

## The Meteoritical Bulletin, No. 98, September 2010

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(Received 19 September 2010)

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**Abstract**—This issue of *The Meteoritical Bulletin* reports information on 1103 meteorites including 281 non-Antarctic meteorites (Table 1) and 822 Antarctic meteorites (Table 2). Reported in full written descriptions are three falls. Full descriptions are also given for three shergottites, two ungrouped irons, a primitive achondrite, an olivine diogenite, and a lunar meteorite. One iron, Gebel Kamil, was found in and around the Kamil impact crater. Also reported is a new dense collection area in Tunisia. Tables list a wide variety of meteorites including chondrites, ureilites, irons, acapulcoites, and HEDs. Antarctic meteorites reported in this edition include meteorites recovered by ANSMET (US), CHINARE (China), KOREAMET (Korea), and the NIPR (Japan) meteorite recovery programs.

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### INTRODUCTION

### FALLS

*The Meteoritical Bulletin* is the announcement for meteorite names and classifications that have been reviewed and approved by the Meteoritical Society's Meteorite Nomenclature Committee. Guidelines for meteorite nomenclature as well as information on submitting a meteorite for review can be found on the society's webpage ([http://meteoriticalsociety.org/simple\\_template.cfm?code=pub\\_bulletin](http://meteoriticalsociety.org/simple_template.cfm?code=pub_bulletin)). Additional information on meteorites reported in tables can be found in the Meteorite Bulletin Database, which can be accessed from the society website.

#### Daule

1°52'15.2"S, 79°57'27.2"W

Guayas, Ecuador

Fell: 23 March 2008, approximately 9 A.M. local time (UT-5)

Classification: Ordinary chondrite (L5)

**History:** People in Daule and the surrounding region heard a series of loud detonations and, moments later, two stones were seen to fall. A single stone fell outside a home next to the Daule River. The homeowner was less than 5 m from the stone, which penetrated nearly 1 m into the mud and bounced out, landing on the

surface. He picked up the stone moments later. Another stone was reported to have impacted into a flooded rice paddy and sent a fountain of water several meters in the air; this stone has not been recovered.

**Physical characteristics:** The recovered stone weighed 6.58 kg.

**Petrography** (Jeff Grossman, *USGS*): A shocked ordinary chondrite with abundant melt veins; shock stage, S4; weathering grade, W0.

**Geochemistry:** Olivine,  $Fa_{24.5 \pm 0.5}$  ( $n = 41$ ); low-Ca pyroxene,  $Fs_{20.8 \pm 0.5}Wo_{1.4 \pm 0.2}$  ( $n = 12$ ).

**Classification:** L5 chondrite.

**Specimens:** 20 g, *SI*; main mass, *Farmer*.

#### Jesenice 46°25.282'N, 14°03.130'E

Upper Sava Valley, Slovenia

Fell: 9 April 2009, 3:00 CEST (UT + 2)

Classification: Ordinary chondrite (L6)

**History:** On April 9, 2009 a bright fireball appeared over Carinthia and the Karavanke Mountains. The meteoroid entered the atmosphere at a steep angle and disintegrated into a large number of fragments after more than 4 s of flight. In Jesenice and its vicinity, witnesses reported loud explosions following the disappearance of the fireball. Eyewitness reports were documented and evaluated by Thomas Grau (*ERFM*, Bernau). Two Czech automated fireball stations of the European Fireball Network (EN) recorded the bolide. Based on photographic and photoelectric records taken by the stations, Pavel Spurný and Jiří Borovička (Academy of Science, Czech Republic) determined the atmospheric trajectory and heliocentric orbit of the initial meteoroid. The bolide was also recorded by all-sky and meteor cameras in Slovenia. The supersonic boom was registered by infrasound stations and seismometers in Slovenia, Austria, Germany, and Italy. The first fragment (2.35 kg) was recovered by Jožef Pretnar and Bojana Krajnc on May 17, 2009. A second complete individual of 361 g was found on July 21, 2009 by Ralph Sporn and Martin Neuhofer (46°25.079'N, 14°03.193'E) and a third one of 956 g by Danijel Repe on August 27, 2009 (46°25.473'N, 14°02.621'E). Total weight: approximately 3.667 kg.

**Petrography and mineral compositions** (A. Bischoff, IFP; Miha Jeršek, *SMNH*): The rock is fine-grained and shows brownish taints (weathering) on surfaces of the broken pieces. Shock veins were detected. In thin section Jesenice is highly recrystallized and a few relic chondrules are visible indicating it is a type 6 chondrite. This is also supported by the large grain size of plagioclase and homogeneous olivine and pyroxene. Mean olivine and low-Ca pyroxene are  $Fa_{25}$  and  $Fs_{21}$ , respectively.

**Classification:** Jesenice is an L6, S3 ordinary chondrite.

**Specimens:** Main mass and type specimens located at *SMNH*.

#### Pleșcoi 45°16'30"N, 26°42'35"E

Pleșcoi Village, Berca Commune, Buzău Co, Romania

Fell: 12 June 2008, 21:45 h local time EEST (UT + 3)

Classification: Ordinary chondrite (L5/6)

**History:** On June 12, 2008, a bolide was observed by eyewitnesses from six counties in south Romania (along about 325 km distance); locally it was accompanied by sonic booms. The fireball was white green, very brilliant, and it crossed the skies along a W-E trajectory, at an angular height of 35–40° above the horizon (eyewitness reports on “Urbi et Orbi,” author Valentin Ghincolov).

**Physical characteristics:** One mass (6.913 kg) of basic conical shape (20 × 19 × 11 cm) with a flat side was discovered by Mihail Popescu in his garden. The stone remained where it had landed for approximately 3 weeks. The specimen showed a dull, black, fusion crust (1 mm thick) with a thin network of cracks; only a very small (about 2 × 1.5 cm) area of the light-gray breccia with metallic grains (< 1 mm) was revealed. The flat surface exhibits some lighter-colored strips and parallel thread lines marked by molten drops.

**Petrography** (Dana Pop, *BBU*; Gretchen Benedix, *NHM*): Chondrule outlines are obscure under the optical microscope, but more discernable in BSE images. Recognizable chondrule types include barred olivine and radiating pyroxene. The fusion crust is relatively thick. The matrix is fully recrystallized; brecciation is not obvious. Metal and troilite grains are relatively fresh, sometimes with thin weathering rims. Olivine exhibits undulatory extinction.

**Geochemistry:** Olivine ( $Fa_{25.5 \pm 0.3}$ ;  $n = 56$ ), low-Ca pyroxene ( $Fs_{21.4 \pm 0.1}$ ;  $Wo_{1.3 \pm 0.2}$ ;  $n = 34$ ). Chromite ( $Cr/Cr + Al = 0.85$ ;  $Fe/Fe + Mg = 0.86$ ).

**Classification:** Ordinary chondrite (L5/6); S2, W1.

**Specimens:** A 20 g sample, two thin sections and two thick sections are on deposit at *BBU*. One 49.95 g piece and one thin section are deposited at *NHM*. The main mass is with the finder of the stone (M. Popescu).

## FINDS

#### Buffalo Gap 32°14'46"N, 99°59'35"W

Taylor County, Texas, United States

Found: 2003

Classification: Iron meteorite (IAB, ungrouped)

**History:** A single 9.3 kg mass was found by Kevin Halliburton in 2003. It was found lying on a section of exposed limestone bedrock on his property, in the vicinity of limestone rubble presumed to have been moved from a nearby road-cut. Mr. Halliburton recognized the unusual appearance and density of the rock. Noting that it was magnetic and possessed other qualities common to iron meteorites, he suspected that it might be a meteorite and contacted A. Rubin at *UCLA*.

**Physical characteristics:** The 9.3 kg mass is of irregular shape, and measures  $21 \times 15 \times 9$  cm at its widest points. It is lightly weathered and displays well defined regmaglypts, but no fusion crust remains. Minor caliche is present on the underside of the specimen, and over twenty (presumably troilite) inclusions are visible on its surface.

**Petrography** (J. Wasson, *UCLA*): Two pieces, weighing 15.7 and 18.7 g, were examined. An area approximately  $15 \times 20$  mm on the smaller sample was polished and etched. It shows a well defined Widmanstätten pattern with kamacite rimmed by bright taenite borders. The kamacite is swollen with mean width  $1.3 \pm 0.1$  mm, on the border between Om and Og but probably on the Om side. Occasional schreibersites are scattered throughout the kamacite. The larger sample displays an  $8 \times 10$  mm FeS nodule ringed by a 0.2–0.3 mm thick rim of schreibersite. The composition of the iron is almost identical to that of the IAB ungrouped FeS-rich iron Waterville, an iron with an exceptionally high content of FeS. Considering the large amount of FeS visible on the surface of the main mass, this iron would appear to be a new member of the Mundrabilla grouplet in the IAB complex.

**Geochemistry:** Bulk Composition: INAA data (J. T. Wasson, *UCLA*): Co =  $4.8 \text{ mg g}^{-1}$ , Ni =  $80 \text{ mg g}^{-1}$ , Cu =  $212 \text{ } \mu\text{g g}^{-1}$ , Ga =  $75 \text{ } \mu\text{g g}^{-1}$ , Ge =  $280 \text{ } \mu\text{g g}^{-1}$ , As =  $16 \text{ } \mu\text{g g}^{-1}$ , Ru =  $4.9 \text{ } \mu\text{g g}^{-1}$ , Sb =  $410 \text{ ng g}^{-1}$ , W =  $0.86 \text{ } \mu\text{g g}^{-1}$ , Ir =  $0.44 \text{ } \mu\text{g g}^{-1}$ , Au =  $1.64 \text{ } \mu\text{g g}^{-1}$ .

**Classification:** Iron meteorite, ungrouped member of the IAB complex, medium octahedrite; member of the Mundrabilla grouplet.

**Specimens:** Type specimen, 33 g, *UCLA*; main mass, *JUtas*.

#### **Dar al Gani 1051** **27°10.15'N, 16°08.12'E**

Libya

Found: 2000

Classification: Martian meteorite (shergottite)

**History:** The stone was found in the strewn field of Dar al Gani 476.

**Physical characteristics:** One stone of 40.1 g with a partly brownish surface was recovered.

**Petrography** Classification and mineralogy (A. Bischoff and M. Horstmann, *IfP*, and Erich H. Haiderer, Vienna, Austria): The rock is slightly weathered and has a porphyritic basaltic texture consisting of large, up to

mm-sized zoned olivines embedded in a fine-grained matrix of pyroxene and maskelynite (the plagioclase has been converted to maskelynite). Minor mineral constituents include Fe-sulfide, chromite, Ti-rich chromite, and ilmenite. Based on the optical appearance the rock is similar to Dar al Gani 476 and very probably paired.

**Geochemistry:** Maskelynite (plagioclase), An<sub>47–64</sub>; mean: An<sub>55.5±6</sub>; pyroxene, Fs<sub>19–33</sub>; mean: Fs<sub>26±4.5</sub>; olivine (range): Fa<sub>26–45</sub>.

**Classification:** The rock is a Martian shergottite and probably paired with Dar al Gani 476 and other samples found within this strewn field.

**Specimens:** Type specimen of 8.4 g and one polished thin section prepared from this mass, *IfP*; the finder (anonymous) holds the main mass.

#### **Gebel Kamil** **22°01'06''N, 26°05'16''E**

East Uweinat Desert, Egypt

Found: 19 February 2009

Classification: Iron meteorite (ungrouped)

**History:** A total of about 1600 kg of iron meteorite shrapnel (thousands of pieces), ranging in mass from <1 to 35,000 g, plus a single 83 kg individual completely covered with well developed regmaglypts, was found in and around the 45 m diameter Kamil impact crater by an Italian–Egyptian geophysical team in February 2009 and February 2010. Approximately 800 kg of the total mass observed in the field (the regmaglypted individual inclusive) was recovered. The Kamil crater was identified by V. De Michele, former curator of the Natural History Museum in Milan, Italy. The geophysical survey was carried out within the framework of the “2009 Italian–Egyptian Year of Science and Technology.”

**Physical characteristics:** A 634 g type specimen, measuring  $88 \times 70 \times 55$  mm, is flattened and jagged shrapnel with a rough, dark-brown external surface. The surface originally sitting in the desert soil shows some oxy-hydroxides due to terrestrial weathering.

**Petrography** (M. D’Orazio, *DST-PI*; Luigi Folco, *MNA-SI*): Etched sections show an ataxitic structure interrupted on a cm-scale by crystals of schreibersite, troilite and daubreelite enveloped in swathing kamacite. Kamacite spindles ( $20 \pm 5 \text{ } \mu\text{m}$  wide) nucleated on tiny schreibersite crystals. The spindles form small aligned clusters and are rimmed by taenite. The matrix is a duplex plessite made of approximately the same proportion of kamacite and taenite lamellae (1–5  $\mu\text{m}$  in thickness) arranged in a micro-Widmanstätten pattern. Many sections show, particularly close to the external surface, shear dislocations offsetting the plessitic matrix and the crystals of the accessory phases by several millimeters.

**Geochemistry:** Composition of the metal (ICP-MS; D’Orazio and Folco, 2003) is Co = 0.75, Ni = 19.8 (both in wt%), Cu = 464, Ga = 49, Ge = 121, As = 15.6, Mo = 9.1, Ru = 2.11, Rh = 0.75, Pd = 4.8, Sn = 2.49, Sb = 0.26, W = 0.66, Re = 0.04, Ir = 0.39, Pt = 3.5, Au = 1.57 (all in ppm).

**Classification:** (M. D’Orazio, *DST-PI*; Luigi Folco, *MNA-SI*) Iron meteorite (ungrouped), Ni-rich ataxite, extensive shear deformation and low weathering.

**Specimens:** Type specimen of approximately 15 kg and one section at *MNA-SI*; approximately 5 kg at *DST-PI*. Main mass of the recovered specimens at Egyptian Geological Museum (Mineral Resources Authority), Cairo, Egypt.

#### Jiddat al Harasis 513                    19°31.859’N, 55°10.787’E

Zufar, Oman

Found: 20 January 2008

Classification: Ordinary chondrite (LL7)

**History:** A single stone was found during a search for meteorites by A. Al-Kathiri, E. Gnos, A. Grimberg, B. Hofmann, and E. Janots.

**Physical characteristics:** Rounded fully crusted single stone with a mass of 9.520 g, size 26 × 18 × 16 mm. This sample was found among numerous fragments of an unpaired ordinary chondrite (JaH 511).

**Petrography** (E. Gnos, *MHNGE*; B. Hofmann, *NMBE*): Heterogeneous texture consisting of coarse (up to 1.2 mm) low-Ca pyroxene (Fs<sub>23.5</sub>Wo<sub>3.8</sub>), recrystallized olivine (Fa<sub>28.6</sub>) and interstitial plagioclase (30–50 μm in size), common troilite, chromite, ilmenite (also as abundant exsolutions in chromite). Very little iron metal, heterogeneously distributed (single nugget up to 1 mm). Chondrule remnants are only faintly discernible. Porosity determined by alcohol saturation is 6.1 vol%. Troilite shows polycrystalline texture. Below the fusion crust is a pronounced rim of troilite melt impregnation. Shock stage S2.

**Geochemistry:** Bulk Fe by XRF is 18.6%. Oxygen isotopes (I.A. Franchi and R.C. Greenwood, *OU*) δ<sup>17</sup>O = 4.07, δ<sup>18</sup>O = 5.73, and Δ<sup>17</sup>O = 1.07‰.

**Classification:** Based on bulk mineralogy, mineral composition, bulk Fe and oxygen isotopes this is a highly metamorphosed LL chondrite, LL7 S1 W2.

**Specimens:** All at *NMBE*.

#### Northwest Africa 2986

Morocco

Purchased: 2006

Classification: Martian meteorite (shergottite)

**History:** Three partially crusted stones with a weight of 201 g were purchased in Erfoud, Morocco, in 2006.

**Petrography:** (T. Bunch and J. Wittke, *NAU*): A basaltic shergottite that contains 54 vol% Ca-pyroxene (pigeonite

and augite), 41 vol% plagioclase (maskelynite) and minor ulvöspinel, ilmenite, merrillite, chlorapatite, pyrrhotite, and K-Si-rich, late stage glasses. Pyroxene shows mottled compositional zoning. Dark, shock pocket glasses and veins are also present. A few melt inclusions of K-Si-rich glass, phosphates, ferroan pigeonite, and ilmenite were found in ulvöspinel.

**Geochemistry:** Pigeonite Fs<sub>37.4–53.8</sub>Wo<sub>10.8–15.8</sub> (FeO/MnO = 34); augite Fs<sub>27.8–40.6</sub>Wo<sub>33.4–36.0</sub>; maskelynite An<sub>54.7</sub>Or<sub>1.6</sub>. Oxygen isotopes (D. Rumble, *CIW*): Replicate analyses of acid-washed whole rock samples by laser fluorination gave, respectively δ<sup>18</sup>O = 4.65, 4.59, 4.45, 4.78, δ<sup>17</sup>O = 2.73, 2.67, 2.58, 2.80, Δ<sup>17</sup>O = 0.280, 0.260, 0.240, 0.284 (all permil). Bulk composition (ICPMS, C. Herd, *UAB*): (mean of 2 replicate analyses, in ppm) La 0.97, Ce 2.32, Nd 1.70, Sm 0.71, Eu 0.43, Gd 1.71, Dy 1.12, Yb 0.85, Lu 0.12, Hf 1.07, Ba 21, Cr 646, V 236, Ni 47, Co 29.

**Classification:** Martian (shergottite) with an “enriched” chondrite-normalized rare earth element pattern, and probably paired with NWA 2975 and related stones. Low weathering grade and a moderate shock level.

**Specimens:** 21.3 g is on deposit at *NAU*. *Farmer* and *Strope* are the main mass holders.

#### Northwest Africa 5297

Morocco

Found: March 2008

Classification: Primitive achondrite

**History:** Found near Alargoug, Morocco, in March 2008 and purchased in June 2008 by Greg Hupé from a Moroccan dealer.

**Physical characteristics:** A total of nine dark stones with visible metal and a combined weight of 130 g.

**Petrography** (A. Irving and S. Kuehner, *UWS*): This specimen has a poikiloblastic metamorphic texture with no chondrules and contains relatively abundant (approximately 10 vol%) Ni-rich metal. The major phases are olivine, low-Ca pyroxene, taenite and very sodic plagioclase with minor Ni-bearing troilite.

**Geochemistry:** Olivine (Fa<sub>28.6</sub>, FeO/MnO = 54.4), plagioclase (Ab<sub>86.2</sub>An<sub>9.1</sub>Or<sub>4.7</sub>), taenite (approximately 10 wt% Ni). Oxygen Isotopes (D. Rumble, *CIW*): replicate analyses of acid-washed silicate material by laser fluorination gave, respectively: δ<sup>18</sup>O = 4.830, 5.032; δ<sup>17</sup>O = 3.711, 3.818; Δ<sup>17</sup>O = 1.171, 1.171 permil.

**Classification:** This specimen is an ungrouped primitive achondrite with an oxygen isotopic composition like those of LL chondrites; however, it contains too much metal to be regarded as a product of metamorphism of typical LL chondrites.

**Specimens:** A total of 20 g and one polished thin section are on deposit at *UWS*. Main mass, *GHupé*.



**Northwest Africa 5718**

Algeria

Purchased: 2006

Classification: Martian (basaltic shergottite)

**History:** A fresh, 90.5 g stone was purchased in Erfoud, Morocco, by Darryl Pitt in 2009. The stone was complete and was covered with a shiny, lightly weathered fusion crust.

**Petrography** (T. Bunch and J. Wittke, *NAU*; A. Irving, *UWS*): This basaltic shergottite is fine to medium-grained (a few prismatic pigeonite grains reach 4.9 mm in length) with ophitic, subophitic, and granular textures. Pigeonite and augite account for 70 vol%, maskelynite 25 vol%, and ulvöspinel, ilmenite, pyrrhotite, and merrillite 5 vol%. Pigeonite and augite are compositionally zoned with mottled extinction, shock lamellae, and kink bands. Small pockets of late-stage K-rich glasses with crystallites of ilmenite, merrillite, pyroxene, and silica are also present. Shock-formed dark, vesicular glass pockets and thin shock melt veins are prominent.

