57'12"	75°14'02"	3.3	1	L6	S2	W1	25.3	21.3	1.4	NAOC	
GRV 050210	8-Jan-2006	72°58'55"	75°16'35"	12.61	1	H4	S2	W1	20.2	17.7	1.4	NAOC	
GRV 050212	8-Jan-2006	72°57'11"	75°13'58"	0.96	1	Mesosiderite						IGGCAS	See separate entry
GRV 050245	8-Jan-2006	72°59'23"	75°15'42"	3.2	1	H6	S3	W1	19.1	17.1	1.4	NAOC	
GRV 050250	8-Jan-2006	72°59'02"	75°14'48"	2.93	1	L6	S2	W1	25.0	21.3	1.4	NAOC	
GRV 050387	8-Jan-2006	72°56'21"	75°17'19"	31.69	1	H4	S1	W1	19.0	16.7	1.3	NAOC	
GRV 050390	8-Jan-2006	72°59'22"	75°13'48"	7.05	1	H4	S2	W1	18.0	16.3	1.1	NAOC	
GRV 050395	9-Jan-2006	73°00'05"	75°12'18"	6.06	1	L6	S3	W1	25.3	21.2	1.5	NAOC	
GRV 050398	9-Jan-2006	72°59'09"	75°15'37"	11.05	1	L6	S3	W1	25.7	21.8	1.8	NAOC	
GRV 050401	9-Jan-2006	72°58'59"	75°17'25"	21.32	1	H4	S2	W1	18.5	16.5	1.2	NAOC	
GRV 050404	9-Jan-2006	72°59'00"	75°17'10"	10.55	1	H3	S2	W2	17.3 (1.0–30.7)	13.5 (2.6–22.1)	1.2	IGGCAS	
GRV 050412	9-Jan-2006	72°59'10"	75°12'36"	2.47	1	H5	S2	W2	18.4	16.5	1.7	IGGCAS	
GRV 050418	9-Jan-2006	72°59'02"	75°14'44"	0.81	1	L5	S3	W2	24.4	20.8	1.9	IGGCAS	
GRV 051218	9-Jan-2006	72°59'02"	75°14'44"	1.82	1	H5	S2	W2	16.8	15.1	0.7	IGGCAS	
GRV 051523	11-Jan-2006	72°56'06"	75°19'10"	0.8	1	Eucrite						IGGCAS	See separate entry
GRV 051525	11-Jan-2006	72°55'58"	75°19'18"	163.69	1	H5	S2	W2	19.3	16.8	1.5	IGGCAS	
GRV 051529	11-Jan-2006	72°56'18"	75°17'25"	24.36	1	L5	S1	W1	24.0	20.2	1.1	NAOC	
GRV 051533	11-Jan-2006	72°56'02"	75°18'35"	12.26	1	H5	S2	W1	18.8	16.5	1.3	NAOC	
GRV 051535	11-Jan-2006	72°56'27"	75°17'45"	29.64	1	L5	S2	W0	25.3	21.4	1.4	NAOC	
GRV 051536	11-Jan-2006	72°56'07"	75°19'19"	44.31	1	H4	S3	W1	17.0	16.1	0.6	NAOC	
GRV 051569	11-Jan-2006	72°56'02"	75°17'19"	13.98	1	H4	S2	W1	18.2	16.3	1.2	NAOC	
GRV 051592	12-Jan-2006	72°56'07"	75°19'08"	10.32	1	H4	S1	W2	18.4	16.2	1.2	NAOC	
GRV 051599	12-Jan-2006	72°56'01"	75°18'32"	7.21	1	H5	S2	W0	19.9	17.1	1.2	NAOC	
GRV 051605	12-Jan-2006	72°56'03"	75°19'12"	4.22	1	H5	S2	W1	18.2	16.3	1.2	NAOC	
GRV 051610	14-Jan-2006	72°56'16"	75°18'51"	7.56	1	L6	S4	W2	25.1	20.9	1.9	IGGCAS	
GRV 051612	14-Jan-2006	72°49'46"	75°16'43"	462.6	1	H5	S2	W2	19.7	17.2	1.4	NAOC	
GRV 051616	14-Jan-2006	72°56'16"	75°18'50"	6.06	1	H5	S2	W1	18.9	17.1	1.2	NAOC	
GRV 051618	16-Jan-2006	72°46'40"	75°19'41"	161.77	1	L6	S2	W1	25.0	21.3	1.6	NAOC	
GRV 051629	16-Jan-2006	72°46'51"	75°19'15"	103.37	1	L6	S3	W1	24.8	21.3	1.7	NAOC	
GRV 051633	16-Jan-2006	72°46'41"	75°19'38"	35.23	1	L5	S2	W1	24.5	20.6	1.7	IGGCAS	
GRV 051638	16-Jan-2006	72°46'44"	75°19'01"	146.39	1	L5	S2	W1	23.4	19.8	1.7	IGGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 051648	16-Jan-2006	72°46'48"	75°19'12"	56.18	1	L6	S2	W2	23.8	20.0	1.7	IGGCAS	
GRV 051651	16-Jan-2006	72°46'45"	75°19'39"	22.92	1	L6	S2	W2	23.6	20.4	1.7	IGGCAS	
GRV 051652	16-Jan-2006	72°46'46"	75°19'26"	13.33	1	L5	S4	W2	24.4	20.7	1.9	IGGCAS	
GRV 051656	16-Jan-2006	72°46'47"	75°19'37"	2.46	1	L5	S2	W1	24.7	20.6	1.7	IGGCAS	
GRV 051659	16-Jan-2006	72°46'47"	75°19'51"	2.07	1	L5	S3	W2	23.5	20.4	1.8	IGGCAS	
GRV 051669	16-Jan-2006	72°46'40"	75°19'06"	1.98	1	L6	S4	W2	24.0	20.2	1.7	IGGCAS	
GRV 051674	16-Jan-2006	72°46'49"	75°19'13"	50.22	1	L5	S3	W1	24.4	20.9	1.7	IGGCAS	
GRV 051680	16-Jan-2006	72°46'49"	75°18'53"	22.17	1	L6	S3	W2	23.6	20.4	1.5	IGGCAS	
GRV 051685	16-Jan-2006	72°46'51"	75°18'33"	18.57	1	L6	S2	W1	24.7	20.9	1.8	NAOC	
GRV 051733	16-Jan-2006	72°46'42"	75°19'06"	2.18	1	L5	S2	W2	25.5	21.5	1.4	NAOC	
GRV 051738	16-Jan-2006	72°46'34"	75°20'01"	2.22	1	H4	S2	W1	20.2	17.4	0.5	NAOC	
GRV 051739	16-Jan-2006	72°46'48"	75°19'13"	345	1	L5	S3	W1	24.7	21.0	1.6	NAOC	
GRV 051741	16-Jan-2006	72°46'42"	75°19'03"	94.1	1	L6	S4	W2	23.5	20.0	1.6	IGGCAS	
GRV 051744	16-Jan-2006	72°46'42"	75°19'03"	6.22	1	L6	S2	W1	25.0	21.1	1.7	NAOC	
GRV 051754	16-Jan-2006	72°46'52"	75°18'19"	14.14	1	L6	S2	W1	25.1	21.2	1.7	NAOC	
GRV 051760	16-Jan-2006	72°46'43"	75°19'03"	221	1	L6	S2	W1	25.1	21.7	1.6	NAOC	
GRV 051764	16-Jan-2006	72°46'43"	75°19'03"	20.92	1	L5	S2	W1	25.2	21.2	1.7	NAOC	
GRV 051770	16-Jan-2006	72°46'46"	75°18'45"	493	1	L6	S3	W1	25.0	21.1	1.7	NAOC	
GRV 051773	16-Jan-2006	72°46'40"	75°19'17"	41.21	1	L5	S2	W2	24.4	20.6	1.8	IGGCAS	
GRV 051779	16-Jan-2006	72°46'40"	75°19'17"	12.22	1	H5	S2	W1	19.2	16.9	1.4	IGGCAS	
GRV 051783	16-Jan-2006	72°46'51"	75°18'18"	15.89	1	L6	S4	W2	23.8	20.5	1.7	IGGCAS	
GRV 051785	16-Jan-2006	72°46'45"	75°19'45"	137.11	1	L6	S2	W2	23.8	20.4	1.7	IGGCAS	
GRV 051795	16-Jan-2006	72°46'41"	75°19'06"	33.75	1	L5	S2	W2	23.8	20.4	1.7	IGGCAS	
GRV 051796	16-Jan-2006	72°46'53"	75°19'08"	13.22	1	L5	S2	W2	24.1	20.9	1.6	IGGCAS	
GRV 051848	16-Jan-2006	72°46'47"	75°18'43"	19.61	1	L6	S3	W2	23.9	20.4	1.8	IGGCAS	
GRV 051862	16-Jan-2006	72°46'30"	75°20'10"	1823	1	L6	S4	W2	23.9	20.3	1.7	IGGCAS	
GRV 051867	16-Jan-2006	72°46'38"	75°19'47"	144.35	1	L6	S4	W2	23.6	20.1	1.8	IGGCAS	
GRV 051869	16-Jan-2006	72°46'52"	75°19'42"	118.69	1	L5	S4	W2	24.7	20.1	1.7	IGGCAS	
GRV 051875	16-Jan-2006	72°46'47"	75°19'51"	28.1	1	L6	S3	W1	24.8	21.2	1.6	NAOC	
GRV 051878	16-Jan-2006	72°46'44"	75°19'55"	27.71	1	L6	S2	W1	25.0	21.1	1.6	NAOC	
GRV 051889	16-Jan-2006	72°46'49"	75°19'48"	19.08	1	L6	S2	W1	24.9	21.5	1.6	NAOC	
GRV 051894	16-Jan-2006	72°46'43"	75°19'33"	13.38	1	L4	S2	W1	25.0	21.3	1.7	NAOC	
GRV 051898	16-Jan-2006	72°46'39"	75°19'51"	7.14	1	L6	S1	W1	24.8	20.9	1.7	NAOC	
GRV 051902	16-Jan-2006	72°46'54"	75°19'44"	10.58	1	L6	S4	W1	24.8	21.2	1.6	NAOC	
GRV 051924	16-Jan-2006	72°46'54"	75°19'04"	73.47	1	L4	S1	W1	25.0	20.9	1.7	NAOC	
GRV 052011	16-Jan-2006	72°46'44"	75°19'08"	22.72	1	L5	S2	W1	25.1	21.8	1.5	NAOC	
GRV 052013	16-Jan-2006	72°46'44"	75°19'08"	15.43	1	L6	S2	W1	25.1	21.1	1.6	NAOC	
GRV 052023	16-Jan-2006	72°46'55"	75°17'58"	40.46	1	L6	S3	W1	25.0	21.1	1.7	NAOC	
GRV 052026	16-Jan-2006	72°46'54"	75°17'58"	21.47	1	L6	S3	W2	24.8	21.0	1.9	IGGCAS	
GRV 052034	16-Jan-2006	72°46'42"	75°19'05"	204.4	1	L6	S4	W2	23.8	20.2	1.6	IGGCAS	
GRV 052049	16-Jan-2006	72°46'23"	75°20'08"	96.72	1	L6	S3	W2	24.1	20.5	1.7	IGGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 052051	16-Jan-2006	72°46'25"	75°20'08"	2.24	1	L5	S5	W3	22.3	18.9	1.2	IGGCAS	
GRV 052055	16-Jan-2006	72°46'27"	75°20'10"	1.69	1	H5	S4	W2	17.8	15.9	1.3	IGGCAS	
GRV 052074	16-Jan-2006	72°46'31"	75°20'17"	135.4	1	L6	S3	W1	23.5	19.9	1.8	IGGCAS	
