Antarctic Meteorite Newsletter
Volume 41, Number 2 September 2018

Curator's Comments
Kevin Righter, NASA-JSC

This newsletter reports samples from the 2014, 2015, 2016, and 2017 ANSMET seasons, including the first from the most recent 2017-2018 season to the Grosvenor Mountains and Amundsen Glacier areas.

Reported here are numerous (14) HED meteorites (including several pairing groups), 3 irons, 10 carbonaceous chondrites, a low FeO ordinary chondrite, and two H3.5 chondrites. The eucrites have been assigned pairing groups as best as possible given the macroscopic, microscopic, and mineral compositional data, but should be treated with caution. Any detailed petrologic work on these pairing groups should try to verify or confirm the pairings. New slices of these meteorites might reveal previously unrecognized lithologies or textures, which would than require a revision of the pairing relations.

In addition to the newly classified samples, there are some reclassifications: a) an unusual achondrite DOM 14289 reclassified from a lodranite to a QUE 93148-like ungrouped achondrite with possible affinities with HEDs, and b) over 300 equilibrated ordinary chondrites from the Dominion Range for which our magnetic susceptibility data indicates reclassification. We also report a pairing update for LAP 031047 and LAP 03788.

Updated classification for DOM 14289

Original classification notes:

This meteorite was examined in a thin section (,2) which contained only silicate material and a thick section (,4) dominated by metal with minor silicates and chromite. As a whole, the meteorite is metal dominated. Silicates are coarse grained, with individual grains reaching up to 3 mm. Pyroxenes exhibit approximately 2 micron scale striations of high birefringence. Chromites reach up to 1.4 mm. The metal exhibits partial swathing kamacite adjacent to silicates and chromite with plessite dominating most of the section. Metal and sulfide inclusions occur within the chromites. Compositionally, olivines are Fa_{12-13} and pyroxenes are Fs_5Wo_{42-46} and $Fs_{12}Wo_1$. The compositions and texture suggest grouping with the lodranites. However, the metal rich nature of the sample is reminiscent of QUE 93148, which was also originally classified as a lodranite, but may be related to the HEDs or pyroxene pallasites.

Since the time of the original classification, we have obtained oxygen isotope data indicating that this sample is not a lodranite, as originally sug-

A periodical issued by the Meteorite Working Group to inform scientists of the basic characteristics of specimens recovered in the Antarctic.

Edited by Cecilia Satterwhite and Kevin Righter, NASA Johnson Space Center, Houston, Texas 77058

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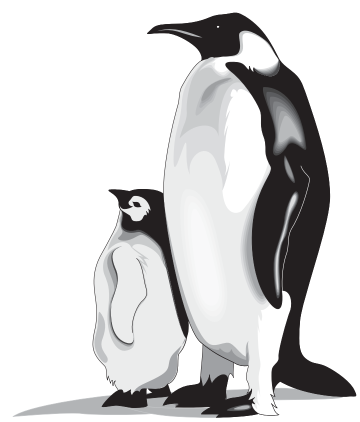