**Geochemistry:** Pigeonite cores,  $\text{Fs}_{30.5-39.1}\text{Wo}_{9.6-11.5}$ , rims,  $\text{Fs}_{41.8-45.7}\text{Wo}_{12-13.2}$  ( $\text{FeO}/\text{MnO} = 32$ ); augite  $\text{Fs}_{25.4-33.4}\text{Wo}_{28.3-31.1}$ ,  $\text{TiO}_2 = 1.49$  wt% ( $\text{FeO}/\text{MnO} = 28$ ). Plagioclase (maskelynite) is zoned with cores of  $\text{An}_{56.8}\text{Or}_{2.1}$  to rims of  $\text{An}_{52.3}\text{Or}_{4.8}$ . Ilmenite  $\text{MgO} = 1.64$  wt%. K-rich glasses (wt%)  $\text{SiO}_2 = 77.1$ ,  $\text{Al}_2\text{O}_3 = 11.6$ ,  $\text{K}_2\text{O} = 7.1$ ,  $\text{Na}_2\text{O} = 2.52$ ,  $\text{FeO} = 1.45$ . Oxygen isotopes (D. Rumble, *CIW*): Replicate analyses of acid-washed whole rock samples by laser fluorination gave  $\delta^{18}\text{O} = 4.47, 4.29$ ;  $\delta^{17}\text{O} = 2.60, 2.50$ ;  $\Delta^{17}\text{O} = 0.253, 0.245$ . Bulk rare earth element abundances (ICPMS; C. Herd  $\%$ , *UAb*): La 3.49, Ce 8.57, Nd 5.92, Sm 2.27, Eu 0.83, Gd 3.63, Dy 4.35, Er 2.53, Yb 2.23, Lu 0.32 (all in ppm).

**Classification:** Martian (basaltic shergottite). This specimen is an “enriched” shergottite with REE abundances approximately  $10 \times$  chondrites.

**Specimens:** 19.4 g is on deposit at *NAU*. *DPitt* is the main mass holder.

**Northwest Africa 6157**

Algeria

Purchased: February 2010

Classification: HED achondrite (diogenite)

**History:** Purportedly found in Algeria, and purchased in February 2010 by Michael *Farmer* from a Moroccan dealer at the Tucson Gem and Mineral Show.

**Physical characteristics:** A single dense stone weighing 42 g.

**Petrography** (A. Irving and S. Kuehner, *UWS*): Coarse grained (up to 7 mm) with a primarily protogranular texture. Composed of 50 vol% olivine and 45 vol% low-Ca pyroxene with accessory Ca-pyroxene, chromite,

troilite and metal (kamacite). Plagioclase is absent. Some veinlets of terrestrial calcite crosscut the specimen.

**Geochemistry:** Olivine ( $\text{Fa}_{29.3-30.1}$ ,  $\text{FeO}/\text{MnO} = 42.1-46.2$ ), low-Ca pyroxene ( $\text{Fs}_{24.3 \pm 0.0}\text{Wo}_{2.8}$ ,  $\text{FeO}/\text{MnO} = 26.0-29.4$ ), Ca-pyroxene ( $\text{Fs}_{11.2}\text{Wo}_{42.7}$ ,  $\text{FeO}/\text{MnO} = 19.7$ ).

**Classification:** Achondrite (olivine-rich diogenite). Although the mineral compositions are very similar to those in NWA 4223, this stone is texturally different and evidently not paired with other olivine-rich diogenites.

**Specimens:** 8.9 g and one polished thin section are on deposit at *UWS*. *Farmer* holds the main mass.

**Shiřr 166****18°32'56.68"N, 53°58'40.73"E**

Zufar, Oman

Found: 10 April 2008

Classification: Lunar (feldspathic melt breccia)

**History:** One stone was found by Luc Labenne in the desert at night.

**Physical characteristics:** The 128.8 g meteorite lacks an obvious fusion crust. The interior consists of a gray, vesicular (up to 1.2 mm vesicles) melt matrix with rounded clasts stained red by hematite. Many vesicles are filled with terrestrial alteration products, including calcite, Ca-sulfate, and celestite.

**Petrography** (R. Zeigler, *WUSL*): Melt matrix dominated by plagioclase (average:  $\text{An}_{96.7}\text{Or}_{0.2}$ ) with intergrown of pigeonite (average  $\text{Fs}_{50}\text{Wo}_{27}$ ;  $\text{Fe}/\text{Mn} = 57$ ), augite ( $\text{Fs}_{60}\text{Wo}_{27}$ ;  $\text{Fe}/\text{Mn} = 48$ ), and olivine ( $\text{Fo}_{61}$ ;  $\text{Fe}/\text{Mn} = 102$ ) in an apparent poikilitic texture. Also present within the matrix are small grains of troilite, Cr, Ti, Fe spinel (19 wt%  $\text{TiO}_2$ , 25 wt%  $\text{Cr}_2\text{O}_3$ , 23 wt%  $\text{FeO}$ ), and ilmenite (5 wt%  $\text{MgO}$ , 1.5 wt%  $\text{Cr}_2\text{O}_3$ ), the latter two often intergrown. There are a few plagioclase clasts (typically 0.2 mm, up to approximately 1 mm) and a few smaller olivine and pyroxene clasts. Large veins of partially devitrified shock melt occur. Average composition of the shock-melt vein: 43.7%  $\text{SiO}_2$ , 0.24%  $\text{TiO}_2$ , 29.7%  $\text{Al}_2\text{O}_3$ , 4.3%  $\text{FeO}$ , 0.07%  $\text{MnO}$  ( $\text{Fe}/\text{Mn} = 63$ ), 4.0%  $\text{MgO}$  ( $\text{Mg}' = 63$ ), 16.8%  $\text{CaO}$ , 0.32 wt%  $\text{Na}_2\text{O}$ , and 0.03 wt%  $\text{K}_2\text{O}$ .

**Geochemistry:** Bulk Chemistry: (R. Korotev, *WUSL*): 0.32%  $\text{Na}_2\text{O}$ , 4.1%  $\text{FeO}$ , 7.9 ppm Sc, 140 ppm Ni, 1.2 ppm Sm.

**Classification:** Achondrite (lunar, impact-melt breccia).

**Specimens:** 20.1 g is on deposit at *WUSL*, the main mass is held by *Labenne*.

**Tieret 001****30°44'53.5"N, 10°12'36.6"E**

Tieret, Tunisia

Found: 22 February 2009

Classification: Ordinary chondrite (H6)

**History:** Tieret 001 is one of seven meteorites found in a new dense collection area. From February 21–26, 2009, seven meteorites (ordinary chondrites) ranging in mass between 10.6 and 602 g, and totaling 703.2 g, were recovered during a Tunisian–Italian meteorite search campaign in southern Tunisia (Tieret 001-007, Table 1). Members of the Tunisian party were N. Ouazaa, S. Kassaa and M. Ghanmi (*Tunis*); members of the Italian party were N. Perchiazzi (*UPisa*), A. Zeoli and L. Folco (*MNA-SI*) and P. Rochette (*CEREGE*). The seven meteorites were found on the rocky desert plateaus (regs) of the Tieret region, which mostly consist of upper Cretaceous sedimentary rock sequences (see also Laridhi-Ouazaa et al. 2009). The Compagnie Générale de Géophysique–Veritas Services Tunisie (CGG-Veritas) provided logistic support. LF was supported by the EC through the ORIGINS project.

#### ERRATA

*The Meteoritical Bulletin* 84:  
Danby Dry Lake coordinates are 34°13'N, 115°3'W.

#### OTHER CORRECTIONS

*The Meteoritical Bulletin* 55:  
Denver City is Iron, ungrouped.

*The Meteoritical Bulletin* 91:  
Type specimen for NWA 4466 (12.3 g) transferred to the *AMNH*.

*The Meteoritical Bulletin* 94:  
Northwest Africa 4878 is reclassified as a shegottite (T. Bunch).  
Yamato 980524 is reclassified as EL6, Kamacite contains 1.1 wt% Si and 6.2 wt% Ni (A. E. Rubin).

#### 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 website, <http://www.lpi.usra.edu/meteor/MetBullAddresses/php>.

#### ADDITIONAL ABBREVIATIONS USED WITHIN THE TEXT

EPMA—Electron microprobe analysis.  
ICP-MS—Inductively coupled plasma–mass spectrometry.  
INAA—Instrumental neutron activation analysis.

#### REFERENCES

- Laridhi-Ouazaa N., Perchiazzi N., Kassa S., Zeoli A., Gahmi M., and Folco L. 2009. Meteorite finds from southern Tunisia. *Meteoritics & Planetary Science* 44: 955–960.
- Stöffler D., Keil K., and Scott E. R. D. 1991. Shock metamorphism of ordinary chondrites. *Geochimica et Cosmochimica Acta* 55:3845–3867.
- Wlotzka F. 1993. A weathering scale for the ordinary chondrites (abstract). *Meteoritics* 28:460.

*Acknowledgments*—The Editor wishes to thank the Nomenclature Committee and all submitters and classifiers who have contributed to this issue of The Meteoritical Bulletin. The editor is also very grateful to the Editor of *MAPS* Dr. T. Jull, Managing Editor A. Baier, and the editorial team at Wiley for all their help in producing the bulletin.

Table 1. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase <sup>(c)</sup>	Latitude	Longitude	Mass (g)	Pieces	Class	SH <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	Mag sus log <sub>10</sub> ( <sup>(d)</sup> m <sup>-1</sup> kg <sup>-1</sup> )	Classifier(s) <sup>(e)</sup>	Type specimen mass (g)	Main mass <sup>d</sup> location	Comment	
<i>Meteorites from Argentina</i>																		
Cruz del Eje	Córdoba	18-May-1971	30°45'S	64°47'W	14kg	1	Iron, IAB complex							A. Ruzicka, M. Huisson, <i>Cascadia</i> , S. Kissin, <i>LHU</i>	21.4	<i>Cascadia Anon</i>		
<i>Meteorites from Canada</i>																		
Redwater	Alberta	30-Aug-2009	53°55.974'N	112°58.620'W	230	2	H4	S2	W5	19.2 ± 1.3	16.2 ± 1.5	1.3 ± 0.3		C. Herd, <i>UAb</i>	40.5	<i>UAb</i>	B. Newman	
<i>Meteorites from Ecuador</i>																		
Duale	Guayas	23-Mar-2008	1°52'15.2"S	79°57'27.2"W	6580	1	L5	S4	W0	24.5 ± 0.5	20.8 ± 0.5	1.4 ± 0.2		J. Grossman, <i>USGS</i>	20.37	<i>SI</i>	<i>Former</i>	See written description
<i>Meteorites from Egypt</i>																		
Gebel Kamil	Al Wadi al Jadid, East Uweinat Desert	19-Feb-2009	22°01'06"N	26°05'16"E	1600 kg	1000s	Iron, ungrouped							M. D'Orazio, Luigi Folco	1500	<i>MNA-SI</i>	<i>EGM</i>	See written description
GSS 030	Al Wadi al Jadid	26-Dec-2006	26°22.69'N	26°51.03'E	51.3	1	H6	S2	W3/4	18.5 ± 0.2	16.4 ± 0.2		4.71	L. Ferrière & M. Bourout-Demise, <i>MNHNP</i>	12.2	<i>MNHNP</i>	L. Ferrière	
GSS 031	Al Wadi al Jadid	30-Dec-2006	25°26.17'N	25°29.19'E	62.3	1	H5	S3/4	W2	18.6 ± 0.2	16.6 ± 1.0		5.06	L. Ferrière & M. Bourout	14	<i>MNHNP</i>	L. Ferrière	
GSS 032	Al Wadi al Jadid	31-Dec-2006	26°11.20'N	25°27.34'E	8.3	1	Acapulcoite	W4	W4	7.5 ± 0.2	8.2 ± 0.2			L. Ferrière & M. Bourout	6.7	<i>MNHNP</i>	L. Ferrière	Ca-pyx Fs <sub>3.6</sub> Wo <sub>43.5</sub> grain sizes ~100–300; rare relic chondrules
GSS 033	Al Wadi al Jadid	31-Dec-2006	26°11.20'N	25°27.34'E	80.1	1	L5	S3/4	W2	24.8 ± 0.4	21.2 ± 0.9		4.34	L. Ferrière & M. Bourout	18.7	<i>MNHNP</i>	L. Ferrière	
GSS 034	Al Wadi al Jadid	31-Dec-2006	26°11.20'N	25°27.34'E	7.72	1	L5/6	S5/6	W2	24.4 ± 0.6	20.6 ± 1.0			L. Ferrière & M. Bourout	6.2	<i>MNHNP</i>	L. Ferrière	
GSS 035	Al Wadi al Jadid	2-Jan-2007	26°37.00'N	26°11.96'E	40.9	1	H5/6	S3/4	W3/4	19.0 ± 0.1	16.3 ± 0.2			L. Ferrière & M. Bourout	8.9	<i>MNHNP</i>	L. Ferrière	
GSS 036	Al Wadi al Jadid	2-Jan-2007	26°37.52'N	26°11.90'E	129	1	H5	S2/3	W4/5	19.1 ± 0.2	16.7 ± 0.4		4.56	L. Ferrière & M. Bourout	21.8	<i>MNHNP</i>	L. Ferrière	
GSS 037	Al Wadi al Jadid	2-Jan-2007	26°46.28'N	26°32.57'E	66.9	6	H4	S2/3	W3/4	18.6 ± 0.2	16.4 ± 0.2		4.69	L. Ferrière & M. Bourout	15.3	<i>MNHNP</i>	L. Ferrière	
GSS 038	Al Wadi al Jadid	3-Jan-2007	26°49.55'N	27°08.54'E	146	1	H5	S4/5	W2	18.8 ± 0.7	17.1 ± 0.6		4.85	L. Ferrière & M. Bourout	24.5	<i>MNHNP</i>	L. Ferrière	
GSS 039	Al Wadi al Jadid	3-Jan-2007	26°49.41'N	27°08.49'E	129	1	H5	S4/5	W3/4	18.8 ± 0.3	16.7 ± 0.3		5.18	L. Ferrière & M. Bourout	25	<i>MNHNP</i>	L. Ferrière	
<i>Meteorites from Libya</i>																		
Ashuwaif 001	Ash Shati'	15-Nov-2008	29°21'34 N	14°15'19"E	14566	3	H4	S2	W3	16	14			A. Bischoff, K. Metzler, J. Roszjar	21.5	<i>IJP</i>	<i>IJP</i>	
Ashuwaif 002	Charyan	15-Nov-2008	29°22'47"N	14°16'11"E	11953	6	L5/6	S4	W2	24	20			A. Bischoff, K. Metzler, J. Roszjar	20	<i>IJP</i>	<i>IJP</i>	Shock veins
DsG 1051	Al Jufrah	2000	27°10.15'N	16°08.12'E	40.1	1	Shergottite			26-45	19-33			A. Bischoff, M. Horstmann, <i>IJP</i> and E. H. Haiderer, Vienna, Austria	8.4	<i>IJP</i>	<i>Anon</i>	See written description
<i>Meteorites from Mali</i>																		
Taoudenni	Gao	Dec-2007	22°47.5'N	3°58.0'W	24370	1	Diogenite			34	69	4	2.8	A. Jambon, O. Boudouma, D. Badia, <i>UPVI</i>	31	<i>UPVI</i>	<i>AHabi</i>	Finder—Dhunen Ouled Ali
<i>Meteorites from Mexico</i>																		
La Cienega	Sonora	Jun-2007	30°12'06.70"N	111°56'09.14"W	7632	8	H6	S3	W2	18.6	16.5	1.5		Jeff Grossman, <i>USGS</i>	31	<i>SI</i>	G. Notkin	Finder—G. Bruce
<i>Meteorites from northwest Africa</i>																		
NWA 2151		02-Feb-2004 <sup>p</sup>			417.44	1	Iron, IAB-sHL							A. Rubin, <i>UCLA</i>	35.32	<i>UCLA</i>	<i>Gassler</i>	

Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase(†)	Latitude	Longitude	Mass (g)	Pieces	Class	Sh <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	Mag sus log(10 <sup>9</sup> m <sup>3</sup> kg <sup>-1</sup> )	Classifier(s) <sup>c</sup>	Type specimen must (g)	Type specimen location	Main must <sup>d</sup>	Comment
NWA 2211		Jan 2005			27690	6	L	S6	W3	22.4 ± 0.4	19.1 ± 0.3	0.6 ± 0.2		K. van Drogenelen, ROM; A. E. Rubin, UCLA	85.9	UCLA	ROM	Melt breccia
NWA 2613		1999			20.3	1	H4/5			19.1–21.1	17.1–19.3			R. Barroschewitz, P. Appel, B. Mader, Kiel	4.7	Vernad	Hochstader	
NWA 2986	Morocco	2006 <sup>p</sup>			201	3	Shergottite			37.4–53.8	10.8–15.8			T. Bunch and J. Wittke	21.3	MAU	Farmer, Strope	See written description
NWA 4802		2007 <sup>p</sup>			11.3	1	L6	W1	24	20.2		1.8		A. Rubin, UCLA	2.33	UCLA	Kkexse <sup>#</sup>	
NWA 4803		2007 <sup>p</sup>			35.5	1	L6	W2	23					A. Rubin, UCLA	7.51	UCLA	Kkexse <sup>#</sup>	
NWA 4804		2007 <sup>p</sup>			69.9	1	L4	W4	22.6	14.6		2.1		A. Rubin, UCLA	14.73	UCLA	Kkexse <sup>#</sup>	
NWA 4805		2007 <sup>p</sup>			34.5	1	L6	W2	23.1					A. Rubin, UCLA	7.21	UCLA	Kkexse <sup>#</sup>	
NWA 4861		Jul-2005 <sup>p</sup>			2400	1	Iron, IAB complex							A. Ruzicka, M. Hutson, Cascadia, S. Kissin, LHU	210.4	Cascadia	Thompson	
NWA 5297	Morocco	Mar-2008			130	9	Primitive achondrite			28.6				A. Irving, S. Kuehner, UWS	20	UWS	GHapé	See written description
NWA 5602		Feb-2007			49	1	Ureilite			20.4; 9.9	17.2–17.3	7.5–7.6		A. Irving, S. Kuehner, UWS	9.8	UWS	GHapé	0.33 wt% Cr <sub>2</sub> O <sub>3</sub> in ol
NWA 5609		Jun-2006			2134	1	L4	S2	W2	23.7–24.9	20.3	1.6		A. Irving, S. Kuehner, UWS	20	UWS	GHapé	*
NWA 5691		May-2009			259	1	Eucrite			59.1–59.6	4.6–5.1			A. Irving, S. Kuehner, UWS	22	UWS	Anon	
NWA 5718	Algeria	2006 <sup>p</sup>			90.5	1	Shergottite			0.5–39.1	9.6			T. Bunch, J. Wittke, MAU	19.4	MAU	DPitt	See written description
NWA 5776		Sep-2006 <sup>p</sup>			683	1	L-melt breccia	S6	W2	22.8 ± 0.8				A. E. Rubin, UCLA	34.4	UCLA	Reed	
NWA 5784	Morocco	2008 <sup>p</sup>			2600	1	Diogenite			31.3				T. Bunch, J. Wittke, MAU	20.6	FMNH	Reed	ol-rich diogenite
NWA 5787	Morocco	Feb-2009			48	1	Eucrite			48.8–49.2	4.0–4.9			A. Irving, S. Kuehner, UWS	9.6	UWS	SBuhl	
NWA 5788		Jul-2006			7286	1	L3.8	S2	W2	11.4–24.6	12.4–25.5; 11.7–18.7	0.6–4.6; 35.9–48.1		A. Irving, S. Kuehner, UWS	47	UWS	PMami	Cr <sub>2</sub> O <sub>3</sub> in ol 0.01–0.03 wt%.
NWA 5935		23-Jun-2009 <sup>p</sup>			374	1	H5	S1	W3–4	18	16			J. Roszjar, A. Bischoff	25.1	IPP	Anon	
NWA 5936		23-Jun-2009 <sup>p</sup>			235	1	H5	S2	W4	18	16			J. Roszjar, A. Bischoff	20.5	IPP	Anon	
NWA 5939		13-Jan-2004 <sup>p</sup>			297	1	H3–6	S3	W2	18.3 ± 1.6	15.9 ± 1.2			J. Roszjar, A. Bischoff	20	IPP	Anon	
NWA 5940		2-Jul-2009 <sup>p</sup>			151000	1	H5–6	S4	W2–3	19.5	16.5			J. Roszjar, A. Bischoff	25	IPP	Anon	
NWA 5957		Jun-2008			1083	1	Howardite			29.6; 63.0; 22.7–28.7	4.6; 2.6; 40.5–42.1			A. Irving, S. Kuehner, UWS	30.2	UWS	Farmer	FeO/MnO ppx 26.4–35.5
NWA 5959	Morocco	Sep-2009			1750	1	Howardite			24.1–27.8; 60.2; 26.2; 39.3	3.8–3.9; 1.7; 42.1; 7.5			A. Irving, S. Kuehner, UWS	20	UWS	DSimpson	FeO/MnO in ppx 25.2–32.7
NWA 5968	Morocco	2008 <sup>p</sup>			15.5	1	Diogenite			8.8				T. Bunch, J. Wittke, MAU	4.4	MAU	Anon	Purchased in Talloune ol-rich
NWA 5981	Morocco	Oct 2009			243	1	Lodranite			4.0; 9.7	44.4; 1.4			A. Irving, S. Kuehner, UWS	20	UWS	DSimpson	Paired with NWA 4478
NWA 5982	Arg Chach, Mali	Mar 2009			1400	1	Eucrite, polymict			32.8; 59.4; 27.8	2.4; 4.6; 41.3			A. Irving, S. Kuehner, UWS	20	UWS	Ralew	FeO/MnO in ppx 32.5–34.0
NWA 6072	Morocco	May 2008 <sup>p</sup>			333	3	Eucrite			64	2			R. Korotev, A. Foreman, R. Zeigler, WUSL	20.4	WUSL	Labame	Augite; F <sub>90</sub> W <sub>0.65</sub> ; granitic texture
NWA 6074	Morocco	June 2008 <sup>p</sup>			48.8	1	Diogenite			24–25	18–26	40,181		R. Korotev, A. Foreman, R. Zeigler, WUSL	10	WUSL	Labame	Polymict
NWA 6157	Algeria	Feb-2010 <sup>p</sup>			42	1	Diogenite, olivine			29.3–30.1	24.3	2.8		A. Irving, S. Kuehner, UWS	8.9	UWS	Farmer	See written description



Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase(°)	Latitude	Longitude	Mass (g)	Pieces	Class	S <sub>1</sub> <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	log(10 <sup>6</sup> m <sup>-3</sup> kg <sup>-1</sup> )	Classifiers <sup>c</sup>	Type specimen location	Type specimen mass (g)	Main mass <sup>d</sup>	Comment	
NWA 6203	Bechar, Algeria	2007	~30°31'N	~4°18'W	35400	14	Iron, IAB-MG	Moderate	Moderate	4.9 ± 0.2	6.9 ± 0.3	1.8 ± 0.3		C. Herd, G. Nadeau, Sawada <sup>a</sup>	UAb	197.9	S. Buhl	Finder—M. Aziz	
NWA 6235	Fezzou Village, Morocco	15-Sep-2005	30°55.68'N	4°51.50'W	216	1	Ureilite			4.1–22.1	3.0–19.2	0.33–10.6		Sawada <sup>a</sup>	NSMT	22.05	Sawada		
NWA 6236	Fezzou Village, Morocco	4-Oct-2005	30°58.29'N	4°56.99'W	145	2	R4			36.0–41.6	14.5–30.5	0.31–9.7		Sawada	NSMT	23.93	Sawada		
Meteorites from Oman																			
Dho 1435	Zufar	5-Feb-2007	18°14.917'N	54°0.218'E	11.7	1	H5	S3	W3	18.6–19.9	16.4–17.1		4.91	R. Bartoschewitz, P. Appel, B. Mader, Kiel	Kiel	2.34	Barrio	Finder—R. Bartoschewitz	
Dho 1445	Zufar	9-Mar-2003	19°26.218'N	054°42.399'E	442	1	LL5	S3	W1	31.7–32.5	25.0–26.5		3.66	R. Bartoschewitz, P. Appel, B. Mader, Kiel	Kiel	20	Anon	FS <sub>3,4</sub> W <sub>0,6</sub> ; An <sub>10</sub> Or <sub>6</sub>	
Dho 1446	Zufar	9-Mar-2003	19°27.084'N	054°39.144'E	199	1	H5		W3				4.83	B. Mader, Kiel	Kiel	20	Anon		
Dho 1447	Zufar	14-Apr-2002	18°37'N	54°11'E	49.4	3	H~4		W5				4.62	R. Bartoschewitz	Kiel	10	Anon		
Dho 1448	Zufar	11-Aug-2002	19°21'N	54°48'E	3110	Many	L~6		W4				4.32	R. Bartoschewitz	Kiel	20.4	Anon		
Dho 1449	Zufar	11 Aug 2002	19°13.8'N	54°52.8'E	1959	Several	L/LL~6		W4				4.09	R. Bartoschewitz	Kiel	21.8	Anon		
Dho 1450	Zufar	18-Feb-2008	19°15.838'N	54°43.417'E	5.4	2	LL~6		W3				4.44	R. Bartoschewitz	Kiel	1.1	Anon		
Dho 1451	Zufar	20-Feb-2008	19°12.782'N	54°37.246'E	570	3	H~5		W4				4.65–4.81	R. Bartoschewitz	Kiel	20	Anon		
Dho 1452	Zufar	20-Feb-2008	19°00.961'N	54°22.070'E	163	1	L~6		W2				4.79	R. Bartoschewitz	Kiel	20	Anon	Melt pockets	
Dho 1453	Zufar	21-Feb-2008	18°59.919'N	54°23.629'E	402	2	L/LL~5		W1/2				4.37–4.67	R. Bartoschewitz	Kiel	20	Anon	Melt pockets	
Dho 1455	Zufar	22-Feb-2008	18°58.595'N	54°24.229'E	489	6	LL5	S1	W3	31.7–32.7	25.4–25.9		3.61	R. Bartoschewitz, P. Appel, B. Mader, Kiel	Kiel	20	Anon	Feld An <sub>10</sub> Or <sub>7</sub>	
Dho 1456	Zufar	22-Feb-2008	18°59.278'N	54°25.095'E	90.2	1	H~5		W4				4.87	R. Bartoschewitz	Kiel	18	Anon	Melt pockets	
Dho 1457	Zufar	22-Feb-2008	18°59.905'N	54°24.974'E	11.4	1	H~5		W4				4.94	R. Bartoschewitz	Kiel	2.3	Anon		
Dho 1458	Zufar	22-Feb-2008	18°59.535'N	54°25.065'E	428	20	L~5		W4				4.76	R. Bartoschewitz	Kiel	20	Anon		
Dho 1459	Zufar	23-Feb-2008	19°01.129'N	54°22.411'E	50.4	1	H5	S1	W2	18.1–19.7	16.5–17.8		5	R. Bartoschewitz, P. Appel, B. Mader, Kiel	Kiel	10.1	Anon		
Dho 1460	Zufar	23-Feb-2008	19°01.092'N	54°22.338'E	40.5	1	L~6		W2				4.74	R. Bartoschewitz	Kiel	8.1	Anon		
Dho 1463	Zufar	25-Feb-2008	18°27.167'N	54°09.693'E	23.6	1	L/LL~4		W4				4.56	R. Bartoschewitz	Kiel	4.7	Anon		
Dho 1464	Zufar	26-Feb-2008	18°34.134'N	54°10.085'E	68.5	1	H~5		W4				5	R. Bartoschewitz	Kiel	13.7	Anon		
Dho 1465	Zufar	26-Feb-2008	18°34.143'N	54°10.268'E	237	1	L~6		W1/2				4.78	R. Bartoschewitz	Kiel	20	Anon		
Dho 1466	Zufar	26-Feb-2008	18°34.277'N	54°10.263'E	268	50	L~6		W4				4.73	R. Bartoschewitz	Kiel	20	Anon		
Dho 1467	Zufar	26-Feb-2008	18°33.969'N	54°09.477'E	130.5	5	L~5		W4				4.65	R. Bartoschewitz	Kiel	20	Anon		
Dho 1468	Zufar	26-Feb-2008	18°33.969'N	54°09.477'E	65.6	1	H~5		W4				4.94	R. Bartoschewitz	Kiel	13.1	Anon		
Dho 1469	Zufar	26-Feb-2008	18°33.706'N	54°10.330'E	110	1	L~6		W3				4.65	R. Bartoschewitz	Kiel	20	Anon		
Dho 1470	Zufar	26-Feb-2008	18°34.005'N	54°10.180'E	51.6	1	H~5		W3				4.89	R. Bartoschewitz	Kiel	10.3	Anon	Melt pockets	
Dho 1471	Zufar	26-Feb-2008	18°34.001'N	54°09.623'E	760	1	H~5		W3				4.87	R. Bartoschewitz	Kiel	20	Anon	Melt pockets	
Dho 1472	Zufar	26-Feb-2008	18°34.460'N	54°08.962'E	1064.1	1	LL6	S1	W1	31.1–32.2	25.8–26.2		3.63	R. Bartoschewitz, P. Appel, B. Mader, Kiel	Kiel	20	Anon	Feld An <sub>10</sub> Or <sub>4</sub>	
Dho 1473	Zufar	27-Feb-2008	18°36.304'N	54°10.131'E	131.2	5	L/LL~6		W4				4.58	R. Bartoschewitz	Kiel	20	Anon		
Dho 1475	Zufar	27-Feb-2008	18°36.186'N	54°10.665'E	1039.2	3	L~6		W4				4.62	R. Bartoschewitz	Kiel	20	Anon		
Dho 1490	Zufar	19-Nov-2008	18°47.870'N	54°24.262'E	309	1	H5–6	S3	W2–3	18.5	16.5			A. Bischoff, M. Matthes, M. Horstmann, I/P	I/P	27.8	Anon	Breccia, shock veins	
Dho 1491	Zufar	19-Nov-2008	18°44.595'N	54°22.614'E	256	1	L4–6	S4	W1	25	20 ± 2.5			M. Matthes, M. Horstmann, I/P	I/P	20.6	Anon	Breccia, shock veins	
Dho 1492	Zufar	22-Nov-2008	18°46.550'N	54°27.260'E	510	1	H3	S2	W4	14.5 ± 5.8	9 ± 5.5			M. Matthes, M. Horstmann, I/P	I/P	20.2	Anon	Breccia, shock veins	
Dho 1493	Zufar	24-Nov-2008	18°40.427'N	54°27.010'E	14000	4	L6	S5	W3	22.5	19		64.6	M. Matthes, M. Horstmann, I/P	I/P	64.6	Anon	Shock veins	
Dho 1494	Zufar	25-Nov-2008	18°41.110'N	54°26.522'E	1400	1	H4	S2	W1–2	17.5	16		33.3	M. Matthes, M. Horstmann, I/P	I/P	33.3	Anon		
Dho 1495	Zufar	25-Nov-2008	18°40.022'N	54°26.092'E	2300	1	L4	S2	W1–2	22.5	18.5		53.6	M. Matthes, M. Horstmann, I/P	I/P, Univ. Muenster	53.6	Anon	Partly shock-darkened	

Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase <sup>(c)</sup>	Latitude	Longitude	Mass (g)	Pieces	Class	Sh <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	Mag sus log( $10^6$ m <sup>3</sup> kg <sup>-1</sup> )	Classifier(s) <sup>c</sup>	Type specimen mass (g)	Type specimen location	Main mass <sup>d</sup>	Comment
Dho 1496	Zufar	25-Nov-2008	18°41.227'N	54°25.200'E	1000	1	LL(L)3	S3	W1-2	19 ± 10	15 ± 10			A. Bischoff, M. Matthes, M. Horstmann, JFP	37.2	JFP, Univ. Muenster	Anon	
Dho 1497	Zufar	27-Nov-2008	18°43.901'N	54°23.821'E	1856	1	L3-5	S3	W0/1	23.5 ± 5.5	15 ± 6.5			M. Matthes, M. Horstmann, JFP	59.3	JFP, Univ. Muenster	Anon	Breccia
Dho 1513	Zufar	1-Apr-2009	19°20'15.59"N	54°31'58.54"E	3782	1	L5	S2	W3	24.7-25.1	20.5	1.9		A. Irving and S. Kuehner, UWS,	20	UWS	Anon	
Dho 1562	Zufar	16-Jan-2004	18°55.560'N	54°23.933'E	7550	1	L6	S3	W1	23.8	20.3	1.6		M. Ivanova, S. Borsovsky	161.6	Vernad	Anon	
Dho 1563	Zufar	9-Dec-2004	18°27.257'N	54°26.195'E	70	1	H5	S2	W3	18.6	16.3	1.3		M. Ivanova, S. Borsovsky	26.6	Vernad	Anon	
Dho 1564	Zufar	8-Dec-2004	18°41.770'N	54°22.200'E	26	1	H5	S1	W3	17.9	15.5	1.6		S. Borsovsky	8.1	Vernad	Anon	
Dho 1565	Zufar	2008	18°16.410'N	54°12.820	43kg	many	H5	S1	W3	18.7	16.5	1.3		M. Ivanova, S. Borsovsky	106.4	Vernad	Anon	
Dho 1566	Zufar	2008	18°14.540'N	54°6.390'E	605	1	LL5-6	S2	W2	30.5	25	2.3		M. Ivanova, S. Borsovsky	80.2	Vernad	Anon	Breccia
JaH 349	Al Wusta	5-Mar-2003	19°17.879'N	055°44.996'E	64.3	1	L-6	W4	W4			4.59		R. Barotschewitz	12.87	Kiel	Anon	
JaH 350	Al Wusta	5-Mar-2003	19°20.338'N	055°32.682'E	67.3	1	L-6	W3	W4			4.76		R. Barotschewitz	13.46	Kiel	Anon	
JaH 351	Al Wusta	5-Mar-2003	19°21.721'N	055°37.021'E	437.3	8	H-5	W4	W4			4.89		R. Barotschewitz	20.7	Kiel	Anon	
JaH 352	Al Wusta	5-Mar-2003	19°21.620'N	055°37.668'E	1005	1	H-6	W4	W4			4.87		R. Barotschewitz	22.3	Kiel	Anon	
JaH 353	Al Wusta	5-Mar-2003	19°21.819'N	055°38.076'E	366.2	1	H-5	W3	W3			5.03		R. Barotschewitz	20	Kiel	Anon	Melt rich breccia
JaH 354	Al Wusta	7-Mar-2003	19°21.802'N	055°38.124'E	1200.8	12	L-6	W4	W4			4.66		R. Barotschewitz	20	Kiel	Anon	
JaH 355	Al Wusta	7-Mar-2003	19°21.531'N	055°32.906'E	16879.1	70	L-6	W4	W4			4.42		R. Barotschewitz	26.6	Kiel	Anon	
JaH 356	Al Wusta	7-Mar-2003	19°21.387'N	055°31.790'E	53.3	1	H-6	W4	W4			4.74		R. Barotschewitz	10.66	Kiel	Anon	
JaH 357	Al Wusta	7-Mar-2003	19°21.718'N	055°36.750'E	1479.5	12	H-6	W4	W4			4.77		R. Barotschewitz	20	Kiel	Anon	
JaH 358	Al Wusta	7-Mar-2003	19°21.214'N	055°37.386'E	528.2	2	L-5	W2	W2			4.76		R. Barotschewitz	20	Kiel	Anon	
JaH 359	Al Wusta	9-Mar-2003	19°21.561'N	055°35.599'E	645.3	12	H-4	W4	W4			5.01		R. Barotschewitz	21	Kiel	Anon	
JaH 361	Al Wusta	10-Mar-2003	19°17.423'N	055°33.725'E	21.2	1	L-4	W4	W4			4.77		R. Barotschewitz	4.24	Kiel	Anon	
JaH 362	Al Wusta	10-Mar-2003	19°20.637'N	055°44.677'E	104.5	1	L-5	W3	W3			4.64		R. Barotschewitz	22.3	Kiel	Anon	
JaH 363	Al Wusta	10-Mar-2003	19°33.823'N	056°03.104'E	186.5	1	H-5	W2	W4			5		R. Barotschewitz	20.9	Kiel	Anon	
JaH 364	Al Wusta	10-Mar-2003	19°32.732'N	056°02.618'E	735.6	1	L-6	W4	W4			4.32		R. Barotschewitz	21.4	Kiel	Anon	
JaH 365	Al Wusta	11-Mar-2003	19°37.119	056°02.536'E	3665.1	1	H-4	W2	W2			4.99		R. Barotschewitz	20	Kiel	Anon	
JaH 366	Al Wusta	11-Mar-2003	19°39.375	056°03.366'E	99.5	1	L-6	W2	W2			4.79		R. Barotschewitz	22.7	Kiel	Anon	Melt pools
JaH 367	Al Wusta	18-Mar-2003	19°20.737'N	055°52.304'E	572.9	12	L-5	W5	W5			4.47		R. Barotschewitz	20	Kiel	Anon	
JaH 368	Al Wusta	18-Mar-2003	19°16.419'N	055°48.624'E	892.7	2	H-4	W4	W4			4.7		R. Barotschewitz	20.7	Kiel	Anon	
JaH 369	Al Wusta	18-Mar-2003	19°17.115'N	055°49.346'E	7100	1	H-5	W4	W4			4.74		R. Barotschewitz	20.4	Kiel	Anon	
JaH 370	Al Wusta	18-Mar-2003	19°19.910'N	055°48.610'E	1453.1	1	L-6	W4	W4			4.65		R. Barotschewitz	20	Kiel	Anon	
JaH 371	Al Wusta	18-Mar-2003	19°18.617'N	055°49.855'E	660.5	9	L-6	W4	W4			4.66		R. Barotschewitz	20	Kiel	Anon	
JaH 372	Al Wusta	19-Mar-2003	19°21.523'N	055°42.643'E	380.9	1	H-4	W4	W4			5.01		R. Barotschewitz	20	Kiel	Anon	
JaH 373	Al Wusta	20-Mar-2003	19°20.328'N	055°43.117'E	68.6	8	L-5	W4	W4			4.69		R. Barotschewitz	13.73	Kiel	Anon	
JaH 374	Al Wusta	18-Mar-2003	19°18.160'N	055°42.223'E	60.6	4	H5	S1	W4	18.3-18.7	15.5-17.3			R. Barotschewitz, P. Appel,	15.3	Kiel	Anon	
JaH 375	Al Wusta	20-Mar-2003	19°18.160'N	055°42.058'E	113.4	3	L-4	W4	W4			4.66		B. Mader, Kiel	20	Kiel	Anon	
JaH 376	Al Wusta	20-Mar-2003	19°19.104'N	055°42.182'E	1429.4	20	H5	S1	W4	17.9-18.6	15.7-17.0			R. Barotschewitz, P. Appel,	21.5	Kiel	Anon	
JaH 377	Al Wusta	21-Mar-2003	19°18.626'N	055°42.656'E	373.5	3	H5	S1	W4	18.2-18.8	16.3-16.9			R. Barotschewitz, B. Mader, Kiel	20.3	Kiel	Anon	
JaH 378	Al Wusta	21-Mar-2003	19°17.358'N	055°42.388'E	1186.3	2	L-6	W4	W4			4.64		B. Mader, Kiel	20.8	Kiel	Anon	
JaH 379	Al Wusta	21-Mar-2003	19°17.063'N	055°42.214'E	297.7	1	H-6	W4	W4			4.73		R. Barotschewitz	19.9	Kiel	Anon	
JaH 380	Al Wusta	22-Mar-2003	19°18.204'N	055°42.351'E	144.5	8	H-5	W4	W4			4.78		R. Barotschewitz	20	Kiel	Anon	
JaH 381	Al Wusta	22-Mar-2003	19°18.448'N	055°41.869'E	501	2	H-5	W4	W4			4.8		R. Barotschewitz	22.5	Kiel	Anon	
JaH 382	Al Wusta	22-Mar-2003	19°17.851'N	055°46.974'E	308.9	1	H-5	W3	W3			4.93		R. Barotschewitz	20.9	Kiel	Anon	
JaH 383	Al Wusta	22-Mar-2003	19°16.939'N	055°46.855'E	374.8	1	H-5	W3	W3			4.87		R. Barotschewitz	24.1	Kiel	Anon	Melt pockets
JaH 384	Al Wusta	22-Mar-2003	19°16.859'N	055°46.991'E	519.7	2	L-6	W4	W4			4.66		R. Barotschewitz	20	Kiel	Anon	
JaH 386	Al Wusta	26-Feb-2003	19°17.947'N	055°47.640'E	1412.9	1	H-5	W3	W3			4.8		R. Barotschewitz	20	Kiel	Anon	
JaH 387	Al Wusta	26-Feb-2003	19°16.586'N	055°46.001'E	622.4	1	L5	S1	W4	25.0-26.9	20.7-22.6			R. Barotschewitz, P. Appel,	20.2	Kiel	Anon	
JaH 388	Al Wusta	26-Feb-2003	19°16.665'N	055°45.841'E	1589.2	1	L-6	S1	W4			4.34		B. Mader, Kiel	21.3	Kiel	Anon	
JaH 389	Al Wusta	23-Feb-2003	19°16.766'N	055°46.003'E	1059.7	1	H-6	W4	W4			4.9		R. Barotschewitz	20	Kiel	Anon	
JaH 390	Al Wusta	2-Mar-2003	19°16.458'N	055°45.428'E	159.2	2	H-6	W3	W4			4.9		R. Barotschewitz	23.5	Kiel	Anon	
JaH 391	Al Wusta	2-Mar-2003	19°16.718'N	055°46.387'E	57.9	1	H-4	W4	W4			5.12		R. Barotschewitz	11.59	Kiel	Anon	

Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase(°)	Latitude	Longitude	Mass (g)	Pieces	Class	Slr <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	Mg sus log 10 <sup>6</sup> m <sup>-1</sup> kg <sup>-1</sup> )	Classifier(s) <sup>c</sup>	Type specimen mass (g)	Type specimen location	Main mass <sup>d</sup>	Comment
JaH 392	Al Wusta	2-Mar-2003	19°17.494'N	055°47.057'E	220.8	1	H-6		W4				4.91	R. Bartoschewitz	22.3	Kiel	Anon	
JaH 393	Al Wusta	2-Mar-2003	19°19.090'N	055°46.519'E	1360.8	1	H-5		W3				4.88	R. Bartoschewitz	20.1	Kiel	Anon	
JaH 394	Al Wusta	3-Mar-2003	19°18.077'N	055°48.503'E	1174.4	1	L-6		W4				4.45	R. Bartoschewitz	20	Kiel	Anon	
JaH 493	Al Wusta	1-Mar-2007	19°47.070'N	56°25.001'E	438.7	4	L6	S3-4	W3	24.4	20.8	1.5	4.12	E. Gnoss, E. Janots, B. Hofmann	438.7	NMBE	NMBE	Paired with JaH 494; finder—Meggmann <sup>1</sup>
JaH 494	Al Wusta	1-Mar-2007	19°47.144'N	56°25.573'E	63.8	2	L6	S4	W3	26			4.12	E. Gnoss, E. Janots, B. Hofmann	63.8	NMBE	NMBE	Paired JaH 493; finder—Meggmann <sup>1</sup>
JaH 495	Al Wusta	06-Mar-2007	19°47.105'N	56°24.746'E	501.8	2	L6	S3	W4	25			4.1	E. Gnoss, E. Janots, B. Hofmann	501.8	NMBE	NMBE	Paired JaH 493; finder—Meggmann <sup>1</sup>
JaH 500	Al Wusta	12-Mar-2007	19°45.136'N	56°18.578'E	1432.2	18	H5	S2	W4	17			4.67	E. Gnoss, E. Janots, B. Hofmann	1432.2	NMBE	NMBE	Paired JaH 501; finder—Al-Kathiri <sup>1</sup>
JaH 502	Al Wusta	12-Mar-2007	19°45.313'N	56°18.404'E	138.6	5	H5	S2	W4	19			4.95	E. Gnoss, E. Janots, B. Hofmann	138.6	NMBE	NMBE	Paired JaH 500; finder—Al-Kathiri <sup>1</sup>
JaH 503	Al Wusta	12-Mar-2007	19°45.134'N	56°18.636'E	2421.6	27	H3-4	S2	W4	18			4.59	E. Gnoss, E. Janots, B. Hofmann	2421.6	NMBE	NMBE	Paired JaH 500; finder—Al-Kathiri <sup>1</sup>
JaH 504	Al Wusta	12-Mar-2007	19°45.164'N	56°18.618'E	674.3	1	H3-5	S2	W4	19			4.56	E. Gnoss, E. Janots, B. Hofmann	674.3	NMBE	NMBE	Paired JaH 500; finder—Al-Kathiri <sup>1</sup>
JaH 513	Zufar	20-Jan-2008	19°31.859'N	55°10.787'E	9.5	1	LL7	S1	W2	28.6	23.5	3.8		E. Gnoss, E. Janots, B. Hofmann	9.5	NMBE	NMBE	See written description
JaH 521	Zufar	22-Jan-2008	19°31.829'N	55°10.894'E	1989	113	L6	S3	W3	24.3	20.8	1.6		E. Gnoss, E. Janots, B. Hofmann	1989	NMBE	NMBE	Paired JaH 520; finder—Al-Kathiri <sup>2</sup>
JaH 522	Zufar	22-Jan-2008	19°31.902'N	55°10.889'E	6	1	H6			18				E. Gnoss, B. Hofmann	6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 523	Zufar	22-Jan-2008	19°31.909'N	55°10.910'E	60.6	1	H6	S2	W3	19	16.7	1.4		E. Gnoss, B. Hofmann	60.6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 524	Zufar	22-Jan-2008	19°31.873'N	55°10.785'E	6	1	H6			19				E. Gnoss, B. Hofmann	6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 525	Zufar	22-Jan-2008	19°31.994'N	55°10.501'E	1.6	1	L4-6	S1	W3	24				E. Gnoss, B. Hofmann	1.6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 526	Zufar	22-Jan-2008	19°32.000'N	55°10.534'E	5.6	1	H6			19				E. Gnoss, B. Hofmann	5.6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 527	Zufar	22-Jan-2008	19°32.024'N	55°10.532'E	3.8	1	H6			18				E. Gnoss, B. Hofmann	3.8	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 528	Zufar	22-Jan-2008	19°32.057'N	55°10.442'E	19.7	1	H6	S3	W4	18				E. Gnoss, B. Hofmann	19.7	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 529	Zufar	22-Jan-2008	19°32.057'N	55°10.442'E	2.1	1	H6			18				E. Gnoss, B. Hofmann	2.1	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 530	Zufar	22-Jan-2008	19°32.009'N	55°10.494'E	12.6	1	H4-6	S2	W4	19				E. Gnoss, B. Hofmann	12.6	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 531	Zufar	22-Jan-2008	19°32.049'N	55°10.529'E	1.7	1	H6			18				E. Gnoss, B. Hofmann	1.7	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 533	Zufar	22-Jan-2008	19°32.433'N	55°10.024'E	24	1	H6	S2	W4	18.1				E. Gnoss, B. Hofmann	23.9	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 535	Zufar	22-Jan-2008	19°32.161'N	55°10.027'E	89.4	1	H4-6	S2	W4	18				E. Gnoss, B. Hofmann	89.4	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 536	Zufar	22-Jan-2008	19°32.641'N	55°9.905'E	1	1	H6			19				E. Gnoss, B. Hofmann	1	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 537	Zufar	22-Jan-2008	19°32.200'N	55°10.431'E	33.2	1	H6	S3	W4	19				E. Gnoss, B. Hofmann	33.2	NMBE	NMBE	Paired JaH 511; finder—Al-Kathiri <sup>2</sup>
JaH 543	Zufar	23-Jan-2008	19°32.284'N	55°10.073'E	8.8	1	H6			18				E. Gnoss, B. Hofmann	8.8	NMBE	NMBE	Paired JaH 511; finder—EGnos <sup>2</sup>
JaH 547	Zufar	23-Jan-2008	19°32.292'N	55°10.100'E	105.6	1	H4-6	S2	W3	20				E. Gnoss, B. Hofmann	105.6	NMBE	NMBE	Paired JaH 511; finder—EGnos <sup>2</sup>
JaH 551	Zufar	23-Jan-2008	19°31.748'N	55°10.899'E	24	1	H4-6	S2	W3	18.1				E. Gnoss, B. Hofmann	23.9	NMBE	NMBE	Paired JaH 511; finder—EGnos <sup>1</sup>
JaH 559	Al Wusta	25-Jan-2008	19°50.395'N	56°6.310'E	208.6	8	H3.7/3.8	S2	W4	18.6-20.6	14.6-19.9	0.2-2.1		E. Gnoss, B. Hofmann	208.6	NMBE	NMBE	Paired JaH 560; chondrule size 0.35 mm, bulk Fe 24.1%; finder—EGnos <sup>1</sup>
SaU 438	Al Wusta	11-Feb-2007	21°5.943'N	57°16.060'E	90.7	1	H5	S4	W2	19.6-20.3	17.1-18.0		5.04	R. Bartoschewitz, P. Appel, B. Mader, Kiel	18.2	Kiel	Barro	Paired with JaH 559; finder—EGnos <sup>1</sup>
SaU 463	Al Wusta	28-Feb-2008	20°00.951'N	56°33.483'E	519.3	2	L-6						4.72	R. Bartoschewitz	20	Kiel	Anon	Petrologic type is approximate.

Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase†	Latitude	Longitude	Mass (g)	Pieces	Class	Sl <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	log <sup>10</sup> Mg/sus m <sup>3</sup> kg <sup>-1</sup>	Classifier(s) <sup>c</sup>	Type specimen mass (g)	Type specimen location	Main mass <sup>d</sup>	Comment
SaU 464	Al Wusta	29-Feb-2008	20°01.534'N	56°33.496'E	210.3	1	LL5	S1	W1	27.3–28.4	7.3–24.8		3.81	R. Bartoschewitz, P. Appel,	20	Kiel	Anon	An <sub>93</sub> Or <sub>17</sub>
SaU 465	Al Wusta	29-Feb-2008	20°00.816'N	56°33.472'E	100.5	1	H~6		W4				4.91	B. Mader, Kiel	20	Kiel	Anon	
SaU 466	Al Wusta	29-Feb-2008	20°05.820'N	56°37.468'E	228.3	2	L/LL~5		W4				4.48	R. Bartoschewitz	20	Kiel	Anon	
SaU 467	Al Wusta	22-Feb-2008	20°09.599'N	56°38.775'E	271.7	1	L~5		W2				4.7	R. Bartoschewitz	20	Kiel	Anon	
SaU 468	Al Wusta	12-Mar-2003	20°59.869'N	05°17.697'E	59.8	1	H~6		W4				11.96	R. Bartoschewitz	11.96	Kiel	Anon	
SaU 469	Al Wusta	12-Mar-2003	20°59.784'N	05°17.272'E	365.5	5	L~6		W2/3				4.61	R. Bartoschewitz	20	Kiel	Anon	
Shjsr 113	Zufar	3-Feb-2007	18°15.057'N	53°59.921'E	12.5	1	H~5		W4				4.86	R. Bartoschewitz	2.7	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 114	Zufar	3-Feb-2007	18°15.171'N	53°59.92'E	2.4	1	H~5		W4				4.92	R. Bartoschewitz	0.48	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 115	Zufar	3-Feb-2007	18°15.224'N	53°59.925'E	2.9	1	H~5		W4				4.95	R. Bartoschewitz	0.48	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 116	Zufar	3-Feb-2007	18°15.225'N	53°59.918'E	2.9	1	H~5		W4				4.85	R. Bartoschewitz	0.58	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 117	Zufar	3-Feb-2007	18°15.263'N	53°59.903'E	4.8	1	H~5		W4				4.86	R. Bartoschewitz	1.1	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 118	Zufar	03-Feb-2007	18°15.183'N	53°59.731'E	10.2	1	L/LL4		W2	24.6–27.9	20.8–22.8		4.75	R. Bartoschewitz, P. Appel,	2.04	Kiel	Barro	An <sub>11</sub> Or <sub>3.5</sub> kamacite Co 0.9%; finder— C. Bartoschewitz
Shjsr 119	Zufar	3-Feb-2007	18°15.254'N	53°59.88'E	6.8	1	H~5		W4				4.8	B. Mader, Kiel	1.36	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 120	Zufar	4-Feb-2007	18°15.279'N	53°59.668'E	8.2	2	H~5		W4				4.92	R. Bartoschewitz	1.64	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 121	Zufar	4-Feb-2007	18°15.517'N	53°59.528'E	49	2	H4	S2	W2	18.8–19.6	16.2–17.2		4.89	R. Bartoschewitz, P. Appel,	9.8	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 122	Zufar	4-Feb-2007	18°15.524'N	53°59.592'E	46.2	1	H~5		W3				4.84	B. Mader, Kiel	9.24	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 123	Zufar	4-Feb-2007	18°15.523'N	53°59.592'E	48.2	1	H~5		W1				4.94	R. Bartoschewitz	9.64	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 124	Zufar	4-Feb-2007	18°15.521'N	53°59.594'E	1.9	1	H~5		W4				4.78	R. Bartoschewitz	0.38	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 126	Zufar	4-Feb-2007	18°15.477'N	53°59.605'E	11.7	1	H5	S2	W3	18.2–20.5	16.2–17.2		4.62	R. Bartoschewitz, P. Appel,	2.34	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 127	Zufar	4-Feb-2007	18°15.483'N	53°59.591'E	6.1	1	H~5		W2				4.85	B. Mader, Kiel	1.22	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 128	Zufar	4-Feb-2007	18°15.488'N	53°59.59'E	52.4	1	H~5		W3				4.76	R. Bartoschewitz	11.7	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 129	Zufar	4-Feb-2007	18°15.481'N	53°59.608'E	25.2	1	H~5		W4				4.78	R. Bartoschewitz	5.04	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 130	Zufar	4-Feb-2007	18°15.491'N	53°59.588'E	13.4	1	H~5		W4				4.87	R. Bartoschewitz	3.1	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 131	Zufar	4-Feb-2007	18°15.503'N	53°59.569'E	2.8	1	H~5		W4				4.84	R. Bartoschewitz	0.56	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 132	Zufar	4-Feb-2007	18°15.525'N	53°59.547'E	13.6	1	H~5		W1				4.96	R. Bartoschewitz	3.3	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 133	Zufar	4-Feb-2007	18°15.565'N	53°59.579'E	12.3	1	H~5		W4				4.92	R. Bartoschewitz	2.46	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 134	Zufar	5-Feb-2007	18°15.537'N	53°59.571'E	0.5	1	H~5		W4				4.71	R. Bartoschewitz	0.16	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 135	Zufar	5-Feb-2007	18°15.541'N	53°59.506'E	69.7	1	H~5		W3				4.77	R. Bartoschewitz	13.94	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 141	Zufar	3-Feb-2007	18°15.232'N	53°59.87'E	38.6	2	H~5		W2				4.94	R. Bartoschewitz	9.2	Kiel	Barro	Finder— C. Bartoschewitz
Shjsr 142	Zufar	3-Feb-2007	18°15.088'N	53°59.931'E	25.3	1	H~5		W3				4.82	R. Bartoschewitz	5.06	Kiel	Barro	Finder— R. Bartoschewitz
Shjsr 143	Zufar	3-Feb-2007	18°15.087'N	53°59.816'E	16	1	H~5		W4				4.83	R. Bartoschewitz	4.3	Kiel	Barro	Finder— R. Bartoschewitz
Shjsr 145	Zufar	4-Feb-2007	18°15.133'N	53°59.877'E	12.7	1	H~5		W4				4.82	R. Bartoschewitz	2.54	Kiel	Barro	Finder— R. Bartoschewitz
Shjsr 146	Zufar	4-Feb-2007	18°15.113'N	53°59.88'E	6.9	1	H~5		W4				4.88	R. Bartoschewitz	1.8	Kiel	Barro	Finder— R. Bartoschewitz

Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

Name	Location	Date of recovery or purchase <sup>(*)</sup>	Latitude	Longitude	Mass (g)	Pieces	Class	Sh <sup>a</sup>	WG <sup>b</sup>	Fa mol %	Fs mol %	Wo mol %	Mg sus log(10 <sup>9</sup> m <sup>3</sup> kg <sup>-1</sup> )	Classifier(s) <sup>c</sup>	Type specimen mass (g)	Type specimen location	Main mass <sup>d</sup>	Comment	
Shijsr 147	Zufar	4-Feb-2007	18°15.052'N	53°59.817'E	20.7	1	H-5	W3	W3				4.85	R. Bartoschewitz	4.14	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 148	Zufar	4-Feb-2007	18°15.043'N	53°59.8'E	23	2	H-5	W3	W3				4.92	R. Bartoschewitz	4.5	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 149	Zufar	4-Feb-2007	18°15.13'N	53°59.842'E	14.1	1	H-5	W4	W4				4.77	R. Bartoschewitz	2.82	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 150	Zufar	4-Feb-2007	18°15.239'N	53°59.713'E	61.3	1	H-5	W2	W2				4.87	R. Bartoschewitz	12.4	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 151	Zufar	4-Feb-2007	18°15.254'N	53°59.691'E	8.1	1	H-5	W2	W2				4.8	R. Bartoschewitz	1.62	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 152	Zufar	4-Feb-2007	18°15.312'N	53°59.822'E	12.8	2	H-5	W3	W3				4.92	R. Bartoschewitz	2.9	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 153	Zufar	4-Feb-2007	18°15.259'N	53°59.73'E	9.8	1	H-5	W2	W2				4.93	R. Bartoschewitz	1.96	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 154	Zufar	4-Feb-2007	18°15.537'N	53°59.624'E	53.2	1	H-5	W4	W4				4.87	R. Bartoschewitz	10.8	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 155	Zufar	5-Feb-2007	18°15.591'N	53°59.569'E	32.5	1	H4	S2	W3	18.9–19.8	16.5–19.4		4.83	R. Bartoschewitz, P. Appel, B. Mader, Kiel	6.7	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 156	Zufar	5-Feb-2007	18°15.666'N	53°59.599'E	130	1	H-5	W4	W4				4.86	R. Bartoschewitz	20	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 157	Zufar	5-Feb-2007	18°15.663'N	53°59.54'E	5.6	1	H-5	W3	W3				4.89	R. Bartoschewitz	1.12	Kiel	Barto	Finder— R. Bartoschewitz	
Shijsr 166	Zufar	10-Apr-2008	18°32'56.68N	53°58'40.73E	128.8	1	Lunar			39	50	27		R. Zeigler and R. Korotev	20.1	WUSL	Labonne*	See written description	
Meteorites from Romania																			
Plescoi	Plescoi Village, Berca Commune, Buzau Co	12-Jun-2008	45°16'30"N	26°42'35"E	6913	1	L5-6	S2	W1	25.5 ± 0.3	21.4 ± 0.1	1.3 ± 0.2		D. Pop and G. Benedict	20	BBU	M. Popescu*	See written description	
Meteorites from Russia																			
Bayushkovo	Smolensk Region	Jun-2007	55°32.92'N	35°17.97'E	4620	1	L5	S5	W1	23.7	20.1	1.6		D.D. Badjukov, Vernad	4620	Vernad	Vernad		
Kirishi	Leningrad Region	Sep-2006	59°32.9'N	32°06.8'E	1350	1	L4	S1	W0	24.5	13.8			D.D. Badjukov, Vernad	46.5	Vernad	Belov	pyx: Fs <sub>2-36</sub>	
Meteorites from Saudi Arabia																			
Azu 001	Ash Sharqiyah	20-Mar-2008	22°43.315'N	48°57.562'E	194.3	1	H3.8	S2	W2/3	17.6–20.1	17.3–21.6	0.6–2.5		E. Gnoss, B. Hofmann	20.5	MHINGE	SGS	Mean chondrule size 0.32 mm, bulk Fe 24.8 wt%, finder— EGnos <sup>†</sup>	
Qulumat Nadqan 001	Ash Sharqiyah	21-Mar-2008	23°8.581'N	49°31.951'E	13901	6	L3.7	S3	W1	18.9–27.6	16.8–21.2	0.2–2.1		E. Gnoss, B. Hofmann	36	MHINGE	SGS	Mean chondrule size 0.60 mm, bulk Fe 20.5 wt%, finder— EGnos <sup>†</sup>	
Yabrin 001	Ash Sharqiyah	19-Mar-2008	23°20.865'N	48°44.245'E	65.193	1	LL5	S4	W2	26.4	22	1.5		E. Gnoss, B. Hofmann	15	MHINGE	SGS	Kingwoodite, mean chondrule size 1.0 mm, bulk Fe 19.7 wt%, finder— EGnos <sup>†</sup>	
Yabrin 002	Ash Sharqiyah	19-Mar-2008	23°21.430'N	48°43.347'E	46.324	1	H5	S2	W2	18.2	15.9	1.1		E. Gnoss, B. Hofmann	10	MHINGE	SGS	Mean chondrule size 0.41 mm, bulk Fe 24.5 wt%, finder— EGnos <sup>†</sup>	



Table 1. Continued. List of newly approved, non-Antarctic meteorites by country.