GRV 052076	16-Jan-2006	72°46'32"	75°20'10"	20.79	1	L4	S2	W3	23.3	18.8	0.6	IGGCAS	
GRV 052082	16-Jan-2006	72°46'17"	75°20'28"	20.35	1	L6	S4	W2	24.1	20.7	1.8	IGGCAS	
GRV 052085	16-Jan-2006	72°46'31"	75°20'31"	1.38	1	H5	S5	W3	18.1	16.2	1.2	IGGCAS	
GRV 052104	16-Jan-2006	72°46'45"	75°18'57"	116.38	1	L6	S2	W1	24.2	20.7	1.5	NAOC	
GRV 052116	16-Jan-2006	72°46'29"	75°19'25"	336	1	L6	S2	W1	25.0	21.3	1.7	NAOC	
GRV 052082	16-Jan-2006	72°46'17"	75°20'28"	20.35	1	L6	S4	W2	24.1	20.7	1.8	IGGCAS	
GRV 052085	16-Jan-2006	72°46'31"	75°20'31"	1.38	1	H5	S5	W3	18.1	16.2	1.2	IGGCAS	
GRV 052104	16-Jan-2006	72°46'45"	75°18'57"	116.38	1	L6	S2	W1	24.2	20.7	1.5	NAOC	
GRV 052116	16-Jan-2006	72°46'29"	75°19'25"	336	1	L6	S2	W1	25.0	21.3	1.7	NAOC	
GRV 052119	16-Jan-2006	72°46'27"	75°18'58"	94.91	1	L6	S2	W1	25.1	21.1	1.7	NAOC	
GRV 052126	16-Jan-2006	72°46'34"	75°19'35"	17.07	1	L6	S2	W2	25.2	21.0	1.7	NAOC	
GRV 052132	16-Jan-2006	72°46'24"	75°19'33"	16.86	1	L6	S2	W1	24.8	21.2	1.5	NAOC	
GRV 052136	16-Jan-2006	72°46'30"	75°20'07"	2.21	1	H5	S2	W1	17.7	16.1	1.0	NAOC	
GRV 052156	16-Jan-2006	72°46'19"	75°20'41"	4.27	1	L6	S3	W1	25.1	21.2	1.6	NAOC	
GRV 052173	16-Jan-2006	72°46'23"	75°20'17"	7.76	1	H6	S2	W1	20.0	17.9	1.4	NAOC	
GRV 052174	16-Jan-2006	72°46'23"	75°20'17"	5.25	1	L6	S5	W2	23.6	19.9	1.6	IGGCAS	
GRV 052175	16-Jan-2006	72°46'23"	75°20'17"	4.37	1	L6	S3	W1	23.5	20.5	1.5	NAOC	
GRV 052244	17-Jan-2006	72°46'45"	75°18'49"	414	1	L6	S4	W2	23.8	20.5	1.7	IGGCAS	
GRV 052246	17-Jan-2006	72°46'45"	75°19'23"	57.39	1	L5	S4	W2	23.8	20.6	1.5	IGGCAS	
GRV 052248	17-Jan-2006	72°46'34"	75°19'23"	28.46	1	L5	S2	W2	23.5	19.9	1.7	IGGCAS	
GRV 052253	17-Jan-2006	72°46'34"	75°19'33"	2.36	1	H4	S2	W2	18.2	15.8	1.3	IGGCAS	
GRV 052256	17-Jan-2006	72°46'42"	75°19'18"	1.55	1	H4	S1	W2	18.4	16.3	1.0	IGGCAS	
GRV 052302	17-Jan-2006	72°46'38"	75°18'29"	49.93	1	H5	S2	W3	18.0	16.0	1.5	IGGCAS	
GRV 052321	17-Jan-2006	72°46'44"	75°18'35"	5.25	1	L5	S3	W2	23.9	20.7	1.6	IGGCAS	
GRV 052342	17-Jan-2006	72°46'51"	75°18'36"	1.15	1	H5	S2	W2	17.9	15.8	1.4	IGGCAS	
GRV 052345	17-Jan-2006	72°46'56"	75°19'18"	2.96	1	H5	S2	W2	18.4	16.4	1.3	IGGCAS	
GRV 052357	17-Jan-2006	72°46'58"	75°17'56"	2.79	1	L6	S3	W2	23.0	19.5	1.7	IGGCAS	
GRV 052358	17-Jan-2006	72°46'58"	75°17'56"	6.66	1	L6	S2	W1	25.7	21.3	1.6	NAOC	
GRV 052359	17-Jan-2006	72°46'58"	75°17'56"	2.85	1	L5	S1	W1	24.2	20.8	1.4	NAOC	
GRV 052373	17-Jan-2006	72°46'55"	75°18'53"	77.07	1	L6	S2	W1	25.1	21.4	1.6	NAOC	
GRV 052382	17-Jan-2006	72°46'15"	75°16'38"	1.86	1	Ureilite						IGGCAS	See separate entry
GRV 052392	17-Jan-2006	72°47'02"	75°16'21"	3.48	1	H6	S3	W2	20.2	18.0	1.1	NAOC	
GRV 052417	17-Jan-2006	72°46'42"	75°19'49"	14.55	1	L6	S3	W1	24.8	21.2	1.5	NAOC	
GRV 052453	17-Jan-2006	72°46'34"	75°18'50"	1.94	1	L5	S2	W2	25.0	21.0	1.5	NAOC	
GRV 052463	17-Jan-2006	72°47'03"	75°18'31"	0.66	1	L6	S1	W1	24.7	20.8	1.7	NAOC	
GRV 052488	17-Jan-2006	72°46'47"	75°18'58"	23.19	1	L6	S5	W2	23.4	19.8	1.6	IGGCAS	
GRV 052506	17-Jan-2006	72°47'11"	75°17'36"	1.92	1	H4	S2	W2	18.9	16.8	1.2	NAOC	
GRV 052660	17-Jan-2006	72°46'59"	75°18'21"	221	1	L6	S2	W1	24.1	20.3	1.6	IGGCAS	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 052685	17-Jan-2006	72°46'44"	75°18'49"	12.02	1	L5	S3	W2	24.0	20.3	1.8	IGGCAS	
GRV 052702	17-Jan-2006	72°46'57"	75°17'56"	2.59	1	H4	S3	W2	19.0	17.2	1.3	IGGCAS	
GRV 052719	17-Jan-2006	72°47'05"	75°17'21"	3.5	1	L5	S5	W1	23.6	20.1	1.6	IGGCAS	
GRV 052739	17-Jan-2006	72°47'00"	75°17'43"	3.94	1	L5	S4	W2	23.5	20.4	1.8	IGGCAS	
GRV 052767	17-Jan-2006	72°46'39"	75°18'53"	62.4	1	L6	S3	W2	23.9	20.0	1.9	IGGCAS	
GRV 052796	17-Jan-2006	72°49'31"	75°21'13"	0.77	1	H4	S1	W3	17.0	15.5	1.0	IGGCAS	
GRV 052797	17-Jan-2006	72°49'31"	75°21'13"	1.64	1	L5	S1	W2	24.3	20.6	1.5	IGGCAS	
GRV 052799	17-Jan-2006	72°49'31"	75°21'13"	5.58	1	H6	S2	W1	18.7	16.6	1.6	NAOC	
GRV 052882	17-Jan-2006	72°49'31"	75°21'13"	4.36	1	L6	S1	W1	25.1	21.1	1.8	NAOC	
GRV 052885	17-Jan-2006	72°49'31"	75°21'13"	7.79	1	L6	S2	W1	24.8	20.6	1.6	NAOC	
GRV 052904	17-Jan-2006	72°46'42"	75°19'11"	474	1	L6	S1	W1	24.6	20.6	1.5	NAOC	
GRV 052910	17-Jan-2006	72°46'45"	75°19'00"	53.51	1	L5	S1	W1	25.0	21.2	1.6	NAOC	
GRV 052985	18-Jan-2006	72°46'45"	75°18'48"	35.53	1	L5	S2	W1	24.9	21.5	1.7	NAOC	
GRV 053016	18-Jan-2006	72°46'19"	75°19'57"	1.68	1	H6	S3	W1	18.1	16.7	1.1	NAOC	
GRV 053025	18-Jan-2006	72°47'24"	75°17'00"	4.83	1	H5	S2	W1	18.9	16.8	1.3	NAOC	
GRV 053030	18-Jan-2006	72°47'14"	75°17'35"	4.76	1	H5	S2	W1	19.1	16.8	1.4	NAOC	
GRV 053039	18-Jan-2006	72°47'35"	75°16'44"	3.01	1	H4	S3	W1	18.3	16.6	1.0	NAOC	
GRV 053132	18-Jan-2006	72°46'10"	75°20'15"	2.5	1	H5	S2	W1	18.9	17.0	1.1	NAOC	
GRV 053149	18-Jan-2006	72°46'29"	75°20'24"	2.29	1	H6	S2	W2	19.3	16.7	1.2	NAOC	
GRV 053167	18-Jan-2006	72°46'29"	75°20'24"	3.12	1	H3	S1	W2	14.0 (2.0–19.0)	14.8 (4.7–19.2)	1.1	IGGCAS	
GRV 053168	18-Jan-2006	72°46'29"	75°20'24"	3.38	1	H5	S2	W2	18.6	16.1	2.1	IGGCAS	
GRV 053209	18-Jan-2006	72°46'29"	75°20'24"	2.92	1	H4	S2	W2	17.8	13.0	0.5	IGGCAS	
GRV 053341	18-Jan-2006	72°46'38"	75°19'42"	137.48	1	L6	S4	W1	24.1	20.6	1.5	IGGCAS	
GRV 053644	19-Jan-2006	72°47'09"	75°16'29"	5.44	1	Metal			19.2–19.9	16.7–19.1	1.0–1.7	IGGCAS	Probably from H group, but kamacite with slightly higher Co (0.67–0.80 wt%).
GRV 053656	19-Jan-2006	72°47'22"	75°16'42"	6.87	1	H5	S3	W2	18.1	16.0	1.1	IGGCAS	
GRV 053666	19-Jan-2006	72°47'11"	75°17'21"	1.51	1	H4	S2	W1	18.7	16.4	1.2	IGGCAS	
GRV 053687	19-Jan-2006	72°50'43"	75°13'04"	18.63	1	H4	S2	W1	18.4	16.4	1.0	IGGCAS	
GRV 053696	20-Jan-2006	72°47'12"	75°17'00"	11.78	1	H5	S2	W3	18.7	16.7	1.2	IGGCAS	
GRV 053735	23-Jan-2006	72°46'42"	75°16'24"	2.51	1	L5	S1	W1	25.3	21.5	1.2	NAOC	
GRV 053744	23-Jan-2006	72°46'52"	75°16'17"	5.84	1	L5	S3	W0	23.1	20.2	1.2	NAOC	
GRV 053784	23-Jan-2006	72°47'07"	75°16'07"	1.1	1	H5	S2	W1	18.9	16.9	1.2	NAOC	
GRV 053788	23-Jan-2006	72°47'06"	75°16'17"	1.88	1	H5	S2	W1	19.1	16.7	1.0	NAOC	
GRV 053789	23-Jan-2006	72°47'06"	75°16'17"	2.13	1	H5	S2	W2	19.2	16.8	1.3	NAOC	
GRV 053985	23-Jan-2006	72°46'39"	75°17'02"	1.27	1	H5	S2	W2	18.8	16.8	1.1	NAOC	
GRV 054045	23-Jan-2006	72°47'14"	75°16'28"	1.49	1	H5	S2	W1	18.9	16.4	1.2	NAOC	
GRV 054060	23-Jan-2006	72°47'06"	75°17'00"	0.83	1	H5	S2	W1	18.8	16.9	1.1	NAOC	
GRV 054061	23-Jan-2006	72°47'06"	75°17'00"	0.84	1	H5	S2	W1	18.7	16.7	1.1	NAOC	