Sample Request Deadline
September 20, 2018

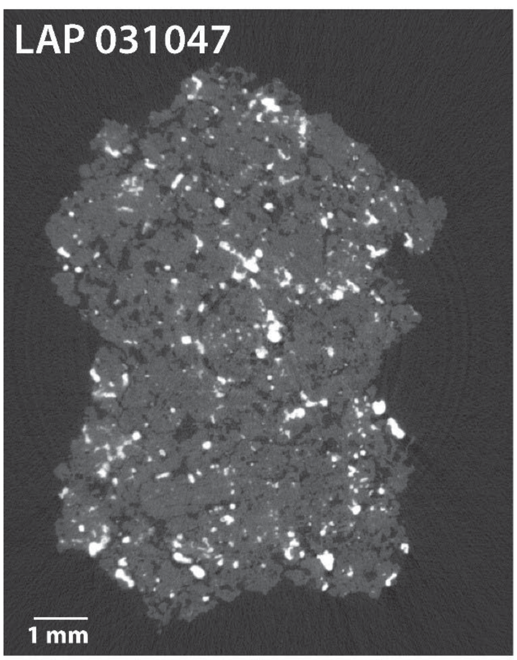
MWG Meets
October 4-5, 2018

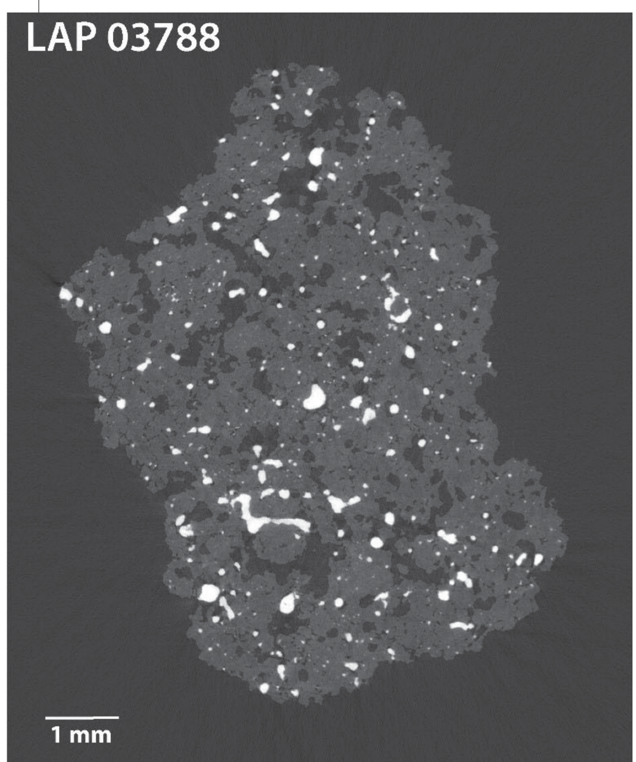
gested, but is instead related to QUE 93148. This was also recognized in the original classification notes, and classification as related to QUE 93148 is now favored with the new oxygen data. In addition, the olivine Fe/Mn and Fe/Mg ratios of ~40 and ~ 0.14, respectively, are also nearly identical to those of olivine in QUE 93148 (Goodrich and Righter, 2000). We thank K. Ziegler for carrying out the oxygen isotope measurements at UNM.

Sample	mg	date	$\delta^{17}O'$	$\delta^{18}O'$	$\Delta^{17}O'$	N
DOM 14289.6 clear	1.5	14-May-18	1.682	3.590	-0.214	1
DOM 14289.6 clear	1.8	14-May-18	1.728	3.719	-0.236	1
DOM 14289.6 dark	2.7	14-May-18	1.984	4.184	-0.225	1

Recommended pairing of LAP 031047 and LAP 03788

As part of an independent study of ordinary chondrites, PI Jon Friedrich carried out a micro CT scan of LAP 03788 and found that it had a nearly identical texture to another LAP chondrite from Wittmann et al. (2011) LAP 031047. Because this texture is unique and these samples were recovered in the same field season we have decided to pair them. Below are the two respective images of slices from the CT scanning (image of LAP 03788 courtesy of J. Friedrich, Fordham Univ., and image of LAP 031047 from Wittmann et al., 2011).





Wittmann, A., Kring, D. A., Friedrich, J. M., Troiano, J., Macke, R. J., Britt, D. T., Swindle, T. D., Weirich, J. R., Rumble III, D., Lasue, J., 2011, H/L chondrite LaPaz Icefield 031047 - A feather of Icarus?, Geochimica et Cosmochimica Acta, 75, 6140-6159, ISSN 0016-7037, http://dx.doi.org/10.1016/j.gca.2011.07.037 .

Reclassification and magnetic susceptibility of Dominion Range samples

Magnetic susceptibility of Dominion Range (DOM) 2008 season samples has been measured and presented below, along with suggested reclassification of equilibrated ordinary chondrites, based on the approach presented in AMN 40, no. 1 (Feb. 2017). There we reported that in a study of ~60 samples from Larkman Nunatak and Dominion Range, all H chondrites had log χ values > 4.9, and no LL chondrites had log χ values > 4.4. We have reclassified ~ 325 DOM 08 samples using these ranges as well. (See Table at the end of the newsletter.)

Field plan for the 2018-19 ANSMET Field Season

Ralph Harvey, Case Western Reserve University
Jim Karner, University of Utah

We're sure most readers of this newsletter can appreciate how much planning is involved to get a typical ANSMET season underway. In many cases it can be several years between the time an icefield is targeted in a support proposal to the day that ANSMET boots first set foot on the ice. Usually the six months before a season is when the pace really picks up. Details of the needs of the field party matched to the logistical capabilities of the US Antarctic program, with several rounds of feedback gradually turning plans into achievable reality. There are other cases where logistical issues (ranging from broken airplanes to a broken US Congress) can force planning to start all over from square one with no more than a day or two's notice. Somehow, (due to either luck, or deep forward thinking, or both) ANSMET has managed to field a team in every austral summer except one since 1976.

That's worth mentioning because for reasons too complicated to be discussed here, detailed planning for the upcoming 2018-19 season is not yet complete. Obviously we'd like everything to be set in stone, but we're no strangers to uncertainty. So we'll just keep pushing things as far forward as we can. Currently we plan a return to the icefields surrounding the Davis Nunataks and Mt. Ward, not surprisingly known as "Davis-Ward". Meteorites (designated DOM for the nearby Dominion Range) were first found at this site during a reconnaissance traverse through the upper Beardmore region by Bill Cassidy in 1985. In the 2003-04 season, a recon team visited the area for five days and recovered 89 meteorites, which pointed to the need for a systematic search of the area. Systematic searches in the 2008-09, 2010-11, and 2014-15 seasons yielded another 2000 meteorites. The Davis-Ward area is essentially a broad tongue of ice between two isolated mountains, which are joined by a recessional moraine (Figure 1). Meteorites have been recovered from all parts of the bare ice, but most have been found in either the 100-meter-wide trough that runs along the foot of Mt. Ward, or the moraines that outline the "mitten" (see Fig. 1). The bare ice is often heavy with terrestrial rock, so systematic sweeping can be slow-going. This year our goal is to complete search and recovery work at Davis-Ward; systematically search bare ice where it is warranted and methodically work through what remains of the unsearched moraines surrounding the icefields. If we finish early (and that's a big if), we will make a snowmobile traverse about 20 nm north to the Main Icefield at the foot of the Dominion Range. The team would spend the rest of the season on search and recovery efforts from the icefields there.