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<i>Meteorites from Slovenia</i>																		
Jesencice	Upper Sava Valley	9-Apr-2009	46°25.282'N	14°03.130'E	3667	3	L6	S3	W0/1	25				A. Bischoff	SMNH	SMNH	See written description	
<i>Meteorites from Tunisia</i>																		
En Naffatiyah	Madaniyin	20-Mar-2007	33°13.133'N	10°50.067'E	87.2	1	L6	S4	W2-3	25.5	21		4.89	Addi Bischoff	IFP	Anon	Synonym: Neflatia	
Tieret 001	Tieret	22-Feb-2009	30°44'53.57"N	10°12'36.66"E	602	1	H6	S1	W2	18.2	15.9	1.7		L. Folco	MVA-SI	Tunis	See written description	
Tieret 002	Tieret	22-Feb-2009	30°47'44.75"N	10°14'44.04"E	23.5	1	L6	S3	W2	22.9	20.2	1.7	4.22	L. Folco	MVA-SI	Tunis	See written description	
Tieret 003	Tieret	23-Feb-2009	30°49'9.49"N	10°15'1.07"E	17.1	2	H6	S2	W2	17.3	15.7	1.4	4.79	L. Folco	MVA-SI	Tunis	See written description	
Tieret 004	Tieret	25-Feb-2009	30°58'4.48"N	10°2'45.13"E	10.6	1	H5	S3	W3	18.3	15.9	1.5	4.44	L. Folco	MVA-SI	Tunis	See written description	
Tieret 005	Tieret	25-Feb-2009	30°58'3.32"N	10°2'48.36"E	18.3	1	L6	S2	W3	23.4	20.4	1.9	4.11	L. Folco	MVA-SI	Tunis	See written description	
Tieret 006	Tieret	25-Feb-2009	30°58'17.51"N	10°3'17.98"E	20.7	1	L4	S2	W1	22.5	19	1.7	4.74	L. Folco	MVA-SI	Tunis	See written description	
Tieret 007	Tieret	25-Feb-2009	30°58'32.22"N	10°5'24.92"E	11	1	H5	S3	W2	16.8	15.2	1.6	5.02	L. Folco	MVA-SI	Tunis	See written description	
<i>Meteorites from the United Arab Emirates</i>																		
UAE 003	Abu Dhabi	24-Feb-2009	22°42'35.57"N	55°07'31.57"E	47	1	H6	S1	W2/3	18.9	17.2			Smith/Hezel	NHM	EAD		
UAE 004	Abu Dhabi	24-Feb-2009	22°41'57.27"N	55°05'17.27"E	205	29	H5	S2	W2/3	18.8	16.7			Smith/Hezel	NHM	EAD		
UAE 005	Abu Dhabi	24-Feb-2009	22°41'58.07"N	55°05'42.17"E	212	1	H6	S1	W4	20.1	17.6			Smith/Hezel	NHM	EAD		
UAE 006	Abu Dhabi	25-Feb-2009	22°42'01.77"N	55°06'15.37"E	200	1	L5	S2	W2	22.3	17.8			Smith/Hezel	NHM	EAD		
UAE 007	Abu Dhabi	26-Feb-2009	22°47'19.57"N	55°05'40.97"E	7	1	H4	S1	W3/4	17.7	15.9			Smith/Hezel	NHM	EAD		
UAE 008	Abu Dhabi	26-Feb-2009	22°47'26.37"N	55°05'40.97"E	23	1	H5	S1/2	W4	19.3	19.1			Smith/Hezel	NHM	EAD		
UAE 009	Abu Dhabi	26-Feb-2009	22°47'35.47"N	55°05'48.07"E	15	1	H6	S1	W4	18.7	16.8			Smith/Hezel	NHM	EAD		
UAE 010	Abu Dhabi	27-Feb-2009	22°50'59.97"N	55°08'40.37"E	53	1	L6	S2	W1/2	25.7	21.9			Smith/Hezel	NHM	EAD		
UAE 011	Abu Dhabi	27-Feb-2009	22°51'04.17"N	55°08'30.37"E	296	1	L6	S2	W1/2	25.4	22.4			Smith/Hezel	NHM	EAD		
UAE 012	Abu Dhabi	27-Feb-2009	22°51'38.07"N	55°10'59.47"E	21	1	L6	S2	W1/2	25.9	21.8			Smith/Hezel	NHM	EAD		
UAE 013	Abu Dhabi	28-Feb-2009	22°52'42.57"N	55°09'04.67"E	55	1	L6	S2	W1/2	25.9	22.4			Smith/Hezel	NHM	EAD		
UAE 014	Abu Dhabi	28-Feb-2009	22°52'08.67"N	55°09'06.87"E	95	1	L6	S2	W2	25.9	21.5			Smith/Hezel	NHM	EAD		
UAE 015	Abu Dhabi	28-Feb-2009	22°52'07.77"N	55°09'05.57"E	57	1	L6	S3/4	W2	25.6	21.8			Smith/Hezel	NHM	EAD		
UAE 016	Abu Dhabi	28-Feb-2009	22°52'07.67"N	55°09'00.37"E	19	3	L6	S3	W3	24.8	21.2			Schlüter	Hamb	EAD		
UAE 017	Abu Dhabi	28-Feb-2009	22°51'57.27"N	55°09'24.17"E	15	1	L6	S3	W3	24.6	21			Schlüter	Hamb	EAD		
UAE 018	Abu Dhabi	1-Mar-2009	22°47'42.27"N	55°12'27.97"E	540	1	H5	S2	W4	20	17.3			Schlüter	Hamb	EAD		
UAE 019	Abu Dhabi	1-Mar-2009	22°53'15.57"N	55°10'31.47"E	87	3	L6	S3	W3	25	20.9			Schlüter	Hamb	EAD		
UAE 020	Abu Dhabi	2-Mar-2009	22°53'17.27"N	55°11'03.87"E	170	1	L6	S3	W3	24.9	21			Schlüter	Hamb	EAD		
UAE 021	Abu Dhabi	2-Mar-2009	22°53'19.47"N	55°11'04.07"E	35	1	L6	S3	W3	25.2	21			Schlüter	Hamb	EAD		
UAE 022	Abu Dhabi	3-Mar-2009	22°53'41.77"N	55°10'14.97"E	100	1	L6	S3	W3	24.8	21.3			Schlüter	Hamb	EAD		
UAE 023	Abu Dhabi	3-Mar-2009	22°53'43.07"N	55°10'13.27"E	87	1	L6	S3	W3	24.9	20.8			Schlüter	Hamb	EAD		
UAE 024	Abu Dhabi	3-Mar-2009	22°53'35.37"N	55°10'41.87"E	45	1	L6	S3	W3	25	22			Schlüter	Hamb	EAD		
UAE 025	Abu Dhabi	3-Mar-2009	22°53'35.17"N	55°10'28.07"E	148	3	L6	S3	W3	24.7	20.6			Schlüter	Hamb	EAD		
UAE 026	Abu Dhabi	3-Mar-2009	22°53'30.67"N	55°10'53.17"E	97	1	L6	S2/3	W3	24.7	20.8			Schlüter	Hamb	EAD		
UAE 027	Abu Dhabi	3-Mar-2009	22°53'38.67"N	55°10'13.87"E	107	1	L6	S2	W3	24.7	21			Schlüter	Hamb	EAD		
UAE 028	Abu Dhabi	3-Mar-2009	22°53'27.37"N	55°10'47.67"E	39	1	L6	S3	W2/3	25	21.3			Schlüter	Hamb	EAD		
UAE 002	Abu Dhabi	11-Feb-2005	22°50'32.37"N	55°08'27.77"E	> 2000	1	L6	S3	W3	24.9	21.3			Schlüter	Senck	EAD		
<i>Meteorites from the United States</i>																		
Bluewing 030	Nevada	1999-2000	40°16'N	118°56'W	18.81	1	H5	S2	W4	19.2				A. Rubin, UCLA	UCLA	Gesler		
Bluewing 031	Nevada	1999-2000	40°16'N	118°56'W	170	1	H5	S2	W4	18.3				A. Rubin, UCLA	UCLA	Gesler		
Bluewing 033	Nevada	1999-2000	40°16'N	118°56'W	287.44	1	L5	S2	W3	24.3				A. Rubin, UCLA	UCLA	Gesler		
Bluewing 034	Nevada	1999-2000	40°16'N	118°56'W	34	1	H5	S2	W3	18.3				A. Rubin, UCLA	UCLA	Gesler		
Bluewing 035	Nevada	1999-2000	40°16'N	118°56'W	12.56	1	L6	S2	W3	23.5				A. Rubin, UCLA	UCLA	Gesler		
Bluewing 036	Nevada	1999-2000	40°16'N	118°56'W	10.47	1	L6	S3	W2	24.3				A. Rubin, UCLA	UCLA	Gesler		
Buffalo Gap	Taylor County, Texas	2003	32°14'46"N	99°59'35"W	9300	1	Iron, IAB-ung							J.T. Wasson, UCLA	UCLA	Jutas	See written description	

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Camp Wood	Real County, Texas	1960s	29°46'21"N	99°52'30"W	148 kg	1	Iron, IIIAB							J.T. Wasson, UCLA	28	UCLA	Utas	Medium octahedrite, Finder—G. Hutcherson
Chocolate Mountains	California	2004	33°04'44"N	114°52'W	699	1	Ureilite	S3	W3	17.8 (cores)	15.5	6		P. Warren, UCLA	46	UCLA	Bill Sajkovicz*	Found at the base of Black Mountain
Coffeyville	Kansas	Jul-2006	37°01'N	95°40'W	35900	1	H5	S2	W3	18.7	16.7	1.6		J. Grossman, USGS	85	SI	G. Notkin and S. Arnold	Finder—G. Langworthy
CDDL 021	California	3-Feb-2004	35°18'00"N	117°27'63"W	31720	1	L6	S2	W3	24.6 ± 0.4				A.E. Rubin, UCLA	7.85	UCLA	K. Donnelly	
Fitzwater Pass	Oregon	Spring-1974	42°21'18.2"N	120°35'21.9"W	65.4	1	Iron, IIIIF							A. Ruzicka, M. Hutson, R. Pugh, Cascadia	12.4	Cascadia	P. Albertson*	
Morrow County	Oregon	1999	45.5 ± 0.5°N	119.5 ± 0.5°W	18200	1	L6	S5	W1	24.5 ± 0.4	20.4 ± 0.1			S. Kissin, LHU; M. Hutson, R. Pugh, Cascadia	25.4	Cascadia	D. E. Wesson*	Oriented specimen, coordinates approx. for county center
Tamarack	Idaho	10-May-2004	44°56'2"N	116°25'54"W	41	2	Iron, IIAB							A. Ruzicka, M. Hutson, Cascadia	14.2	Cascadia	J. Adams*	
TM 204	Churchill Co., Nevada	7-Jul-2005	39°40'73"N	117°37'767"W	41.6	1	H4	S1	W5	Fa 16.9 ± 0.1, n = 8				S. Kissin, LHU; A. E. Rubin, UCLA	8.8	UCLA	Verish	
TM 533	Churchill Co.	9-May-2007	39°41'367"N	117°37'415"W	25.3	1	H5	S3	W2	18.6 ± 0.2	16.4 ± 0.2	1.3		A. E. Rubin, UCLA	7.3	UCLA	Verish	Fs <sub>6.0±0.3</sub> , Wo <sub>3.5</sub> n = 2;
TM 535	Churchill Co.	9-May-2007	39°41'345"N	117°37'354"W	26.1	1	H4	S1	W5	18.1 ± 0.2	16.2	1.3 n = 2		A. E. Rubin, UCLA	5.3	UCLA	Verish	
TM 541	Churchill Co.	9-May-2007	39°41'304"N	117°37'453"W	5.7	1	H3.8	S1	W3	17.3 ± 0.2, n = 5				A. E. Rubin, UCLA	1.9	UCLA	Verish	
TM 542	Churchill Co.	10-May-2007	39°41'232"N	117°37'571"W	4.6	1	H5	S3	W1	18.3 ± 0.1				A. E. Rubin, UCLA	2.1	UCLA	Verish	
TM 543	Churchill Co.	10-May-2007	39°41'363"N	117°37'219"W	18.1	1	H4	S2	W3	18.5 ± 0.3				A. E. Rubin, UCLA	4	UCLA	Verish	
TM 563	Churchill Co.	27-May-2007	39°40'632"N	117°37'715"W	9.3	1	H5	S3	W2	19.0 ± 0.7				A. E. Rubin, UCLA	2.1	UCLA	Stanley	
TM 572	Churchill Co.	28-May-2007	39°40'863"N	117°36'795"W	10.7	1	H6	S1	W3	19.1 ± 0.1				A. E. Rubin, UCLA	2.5	UCLA	Stanley	
Wilcox Playa 004	Cochise Co., Arizona	7-Feb-2004	32°8'521"N	109°49'454"W	19.9	1	L6	S4	W2	24.5 ± 0.3				A. Rubin, UCLA	4.85	UCLA	Verish	
Wilcox Playa 005	Cochise Co., Arizona	10-Dec-2004	32°5'634"N	109°53'047"W	278	1	H5	S3	W3	18.0 ± 0.2				A. Rubin, UCLA	20.6	UCLA	Verish	
Wilcox Playa 006	Cochise Co., Arizona	11-Dec-2004	32°6'773"N	109°53'559"W	3.1	1	H6	S3	W2	18.7 ± 0.2				A. Rubin, UCLA	0.7	UCLA	Verish	
Wilcox Playa 007	Cochise Co., Arizona	12-Dec-2004	32°11'306"N	109°50'738"W	62.4	1	L6	S2	W1	24.4 ± 0.1				A. Rubin, UCLA	12.5	UCLA	Verish	

AU = Abu al Uj; CDDL = Cuddeback Dry Lake; DaG = Dar al Gani; Dho = Dhojar; GSS = Great Sand Sea; JdH = Jiddat al Harasis; NWA = Northwest Africa; SaU = Sayh al Uhaymir; TM = Tungsten Mountain; UAE = United Arab Emirates.

<sup>a</sup>Sfr—shock classifications conform to the scheme of Stöffler et al. (1991).

<sup>b</sup>WG—weathering grade using the seal of Wlotzka (1993).

<sup>c</sup>Name and institution of classifier.

<sup>d</sup>Location of holder of the main mass.

<sup>e</sup>A key to abbreviations for addresses used in the table can be found at our web site <http://lin.er.usgs.gov/meteor/MetBullAddresses.php>.

<sup>f</sup>Denotes finder.

<sup>g</sup>Date of purchase.

Al-Kathiri—A. Al-Kathiri, E. Gnoss, E. Janots, B. Hofmann, L. Huber.

Al-Kathiri2—A. Al-Kathiri, E. Gnoss, B. Hofmann, A. Grimberg, E. Janots.

EGnos1—E. Gnoss, B. Hofmann, M. Halaqani, Y. Tarabulsi, M. Hakeemmm, M. Halaqani, Y. Tarabulsi, M. Hakeem.

EGnos2—E. Gnoss, B. Hofmann, A. Grimberg, E. Janots.

Gessler—Nicholas Gessler.

MEgimnam1—M. Egimnam, B. Hofmann, F. Zurrhuh.

MEgimnam2—M. Egimnam, E. Gnoss, E. Janots, B. Hofmann, L. Huber, F. Zurrhuh.

Sonadal—Y. Swada, ShiU; T. Endo, H. Nishido, OkaU; K. Nagao, UTok; M. Kusakabe, UTToy; I. Ahn and J. I. Lee, KOPRI.

<sup>h</sup>Bulk comp. (NWA), R. Korover, PUSLJ; 1.2 wt.% Ni, 306 ppb Au, REE 1.2XCT chondrites.

ot = olivine; pyx = pyroxene.

Further information on these meteorites can be found in the Meteoritical Society Meteorite Database <http://lin.er.usgs.gov/meteor/metbull.php>.

Table 2. a) Antarctic meteorites recovered by the United States Antarctic Search for Meteorites (ANSMET) Program. b) Antarctic meteorites recovered by the Chinese Antarctic Research (CHINARE) Program. c) Antarctic meteorites recovered by the Korean Antarctic Meteorite (KOREAMET) Program. d) Antarctic meteorites recovered by the Japanese Antarctic Meteorite Program.