Table 6. *Continued.* Chinese Antarctic Meteorite Nomenclature, Polar Research Institute of China.

Name	Date of recovery	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Shock	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info	Comments
GRV 054463	29-Jan-2006	72°54'51"	75°06'27"	13.34	1	H5	S3	W1	19.2	17.0	1.2	NAOC	
GRV 054471	30-Jan-2006	72°54'58"	75°06'01"	222	1	H6	S2	W1	19.4	16.8	0.8	NAOC	
GRV 054473	30-Jan-2006	72°54'58"	75°06'01"	60.88	1	H4	S2	W1	18.2	16.1	1.0	IGGCAS	
GRV 054476	30-Jan-2006	72°54'58"	75°06'01"	50.74	1	H4	S2	W2	18.7	16.4	1.1	IGGCAS	
GRV 054481	30-Jan-2006	72°54'58"	75°06'01"	6.32	1	H4	S2	W3	17.9	16.8	1.2	IGGCAS	
GRV 054493	30-Jan-2006	72°54'58"	75°06'01"	3.42	1	H4	S2	W2	18.4	16.0	0.9	IGGCAS	
GRV 054505	2-Feb-2006	72°56'26"	75°09'27"	873	1	L4	S1	W1	23.7	18.9	0.7	IGGCAS	
GRV 054653	8-Jan-2006	72°59'56"	75°11'14"	3.45	1	L5	S2	W3	23.7	20.1	1.3	IGGCAS	
GRV 054855	9-Jan-2006	72°59'56"	75°11'14"	0.72	1	H4	S2	W1	15.5	14.6	1.4	IGGCAS	
GRV 055056	9-Jan-2006	72°59'56"	75°11'14"	0.4	1	L5	S2	W1	24.5	20.7	1.5	IGGCAS	
GRV 055152	9-Jan-2006	72°59'56"	75°11'14"	0.24	1	Metal			23.7-26.9	20.5-21.2	1.1-2	IGGCAS	Probably from L group, kamacite with 1.1 wt% Co.
GRV 055356	9-Jan-2006	72°59'56"	75°11'14"	1.38	1	Metal			18.7-21.9	16.2-17.3	0.6-1.2	IGGCAS	Probably from H group, but kamacite with slightly higher Co (0.65–0.69 wt%).