Report from the Smithsonian

Cari Corrigan, Geologist (Dept. of Mineral Sci.)

Things are rolling along as usual at the Smithsonian. The Hyperprobe is still running beautifully and the SEM is back online, allowing us to use both for classification of Antarctic meteorites. We have secured the funding for two, one-year positions in the Division of Meteorites, and are looking forward to having those folks on board sometime later this fall. We have ordered new cabinets for our meteorite vault in the Museum on the Mall, which will expand our storage capability, provide more workspace and a new display case. Finally, we are very sorry to see our current post doc, Nicole Lunning, move on to the next steps in her career this fall. Nicole has been an amazing asset to our department and she will be missed.

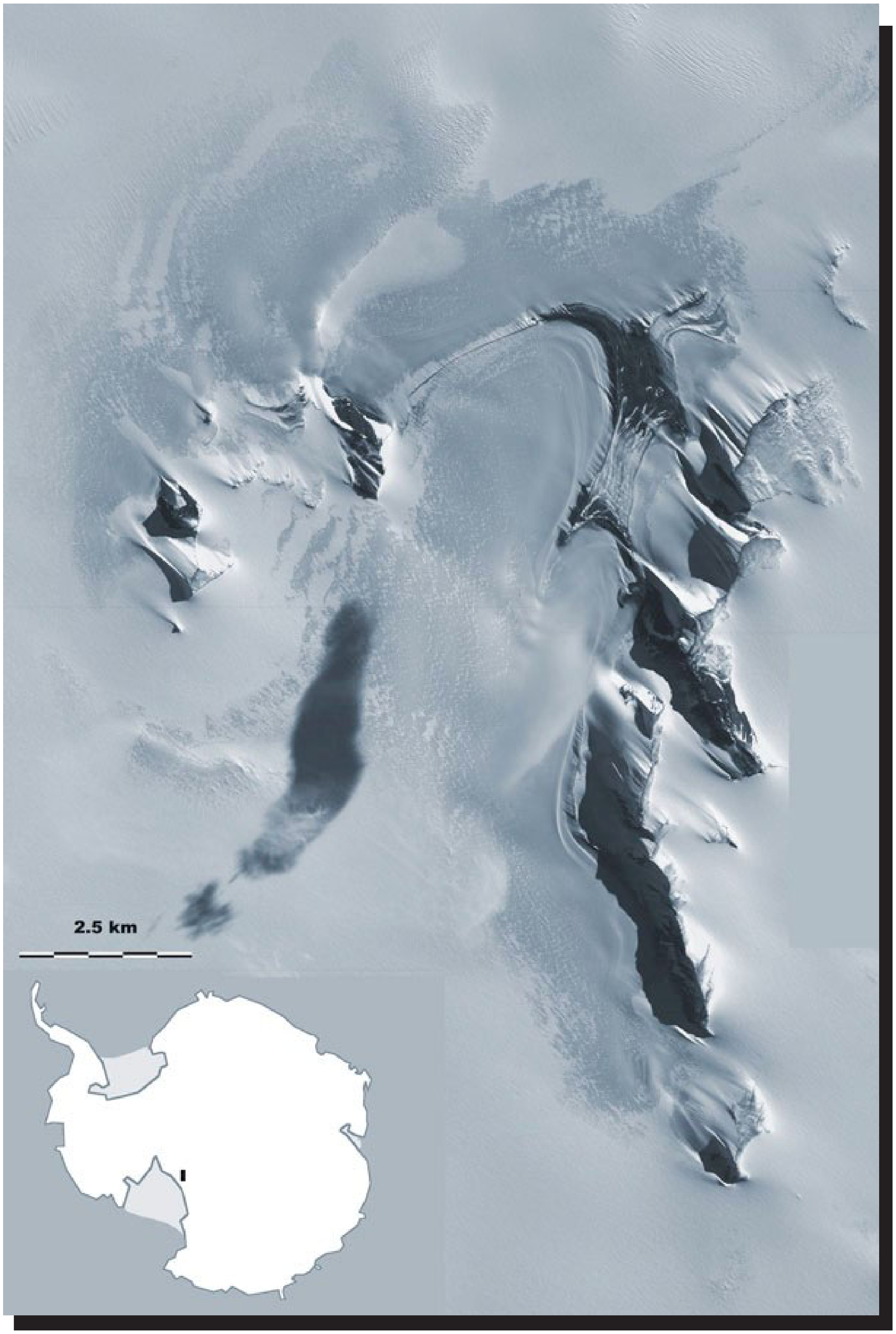


Figure 1. *Composite satellite image of the Davis-Ward icefields, with Mt. Ward to the right and Davis Nunataks to the left. The image is oriented with north toward the top. The remaining unsearched areas are about "half the fingers" and "part of the thumb" of the mitten-shaped central icefield.*

New Meteorites

2014-2017 Collection

Pages 6-21 contain preliminary descriptions and classifications of meteorites that were completed since publication of issue 41(1), March, 2018. Specimens of special petrologic type (carbonaceous chondrite, unequilibrated ordinary chondrite, achondrite, etc.) are represented by separate descriptions unless they are paired with previously described meteorites. However, some specimens of non-special petrologic type are listed only as single line entries in Table 1. For convenience, new specimens of special petrological type are also recast in Table 2.