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
(a) U.S. Antarctic meteorite program							
DOM 08001	1305.4	Eucrite-breccia	A/B	A		25–6	33 (1)
DOM 08002	173.2	LL-impact melt	Be	A/B	30	25	33 (1)
DOM 08003	109	CM2	B	A/B		2–48	33 (1)
DOM 08004	294.5	CO3	B	B		0–51	32 (2)
DOM 08005	88.8	Eucrite	A/B	A		26–62	32 (2)
DOM 08006	667.3	CO3	B/C	A		1.0–33	32 (2)
DOM 08007	24.7	H5	A/B	A	20	17	33 (1)
DOM 08008	27.1	Eucrite-breccia	B/C	A		26–6	33 (1)
DOM 08009	5.2	CM2	B/C	B/C	1–4	1–21	33 (1)
DOM 08010	8.3	CM2	B/C	B/C	1.0–17	1.0–2	32 (2)
DOM 08011	3.4	Eucrite	A/B	A		28–63	32 (2)
DOM 08012	18.6	Ure	B	A		3.0–22	32 (2)
DOM 08013	28.8	CO3	B/C	B		1.0–55	32 (2)
DOM 08014	19.6	Eucrite	A/B	A		27–63	32 (2)
DOM 08015	8.4	CM2	B	B		1.0–52	32 (2)
DOM 08016	6.2	CM2	B/Ce	B/C	1–31	3–19	33 (1)
DOM 08019	1434.5	LL5	B	B			33 (1)
GRA 06110	205.4	L5	C	C			32 (2)
GRA 06111	599.6	L5	C	A/B			32 (2)
GRA 06116	1853.3	H5	B/C	C	18	16	32 (2)
GRA 06117	1022.5	H5	C	C	18	16	32 (2)
GRA 06126	682.1	L5	A/B	A			32 (2)
GRA 06140	139.3	L5	B/C	A			32 (2)
GRA 06141	135.4	H6	B/C	A/B			32 (2)
GRA 06142	111.3	LL5	A/B	A			32 (2)
GRA 06143	244.3	L5	B/C	A/B			32 (2)
GRA 06144	57.2	L6	B/C	A/B			32 (2)
GRA 06145	84.9	L5	B/C	A			32 (2)
GRA 06146	192.4	LL5	A	A			32 (2)
GRA 06147	143.5	LL5	A/B	A/B			32 (2)
GRA 06148	362.6	L6	B/C	A			32 (2)
GRA 06149	60.1	LL5	B/C	A/B			32 (2)
GRA 06174	95.8	L6	B/C	A			32 (2)
GRA 06175	73.3	LL5	A/B	A/B			32 (2)
GRA 06176	95.8	L5	B/C	A			32 (2)
GRA 06177	92.7	L5	B/C	A/B			32 (2)
GRA 06178	37	L3.5	B	A		7.0–35	32 (2)
GRA 06179	46.1	LL4	A/B	A	30	25	32 (2)
LAR 06251	2217.9	L6	B/C	A			32 (2)
LAR 06252	2660.1	EH3	Be	A/B	1	1.0–4	32 (2)
LAR 06257	1721.4	LL6	B/C	A			32 (2)
LAR 06259	924.5	LL6	A/B	A			32 (2)
LAR 06273	837.9	L6	B/C	A			32 (2)
LAR 06274	905.6	H6	B/Ce	A			32 (2)
LAR 06275	707.3	H6	B/C	A			32 (2)
LAR 06276	1140.2	H6	B/Ce	B			32 (2)
LAR 06277	1032.2	H5	B/Ce	A			32 (2)
LAR 06278	1196.8	H6	B/Ce	A/B			32 (2)
LAR 06279	729.8	LL3.8	B	A	14–40	6–19	33 (1)
LAR 06280	1313.4	H6	B/C	A			32 (2)
LAR 06281	762.4	H5	B/Ce	A			32 (2)
LAR 06282	694.1	LL5	B/C	A			32 (2)
LAR 06283	878.2	LL3.8	Be	A	10–44	3–28	33 (1)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
LAR 06284	1261	L5	B/Ce	A/B			32 (2)
LAR 06285	982.2	LL6	A/B	A/B			32 (2)
LAR 06286	741.8	H6	B/C	A	19	17	32 (2)
LAR 06287	574.7	L5	B/C	A/B			32 (2)
LAR 06288	630.4	L6	A/Be	A			32 (2)
LAR 06289	524.1	H6	B/Ce	A			32 (2)
LAR 06290	452.8	L5	B	A			32 (2)
LAR 06291	329.7	L6	A/B	A			32 (2)
LAR 06292	623.7	LL5	A/B	A			32 (2)
LAR 06293	583.5	LL6	A/B	A			32 (2)
LAR 06294	291.8	L5	B	A			32 (2)
LAR 06295	225.7	H5–6	B/C	A	18	16	33 (1)
LAR 06296	381.8	H6	B/Ce	A			32 (2)
LAR 06297	331.2	H5	B/Ce	A			32 (2)
LAR 06300	990.3	LL6	A/B	A			32 (2)
LAR 06301	803.6	LL3.8	B	A	11.0–33	6.0–34	32 (2)
LAR 06303	2583.7	L5	A	A			32 (2)
LAR 06306	263.5	H6	C	C			32 (2)
LAR 06307	354.5	LL6	Be	A/B			32 (2)
LAR 06308	465.5	L6	B	A/B			32 (2)
LAR 06309	601.8	H6	C	A/B			32 (2)
LAR 06310	815.1	L5	B/C	A/B			32 (2)
LAR 06311	234.5	L6	B/C	A/B			32 (2)
LAR 06312	423.8	LL6	B	A			32 (2)
LAR 06313	821.9	LL5	B	A			32 (2)
LAR 06314	518.1	L5	B	A			32 (2)
LAR 06315	347.7	L5	B/C	A			32 (2)
LAR 06316	277.0	H6	C	C			32 (2)
LAR 06320	161.2	LL3.8	B/C	A	2–30	2–9	33 (1)
LAR 06321	248.1	H6	B/C	A			32 (2)
LAR 06322	325.2	L5	B	A/B			32 (2)
LAR 06323	320.6	L6	B/Ce	A			32 (2)
LAR 06324	202.3	LL5	A/B	A			32 (2)
LAR 06325	257.4	L5	B/C	A/B			32 (2)
LAR 06326	272.2	LL6	A/B	A			32 (2)
LAR 06327	286.1	LL6	B/Ce	A			32 (2)
LAR 06328	151.1	H6	C	B/C			32 (2)
LAR 06329	135.3	L6	B/C	A/B			32 (2)
LAR 06330	179.3	LL6	A/B	A			32 (2)
LAR 06331	87.8	LL5	A/B	A			32 (2)
LAR 06332	129.3	H6	B/C	A/B			32 (2)
LAR 06333	138.5	L6	B/C	A/B			32 (2)
LAR 06334	59.1	L5	Ce	A/B			32 (2)
LAR 06335	10.5	L5	B	A			32 (2)
LAR 06336	346.8	L5	B/C	A			32 (2)
LAR 06337	83.9	H6	B/C	A/B			32 (2)
LAR 06338	72.7	L6	B/C	A			32 (2)
LAR 06339	66.2	L6	B/C	A			32 (2)
LAR 06399	16.9	L4	B	A/B	24	20	32 (2)
LAR 06400	134.8	LL6	A/B	A			32 (2)
LAR 06401	168.1	L5	B	A/B	25	21	33 (1)
LAR 06402	84.3	L6	B	A			32 (2)
LAR 06403	94.7	LL6	A/B	A			32 (2)
LAR 06404	83.6	H5	B/C	A			32 (2)
LAR 06405	160.0	L5	B/C	A			32 (2)
LAR 06406	105.7	LL6	B/C	A			32 (2)
LAR 06407	68.3	L6	B/C	A			32 (2)
LAR 06408	63.7	L5	B	A			32 (2)
LAR 06409	35.2	L5	B/C	A			32 (2)
LAR 06423	16.3	L4	B	A/B			33 (1)
LAR 06470	10.6	LL5	A/B	A			32 (2)
LAR 06471	19.6	L6	B/C	A			32 (2)
LAR 06472	38.8	H6	B/C	A			32 (2)
LAR 06473	14.4	H6	B/C	A			32 (2)
LAR 06474	9.1	L6	B/Ce	A			32 (2)
LAR 06475	18.9	L6	Be	A			32 (2)
LAR 06476	13.9	H5	B/C	A			32 (2)
LAR 06477	26.6	H5	B/Ce	A			32 (2)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
LAR 06478	4.3	H5	B/C	A			32 (2)
LAR 06479	14.3	L6	B	A			32 (2)
LAR 06500	18.1	H5	C	B/C			32 (2)
LAR 06501	8.8	H6	C	A/B			32 (2)
LAR 06502	11.0	H5	C	A	19	17	33 (1)
LAR 06503	10.4	H6	C	A/B			32 (2)
LAR 06504	12.2	H6	C	A/B			32 (2)
LAR 06505	20.7	L5	B	A/B			32 (2)
LAR 06506	6.6	H6	C	B			32 (2)
LAR 06507	12.1	LL-impact melt	Be	B	34	11	33 (1)
LAR 06508	22.9	L6	C	B	25	21	32 (2)
LAR 06509	67.0	L5	B/C	B			32 (2)
LAR 06512	29.0	Mesosiderite	A/B	A/B	31	22–58	32 (2)
LAR 06542	10.6	L5	C	A/B	24	20	32 (2)
LAR 06560	159.6	L5	C	B			32 (2)
LAR 06561	125.0	H5	C	B			32 (2)
LAR 06562	111.1	L6	C	A			32 (2)
LAR 06563	213.4	H5	C	A			32 (2)
LAR 06564	125.3	H5	C	B			32 (2)
LAR 06565	154.9	L6	Ce	C			32 (2)
LAR 06566	216.4	L5	C	A/B			32 (2)
LAR 06567	145.5	H5	C	A			32 (2)
LAR 06568	81.8	H5	C	A			32 (2)
LAR 06569	122.8	H6	C	A			32 (2)
LAR 06570	47.4	H5	Ce	A/B			32 (2)
LAR 06571	57.5	H5	C	B			32 (2)
LAR 06572	56.4	L5	B	A/B			32 (2)
LAR 06573	23.2	L5	B	A/B			32 (2)
LAR 06574	53.2	L5	C	B			32 (2)
LAR 06575	37.0	L5	B	A/B			32 (2)
LAR 06576	35.7	L5	B/C	B			32 (2)
LAR 06577	30.2	LL5	C	B			32 (2)
LAR 06578	38.3	H6	C	B			32 (2)
LAR 06579	25.6	L5	B	A/B			32 (2)
LAR 06600	13.7	LL6	B/C	B			32 (2)
LAR 06601	25.7	H4	C	A/B	19	16	32 (2)
LAR 06602	21.1	H6	C	B			32 (2)
LAR 06603	5.0	L6	C	C			32 (2)
LAR 06604	10.7	L5	B	B			32 (2)
LAR 06605	34.6	Lodranite	B	B	12	12	32 (2)
LAR 06606	19.7	L6	B/C	B			32 (2)
LAR 06607	27.3	L5	B/Ce	B			32 (2)
LAR 06608	13.5	L5	B	A/B			32 (2)
LAR 06609	10.4	H6	C	C			32 (2)
LAR 06618	43.5	Ureilite	Ce	C	7–19		33 (1)
LAR 06626	22.4	EL4	C	A/B		0–2	32 (2)
LAR 06636	6.3	L5-impact melt	CE	C	34	10	32 (2)
LAR 06654	10.2	EL4	C	B	25	21	32 (2)
LAR 06659	20.2	LL5	CE	B		0–2	32 (2)
LAR 06673	35.5	LL3.8	B	A/B	28	23	32 (2)
LAR 06674	31.2	Terr	B	B	14–33	14–28	32 (2)
LAR 06686	21.9	CM2	B/C	A/B	0–45	0–1	32 (2)
LAR 06691	17.7	Mesosiderite	B/C	A		28–35	32 (2)
LAR 06800	371.2	L5	B/C	A			32 (2)
LAR 06801	257.9	L6	B/C	A			32 (2)
LAR 06802	445.1	LL6	A/B	A			32 (2)
LAR 06803	472.6	L5	B/C	A			32 (2)
LAR 06804	130.0	H6	B/Ce	A/B			32 (2)
LAR 06805	337.6	L6	B/C	A/B			32 (2)
LAR 06806	454.3	L5	B/Ce	A/B			32 (2)
LAR 06807	250.0	H5	B/C	A			32 (2)
LAR 06808	237.9	L5	Be	A/B			32 (2)
LAR 06809	371.2	L5	B/Ce	A			32 (2)
LAR 06810	121.3	L6	B/C	A/B			32 (2)
LAR 06811	150.4	LL6	B	A			32 (2)
LAR 06812	96.7	LL6	A/Be	A/B			32 (2)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
LAR 06813	170.4	H6	C	A/B			32 (2)
LAR 06814	56.1	L6	B/C	B			32 (2)
LAR 06815	89.9	LL6	A/B	A			32 (2)
LAR 06816	97.9	LL6	B	A/B			32 (2)
LAR 06817	73.0	H5	B/C	A			32 (2)
LAR 06818	71.2	H6	B/Ce	A			32 (2)
LAR 06819	48.5	H6	B/Ce	A			32 (2)
LAR 06820	63.0	L5	B	A/B			32 (2)
LAR 06821	66.9	H5	C	A/B			32 (2)
LAR 06822	65.7	H6	C	A/B			32 (2)
LAR 06823	47.5	LL6	B	B			32 (2)
LAR 06824	52.5	L5	B/C	B			32 (2)
LAR 06825	33.6	H6	C	A/B			32 (2)
LAR 06826	29.5	H6	C	A/B			32 (2)
LAR 06827	20.2	H6	C	B			32 (2)
LAR 06828	12.6	LL6	A/B	A			32 (2)
LAR 06829	22.0	L5	B	A/B			32 (2)
LAR 06878	16.6	H6	B/C	A			32 (2)
LAR 06879	13.2	L5	Be	A			32 (2)
LAR 06880	254.4	LL6	A/B	A			32 (2)
MIL 07011	7120.0	L5	B/Ce	A			33 (1)
MIL 07012	2604.4	LL6	C	C			33 (1)
MIL 07013	1491.3	L5	C	B			33 (1)
MIL 07014	710.4	H6	B/C	B/C			33 (1)
MIL 07015	472.4	H5	B/C	B/C			33 (1)
MIL 07017	3094.4	H5	Ce	B			33 (1)
MIL 07018	1665.7	LL6	Be	B			33 (1)
MIL 07019	1669.2	L5	C	C			33 (1)
MIL 07020	930.0	L5	C	A/B			33 (1)
MIL 07021	746.7	H5	B	A			33 (1)
MIL 07022	1126.9	L6	C	C			33 (1)
MIL 07023	2085.0	L5	C	C			33 (1)
MIL 07024	747.4	L6	B	A			33 (1)
MIL 07025	1072.7	H5	B	A			33 (1)
MIL 07026	879.3	L5	A/B	A/B			33 (1)
MIL 07027	1041.1	L5	C	C			33 (1)
MIL 07029	991.1	H6	B/C	B			33 (1)
MIL 07030	592.8	H5	B/C	B			33 (1)
MIL 07031	930.0	H6	B	A			33 (1)
MIL 07032	194.7	L6	B/C	C			33 (1)
MIL 07033	349.4	L6	B/C	B			33 (1)
MIL 07034	240.0	L6	B/C	C			33 (1)
MIL 07035	270.1	H6	B	A			33 (1)
MIL 07036	234.1	H5	B	B			33 (1)
MIL 07037	362.4	L6	B/C	A/B			33 (1)
MIL 07038	431.9	L6	B/C	A/B			33 (1)
MIL 07039	258.9	L5	A/B	A/B			33 (1)
MIL 07040	413.0	H5	C	B			33 (1)
MIL 07041	257.3	L6	B	B			33 (1)
MIL 07042	184.8	H5	B	C			33 (1)
MIL 07043	288.0	H5	C	B			33 (1)
MIL 07044	460.7	H5	C	B/C			33 (1)
MIL 07045	308.7	L5	B/C	C			33 (1)
MIL 07046	441.8	H5	C	C			33 (1)
MIL 07047	733.2	L6	C	C			33 (1)
MIL 07048	222.2	L6	B/C	C			33 (1)
MIL 07049	577.4	H5	C	C			33 (1)
MIL 07050	176.9	H4	C	C	20	18	33 (1)
MIL 07051	93.1	H5	C	B			33 (1)
MIL 07052	164.4	L5	B	B			33 (1)
MIL 07053	76.5	L5	B	B/C			33 (1)
MIL 07054	62.9	L5	B/C	B			33 (1)
MIL 07055	51.1	H6	B	A/B			33 (1)
MIL 07056	68.1	L6	C	A/B			33 (1)
MIL 07057	114.9	H5	C	A/B			33 (1)
MIL 07058	53.0	H5	C	C			33 (1)
MIL 07059	81.9	L6	B/C	B			33 (1)
MIL 07060	0.4	H5	B/C	B			33 (1)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
MIL 07061	0.8	H6	B/C	B			33 (1)
MIL 07062	1.6	H6	B/C	A/B			33 (1)
MIL 07063	6.7	L6	C	B			33 (1)
MIL 07064	0.3	H6	B	B			33 (1)
MIL 07066	0.4	L6	B	B			33 (1)
MIL 07067	0.8	L5	B	B			33 (1)
MIL 07068	1.9	L6	C	B			33 (1)
MIL 07069	0.7	H6	B	B			33 (1)
MIL 07070	18.8	H6	B/Ce	A/B			33 (1)
MIL 07071	9.4	H5	B/C	A			33 (1)
MIL 07072	0.3	L6	B	A			33 (1)
MIL 07073	0.3	H5	B/C	A			33 (1)
MIL 07074	4.5	H5	B/C	A			33 (1)
MIL 07075	1.4	H5	C	A			33 (1)
MIL 07076	13.1	H5	B/C	A			33 (1)
MIL 07077	10.4	H5	B	A			33 (1)
MIL 07078	0.6	H5	B/C	A			33 (1)
MIL 07079	57.7	H5	B/C	A/B			33 (1)
MIL 07080	20.9	H5	C	A/B			33 (1)
MIL 07081	3.4	H5	C	B			33 (1)
MIL 07082	12.6	H5	C	A/B			33 (1)
MIL 07084	4.2	H5	C	A/B			33 (1)
MIL 07085	0.8	H5	B/C	B			33 (1)
MIL 07086	14.5	H5	C	A/B			33 (1)
MIL 07087	13.0	H5	C	B			33 (1)
MIL 07088	7.5	L5	A/B	B			33 (1)
MIL 07089	32.9	H5	C	B			33 (1)
MIL 07090	3.2	H6	C	B			33 (1)
MIL 07091	7.8	H5	B/C	Be			33 (1)
MIL 07092	0.5	H6	B/C	B			33 (1)
MIL 07093	1.1	LL5	B	B			33 (1)
MIL 07094	25.2	H6	C	B			33 (1)
MIL 07095	47.6	H6	C	B			33 (1)
MIL 07096	9.1	H6	C	B			33 (1)
MIL 07097	7.1	H5	B	B			33 (1)
MIL 07098	54.8	L5	B	B			33 (1)
MIL 07100	254.9	H6	B	A			33 (1)
MIL 07101	285.2	H6	C	C			33 (1)
MIL 07102	350.8	H6	C	B			33 (1)
MIL 07103	138.4	H6	C	C			33 (1)
MIL 07104	109.7	H6	C	A			33 (1)
MIL 07105	139.9	H5	C	C			33 (1)
MIL 07106	118.2	H5	C	B			33 (1)
MIL 07107	112.8	H5	C	B			33 (1)
MIL 07109	133.8	H5	C	C			33 (1)
MIL 07110	256.4	H6	B/C	Ae			33 (1)
MIL 07111	269.2	L6	A/B	A			33 (1)
MIL 07112	332.6	L5	A/B	A			33 (1)
MIL 07113	264.5	H6	B/C	A/B			33 (1)
MIL 07115	106.6	H5	B/C	A/B			33 (1)
MIL 07116	72.1	H6	B/C	A			33 (1)
MIL 07117	104.6	H6	B/C	A/B			33 (1)
MIL 07118	146.6	L4	B	Ae			33 (1)
MIL 07120	179.1	L4	B/C	B			33 (1)
MIL 07121	358.3	H5	C	B			33 (1)
MIL 07122	221.1	H6	C	B			33 (1)
MIL 07123	303.4	L6	B	A/B			33 (1)
MIL 07124	378.6	L5	B	A/B			33 (1)
MIL 07125	213.3	L5	A/B	A			33 (1)
MIL 07126	210.4	H5	B	A/B			33 (1)
MIL 07127	180.3	H5	B	A/B			33 (1)
MIL 07128	156.4	H6	C	B			33 (1)
MIL 07129	371.4	H6	B	A/B			33 (1)
MIL 07130	33.7	H5	B/C	A/B			33 (1)
MIL 07131	56.0	H6	B/C	A/B			33 (1)
MIL 07132	71.0	H6	B/C	A			33 (1)
MIL 07133	95.4	H6	B/C	A/B			33 (1)
MIL 07134	102.1	H5	B/C	A			33 (1)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
MIL 07135	132.7	H6	B/C	A/B			33 (1)
MIL 07136	62.0	H5	B/C	A/B			33 (1)
MIL 07137	110.4	L5	B	A/B			33 (1)
MIL 07138	91.3	H5	B	A/B			33 (1)
MIL 07140	50.4	L5	B	B			33 (1)
MIL 07141	91.6	H6	C	A/B			33 (1)
MIL 07142	91.8	H6	B/C	B			33 (1)
MIL 07143	81.9	H6	C	B			33 (1)
MIL 07144	73.3	H5	C	B			33 (1)
MIL 07145	153.2	L6	C	B			33 (1)
MIL 07146	53.2	L4	B	B			33 (1)
MIL 07148	35.1	H5	A/B	B			33 (1)
MIL 07149	49.1	H5	C	B			33 (1)
MIL 07150	86.2	H5	C	B			33 (1)
MIL 07151	45.7	H6	A	A			33 (1)
MIL 07152	98.2	L6	B	B			33 (1)
MIL 07153	122.2	L6	B/C	A			33 (1)
MIL 07154	91.4	L5	C	C			33 (1)
MIL 07155	91.6	H6	B/C	A			33 (1)
MIL 07156	57.1	H6	B	A			33 (1)
MIL 07157	62.7	H6	B/C	A/B			33 (1)
MIL 07158	50.6	H6	B/C	A			33 (1)
MIL 07159	120.2	L6	A/B	A/B			33 (1)
MIL 07160	54.0	H6	B/C	B			33 (1)
MIL 07161	22.0	H6	B	B			33 (1)
MIL 07162	43.0	H6	B	B			33 (1)
MIL 07163	63.0	H6	B	A			33 (1)
MIL 07164	85.5	L6	B	B/C			33 (1)
MIL 07165	54.1	H5	B/Ce	B			33 (1)
MIL 07166	104.2	L6	B/C	B			33 (1)
MIL 07167	129.2	H5	B	B/C			33 (1)
MIL 07168	87.5	H5	B	B/C			33 (1)
MIL 07169	56.2	H5	B	B/C			33 (1)
MIL 07170	58.8	L6	C	A/B			33 (1)
MIL 07171	56.9	L6	B/C	B			33 (1)
MIL 07172	138.1	L5	C	B			33 (1)
MIL 07173	30.9	H6	C	C			33 (1)
MIL 07174	65.4	H6	C	B			33 (1)
MIL 07175	31.5	H5	B/C	B			33 (1)
MIL 07176	75.5	L5	B/C	A/B			33 (1)
MIL 07177	83.5	L5	B/C	B/C			33 (1)
MIL 07178	44.8	H5	C	C			33 (1)
MIL 07179	32.7	L6	C	A/B			33 (1)
MIL 07180	113.9	L5	B/C	A/B			33 (1)
MIL 07181	136.3	L6	B/C	A			33 (1)
MIL 07182	112.0	CO3	B	A	0-42	6	33 (1)
MIL 07183	110.7	H6	B/C	A/B			33 (1)
MIL 07184	134.1	L5	B	A			33 (1)
MIL 07185	115.4	L6	B/C	A/B			33 (1)
MIL 07186	40.3	L6	B/C	A/B			33 (1)
MIL 07187	106.6	H5	B/C	A			33 (1)
MIL 07188	105.0	H5	B	A			33 (1)
MIL 07189	54.7	L6	B/C	A			33 (1)
MIL 07190	65.5	L6	C	A/B			33 (1)
MIL 07191	49.0	H6	B/C	B/C			33 (1)
MIL 07192	78.0	L5	C	B			33 (1)
MIL 07194	73.1	H6	B/C	B			33 (1)
MIL 07195	64.9	H6	B/C	B/C			33 (1)
MIL 07196	59.5	L6	C	C			33 (1)
MIL 07197	85.5	L6	C	C			33 (1)
MIL 07198	75.2	L6	B/C	C			33 (1)
MIL 07199	130.4	L6	B/C	C			33 (1)
MIL 07220	1.7	H6	C	A/B			33 (1)
MIL 07221	5.3	H6	C	B			33 (1)
MIL 07222	2.5	H6	C	B			33 (1)
MIL 07223	1.6	L6	C	B			33 (1)
MIL 07224	1.6	L6	C	A/B			33 (1)
MIL 07225	4.5	H6	C	A/B			33 (1)



Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
MIL 07226	5.4	H6	C	B			33 (1)
MIL 07227	3.9	H6	C	B			33 (1)
MIL 07228	2.7	H6	C	B			33 (1)
MIL 07229	1.7	L6	B/C	B			33 (1)
MIL 07240	28.9	H5	B/C	A/B			33 (1)
MIL 07241	33.6	EH3	B	A/B		1–15	33 (1)
MIL 07242	24.0	H5	B	A			33 (1)
MIL 07243	21.4	L6	A/B	A			33 (1)
MIL 07244	6.1	L6	A/B	A			33 (1)
MIL 07245	3.2	L6	A/B	A			33 (1)
MIL 07246	2.7	L6	A/B	A			33 (1)
MIL 07247	1.7	H6	B/C	A/B			33 (1)
MIL 07248	2.2	H6	B/C	A			33 (1)
MIL 07249	4.7	L4	B	A/B			33 (1)
MIL 07250	1.4	H6	C	B			33 (1)
MIL 07251	14.5	H6	C	B			33 (1)
MIL 07252	2.4	H6	C	C			33 (1)
MIL 07253	5.6	H6	C	B			33 (1)
MIL 07254	2.7	L6	C	B			33 (1)
MIL 07255	7.7	L6	B/C	B			33 (1)
MIL 07256	0.4	L6	B	B			33 (1)
MIL 07257	4.2	H6	C	A/B			33 (1)
MIL 07258	3.0	L6	B	B			33 (1)
MIL 07260	2.4	H6	C	B			33 (1)
MIL 07261	17.3	H6	C	B			33 (1)
MIL 07262	0.3	L6	B/C	C			33 (1)
MIL 07263	2.3	H6	C	B			33 (1)
MIL 07264	5.7	L6	B	B			33 (1)
MIL 07265	0.6	CO3	B	B	1–73	1–16	33 (1)
MIL 07266	9.7	H6	C	B			33 (1)
MIL 07267	7.4	H6	C	C			33 (1)
MIL 07268	1.1	LL6	B	B	31	26	33 (1)
MIL 07269	1.9	H5	B	B			33 (1)
MIL 07270	32.8	H6	B/C	A/B			33 (1)
MIL 07271	21.7	H6	B/C	A/B			33 (1)
MIL 07272	59.2	L6	A/B	A			33 (1)
MIL 07273	33.9	H5-anomalous	B/C	A/B	16	14	33 (1)
MIL 07274	23.7	H6	B/Ce	A/B			33 (1)
MIL 07275	29.3	H5	B/C	A/B			33 (1)
MIL 07276	15.0	L5	A/B	A			33 (1)
MIL 07277	34.1	CV3	B	A/B	0–13	1–9	33 (1)
MIL 07278	33.0	L5	B/C	A/B			33 (1)
MIL 07279	9.8	H5	B/C	Ae			33 (1)
MIL 07301	4.3	L6	B/C	B			33 (1)
MIL 07307	0.5	H6	B	A/B			33 (1)
MIL 07308	13.2	L5	B/C	B			33 (1)
MIL 07309	5.9	L6	C	B			33 (1)
MIL 07312	9.7	L6	B	A			33 (1)
MIL 07316	2.2	H6	B/C	B			33 (1)
MIL 07317	1.3	H6	C	A			33 (1)
MIL 07318	4.0	H6	C	B			33 (1)
MIL 07319	0.9	L6	B	A			33 (1)
MIL 07320	4.2	L6	B/C	C			33 (1)
MIL 07321	1.3	H6	C	A/B			33 (1)
MIL 07323	16.1	L5	B/C	B			33 (1)
MIL 07324	12.2	L6	B/C	B			33 (1)
MIL 07325	2.9	L5	C	B			33 (1)
MIL 07326	15.8	H6	B	A/B			33 (1)
MIL 07327	10.6	H6	C	B			33 (1)
MIL 07328	1.0	L5	B	B			33 (1)
MIL 07329	6.1	H6	C	B			33 (1)
MIL 07330	1.1	L6	B	B			33 (1)
MIL 07331	7.6	L5	B	A/B			33 (1)
MIL 07332	17.2	L5	B/C	A/B			33 (1)
MIL 07333	12.8	H5	C	B			33 (1)
MIL 07334	11.5	H6	C	B			33 (1)
MIL 07335	16.3	H5	B	B			33 (1)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
MIL 07337	7.3	H6	C	B			33 (1)
MIL 07339	1.2	L4	A/B	A/B			33 (1)
MIL 07360	2.5	L5	B	B			33 (1)
MIL 07362	4.2	H6	C	A			33 (1)
MIL 07363	1.8	H6	C	B			33 (1)
MIL 07364	1.0	EH3	B	B	2	1–12	33 (1)
MIL 07365	13.6	H6	C	B			33 (1)
MIL 07366	2.1	H6	C	B			33 (1)
MIL 07367	1.4	L6	C	B			33 (1)
MIL 07368	2.0	CO3	B	A/B	0–45	1	33 (1)
MIL 07369	2.8	EH3	C	B		0–4	33 (1)
MIL 07370	45.6	L6	C	B			33 (1)
MIL 07371	10.8	LL5	C	C			33 (1)
MIL 07372	52.5	LL5	B/C	B			33 (1)
MIL 07373	20.8	L5	C	C			33 (1)
MIL 07374	14.9	L5	B/C	A/B			33 (1)
MIL 07375	4.0	H6	B/C	A/B			33 (1)
MIL 07376	12.1	H5	B/C	B			33 (1)
MIL 07377	28.9	H6	B	B			33 (1)
MIL 07378	13.5	L5	C	C			33 (1)
MIL 07379	10.0	L5	C	C			33 (1)
MIL 07390	7.4	H6	C	B			33 (1)
MIL 07391	1.7	H6	C	B			33 (1)
MIL 07392	5.2	H5	C	B			33 (1)
MIL 07393	11.8	EH3	C	B/C		0–4	33 (1)
MIL 07394	12.2	H6	C	B/C			33 (1)
MIL 07395	4.2	L6	A/B	A			33 (1)
MIL 07396	11.8	H6	C	A/B			33 (1)
MIL 07397	2.7	L5	C	B			33 (1)
MIL 07398	2.8	L5	C	B			33 (1)
MIL 07399	0.5	L5	B	B			33 (1)
MIL 07402	1.6	L5	C	B			33 (1)
MIL 07405	1.8	H5	C	B			33 (1)
MIL 07406	6.1	H6	C	B			33 (1)
MIL 07410	11.9	L5	B	B			33 (1)
MIL 07412	22.3	H5	C	C			33 (1)
MIL 07413	2.4	L5	B/C	A			33 (1)
MIL 07414	1.9	L5	B	A/B			33 (1)
MIL 07415	21.2	H6	C	B			33 (1)
MIL 07416	0.3	H6	B/C	B			33 (1)
MIL 07419	2.4	L5	B	B			33 (1)
MIL 07433	1.7	L5	B/C	A	24	21	33 (1)
MIL 07447	32.0	Ureilite	B/Ce	A/B	10–17	14	33 (1)
MIL 07486	5.4	L5	C	B	23	20	33 (1)
MIL 07488	0.3	H4	B	A	18	16	33 (1)
MIL 07497	4.1	CM2	B	A/B	0–76	4	33 (1)
MIL 07531	2.7	CO3	B	A/B	1.0–15	1.0–11	32 (2)
MIL 07546	0.4	CO3	B	B	0–51	1–4	33 (1)
MIL 07552	0.4	CO3	C	A/B	1.0–48	1.0–4	32 (2)
MIL 07555	2.7	CO3	B	A/B	1.0–32	5.0–9	32 (2)
MIL 07560	16.4	CO3	B	A/B	0–37	1.0–2	32 (2)
MIL 07570	3.2	LL6	A/B	A	30	25	33 (1)
MIL 07582	12.4	Acapulcoite	B/C	A	10	11	32 (2)
MIL 07588	1.4	CB	A/B	A	1–3	1–3	33 (1)
MIL 07590	1.8	CV3	B	B	1–20		33 (1)
MIL 07591	1.5	H5	C	B	18	16	33 (1)
MIL 07597	1.0	CV3	B	B	3–64	1	33 (1)
MIL 07668	3.0	CM2	B	A/B	1.0–40		32 (2)
MIL 07669	15.8	CV3	Be	B	1–41		33 (1)
MIL 07672	1.8	CM2	Be	C	0–8		33 (1)
MIL 07674	4.2	CM2	B	B	0–55	1	33 (1)
MIL 07675	37.4	CM2	Be	B	0–47	5	33 (1)
MIL 07677	1.2	CM1–2	Be	C	1		32 (2)
MIL 07678	7.7	CV3	B/C	B	0–36		33 (1)
MIL 07680	2.5	CM2	B	B	0–39		33 (1)
MIL 07681	20.7	CV3	B/C	B	0–47	5	33 (1)
MIL 07682	5.1	CM2	B	B	1–52		33 (1)
MIL 07683	3.1	CV3	B	B	0–13	1	33 (1)

Table 2. *Continued.*

Name	Mass (g)	Class	WG	F	Fa mole%	Fs mole%	Ref.
MIL 07684	1.3	CV3	B	B	0–10	3	33 (1)
MIL 07685	9.7	CV3	B/C	B	0–44	1	33 (1)
MIL 07688	0.9	CO3	B	B	0–51		33 (1)
MIL 07690	4.9	CV3	B	B	1–39		33 (1)
MIL 07691	4.0	CV3	B	B	1–37	1	33 (1)
MIL 07692	5.2	CM2	Be	B	0–54		33 (1)
MIL 07695	1.4	CO3	B	B	0–60	0–6	33 (1)
MIL 07696	16.4	CV3	Ce	B	0–46	1	33 (1)
MIL 07699	2.0	CV3	B	Ce	0–8	1	33 (1)
MIL 07701	5.7	CM2	Be	B			33 (1)
MIL 07702	7.4	CM2	B	A	0–19		33 (1)
MIL 07703	13.6	CM2	Be	B	0–48		33 (1)
SCO 06030	11.4	Lodranite	C	C	8	11	32 (2)

Type Specimens located at SI and JSC, main masses are at JSC.

Ref. is the Antarctic Meteorite Newsletter.

DOM = Dominion Rang; GR = Graves Nunataks; LAR = Larkman Nunatak; MIL = Miller Range; SCO = Scott Glacier; WG = Weathering grade; F = Fracturing, using the weathering and fracture scale reported in the Antarctic Meteorite Newsletter 33 (2).

Name	Mass (g)	Class	Fa mole%	Fs mole%
(b) Chinese Antarctic research program				
GRV 021692	0.61	E	2.4 ± 2.7	0.8 ± 0.5

GRV = Grove Mountains.

Also listed in the Catalogue of the Grove Mountains Antarctic Meteorites.

Name	Mass (g)	Class	WG	S	Fa mole%	
(c) Korean Antarctic Meteorite Program						
TIL 07007	18	CV3		W1	S2	0.3–6.4
TIL 07012	30	Acapulcoite				9.8

Type specimens at SEOUL-NU, main masses at KOPRI.

Meteorites classified by B.-G. Choi and A. E. Rubin.

TIL = Thiel Mountains; W = Weathering grade; S = Shock.

Name	Mass (g)	Class	WG	Fa mole%	Fs mole%	Ref.
(d) Japanese Antarctic Meteorite Program						
Y-981115	12.59	H4	A	19.1 (18.2–23.4)	17.4 (15.8–20.1)	J19
Y-981116	13.47	H4	A	19.3 (18.4–20.7)	17.0 (16.1–18.5)	J19
Y-981120	14.79	H4	A	19.1 (17.8–21.7)	17.1 (15.8–19.3)	J19
Y-981121	13.53	H3	A	19.6 (17.0–24.4)	17.6 (15.4–23.7)	J19
Y-981123	6.26	H4	A	19.1 (18.0–20.4)	16.8 (15.6–19.6)	J19
Y-981130	15.41	H5	A	20.0 (17.8–23.9)	17.1 (16.3–18.1)	J19
Y-981132	23.61	L6	A	24.7 (24.1–25.6)	20.7 (19.7–21.5)	J19
Y-981133	46.87	H6	A	17.6 (16.7–18.7)	15.3 (14.5–16.3)	J19
Y-981134	13.93	H5	A	18.8 (16.7–21.6)	16.6 (15.9–17.7)	J19
Y-981135	10.53	H5	A	19.4 (18.1–22.4)	16.8 (15.8–18.1)	J19
Y-981139	12.34	H3	A	17.8 (11.2–20.4)	15.8 (10.9–20.3)	J19
Y-981140	29.57	H3	A	15.8 (0.6–19.1)	15.0 (2.6–23.4)	J19
Y-981143	5.51	H5	A	19.3 (18.1–21.7)	17.5 (16.3–19.3)	J19
Y-981144	6.15	H5	A	18.2 (17.1–21.1)	16.1 (6.7–21.1)	J19
Y-981148	25.36	H6	A	17.0 (16.2–17.7)	15.1 (14.2–15.7)	J19
Y-981149	8.64	L6	A	25.4 (23.5–26.4)	21.1 (19.6–22.5)	J19
Y-981150	7.75	H4	A	20.1 (19.0–23.9)	17.8 (16.6–22.7)	J19
Y-981159	8.85	H4	A	18.6 (17.6–20.1)	16.8 (14.1–21.3)	J19
Y-981162	53.72	H5	A	17.4 (16.2–18.3)	15.0 (14.2–15.9)	J19
Y-981163	40.18	H6	A	18.5 (17.0–19.3)	16.6 (15.7–19.1)	J19
Y-981164	23.15	L6	A	24.1 (23.1–24.8)	20.7 (19.2–22.4)	J19
Y-981165	49.79	Euclite				J19
Y-981166	46.35	H5	A	17.6 (17.0–18.0)	15.4 (14.3–16.5)	J19
Y-981167	31.29	H4	A	17.5 (16.8–18.8)	15.1 (14.2–15.8)	J19

Table 2. *Continued.*

Name	Mass (g)	Class	WG	Fa mole%	Fs mole%	Ref.
Y-981169	8.34	H4	A	19.2 (18.2–22.2)	16.7 (15.9–18.9)	J19
Y-981173	8.92	H4	A	18.3 (17.1–20.6)	16.6 (15.5–20.0)	J19
Y-981174	43.91	L6	A	24.0 (23.2–24.6)	20.3 (19.0–23.7)	J19
Y-981175	8.28	H3	A	18.0 (7.6–34.2)	15.6 (6.9–18.0)	J19
Y-981176	11.13	H5	B	19.4 (18.1–23.4)	17.4 (16.2–19.2)	J19
Y-981186	26.95	H3	A	17.1 (0.7–18.9)	14.9 (5.5–24.0)	J19
Y-981188	24.32	H6	B	17.6 (16.7–18.5)	15.6 (14.2–16.8)	J19
Y-981189	17.3	H5	B	18.7 (17.6–20.3)	16.8 (15.4–21.7)	J19
Y-981195	6.77	H5	B	19.2 (18.0–19.9)	16.7 (15.4–17.5)	J19
Y-981198	5.03	H5	B	19.1 (18.1–20.9)	16.9 (15.1–21.3)	J19
Y-981200	12.23	H4	B	19.3 (18.4–22.9)	16.8 (15.6–19.4)	J19
Y-981202	95.46	L6	A	24.3 (23.8–25.7)	20.8 (19.7–22.1)	J19
Y-981204	7.75	L6	A	24.9 (23.5–26.2)	21.2 (20.4–22.7)	J19
Y-981207	5.8	L4	A	23.8 (22.6–24.8)	20.3 (9.4–25.8)	J19
Y-981208	24.32	LL3	A	3.6 (0.2–32.0)	1.6 (0.4–5.8)	J19
Y-981209	16.58	L6	A	25.7 (24.4–28.1)	22.2 (20.5–24.5)	J19
Y-981210	26.57	H5	B	18.1 (17.2–19.0)	15.7 (14.7–16.9)	J19
Y-981214	17.82	LL6	A	26.7 (24.9–31.4)	23.4 (21.9–28.1)	J19
Y-981215	5.75	H5	A	20.4 (18.8–22.1)	18.2 (16.5–21.2)	J19
Y-981218	7.12	L4	A	24.2 (22.7–26.6)	20.7 (19.4–22.5)	J19
Y-981219	23.65	H4	A	17.9 (16.7–20.3)	16.0 (10.8–20.7)	J19
Y-981221	29.56	H3	B	9.3 (0.4–27.0)	8.7 (1.8–26.2)	J19
Y-981222	12.62	H4	A/B	19.9 (18.8–21.6)	17.7 (15.9–19.3)	J19
Y-981223	25.82	H4	A/B	17.9 (17.2–19.2)	15.6 (14.5–16.7)	J19
Y-981224	27.15	H4	A/B	18.2 (16.5–21.0)	16.1 (14.2–17.5)	J19
Y-981225	5.71	H5	A/B	20.8 (20.0–25.4)	17.9 (16.5–18.9)	J19
Y-981229	46.09	H4	B	18.5 (16.7–20.3)	15.9 (15.0–17.1)	J19
Y-981232	6.57	H3	B	16.0 (15.0–16.9)	14.5 (13.5–16.0)	J19
Y-981233	25.3	H5	A/B	18.2 (17.4–19.0)	16.1 (15.3–17.9)	J19
Y-981234	17.25	H6	A	20.0 (18.9–22.3)	17.3 (15.8–18.9)	J19
Y-981235	28.6	H6	B	17.2 (16.5–18.7)	15.0 (13.9–16.4)	J19
Y-981236	10.59	H5	B	18.8 (18.2–21.5)	16.5 (15.9–18.3)	J19
Y-981237	18.83	L6	A	25.5 (24.1–27.6)	21.7 (20.9–23.9)	J19
Y-981238	15.7	H5	B/C	18.7 (17.3–20.5)	16.6 (15.6–17.5)	J19
Y-981245	29.08	H4	A/B	17.9 (16.2–19.0)	15.9 (15.0–17.1)	J19
Y-981246	14.38	H5	A	19.5 (17.5–21.2)	17.1 (15.7–18.3)	J19
Y-981247	5.57	Diogenite			24.0 (22.3–27.2)	J19
Y-981252	11.51	H4	A	18.7 (17.3–24.1)	16.4 (15.0–21.2)	J19
Y-981253	131.12	H5	A	17.8 (16.9–18.6)	15.5 (14.4–17.4)	J19
Y-981256	9.61	H6	A	19.8 (18.5–21.0)	17.9 (16.2–22.0)	J19
Y-981266	11.8	CM2	A	11.2 (0.3–60.7)	2.5 (0.6–10.2)	J19
Y-981268	6.63	CM2	A	10.9 (0.4–34.0)	2.3 (0.4–24.0)	J19
Y-981271	12.13	CM2	A	5.8 (0.3–35.4)	2.9 (0.4–6.7)	J19
Y-981274	478.69	L3	A	23.1 (14.2–25.5)	15.1 (3.7–31.7)	J19
Y-981275	65.73	L3	A	23.5 (8.4–26.2)	15.7 (4.7–34.3)	J19
Y-981277	52.07	L3	A	22.3 (13.8–24.9)	14.0 (3.8–26.5)	J19
Y-981278	146.41	L3	A	23.1 (17.3–25.2)	13.7 (3.0–34.0)	J19
Y-981280	6.17	H5	B	20.2 (18.6–22.4)	17.5 (16.1–22.7)	J19
Y-981282	34.09	H6	A	17.7 (16.6–18.6)	15.8 (15.0–16.4)	J19
Y-981283	17.15	L3	A	25.5 (20.3–28.3)	18.1 (8.0–32.3)	J19
Y-981285	16.37	L3	A	25.1 (6.0–28.6)	18.6 (8.6–30.0)	J19
Y-981286	19.3	CM2	A	4.7 (0.2–53.3)	2.3 (0.5–6.6)	J19
Y-981288	6.72	CM2	A	7.3 (0.2–36.1)	2.7 (0.5–7.4)	J19
Y-981290	6.36	CM2	A	9.4 (0.3–39.4)	3.9 (0.9–8.2)	J19
Y-981299	31.16	H4	A	18.0 (17.0–19.2)	15.6 (13.8–17.1)	J19
Y-981301	126.4	L3	A	25.3 (22.8–30.9)	14.6 (4.3–23.9)	J19
Y-981302	147.96	L3	A	24.1 (22.2–25.4)	12.1 (2.0–22.1)	J19
Y-981303	43.89	L3	A	23.9 (13.9–26.2)	13.5 (2.0–23.0)	J19
Y-981304	102.79	L3	A	23.8 (19.3–26.2)	11.8 (2.7–30.2)	J19
Y-981305	228.72	L3	A	22.4 (12.3–25.8)	13.0 (5.5–24.8)	J19
Y-981307	68.91	H4	A	17.5 (15.7–19.7)	15.1 (13.6–16.1)	J19
Y-981308	86.92	H5	A	17.1 (16.5–17.9)	14.8 (13.9–15.4)	J19
Y-981309	5.34	H4	A	18.9 (17.9–21.0)	16.6 (15.6–19.3)	J19
Y-981318	5.81	H5	A	19.1 (17.6–20.3)	16.7 (14.9–18.4)	J19
Y-981319	7.73	H4	A	19.7 (18.3–24.8)	17.0 (15.0–20.7)	J19
Y-981321	12.73	H4	A	19.1 (17.9–21.0)	17.0 (15.6–20.6)	J19
Y-981326	15	L6	A	25.6 (23.8–28.0)	21.1 (19.3–23.0)	J19