Table 7. Approved meteorites names and relevant data for recoveries from Australia.

Name	Location of recovery	Date of recovery	Find/ Fall	Latitude (S)	Longitude (E)	Mass (g)	No. of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info
Mount Leake	Pilbara region, Western Australia, Australia	Aug-1998	Find	25°52.6'	119°4.4'	3667	2	L5	3667	S3	W2	25.8	22.2	1.3	WAM-1
Mukinbudin	Western Australia, Australia	Circa 1938	Find	30°55'	118°12'	8200	1	H5	8200	S3	W2	20.4	18.1	1.3	WAM-1
Juderina Spring	Pilbara region, Western Australia, Australia	1990	Find	25°55'	119°18'	2198	1	L6	2198	S4	W1	25.5	22.4	1.6	WAM-1

Table 8. Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
India																	
Ararki	Hanumangarh district, Rajasthan, India	2001	Find	29.06°N	74.44°E	4460	100	1	L5			26.3	22.5	1.2		100; JNV-1	$\delta^{13}C = -23‰$; $\delta^{17}O = 3.69$ $\delta^{18}O = 5.04$ and $\Delta^{17}O = 1.068$
Indonesia																	
Lovina	Lovina, Bali, Indonesia	1981	Find	8°39′S	115°13′E	8200	32.5	1	Iron (ataxite)							See separate entry	
Oman																	
Al Huqf																	
Al Huqf 052	Oman, desert plain	27-Feb-2001	Find	19°39.405′N	57°2.598′E	1319.4	20.0	2	H ~5		W4				4.83	Bart-1	
Al Huqf 053	Oman, desert plain	27-Feb-2001	Find	19°36.772′N	57°16.223′E	854.7	20.0	4	H ~5		W4				4.70	Bart-1	
Al Huqf 054	Oman, desert plain	28-Feb-2001	Find	19°36.967′N	57°16.188′E	2936.5	20.0	46	L ~6		W4				4.42	Bart-1	
Al Huqf 055	Oman, desert plain	1-Mar-2001	Find	19°38.444′N	57°17.314′E	1865.6	20.6	12	H 4	S2	W3	16.6–17.3	11.6–18.1		5.01	Bart-1	$En_{79.8}Wo_{11.2}/An_{42}Or_1$
Al Huqf 056	Oman, desert plain	2-Mar-2001	Find	19°39.872′N	57°20.004′E	124.0	20.0	2	H5	S1	W3	18.2–18.5	15.9–16.2		4.84	Bart-1	$En_{47.6}Wo_{45.8}/An_{42}Or_1$/ kamacite 0.7% Co/Mg,Cr-rich hercynite chondrule-like object
Al Huqf 057	Oman, desert plain	2-Mar-2001	Find	19°31.867′N	57°5.056′E	105.3	20.4	1	H 5	S2	W 2–3	16.6–16.9	7.9–17.0		5.09	Bart-1	$En_{38.1}Wo_{32.6}$/ kamacite 0.6–0.7% Co
Al Huqf 058	Oman, desert plain	4-Mar-2001	Find	19°20.526′N	57°10.158′E	97.7	20.0	1	L ~6		W4				4.72	Bart-1	
Al Huqf 059	Oman, desert plain	4-Mar-2001	Find	19°18.881′N	57°16.406′E	362.7	20.0	1	L ~3		W2–3				4.50	Bart-1	
Al Huqf 060	Oman, desert plain	5-Mar-2001	Find	19°24.311′N	57°16.091′E	913.1	20.0	1	L ~6		W4				4.47	Bart-1	Melt pockets
Al Huqf 063	Oman, desert plain	28-Mar-2006	Find	19°26.720′N	57°01.407′E	591.8	591.8	1	L6	S2	W3	25.0	20.6	1.4		Bern14	
Dhofar																	
Dhofar 1103	Oman, desert plain	06-Jan-2004	Find	19°05′31″N	54°48′20″E	316	21.33	1	H4		W2	19.14 ± 0.63				See separate entry	
Dhofar 1127	Oman, desert plain	12-Jan-2005	Find	19°12′02.4″N	54°54′30.3″E	173	38.2	1	LL6	S3	W4	29.5	24.7			NaU-5	
Dhofar 1128	Oman, desert plain	12-Jan-2005	Find	19°11′41.4″N	54°55′06.3″E	186	26.1	1	URE	S3	W2	21.3 (core)	16.1 (core)			NaU-5	C = 4.5 vol%
Dhofar 1130	Oman, desert plain	13-Jan-2005	Find	19°13′23.9″N	54°56′08.8″E	3420	38	1	H4	S2	W2	17.7	16			NaU-5	
Dhofar 1131	Oman, desert plain	13-Jan-2005	Find	19°13′44.7″N	54°55′23.2″E	661	30	1	LL4	S3	W5	27.8	23			NaU-5	
Dhofar 1136	Oman, desert plain	13-Jan-2005	Find	19°16′29.2″N	54°40′22.7″E	356	29.1	1	H5	S2	W2	18.8	16.5			NaU-5	
Dhofar 1139	Oman, desert plain	13-Jan-2005	Find	19°11′30.1″N	54°38′21.8″E	445	27	1	LL6	S3	W5	28.1	23.6			NaU-5	
Dhofar 1144	Oman, desert plain	14-Jan-2005	Find	19°11′28.4″N	54°40′17.6″E	328	40.7	1	LL5	S3	W3	28.5	23.7			NaU-5	