Macroscopic descriptions of stony meteorites were performed at NASA/JSC. These descriptions summarize hand-specimen features observed during initial examination. Classification is based on microscopic petrography and reconnaissance-level electron microprobe analyses using polished sections prepared from a small chip of each meteorite. For each stony meteorite the sample number assigned to the preliminary examination section is included. In some cases, however, a single microscopic description was based on thin sections of several specimens believed to be members of a single fall.

Meteorite descriptions contained in this issue were contributed by the following individuals:

Rachel Funk, Roger Harrington, Kellye Pando, Cecilia Satterwhite and Kevin Righter
Antarctic Meteorite Laborabory
NASA Johnson Space Center
Houston, Texas

Cari Corrigan, Julie Hoskin, Nicole Lunning, and Tim McCoy
Department of Mineral Sciences
U.S. National Museum of Natural History - Smithsonian Institution
Washington, D.C.

Antarctic Meteorite Locations

ALH	—	Allan Hills
AMU	—	Amundsen Glacier
BEC	—	Beckett Nunatak
BOW	—	Bowden Neve
BTN	—	Bates Nunataks
BUC	—	Buckley Island
CMS	—	Cumulus Hills
CRA	—	Mt.Cranfield Ice Field
CRE	—	Mt. Crean
DAV	—	David Glacier
DEW	—	Mt. DeWitt
DNG	—	D'Angelo Bluff
DOM	—	Dominion Range
DRP	—	Derrick Peak
EET	—	Elephant Moraine
FIN	—	Finger Ridge
GDR	—	Gardner Ridge
GEO	—	Geologists Range
GRA	—	Graves Nunataks
GRO	—	Grosvenor Mountains
HOW	—	Mt. Howe
ILD	—	Inland Forts
KLE	—	Klein Ice Field
LAP	—	LaPaz Ice Field
LAR	—	Larkman Nunatak
LEW	—	Lewis Cliff
LON	—	Lonewolf Nunataks
MAC	—	MacAlpine Hills
MBR	—	Mount Baldr
MCY	—	MacKay Glacier
MET	—	Meteorite Hills
MIL	—	Miller Range
ODE	—	Odell Glacier
OTT	—	Outpost Nunatak
PAT	—	Patuxent Range
PCA	—	Pecora Escarpment
PGP	—	Purgatory Peak
PRA	—	Mt. Pratt
PRE	—	Mt. Prestrud
QUE	—	Queen Alexandra Range
RBT	—	Roberts Massif
RKP	—	Reckling Peak
SAN	—	Sandford Cliffs
SCO	—	Scott Glacier
STE	—	Stewart Hills
SZA	—	Szabo Bluff
TEN	—	Tentacle Ridge
TIL	—	Thiel Mountains
TYR	—	Taylor Glacier
WIS	—	Wisconsin Range
WSG	—	Mt. Wisting