Table 2. *Continued.*

Name	Mass (g)	Class	WG	Fa mole%	Fs mole%	Ref.
Y-981327	42.04	L3	A	16.3 (0.5–29.3)	7.7 (1.1–35.2)	J19
Y-981333	133.65	H4	B	18.1 (17.4–18.8)	15.5 (14.5–16.5)	J19
Y-981337	59.39	L6	B	22.8 (22.0–24.3)	19.3 (18.1–21.6)	J19
Y-981338	7.15	L6	A	25.3 (24.2–28.6)	21.4 (20.8–22.8)	J19
Y-981346	21.89	H6	A	17.0 (16.2–18.1)	15.0 (14.4–16.2)	J19
Y-981350	18.34	L6	A	25.1 (23.4–26.6)	21.3 (20.2–22.3)	J19
Y-981351	13.22	L5	A	25.3 (24.1–27.2)	22.2 (20.6–27.2)	J19
Y-981359	5.5	H5	B	19.0 (18.0–20.6)	16.7 (15.0–20.1)	J19
Y-981361	13.42	H4	A	18.1 (16.4–19.4)	16.7 (15.3–21.1)	J19
Y-981366	8.02	L6	A	25.8 (24.6–27.2)	22.2 (20.4–28.6)	J19
Y-981369	5.96	L6	A	25.3 (24.2–27.6)	21.8 (20.4–24.8)	J19
Y-981380	5.15	L3	A	23.5 (22.7–24.9)	20.4 (18.3–23.5)	J19
Y-981381	5.59	H4	B	19.0 (18.1–22.3)	16.6 (15.7–17.7)	J19
Y-981393	5.03	H5	A/B	19.4 (17.8–23.4)	17.0 (15.1–21.9)	J19
Y-981398	6.92	L5	A	25.5 (24.0–28.5)	21.4 (19.3–24.0)	J19
Y-981399	24.57	H3	B			J19
Y-981405	18.58	L6	A	25.7 (24.1–27.8)	21.7 (20.5–23.5)	J19
Y-981412	7.68	H6	A	19.9 (19.0–20.6)	17.5 (16.1–18.4)	J19
Y-981413	40.86	L6	A	23.1 (21.5–24.4)	19.8 (18.3–23.1)	J19
Y-981414	11.53	L6	A	25.4 (23.9–26.8)	21.7 (20.8–22.9)	J19
Y-981415	10.3	L6	A	25.4 (23.9–27.4)	22.1 (20.4–25.0)	J19
Y-981416	33.65	L6	A	22.9 (22.0–24.1)	19.1 (17.8–20.1)	J19
Y-981417	8.26	L6	A	25.9 (23.8–28.9)	21.6 (20.9–23.6)	J19
Y-981418	6.67	H4	A	19.5 (18.3–23.0)	16.8 (15.5–19.1)	J19
Y-981419	187.79	L6	A	23.4 (22.7–24.1)	19.6 (17.9–21.1)	J19
Y-981420	25.49	L6	A	23.5 (22.3–24.4)	19.8 (18.8–21.4)	J19
Y-981425	15.19	H4	B	18.9 (18.0–21.7)	17.4 (15.2–20.6)	J19
Y-981428	5	H3	A/B	18.6 (9.8–32.3)	16.4 (3.8–21.8)	J19
Y-981436	26.42	H4	B	17.6 (16.4–18.5)	15.3 (13.8–15.9)	J19
Y-981437	5.15	H4	A	19.2 (17.8–20.7)	17.6 (16.1–22.2)	J19
Y-981438	370.88	H4	A	17.4 (16.0–18.1)	14.9 (13.6–17.0)	J19
Y-981441	5.49	L6	A	25.6 (23.7–30.3)	21.4 (20.4–22.3)	J19
Y-981442	5.33	L6	A	25.9 (24.5–28.2)	22.1 (20.3–25.5)	J19
Y-981449	15.3	H5	B	19.0 (18.2–21.4)	16.7 (15.2–22.0)	J19
Y-981453	8.76	H4	A	19.6 (18.1–22.8)	17.4 (15.0–20.7)	J19
Y-981455	7.25	H4	A	19.5 (17.9–21.1)	17.3 (16.1–19.1)	J19
Y-981456	11.58	H4	A	19.3 (18.2–21.8)	16.8 (15.4–19.2)	J19
Y-981457	17.46	H4	A	19.5 (18.1–22.2)	16.9 (15.7–19.1)	J19
Y-981460	7.92	H5	B	18.8 (16.2–20.8)	16.7 (15.1–17.3)	J19
Y-981463	61.79	L6	A	23.0 (22.1–23.7)	19.5 (18.4–22.5)	J19
Y-981469	5.02	L5	A	25.2 (23.6–29.1)	21.3 (20.1–22.4)	J19
Y-981471	5.11	L6	A	25.3 (24.1–26.9)	21.9 (20.8–25.0)	J19
Y-981474	6.68	L6	A	25.5 (24.0–29.2)	22.3 (21.6–24.0)	J19
Y-981475	5.47	L6	A	25.5 (23.7–26.7)	21.9 (19.7–25.9)	J19
Y-981480	9.17	L5	A	23.4 (22.0–27.5)	19.9 (19.0–20.7)	J19
Y-981489	7.08	H6	A/B	18.8 (18.1–20.1)	16.4 (15.8–17.2)	J19
Y-981490	183.99	L3	A	25.5 (12.4–24.9)	13.9 (5.5–30.4)	J19
Y-981493	19.76	H5	A/B	19.2 (16.8–22.7)	17.3 (16.4–18.9)	J19
Y-981494	13.45	L6	A	25.7 (24.5–27.6)	22.2 (21.0–25.2)	J19
Y-981495	9.8	L6	A	25.8 (23.3–29.7)	21.8 (21.0–22.6)	J19
Y-981496	24.58	L6	A	23.6 (22.8–25.5)	20.1 (19.0–21.3)	J19
Y-981497	22.93	H5	A	17.7 (16.7–19.9)	14.9 (14.5–15.5)	J19
Y-981498	9.92	H4	A/B	19.2 (18.2–20.8)	17.0 (15.9–17.5)	J19
Y-981499	139.14	L6	A	24.0 (23.1–25.5)	19.8 (18.7–21.1)	J19
Y-981501	31.89	L6	A	23.4 (21.3–24.6)	19.8 (18.6–22.1)	J19
Y-981502	15.56	H6	B	19.2 (18.5–20.1)	17.0 (16.1–18.2)	J19
Y-981503	6.49	H4	A/B	18.9 (18.0–21.0)	16.8 (15.7–20.2)	J19
Y-981504	6.89	L3	A	25.8 (17.7–30.6)	18.7 (8.0–25.1)	J19
Y-981505	56.95	Acapulcoite		8.0 (7.1–8.8)	9.8 (8.7–10.8)	J19
Y-981507	10.81	H5	A/B	19.6 (18.4–22.4)	17.0 (10.4–21.2)	J19
Y-981510	9.08	H4	A/B	19.6 (18.3–21.5)	18.0 (15.5–20.6)	J19
Y-981513	17.65	H4	A/B	21.3 (20.0–22.7)	17.7 (11.8–20.1)	J19
Y-981514	8.71	L5	A	23.5 (22.2–25.6)	20.5 (18.8–23.6)	J19
Y-981515	9.14	L6	A	25.8 (24.2–27.7)	21.9 (20.8–25.0)	J19
Y-981516	5.58	L6	A	25.6 (24.2–27.8)	22.2 (21.1–24.2)	J19
Y-981522	37.07	L6	A	23.9 (22.7–26.4)	19.9 (17.7–21.9)	J19
Y-981523	45.47	L6	A	23.5 (22.3–25.2)	19.8 (18.0–22.2)	J19

Table 2. *Continued.*

Name	Mass (g)	Class	WG	Fa mole%	Fs mole%	Ref.
Y-981525	68.07	L6	A	23.8 (22.4–25.1)	19.8 (18.0–21.5)	J19
Y-981526	28.07	L6	A	23.6 (22.2–25.2)	19.5 (18.8–20.7)	J19
Y-981527	8.78	L6	A	25.8 (24.5–28.0)	21.6 (20.6–23.6)	J19
Y-981530	5.57	H4	A/B	19.3 (18.2–20.5)	17.0 (15.4–19.2)	J19
Y-981536	7.61	H3	B	16.8 (15.7–17.8)	15.1 (7.3–20.7)	J19
Y-981539	10.15	H6	A/B	20.1 (18.5–23.8)	18.4 (16.4–24.4)	J19
Y-981540	11.52	H5	A	19.5 (18.2–21.0)	17.2 (16.2–21.3)	J19
Y-981545	28.26	H4	B	17.4 (16.2–18.1)	15.3 (14.3–16.0)	J19
Y-981547	7.09	H6	A/B	19.3 (18.1–23.1)	16.8 (15.2–19.0)	J19
Y-981548	7.35	H6	B	19.1 (17.4–20.0)	16.9 (16.3–18.8)	J19
Y-981549	13.5	H6	B	19.1 (17.7–20.7)	17.2 (16.2–18.3)	J19
Y-981550	18.1	H6	B	19.5 (18.4–20.6)	17.3 (16.0–19.9)	J19
Y-981551	6.01	H5	B/C	19.6 (18.0–21.8)	17.9 (16.5–21.8)	J19
Y-981553	42	L6	A	23.8 (22.6–24.8)	20.1 (18.9–22.4)	J19
Y-981554	30.26	L6	A	23.6 (22.2–24.6)	19.8 (19.2–20.6)	J19
Y-981556	26.78	L5	A	23.0 (22.1–24.1)	19.5 (18.0–22.1)	J19
Y-981558	7.28	L5	A	25.1 (23.1–28.8)	20.9 (19.3–22.0)	J19
Y-981563	7.04	H4	A	18.6 (16.9–21.1)	16.8 (14.6–20.8)	J19
Y-981575	11.86	L6	A	25.3 (23.2–26.9)	21.6 (21.2–24.2)	J19
Y-981576	34.78	L6	A	23.6 (22.5–24.7)	20.4 (18.8–22.0)	J19
Y-981581	6.59	L6	A	25.0 (23.7–26.6)	21.3 (20.3–22.3)	J19
Y-981582	5.88	Diogenite			24.0 (22.3–25.0)	J19
Y-981584	10.92	LL6	A	28.6 (27.7–30.3)	24.0 (23.7–24.1)	J19
Y-981585	7.83	LL6	A	28.8 (27.0–32.2)	23.6 (22.8–24.9)	J19
Y-981586	7.29	H6	B	18.9 (16.8–21.2)	17.2 (16.1–20.2)	J19
Y-981588	25.88	L3	A	23.5 (12.2–26.3)	11.9 (3.9–24.7)	J19
Y-981591	7.1	L3	A	25.6 (22.2–28.0)	18.9 (6.2–42.1)	J19
Y-981593	27.39	H6	B	18.8 (17.6–19.8)	16.1 (15.0–16.7)	J19
Y-981594	9.14	H4	B	19.2 (17.8–22.6)	16.9 (16.0–19.3)	J19
Y-981595	26.66	H5	A/B	17.9 (17.2–18.8)	15.9 (15.0–17.0)	J19
Y-981597	12.98	LL6	A	28.3 (27.2–29.6)	23.4 (21.5–24.7)	J19
Y-981598	8.06	LL6	A	28.4 (26.8–29.5)	23.3 (22.7–23.8)	J19
Y-981600	14.57	H5	A/B	19.1 (17.8–23.6)	16.6 (14.8–18.9)	J19
Y-981601	15.61	L4	A/B	25.6 (24.1–28.6)	20.8 (10.3–23.8)	J19
Y-981602	58.84	L3	A	22.6 (14.8–25.4)	13.9 (4.2–31.1)	J19
Y-981603	12.46	H6	A	19.9 (18.6–21.0)	17.7 (16.8–20.9)	J19
Y-981604	137.86	Howardite			J19	
Y-981605	576.89	L6	A	23.8 (22.5–25.1)	20.0 (18.5–21.5)	J19
Y-981606	7.78	L3	A	24.7 (5.4–29.0)	17.8 (5.5–33.7)	J19
Y-981607	16.6	LL5	A	29.4 (27.1–34.0)	24.1 (22.4–26.3)	J19
Y-981613	27.45	H4	A	16.7 (16.0–17.2)	14.6 (13.4–16.1)	J19
Y-981615	88.66	L6	A	23.3 (22.0–25.3)	19.5 (18.2–22.9)	J19
Y-981616	40.3	H4	A	17.1 (16.0–18.3)	14.9 (13.6–15.8)	J19
Y-981617	134.67	Eucairite			J19	
Y-981619	5.39	Lodranite		9.1 (7.6–10.4)	12.3 (10.7–12.8)	J19
Y-981621	7.87	L3	A	24.8 (10.6–28.3)	14.1 (5.6–23.0)	J19
Y-981624	5.89	L4	A/B	25.5 (24.7–27.2)	21.6 (19.7–24.7)	J19
Y-981625	8.67	Eucairite			48.5 (47.1–49.3)	J19
Y-981627	39.39	H4	B	17.3 (15.8–18.1)	15.1 (14.3–15.9)	J19
Y-981629	21.13	L6	A/B	23.3 (22.4–24.4)	19.8 (18.5–21.2)	J19
Y-981630	15.92	H4	A/B	19.2 (18.2–22.8)	17.3 (16.1–19.3)	J19
Y-981631	8.29	H6	A	21.2 (20.3–24.9)	18.1 (17.3–18.9)	J19
Y-981632	5.53	CM2	A	3.1 (0.3–43.3)	3.8 (0.5–33.4)	J19
Y-981633	20.71	LL6	A	29.8 (26.3–31.0)	23.9 (21.2–25.3)	J19
Y-981634	92.66	H6	A	17.4 (16.0–18.3)	15.1 (14.0–15.8)	J19
Y-981638	11.39	Eucairite			48.9 (47.5–50.3)	J19
Y-981639	10.71	H6	A	19.0 (18.4–19.6)	16.6 (14.9–17.4)	J19
Y-981643	57.33	H6	B	17.7 (16.7–18.3)	15.6 (14.5–17.0)	J19
Y-981644	143.44	H5	A	17.2 (15.9–18.4)	15.3 (14.3–16.4)	J19
Y-981646	171.1	Eucairite			J19	
Y-981656	26.62	L3	A	17.4 (1.4–29.0)	11.1 (0.6–26.8)	J19
Y-981657	6.14	H4	A	18.9 (17.8–19.9)	16.6 (15.4–17.9)	J19
Y-981664	22.58	H3	A	10.9 (0.3–27.7)	9.1 (1.0–32.6)	J19
Y-981678	225.2	L6	A	23.5 (22.0–24.4)	19.6 (17.7–22.1)	J19
Y-981679	12.49	H5	A	20.2 (19.1–23.8)	17.9 (16.7–25.4)	J19
Y-981684	73.38	L6	A	24.7 (23.9–25.4)	20.4 (19.1–21.3)	J19
Y-981685	767.6	L6	A	25.0 (23.6–27.2)	21.0 (20.1–24.1)	J19

Table 2. *Continued.*

Name	Mass (g)	Class	WG	Fa mole%	Fs mole%	Ref.
Y-981687	5.32	H4	A	19.7 (18.1–21.8)	17.3 (15.8–20.1)	J19
Y-981691	17.75	LL6	A	26.1 (25.1–29.6)	21.9 (21.0–22.7)	J19
Y-981695	16.72	H6	B	20.3 (18.5–22.7)	17.9 (17.2–20.5)	J19
Y-981696	20.89	H5	A/B	18.9 (17.8–20.0)	16.6 (16.0–17.8)	J19
Y-981697	16.77	LL3	A/B	25.7 (14.2–31.1)	21.1 (8.9–29.6)	J19
Y-981700	9.68	LL4	A/B	25.7 (24.3–30.1)	21.8 (20.9–23.2)	J19
Y-981702	5.05	H6	B	19.2 (18.3–20.5)	16.9 (16.3–17.9)	J19
Y-981703	11.82	LL6	A	28.9 (27.8–29.9)	23.5 (22.4–24.3)	J19
Y-981705	74.1	H3	B/C	17.5 (13.3–18.7)	12.9 (4.9–22.6)	J19
Y-981706	5.41	H4	A	19.6 (18.1–23.0)	17.6 (16.4–20.2)	J19
Y-981709	82.24	L6	A	24.6 (23.6–25.4)	20.9 (20.3–21.2)	J19
Y-981712	24.47	L6	A	24.8 (23.4–31.9)	20.3 (18.7–21.6)	J19
Y-981713	28.66	L6	A	24.4 (23.6–25.8)	20.4 (19.5–21.3)	J19
Y-981715	11.08	LL4	A	28.7 (27.5–33.3)	23.5 (22.2–24.2)	J19
Y-981716	6.88	H5	A/B	19.0 (17.6–21.8)	16.7 (15.9–17.3)	J19
Y-981719	13.8	CM2	A	4.4 (0.3–31.3)		J19
Y-981721	15.24	H4	A	19.7 (18.4–25.5)	17.9 (16.2–26.0)	J19
Y-981722	22.86	LL6	A	29.4 (28.5–30.0)	23.7 (22.7–26.3)	J19
Y-981730	39.6	H4	A	18.6 (17.9–19.4)	16.3 (15.3–18.0)	J19
Y-981731	319.84	L6	A	25.0 (23.7–26.2)	20.8 (19.6–21.7)	J19
Y-981732	106.56	L6	A	24.9 (23.9–26.1)	20.8 (19.6–21.7)	J19
Y-981736	67.82	LL3	A	28 (16.8–30.3)	18.3 (5.5–25.8)	J19
Y-981744	21.13	H3	A	17.7 (0.4–28.8)	12.4 (2.5–24.2)	J19
Y-981745	8.32	H3	A	23.0 (9.7–31.0)	16.6 (10.6–22.1)	J19
Y-981746	6.25	H3	A	23.3 (17.2–28.4)	16.1 (4.8–24.8)	J19
Y-981752	296.26	L6	A	23.7 (22.7–25.6)	19.7 (18.1–20.7)	J19
Y-981754	5.16	H4	A/B	19.7 (18.3–22.6)	17.9 (16.3–22.2)	J19
Y-981779	17.27	H4	A/B	18.3 (2.1–22.4)	16.9 (14.9–24.3)	J19
Y-981782	6.05	L6	A/B	25.6 (24.3–28.0)	21.4 (19.7–23.3)	J19
Y-981784	19.15	H6	A/B	19.5 (17.5–22.3)	17.0 (14.9–20.8)	J19
Y-981808	15.84	H4	B	20.0 (18.4–23.3)	18.4 (16.6–21.8)	J19
Y-981809	16.24	L6	A/B	26.0 (23.7–29.1)	22.1 (20.4–23.9)	J19
Y-981823	88.51	H4	A/B	18.2 (17.0–19.8)	16.4 (14.9–16.4)	J19
Y-981824	85.69	H4	A/B	17.8 (16.9–18.5)	15.3 (14.4–16.1)	J19
Y-981825	73.41	H4	A/B	18.2 (17.5–20.2)	16.1 (15.1–17.5)	J19
Y-981826	45.53	H4	A/B	18.3 (17.4–18.9)	16.0 (14.8–19.2)	J19
Y-981827	30.29	H4	A/B	18.2 (17.3–18.9)	15.9 (15.1–16.5)	J19
Y-981828	35.46	H5	A/B	17.6 (16.7–18.7)	15.4 (14.6–16.4)	J19
Y-981829	16.64	H4	A/B	19.6 (18.4–20.9)	17.6 (16.2–19.2)	J19
Y-981830	16.92	H4	A/B	19.6 (18.9–21.2)	17.4 (16.1–19.8)	J19
Y-981831	18.49	H4	A	19.8 (18.7–22.2)	17.8 (16.2–20.8)	J19
Y-981832	14.01	H4	A/B	19.7 (18.3–22.9)	17.3 (16.4–21.0)	J19
Y-981833	13.57	H4	A	20.0 (18.4–23.4)	18.2 (16.6–21.6)	J19
Y-981834	6.62	H4	A	20.1 (19.1–23.4)	18.1 (16.7–20.8)	J19
Y-981835	7.38	H4	A	19.9 (18.7–22.8)	17.3 (16.2–18.7)	J19
Y-981836	4.83	H4	B	19.9 (18.3–23.2)	17.6 (16.3–22.6)	J19
Y-981860	6.89	H4	B	19.7 (18.8–21.3)	18.0 (16.2–21.4)	J19
Y-981861	5.02	H4	A/B	19.8 (18.7–23.0)	17.4 (15.9–19.9)	J19
Y-981862	5.94	H4	B	19.2 (17.3–22.5)	17.0 (15.8–18.3)	J19
Y-981863	5.42	H4	B	19.6 (18.6–21.3)	17.7 (16.3–22.1)	J19
Y-981894	234.34	L6	A/B	24.2 (22.8–25.6)	20.2 (18.5–21.2)	J19
Y-981896	15.47	L6	B	25.3 (23.1–29.3)	21.8 (20.7–26.6)	J19
Y-981897	46.55	H4	A/B	18.0 (17.4–18.7)	15.7 (14.5–17.6)	J19
Y-981898	22.62	H4	B	17.8 (16.2–19.0)	15.5 (14.3–16.7)	J19
Y-981900	56.53	L6	A/B	23.2 (21.9–24.1)	19.8 (18.8–21.0)	J19

Type specimens and main masses are at the National Institute of Polar Research, Tokyo, Japan (NIPR).

Meteorites classified by staff, NIPR.

Ref. is the Meteorite Newsletter, Japanese Collection of Antarctic Meteorites.

Y = Yamato.

Weathering index for Japanese Antarctic meteorites:

A: Limonite haloes on metal particles and limonite veins are minor.

B: 7.5 to 35% of metal particles are weathered to limonite. Several limonite veins are visible.

C: Most metal particles are weathered to limonite.