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Dhofar 1148	Oman, desert plain	15-Jan-2005	Find	19°11′25.5″N	54°57′25.9″E	426	37	1	L4	S2	W3	23.6	20.7			NaU-5	
Dhofar 1154	Oman, desert plain	15-Jan-2005	Find	18°44′29.8″N	54°15′42.3″E	952	27.2	1	LL6	S5	W5	27.3	23.5			NaU-5	Shock melt breccia
Dhofar 1156	Oman, desert plain	15-Jan-2005	Find	18°45′05.9″N	54°21′08.5″E	108	20.8	1	H4	S2	W5	16.8	14.8			NaU-5	
Dhofar 1168	Oman, desert plain	16-Jan-2005	Find	19°13′35.1″N	54°58′02.1″E	60.8	15.8	1	L4	S2	W4	25.6	22.8			NaU-5	
Dhofar 1170	Oman, desert plain	16-Jan-2005	Find	19°13'05.2"N	54°55′02.7″E	501	20.1	1	URE	S2	W3	16.6 (core)	15.1 (core)			NaU-5	
Dhofar 1176	Oman, desert plain	17-Jan-2005	Find	18°44′29.8″N	54°15′42.3″E	849	31	1	LL4	S2	W5	28.6	24.6			NaU-5	
Dhofar 1178	Oman, desert plain	17-Jan-2005	Find	18°52′11.1″N	54°50′24.4″E	732	121.2	1	LL4	S2	W5	28.6	24.3			NaU-5	
Dhofar 1181	Oman, desert plain	18-Jan-2005	Find	18°44′44.5″N	54°16′01.8″E	1812	26.3	1	H5	S3	W4	17.7	15.8			NaU-5	
Dhofar 1226	Oman, desert plain	27-Feb-2005	Find	18°41′18.7″N	54°19′35.5″E	1040	47	1	L5	S3-5	W2	24.7	21.3			NaU-5	Shock melt breccia
Dhofar 1232	Oman, desert plain	28-Feb-2005	Find	18°53′44.4″N	54°20′36.8″E	1088	26.5	1	H4	S2	W3	17.5	15.7			NaU-5	
Dhofar 1243	Oman, desert plain	2-Mar-2005	Find	18°52′33.1″N	54°28′21.4″E	2510	51.4	1	LL4	S2	W3	27.9	23.6			NaU-5	Rimmed chondrules
Dhofar 1250	Oman, desert plain	4-Mar-2005	Find	18°32′04.3″N	54°10′04.4″E	142	21.4	1	L3.8	S2	W2	24.6 ± 6.3				NaU-5	
Dhofar 1251	Oman, desert plain	4-Mar-2005	Find	18°34′09.3″N	54°11′43.4″E	1905	31.9	1	LL6	S3	W5	28.7	24.3			NaU-5	
Dhofar 1261	Oman, desert plain	3-Apr-2005	Find	18°44′00.5″N	54°30′54.3″E	445.6	25.7	1	LL6	S4	W3	28.1	24			NaU-5	
Dhofar 1269	Oman, desert plain	4-Mar-2005	Find	18°43′53″N	54°30′33″E	42	8.4	1	DIO	Mod	Min					See separate entry	
Dhofar 1272	Oman, desert plain	17-Jan-2005	Find	18°40′58.1″N	54°17′08.8″E	1883	23.8	1	LL4	S2	W5	27.9	23.7			NaU-5	
Dhofar 1429	Oman, desert plain	5-March-2006	Find	18°32′16″N	54°11′16″E	89	21.1	1	EUC	S5	Min					See separate entry	
Dhofar 1430	Oman, desert plain	6-March-2006	Find	18°34′10″N	54°14′24″E	185	20.4	1	CK3/4	S2	Min					See separate entry	
Dhofar 1431	Oman, desert plain	6-March-2006	Find	18°35′18″N	54°13′5″E	189	22	1	LL6	S3	S2	30.2	24.5	2.1		NaU-6	
Dhofar 1432	Oman, desert plain	6-March-2006	Find	19°17′9″N	54°44′15	"76	16.1	1	CR2	S2	Mod	0.5–27.5	1.4–24.1	0.5–2.2		NaU-6	
Dhofar 1433	Oman, desert plain	21-Apr-2006	Find	18°26′N	54°06′E	44790	44	Many	H5		W2	18.47 ± 0.21				See separate entry	
Dhofar 1436	Oman, desert plain	8-Dec-2004	Find	18°25.4′N	54°25.4′E	24.20	5.2	1	Lunar							See separate entry	
Jiddat al Harasis																	
Jiddat al Harasis 120	Oman, desert plain	19-Jan-2002	Find	19°44.001′N	55°43.465′E	1070.7	1070.7	2	H5	S1	W2	17.7	16.1	1.7		Bern-1	$Wo_{1.7}$; paired with JaH 121
Jiddat al Harasis 121	Oman, desert plain	20-Jan-2002	Find	19°43.850′N	55°43.900′E	257.1	257.1	1	H5	S1	W3	17.8	15.3	1.5		Bern-1	$Wo_{1.5}$; paired with JaH 120
Jiddat al Harasis 122	Oman, desert plain	6-Dec-1998	Find	19°40.103′N	55°44.444′E	43.6	43.6	1	L5	S2	W4	25.7	21.6	1.5			$Wo_{1.5}$