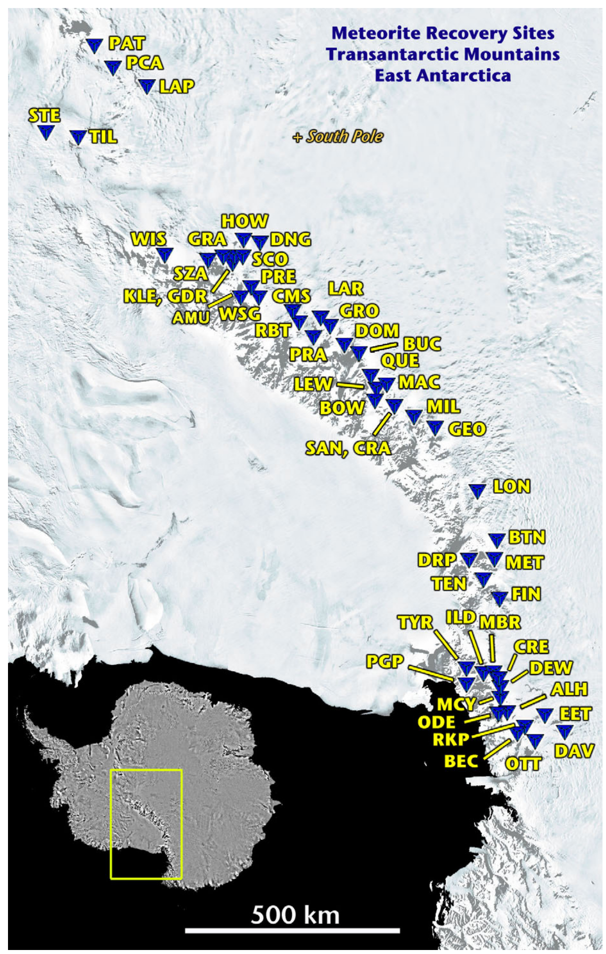


Table 1
Newly Classified Antarctic Meteorites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14001	8205.000	H5 CHONDRITE	B	A	18	17
DOM 14080	10.340	CHONDRITE UNGROUPED	C	A	15	5-14
DOM 14188	35.450	H4 CHONDRITE	Ce	A	18	7-29
DOM 14192	9.445	L5 CHONDRITE	A/B	A	25	20
DOM 14210	48.399	L6 CHONDRITE	A/B	A	25	21
DOM 14211	24.675	L5 CHONDRITE	B	A	25	21
DOM 14212	23.509	L6 CHONDRITE	B	A	25	21
DOM 14213	63.269	H6 CHONDRITE	B/C	A	19	17
DOM 14214	29.675	L6 CHONDRITE	A/B	A	24	22
DOM 14215	46.992	L5 CHONDRITE	B/C	A	24	21
DOM 14216	27.106	L6 CHONDRITE	B	A	24	21
DOM 14217	27.096	L6 CHONDRITE	B	A	25	20
DOM 14218	41.805	L5 CHONDRITE	B/C	A	25	21
DOM 14230	288.530	L5 CHONDRITE	B/C	A	25	
DOM 14231	244.620	L6 CHONDRITE	A/B	A	24	21
DOM 14232	161.460	H6 CHONDRITE	C	A	19	17
DOM 14233	164.100	L6 CHONDRITE	A	A	26	21
DOM 14234	193.87	H5 CHONDRITE	C	B	18	21
DOM 14235	63.720	L6 CHONDRITE	B	A	24	21
DOM 14250	49.702	H5 CHONDRITE	B	A/B	19	18
DOM 14251	30.263	L6 CHONDRITE	B/C	A	25	21
DOM 14252	26.192	H5 CHONDRITE	B/C	A	20	17
DOM 14253	33.229	L6 CHONDRITE	A/B	A	25	21
DOM 14254	32.339	H5 CHONDRITE	B	A	19	
DOM 14255	17.966	H5 CHONDRITE	B/C	A	18	18
DOM 14256	21.926	H6 CHONDRITE	B/C	A	20	19
DOM 14257	14.357	L6 CHONDRITE	B	A	25	21
DOM 14258	23.193	H6 CHONDRITE	B/C	A/B	20	17
DOM 14259	31.060	L6 CHONDRITE	B	A	25	21
DOM 14260	9.975	L6 CHONDRITE	B	A	24	21
DOM 14261	11.599	H5 CHONDRITE	A/B	A	19	18
DOM 14262	7.146	L6 CHONDRITE	B	A	24	21
DOM 14263	11.922	H5 CHONDRITE	B/C	A/B	18	16
DOM 14264	13.742	L6 CHONDRITE	B	A	25	21
DOM 14265	15.701	H6 CHONDRITE	B/C	A	19	17
DOM 14266	19.055	H5 CHONDRITE	B/C	A	19	18
DOM 14267	21.307	L6 CHONDRITE	B	A	25	21
DOM 14268	19.439	H5 CHONDRITE	B/C	A	19	17
DOM 14269	22.804	L6 CHONDRITE	B/C	A/B	25	21
DOM 14290	27.251	L6 CHONDRITE	A/B	A	24	21
DOM 14291	31.977	L6 CHONDRITE	B/C	A	25	22
DOM 14292	14.307	L5 CHONDRITE	B/C	A	25	22
DOM 14293	18.076	L6 CHONDRITE	A/B	A	25	21
DOM 14294	13.738	H5 CHONDRITE	A/B	A	18	17
DOM 14295	17.726	L6 CHONDRITE	B/C	A	25	
DOM 14296	14.015	L6 CHONDRITE	B/C	A	25	21
DOM 14297	11.052	L5 CHONDRITE	A/B	A	24	21