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Jiddat al Harasis 203	Oman, desert plain	25-Dec-2002	Find	19°58.980′N	56°24.821′E	1231.2	1231.2	1	Meso	S1	–					See separate entry	
Jiddat al Harasis 239	Oman, desert plain	22-Feb-2005	Find	19°59.103′N	56°24.926′E	12.4	12.4	1	R5	–	–	–	–			Bern -15	Paired with RaS 201
Jiddat al Harasis 249	Oman, desert plain	23-Feb-2005	Find	19°58.602′N	56°25.209′E	20.8	20.8	3	R5	–	–	–	–			Bern -15	Paired with RaS 201
Jiddat al Harasis 316	Oman, desert plain	5-Mar-2001	Find	19°20.951′N	55°33.258′E	166.2	20.0	1	L ~6		W4				4.53		
Jiddat al Harasis 317	Oman, desert plain	5-Mar-2001	Find	19°21.787′N	55°33.434′E	21472.0	21.4	62	H 5	S2	W3	17.8–18.1	15.6–16.2		4.99		$An_{26}Or_4$/ kamacite 0.6–0.8% Co
Jiddat al Harasis 318	Oman, desert plain	6-Mar-2001	Find	19°25.119′N	55°34.471′E	103.1	20.0	1	H ~5		W4				4.70	Bart-1	
Jiddat al Harasis 321	Oman, desert plain	19-Jan-2002	Find	19°44.001′N	55°43.465′E	1070.7	1070.7	2	H5	S1	W2	17.7	16.1	1.7		Bern -5	Paired with JaH 322
Jiddat al Harasis 322	Oman, desert plain	20-Jan-2002	Find	19°43.850′N	55°43.900′E	257.1	257.1	1	H5	S1	W3	17.8	15.3	1.5		Bern-6	Paired with JaH 321
Jiddat al Harasis 323	Oman, desert plain	9-Feb-2005	Find	19°57.778′N	56°26.752′E	2967	2967	3	H5	S1	W2	19.7	17.2	1.2		Bern-7	
Jiddat al Harasis 324	Oman, desert plain	1-Mar-2006	Find	19°43.235′N	55°40.863′E	791.0	791.0	1	L5	S3	W3	24.8	21.1	1.5		Bern-8	
Jiddat al Harasis 325	Oman, desert plain	2-Mar-2006	Find	19°37.682′N	55°44.213′E	84.8	84.8	1	H4	S1	W3	19.0	13.0	3.0		Bern-9	
Jiddat al Harasis 326	Oman, desert plain	2-Mar-2006	Find	19°40.949′N	55°43.943′E	73.1	73.1	2	L6	S4	W3	24.8	20.8	1.7		Bern-9	Paired with JaH 073
Jiddat al Harasis 327	Oman, desert plain	2-Mar-2006	Find	19°40.439′N	55°44.217′E	527.5	527.5	1	L6	S4	W3	26.8	21.2	1.5		Bern-9	Paired with JaH 073
Jiddat al Harasis 328	Oman, desert plain	3-Mar-2006	Find	19°44.439′N	55°42.816′E	2221.2	2221.2	6	L6	S4	W3	23.8	22.3	1.4		Bern-9	Paired with JaH 073
Jiddat al Harasis 329	Oman, desert plain	3-Mar-2006	Find	19°44.033′N	55°43.280′E	272.5	272.5	2	L6	S4	W4	25.2	21.5	1.5		Bern-9	Paired with JaH 073
Jiddat al Harasis 330	Oman, desert plain	3-Mar-2006	Find	19°43.725′N	55°43.674′E	65.5	65.5	1	L6	S4	W3	24.4	20.8	1.6		Bern-9	Paired with JaH 073
Jiddat al Harasis 331	Oman, desert plain	3-Mar-2006	Find	19°43.660′N	55°43.606′E	96.1	96.1	1	L6	S4	W3	24.5	20.6	1.5		Bern-9	Paired with JaH 073
Jiddat al Harasis 332	Oman, desert plain	3-Mar-2006	Find	19°43.694′N	55°43.558′E	93.4	93.4	1	L6	S4	W3	24.9	21.8	1.2		Bern-9	Paired with JaH 073
Jiddat al Harasis 333	Oman, desert plain	3-Mar-2006	Find	19°43.663′N	55°43.521′E	16.0	16.0	1	H4-6	S2	W4	18.9	16.4	1.6		Bern-9	Paired with JaH 073
Jiddat al Harasis 334	Oman, desert plain	3-Mar-2006	Find	19°43.646′N	55°43.520′E	261.7	261.7	1	L6	S4	W3	24.5	20.8	1.5		Bern-9	Paired with JaH 073
Jiddat al Harasis 335	Oman, desert plain	2-Mar-2006	Find	19°43.695′N	55°43.695′E	50.47	50.47	1	Dio							Bern-9	
Jiddat al Harasis 336	Oman, desert plain	2-Mar-2006	Find	19°43.646′N	55°49.323′E	199.5	199.5	2	H4–6	S4	W3	18.7	17.0	1.4		Bern-9	Br
Jiddat al Harasis 337	Oman, desert plain	2-Mar-2006	Find	19°43.646′N	55°42.916′E	731.4	731.4	120	L6	S2	W4	23.7	20.3	1.7		Bern-9	
Jiddat al Harasis 338	Oman, desert plain	3-Mar-2006	Find	19°59.161′N	55°40.500′E	85.9	85.9	1	L6	S3	W3	24.4	20.4	1.4		Bern-9	
Jiddat al Harasis 339	Oman, desert plain	3-Mar-2006	Find	19°43.646′N	55°40.133′E	488.3	488.3	1	L6	S4	W3	24.9	21.2	1.3		Bern-9	Paired with JaH 073
Jiddat al Harasis 340	Oman, desert plain	19-Mar-2006	Find	19°47.443′N	56°30.033′E	320.3	320.3	6	L6	S2	W4	25.1	20.6	1.4		Bern-12	
Jiddat al Harasis 341	Oman, desert plain	19-Mar-2006	Find	19°47.141′N	56°30.142′E	225.5	225.5	1	L5	S2	W3	24.8	20.7	1.8		Bern-12	Paired with JaH 091

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Jiddat al Harasis 342	Oman, desert plain	20-Mar-2006	Find	19°42.875′N	56°32.853′E	49,750.0	73.2	6	L5	S2	W4	25.2	20.7	2.0		Bern-12	Paired with JaH 091
Jiddat al Harasis 343	Oman, desert plain	23-Mar-2006	Find	19°45.105′N	56°34.791′E	528.4	528.4	3	LL6	S3	W2	27.0	22.5	1.5		Bern-12	
Jiddat al Harasis 344	Oman, desert plain	23-Mar-2006	Find	19°41.995′N	56°34.918′E	497.4	497.4	1	H4	S3	W4	17.8	16.2	1.4		Bern-12	
Jiddat al Harasis 345	Oman, desert plain	24-Mar-2006	Find	19°46.441′N	56°36.319′E	470.0	470.0	1	H6	S2	W3	18.8	16.7	1.3		Bern-12	
Jiddat al Harasis 346	Oman, desert plain	27-Mar-2006	Find	19°43.687′N	56°35.176′E	712.6	712.6	5	H5	S2	W4	18.0	16.2	1.4		Bern-14	
Jiddat al Harasis 347	Oman, desert plain	28-Mar-2006	Find	19°48.971′N	56°40.076′E	850.7	850.7	1	H5-6	S2	W3	19.5	16.8	1.5		Bern-14	
Mughsayl																	
Mughsayl	Al Mughsayl, Dhofar Province, Oman	27-Jun-1905	Find	16°55.47′N	53° 47.10′E	300.0	60.4	1	L6	S2	W4	24.5	19.6	1.8		Bern-16	
Ramlat al Wahibah																	
Ramlat al Wahibah 001	Oman, desert plain	6-Mar-2006	Find	21°22.269′N	58°24.426′E	75.7	75.7	1	H4/5	S2	W2	19.2	16.3	1.3		Bern-9	Paired with RaW 002
Ramlat al Wahibah 002	Oman, desert plain	6-Mar-2006	Find	21°22.218′N	58°24.476′E	475.2	475.2	5	H4/5	S2	W2	19.5	17.3	1.2		Bern-9	Paired with RaW 001
Ramlat al Wahibah 003	Oman, desert plain	6-Mar-2006	Find	21°20.907′N	58°24.471′E	95.4	95.4	1	H4/5	S2	W2	19.4	16.8	2.7		Bern-9	Paired with RaW 001
Ramlat al Wahibah 004	Oman, desert plain	6-Mar-2006	Find	21°20.894′N	58°24.474′E	43.8	43.8	1	H4/5	S2	W2	19.9	16.9	2.6		Bern-9	Paired with RaW 001
Ramlat al Wahibah 005	Oman, desert plain	6-Mar-2006	Find	21°13.508′N	58°24.696′E	56.6	56.6	1	H5	S3	W4	18.4	16.8	1.7		Bern-9	
Ramlat al Wahibah 006	Oman, desert plain	6-Mar-2006	Find	21°10.737′N	58°24.711′E	33.3	33.3	1	H5	S2	W4	18.5	16.5	1.4		Bern-9	Paired with RaW 007
Ramlat al Wahibah 007	Oman, desert plain	5-Mar-2006	Find	21°10.476′N	58°24.551′E	1940.7	1940.7	111	H5	S2	W4	19.1	16.8	1.3		Bern-9	Paired with RaW 006
Ramlat al Wahibah 008	Oman, desert plain	6-Mar-2006	Find	21°10.098′N	58°23.487′E	7.8	7.8	1	L4	S2	W3	23.7	20.9	1.2		Bern-9	
Ramlat al Wahibah 009	Oman, desert plain	7-Mar-2006	Find	21°08.198′N	58°21.872′E	22.0	22.0	1	H4	S3	W3	17.7	15.1	0.7		Bern-9	
Ramlat al Wahibah 010	Oman, desert plain	7-Mar-2006	Find	21°08.298′N	58°21.815′E	23.2	23.2	2	H4	S2-3	W4	17.5	16.4	1.3		Bern-9	
Ramlat al Wahibah 011	Oman, desert plain	7-Mar-2006	Find	21°09.492′N	58°24.679′E	120.6	120.6	2	H5	S2	W3	18.5	16.2	1.3		Bern-9	Paired with RaW 006
Ramlat al Wahibah 012	Oman, desert plain	7-Mar-2006	Find	21°10.046′N	58°24.652′E	23.1	23.1	1	H5	S2	W4	17.3	16.3	1.3		Bern-9	Paired with RaW 006
Ramlat al Wahibah 013	Oman, desert plain	7-Mar-2006	Find	21°09.444′N	58°24.641′E	305.2	305.2	3	H5	S2	W3–4	18.5	16.5	1.2		Bern-9	Paired with RaW 006
Ramlat al Wahibah 014	Oman, desert plain	7-Mar-2006	Find	21°03.587′N	58°24.259′E	5591.0	5591.0	1	H5	S2	W2	18.6	14.7	1.3		Bern-9	
Ramlat al Wahibah 015	Oman, desert plain	7-Mar-2006	Find	21°10.366′N	58°25.305′E	295.8	295.8	1	H5	S3	W3	20.3	18.8	2.9		Bern-9	
Ramlat al Wahibah 016	Oman, desert plain	8-Mar-2006	Find	21°09.983′N	58°24.621′E	115.4	115.4	12	L6	S4-5	W4	25.0	21.2	1.2		Bern-9	
Ramlat al Wahibah 017	Oman, desert plain	8-Mar-2006	Find	21°09.504′N	58°23.353′E	70.1	70.1	1	H5	S2	W3	18.9	16.3	1.2		Bern-9	
Ramlat al Wahibah 018	Oman, desert plain	8-Mar-2006	Find	21°12.716′N	58°23.169′E	35.8	35.8	1	H6	S1	W4	18.6	16.6	1.3		Bern-9	Paired with RaW 019