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14298	25.743	L6 CHONDRITE	A/B	A	25	21
DOM 14299	17.966	L6 CHONDRITE	A/B	A		20
DOM 14310	25.278	L6 CHONDRITE	A/B	A	25	21
DOM 14311	23.055	L6 CHONDRITE	B	A	25	21
DOM 14312	20.873	L6 CHONDRITE	B	A	25	
DOM 14313	20.598	L6 CHONDRITE	A/B	A	25	20
DOM 14314	17.513	L6 CHONDRITE	B/C	A/B	25	21
DOM 14315	13.150	L5 CHONDRITE	B/C	A	24	22
DOM 14316	11.129	L6 CHONDRITE	A/B	A	24	21
DOM 14317	16.705	L6 CHONDRITE	B	A	24	21
DOM 14318	14.912	L6 CHONDRITE	B/C	A	24	21
DOM 14319	12.388	L6 CHONDRITE	Be	A	25	21
DOM 14340	33.113	L6 CHONDRITE	A/B	A	25	20
DOM 14341	39.217	L6 CHONDRITE	B/C	A	25	21
DOM 14342	42.705	LL4 CHONDRITE	B	A	28	24
DOM 14343	48.451	L5 CHONDRITE	A/B	A	25	22
DOM 14344	50.959	L6 CHONDRITE	B/C	A	24	21
DOM 14345	44.888	L6 CHONDRITE	B/C	A	24	21
DOM 14346	23.062	L6 CHONDRITE	B/C	A	25	21
DOM 14347	33.898	L6 CHONDRITE	B/C	A	25	21
DOM 14348	40.590	L6 CHONDRITE	A/Be	A	24	20
DOM 14349	26.291	L6 CHONDRITE	B	A	24	21
DOM 14350	35.852	L6 CHONDRITE	B/C	A	25	21
DOM 14351	26.878	L5 CHONDRITE	B	A	24	21
DOM 14352	15.329	L6 CHONDRITE	B/C	A/B	24	20
DOM 14353	19.662	L6 CHONDRITE	A/B	A	24	21
DOM 14354	28.381	L6 CHONDRITE	A/B	A	25	21
DOM 14355	6.607	L6 CHONDRITE	B/C	A/B	25	21
DOM 14356	11.982	H6 CHONDRITE	B/C	A	19	17
DOM 14357	13.987	H6 CHONDRITE	B/C	A	19	17
DOM 14358	16.209	L6 CHONDRITE	B/C	A	24	21
DOM 14368	23.887	L6 CHONDRITE	B/C	A	23	19
DOM 14375	14.466	L5 CHONDRITE	B/C	A	25	21
DOM 14400	65.518	L6 CHONDRITE	A/B	A	25	21
DOM 14401	64.509	L5 CHONDRITE	B/C	A	25	21
DOM 14402	57.619	L6 CHONDRITE	B/C	A	24	22
DOM 14403	41.377	L6 CHONDRITE	A/B	A	25	21
DOM 14404	36.534	L5 CHONDRITE	B/C	A	26	22
DOM 14405	66.002	H6 CHONDRITE	B/C	A	19	17
DOM 14406	71.720	L6 CHONDRITE	A/B	A	25	
DOM 14407	84.250	H5 CHONDRITE	B/C	A/B	19	17
DOM 14408	63.981	H5 CHONDRITE	A/B	B	19	17
DOM 14409	73.130	L5 CHONDRITE	B	A	24	21
DOM 14410	53.889	H5 CHONDRITE	B	A	20	18
DOM 14411	53.791	L6 CHONDRITE	A/B	A	25	21
DOM 14412	82.589	H4 CHONDRITE	B	A	19	17
DOM 14413	99.891	L5 CHONDRITE	B/C	A	25	21
DOM 14414	100.68	L6 CHONDRITE	B/C	A	23	21
DOM 14415	128.801	L6 CHONDRITE	B/C	A	25	21

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14416	104.266	H6 CHONDRITE	B/C	B	18	17
DOM 14417	96.903	L6 CHONDRITE	B/C	A/B	24	21
DOM 14418	134.868	H6 CHONDRITE	B	A	19	18
DOM 14419	81.815	L6 CHONDRITE	A/B	A	24	21
DOM 14420	20.093	L6 CHONDRITE	B/C	A	23	20
DOM 14421	20.346	H5 CHONDRITE	B/C	A	19	17
DOM 14422	24.271	H6 CHONDRITE	B/C	A/B	19	18
DOM 14423	24.475	L6 CHONDRITE	B	A/B	24	22
DOM 14424	32.146	L6 CHONDRITE	A/B	A/B	24	21
DOM 14425	49.982	L5 CHONDRITE	B/C	A	25	21
DOM 14426	35.112	L6 CHONDRITE	A/B	A	25	22
DOM 14427	22.324	L5 CHONDRITE	B/C	A	25	22
DOM 14428	27.068	L5 CHONDRITE	A/B	A	25	21
DOM 14429	40.145	H3.5 CHONDRITE	B	A	5-44	8-25
DOM 14430	18.950	H6 CHONDRITE	B/C	A	19	18
DOM 14431	33.987	L6 CHONDRITE	A/B	A	24	22
DOM 14432	31.067	L6 CHONDRITE	B/C	A	25	22
DOM 14433	18.928	H5 CHONDRITE	B/C	A/B	19	17
DOM 14434	30.193	L5 CHONDRITE	B/C	A	25	21
DOM 14435	27.631	H4 CHONDRITE	B/C	A	19	17
DOM 14436	27.561	L5 CHONDRITE	B/C	A	25	
DOM 14437	32.904	L5 CHONDRITE	A/B	A	25	20
DOM 14438	41.315	H6 CHONDRITE	B/C	A	19	17
DOM 14439	100.154	H5 CHONDRITE	B/C	A	19	17
DOM 14445	5.091	LL6 CHONDRITE	B	A/B	28	
DOM 14470	35.160	L6 CHONDRITE	B	A	24	21
DOM 14471	44.840	L4 CHONDRITE	B/C	A/B	25	21
DOM 14472	26.110	L6 CHONDRITE	B/C	A	25	21
DOM 14473	43.600	H5 CHONDRITE	B/C	A	19	17
DOM 14474	72.510	L6 CHONDRITE	A/Be	A	24	20
DOM 14475	60.430	L6 CHONDRITE	A/B	A	24	21
DOM 14476	60.160	L6 CHONDRITE	B	B	25	
DOM 14477	43.110	L6 CHONDRITE	B/C	A	24	21
DOM 14478	58.710	L6 CHONDRITE	B/C	A	25	21
DOM 14479	31.430	H5 CHONDRITE	B/C	A/B	19	17
DOM 14490	16.290	L6 CHONDRITE	B	A/B	25	21
DOM 14491	18.830	H3.5 CHONDRITE	A	A	9-41	2-22
DOM 14492	30.710	L6 CHONDRITE	B/C	A	25	22
DOM 14493	11.190	L6 CHONDRITE	B/C	A	25	21
DOM 14494	13.280	L6 CHONDRITE	B/C	A	24	21
DOM 14495	13.270	L6 CHONDRITE	B/C	A	25	21
DOM 14496	14.860	L6 CHONDRITE	B/C	A	25	21
DOM 14497	22.500	H5 CHONDRITE	C	A	19	18
DOM 14498	21.650	L5 CHONDRITE	B/C	A	22	
DOM 14499	10.830	L6 CHONDRITE	Ce	A	25	21
DOM 14500	21.980	L6 CHONDRITE	A/B	A/B	25	22
DOM 14501	18.055	L6 CHONDRITE	B	A	24	21
DOM 14502	15.128	L6 CHONDRITE	B	A	25	
DOM 14503	18.510	L6 CHONDRITE	B	A	25	22

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14504	16.092	L6 CHONDRITE	B	A	25	
DOM 14505	17.842	L6 CHONDRITE	B/C	A	24	
DOM 14506	26.455	L6 CHONDRITE	A/B	A	25	22
DOM 14507	19.293	L6 CHONDRITE	B/C	A/B	25	
DOM 14508	12.874	L6 CHONDRITE	B	A/B	25	21
DOM 14509	33.466	L5 CHONDRITE	A/B	A	24	21
DOM 14527	14.110	L5 CHONDRITE	Be	B	25	
DOM 14560	13.268	L6 CHONDRITE	B/C	A	25	21
DOM 14561	7.176	L6 CHONDRITE	B/C	A	25	22
DOM 14562	17.133	L6 CHONDRITE	A/B	A	25	21
MIL 15082	35.858	H5 CHONDRITE	B/C	A	19	17
MIL 15083	27.598	H6 CHONDRITE	B/C	A	18	16
MIL 15084	24.850	L6 CHONDRITE	A/B	A	25	22
MIL 15085	42.171	L5 CHONDRITE	B	A	25	21
MIL 15087	19.597	L6 CHONDRITE	A/B	A/B	25	22
MIL 15088	30.538	H6 CHONDRITE	B/C	A	19	17
MIL 15089	30.965	H6 CHONDRITE	C	A/B	20	18
MIL 15090	15.084	L6 CHONDRITE	B/C	A	22	18
MIL 15091	11.888	H5 CHONDRITE	B/C	A	19	17
MIL 15092	18.727	L5 CHONDRITE	B/Ce	A	22	20
MIL 15093	21.073	H6 CHONDRITE	B/C	A/B	19	17
MIL 15094	10.636	CM2 CHONDRITE	Be	A/B	1-46	1
MIL 15095	12.489	H6 CHONDRITE	B/C	A	19	17
MIL 15096	16.58	H5 CHONDRITE	B/C	A	19	17
MIL 15097	16.096	H6 CHONDRITE	B/C	A/B	19	18
MIL 15098	4.436	H6 CHONDRITE	B/C	A	20	17
MIL 15250	11.156	H6 CHONDRITE	B/C	A	19	17
MIL 15251	8.337	LL6 CHONDRITE	B	A/B	29	23
MIL 15252	17.858	H6 CHONDRITE	B/C	A	18	16
MIL 15253	11.990	H6 CHONDRITE	B/C	A	20	17
MIL 15254	21.468	CV3 CHONDRITE	B	A	1-44	1
MIL 15255	7.492	CV3 CHONDRITE	B	A	1-52	1-15
MIL 15256	11.180	H6 CHONDRITE	B/C	A	20	16
MIL 15257	11.258	CV3 CHONDRITE	B	A	1-14	1-5
MIL 15258	36.636	H6 CHONDRITE	B/C	A/B	20	18
MIL 15299	15.297	L5 CHONDRITE	A	C	25	21
MIL 15357	48.785	H6 CHONDRITE	B/C	B	19	17
MIL 15370	28.343	H5 CHONDRITE	B/Ce	A	19	17
MIL 15371	18.278	L5 CHONDRITE	Be	A/B	25	21
MIL 15372	12.891	H6 CHONDRITE	Ce	A/B	21	18
MIL 15373	13.786	H5 CHONDRITE	B/Ce	A	21	17
MIL 15374	29.383	L6 CHONDRITE	B	A/B	24	20
MIL 15375	20.581	L5 CHONDRITE	A/Be	A/B	25	21
MIL 15376	36.611	L6 CHONDRITE	Be	A	24	
MIL 15377	23.306	H5 CHONDRITE	B/Ce	A	19	17
MIL 15378	16.525	H5 CHONDRITE	B/Ce	A/B	19	17
MIL 15379	29.798	H5 CHONDRITE	B/C	A	19	17
MIL 15383	557.700	H5 CHONDRITE	B/C	B	20	18