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Ramlat al Wahibah 019	Oman, desert plain	8-Mar-2006	Find	21°12.763′N	58°23.183′E	546.1	546.1	49	H6	S1	W4	18.7	16.5	1.4		Bern-9	Paired with RaW 018
Ramlat al Wahibah 020	Oman, desert plain	8-Mar-2006	Find	21°07.638′N	58°24.450′E	112.2	112.2	1	H6	S1	W4	18.4	16.2	1.4		Bern-9	Paired with RaW 018
Ramlat al Wahibah 021	Oman, desert plain	7-Mar-2006	Find	21°09.120′N	58°24.836′E	59.1	59.1	1	H5	S1	W4	18.0	16.0	1.4		Bern-9	
Ramlat al Wahibah 022	Oman, desert plain	8-Mar-2006	Find	21°29.587′N	58°27.864′E	89.9	89.9	1	H5	S3	W4	18.3	16.4	1.5		Bern-9	
Ramlat al Wahibah 023	Oman, desert plain	9-Mar-2006	Find	21°22.563′N	58°25.662′E	107.1	107.1	12	H4	S4	W4	19.4	16.9	1.2		Bern-10	
Ramlat al Wahibah 024	Oman, desert plain	10-Mar-2006	Find	21°22.577′N	58°25.661′E	12.1	12.1	1	H5	S2	W1	19.5	17.0	1.5		Bern-10	
Ramlat al Wahibah 025	Oman, desert plain	10-Mar-2006	Find	21°21.531′N	58°25.328′E	4.9	4.9	1	H5	S2	W4	18.8	16.7	1.2		Bern-10	Paired with RaW 038
Ramlat al Wahibah 026	Oman, desert plain	10-Mar-2006	Find	21°18.622′N	58°24.134′E	342.7	342.7	4	H5	S2	W4	17.7	15.1	1.4		Bern-10	
Ramlat al Wahibah 027	Oman, desert plain	10-Mar-2006	Find	21°15.603′N	58°23.491′E	1174.4	1174.4	102	H5	S2-3	W4	19.3	16.4	1.4		Bern-10	
Ramlat al Wahibah 028	Oman, desert plain	11-Mar-2006	Find	21°11.951′N	58°24.763′E	26.8	26.8	1	H5	S2	W4	18.3	16.2	1.2		Bern-10	Paired with RaW 006
Ramlat al Wahibah 029	Oman, desert plain	11-Mar-2006	Find	21°11.951′N	58°24.763′E	12.4	12.4	1	H5	S2	W4	18.5	16.6	1.3		Bern-10	Paired with RaW 006
Ramlat al Wahibah 030	Oman, desert plain	11-Mar-2006	Find	21°11.951′N	58°24.763′E	4.9	4.9	1	H5	S2	W4	18.6	16.3	1.1		Bern-10	Paired with RaW 006
Ramlat al Wahibah 031	Oman, desert plain	11-Mar-2006	Find	21°16.396′N	58°23.787′E	195.3	195.3	1	H4	S2	W3	18.0	15.9	1.0		Bern-10	
Ramlat al Wahibah 032	Oman, desert plain	11-Mar-2006	Find	21°20.281′N	58°24.692′E	13.5	13.5	1	L6	S4	W4	25.3	20.8	1.7		Bern-10	Cpx
Ramlat al Wahibah 033	Oman, desert plain	11-Mar-2006	Find	21°21.722′N	58°24.780′E	22.7	22.7	1	H4/5	S2-3	W3	20.1	17.0	1.0		Bern-10	Paired with RaW 001
Ramlat al Wahibah 034	Oman, desert plain	11-Mar-2006	Find	21°21.738′N	58°24.707′E	61.1	61.1	1	LL3-5	S2	W0	27.9	22.9	1.6		Bern-10	
Ramlat al Wahibah 035	Oman, desert plain	11-Mar-2006	Find	21°22.119′N	58°23.860′E	30.7	30.7	1	H5	S2	W3-4	18.7	16.7	1.1		Bern-10	
Ramlat al Wahibah 036	Oman, desert plain	11-Mar-2006	Find	21°22.374′N	58°24.295′E	131.4	131.4	5	H4/5	S2	W3	20.4	17.0	1.2		Bern-10	Paired with RaW 001
Ramlat al Wahibah 037	Oman, desert plain	11-Mar-2006	Find	21°22.561′N	58°24.724′E	529.6	529.6	6	H4/5	S2	W3	19.4	16.3	1.6		Bern-10	Paired with RaW 001
Ramlat al Wahibah 038	Oman, desert plain	11-Mar-2006	Find	21°22.232′N	58°24.841′E	7.4	7.4	1	H5	S2	W4	18.5	16.4	1.2		Bern-10	Paired with RaW 025
Ramlat al Wahibah 039	Oman, desert plain	11-Mar-2006	Find	21°22.297′N	58°24.744′E	23.8	23.8	1	H4/5	S3	W2	19.8	17.2	1.1		Bern-10	Paired with RaW 001
Ramlat al Wahibah 040	Oman, desert plain	11-Mar-2006	Find	21°22.264′N	58°24.849′E	78.4	78.4	1	H4/5	S2	W3	19.5	16.5	1.4		Bern-10	Paired with RaW 001
Ramlat al Wahibah 041	Oman, desert plain	15-Mar-2006	Find	22°20.486′N	58°32.039′E	88.9	88.9	1	L6	S2	W3	25.4	21.1	1.4		Bern-11	
Ramlat al Wahibah 042	Oman, desert plain	15-Mar-2006	Find	22°07.809′N	58°26.443′E	548.2	548.2	8	L6	S4	W4	25.1	21.3	1.5		Bern-11	
Ramlat as Sahmah																	
Ramlat as Sahmah 113	Oman, desert plain	19-Jan-2003	Find	20°27.926′N	55°51.747′E	1499	1499	1	L6	S2	W3	25.3	21.3		1.4	Bern-2	$Wo_{1.4}$
Ramlat as Sahmah 114	Oman, desert plain	20-Jan-2003	Find	20°34.109′N	56°06.130′E	142.4	142.4	1	H5	S1/2	W3	18.9	16.9		1.4	Bern-2	$Wo_{1.4}$; cpx; $An_{12.3}$

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Ramlat as Sahmah 201	Oman, desert plain	24-Dec-2002	Find	20°00.486′N	56°24.889′E	249.4	249.4	1	R5							See separate entry	
Ramlat as Sahmah 211	Oman, desert plain	16-Jan-2003	Find	20°35.152′N	55°52.351′E	143.0	143.0	1	Ungrouped C	S1	W3	31.3	26.2			See separate entry	
Ramlat as Sahmah 221	Oman, desert plain	19-Jan-2003	Find	0°31.912′N	56°2.941′E	48.3	48.3	3	CV3							See separate entry	
Ramlat as Sahmah 262	Oman, desert plain	21-Mar-2006	Find	20°00.811′N	56°24.418′E	425.0	425.0	1	LL6	S3	W1	27.6	22.7	1.3		Bern-12	
Ramlat as Sahmah 263	Oman, desert plain	26-Mar-2006	Find	20°14.394′N	56°13.750′E	578.0	578.0	1	L6	S3	W2	24.2	20.3	1.5		Bern-12	
Sayh al Uhaymir																	
Sayh al Uhaymir 428	Oman, desert plain	16-Feb-2001	Find	21°5.072′N	57°17.593′E	121.9	20.0	1	H ~5		W4				4.80	Bart-1	
Sayh al Uhaymir 429	Oman, desert plain	16-Feb-2001	Find	21°3.315′N	57°16.141′E	154.5	20.0	1	H 4	S2	W2	15.7–17.9	15.9–19.6		4.92	Bart-1	
Sayh al Uhaymir 430	Oman, desert plain	18-Feb-2001	Find	21°4.591′N	57°17.753′E	180.6	20.0	1	H ~5		W4				4.84	Bart-1	
Sayh al Uhaymir 431	Oman, desert plain	18-Feb-2001	Find	21°4.614′N	57°17.816′E	22.1	4.6	1	H 5	S2	W1	18.3–18.8	16.0–16.4		4.90	Bart-1	$An_{1–14}Or_{0.4–6}$
Sayh al Uhaymir 432	Oman, desert plain	19-Feb-2001	Find	21°3.315′N	57°15.489′E	62.0	12.4	2	L ~6		W4				4.48	Bart-1	
Sayh al Uhaymir 433	Oman, desert plain	21-Feb-2001	Find	21°3.982′N	57°15.888′E	43.3	8.7	1	L ~6		W1				4.85	Bart-1	Darkened by metal-filled cracks
Sayh al Uhaymir 434	Oman, desert plain	21-Feb-2001	Find	21°5.345′N	57°16.359′E	286.1	20.0	1	H ~5		W4				4.78	Bart-1	
Sayh al Uhaymir 435	Oman, desert plain	21-Feb-2001	Find	21°5.611′N	57°16.535′E	164.6	20.0	1	L ~5		W4				4.68	Bart-1	
Sayh al Uhaymir 436	Oman, desert plain	21-Feb-2001	Find	21°5.884′N	57°16.826′E	808.1	20.0	5	L ~5		W4				4.67	Bart-1	
Sayh al Uhaymir 437	Oman, desert plain	24-Feb-2001	Find	21°5.398′N	57°17.695′E	1358.1	20.0	4	H ~4		W3				4.91	Bart-1	Melt pockets
Sayh al Uhaymir 449	Oman, desert plain	19-Mar-2006	Find	21°2.4′N	57°18.9′E	16.50	3.6	1	Lunar							See separate entry	
Sayh al Uhaymir 450	Oman, desert plain	17-Mar-2006	Find	20°52.950′N	57°21.434′E	1713.8	1713.8	5	L4	S2	W4	24.1	20.6	0.8		Bern-12	
Sayh al Uhaymir 451	Oman, desert plain	17-Mar-2006	Find	20°47.595′N	57°21.039′E	167.4	167.4	1	H4	S3	W3	20.0	17.3	1.0		Bern-12	
Sayh al Uhaymir 452	Oman, desert plain	18-Mar-2006	Find	20°35.710′N	56°49.814′E	676.0	676.0	1	H6	S1-2	W2	17.8	15.7	1.6		Bern-12	
Sayh al Uhaymir 453	Oman, desert plain	18-Mar-2006	Find	20°28.757′N	56°49.739′E	298.9	298.9	1	L4	S2	W2	26.3	21.5	1.3		Bern-12	Br
Sayh al Uhaymir 454	Oman, desert plain	18-Mar-2006	Find	20°28.757′N	56°45.265′E	120.9	120.9	1	L6	S3	W4	24.7	20.9	1.6		Bern-12	Paired with SaU 456
Sayh al Uhaymir 455	Oman, desert plain	18-Mar-2006	Find	20°28.773′N	56°44.661′E	274.8	274.8	3	H5	S2	W3	17.9	15.7	1.6		Bern-12	
Sayh al Uhaymir 456	Oman, desert plain	18-Mar-2006	Find	20°26.293′N	56°42.230′E	94.1	94.1	1	L6	S3	W4	24.7	22.8	1.3		Bern-12	Paired with SaU 454, cpx
Sayh al Uhaymir 457	Oman, desert plain	18-Mar-2006	Find	20°20.357′N	56°33.867′E	16.9	16.9	1	H4	S3	W4	18.5	16.4	1.3		Bern-12	

Table 8. *Continued.* Approved meteorite names and relevant data of recoveries from Asia.

Name	Location of recovery (description)	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	Type spec (g)	Number of pieces	Class	SS	WG	Fa mol%	Fs mol%	Wo mol%	Magnetic sus	Info	Comments or other measurements made
Shişr																	
Shişr 125	Oman, desert plain	4-Feb-2007	Find	18°15.477′N	53°59.613′E	23.90	4.8	1	H ~5		W4				4.88	Bart-2	
Shişr 136	Oman, desert plain	5-Feb-2007	Find	18°15.559′N	53°59.465′E	1.60	0.3	1	H ~5		W4				4.83	Bart-2	
Shişr 140	Oman, desert plain	3-Feb-2007	Find	18°15.24′N	53°59.923′E	37.60	7.5	1	L ~5		W3				4.73	Bart-6	
Thumrayt																	
Thumrayt 001	Oman, desert plain	November 2006	Find	17°35′N	54°21′E	2480.00	21.0	42	Pallasite (MG)							See separate entry	

Table 9. Approved meteorites names and relevant data for recoveries from Europe.

Name	Location of recovery	Date of recovery	Find/ fall	Latitude	Longitude	Mass (g)	No. of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Info
Spain															
Puerto Lápice	Ciudada Real, Castilla-La Mancha, Spain	10-May-07	Fall	39°21′N	3º31'W	500+	Many	Eucrite	22.1						See separate entry
Russia															
Ulyanovsk	Ulyanovska, Russia	24-May-06	Find	54°21′53.81″N	48°35′29.21″E	4680	1	H5	960						See separate entry

Table 10. Approved Nova names for meteorites with unknown provenance.

Name	Location of recovery	Date of recovery	Find/fall	Mass (g)	No. of pieces	Class	Type specimen mass (g)	SS	WG	Fa (mol%)	Fs (mol%)	Wo (mol%)	Magnetic sus	Info
Nova 008	Unknown	Before 1972	Find	4200	1	L6	144	3	3	24.2 ± 0.2 (n = 7)				UCLA-4
Nova 009	Unknown	Before 1972	Find	7300	1	H4	53	3	2	18.1 ± 0.2 (n = 6)				UCLA-4