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
MIL 15390	36.150	H5 CHONDRITE	C	A/B	20	17
MIL 15391	27.790	H6 CHONDRITE	CE	A	19	18
MIL 15392	22.480	H6 CHONDRITE	CE	A	19	
MIL 15393	20.540	L5 CHONDRITE	B/C	B/C	24	21
MIL 15394	32.900	H6 CHONDRITE	CE	A	19	17
MIL 15395	21.450	H6 CHONDRITE	C	B	19	17
MIL 15396	14.630	H6 CHONDRITE	CE	A	19	17
MIL 15397	17.900	H6 CHONDRITE	C	A	18	
MIL 15398	16.500	H5 CHONDRITE	B/CE	B	18	16
MIL 15399	34.510	H6 CHONDRITE	CE	A/B	19	17
MIL 15416	1.250	L6 CHONDRITE	A/B	C	25	22
MIL 15417	1.200	H6 CHONDRITE	C	B	18	17
MIL 15418	0.850	L5 CHONDRITE	A/B	A/B	24	19
MIL 15430	0.170	H6 CHONDRITE	C	A	19	17
MIL 15431	0.260	L5 CHONDRITE	B/C	B	25	20
MIL 15432	0.530	H6 CHONDRITE	C	C	19	17
MIL 15433	1.040	LL4 CHONDRITE	A/B	A/B	29	23
MIL 15436	1.010	L6 CHONDRITE	Be	A	25	22
MIL 15477	0.760	H6 CHONDRITE	B	A/B	19	17
MIL 15478	0.540	H6 CHONDRITE	B/C	A	18	16
MIL 15531	1.370	H5 CHONDRITE	C	C	19	17
MIL 15532	1.450	H6 CHONDRITE	Ce	A/B	19	18
MIL 15533	1.310	H5 CHONDRITE	B	B	19	17
MIL 15534	0.390	H6 CHONDRITE	B	A/B	21	18
MIL 15535	1.400	L5 CHONDRITE	B	C	25	
MIL 15536	1.410	H5 CHONDRITE	B	A/B	20	17
MIL 15538	0.790	H5 CHONDRITE	Ce	A/B	20	18
MIL 15567	1.070	L6 CHONDRITE	C	A	26	22
EET 16002	259.400	L5 CHONDRITE	B/C	A/B	26	21
EET 16016	67.903	H5 CHONDRITE	B/C	A/B	19	17
EET 16020	1707.200	L6 CHONDRITE	A	A/B	24	21
EET 16021	183.169	L6 CHONDRITE	A/B	B	25	21
EET 16040	218.380	LL5 CHONDRITE	A/B	A	28	24
EET 16043	47.040	L6 CHONDRITE	A/B	A	25	
AMU 17290	14.393	CM2 CHONDRITE	Be	B/C	1-33	9
GRO 17001	28.215	H5 CHONDRITE	B/C	A	19	17
GRO 17004	52.933	CM2 CHONDRITE	Be	B/C	0-39	
GRO 17006	40.372	EUCRITE (POLYMICT)	A/B	B		28-64
GRO 17039	8.269	EUCRITE (POLYMICT)	A/B	A		27-62
GRO 17048	23.531	EUCRITE (POLYMICT)	A/B	A/B		29-66
GRO 17049	61.353	EUCRITE (POLYMICT)	A/B	B		27-65
GRO 17051	2805.950	IRON-IAB		A		
GRO 17059	102.442	CK5 CHONDRITE	B	A/B	31	23
GRO 17063	388.300	CR2 CHONDRITE	B	A	9-38	12-17
GRO 17064	226.400	CR2 CHONDRITE	B	A	1-36	9-19
GRO 17070	64.631	EUCRITE (UNBRECCIATED)	A	A/B		29-60
GRO 17098	38.752	EUCRITE (UNBRECCIATED)	A/B	A/B		24-60

Sample Number	Weight (g)	Classification	Weathering	Fracturing	%Fa	%Fs
GRO 17099	26.701	EUCRITE (POLYMICT)	A	A/B		20-52
GRO 17102	4959.500	IRON-IAB				
GRO 17168	133.858	EUCRITE (POLYMICT)	A/B	A/B		28-64
GRO 17169	78.959	CK4 CHONDRITE	A/B	A/B		11-15
GRO 17175	94.864	DIOGENITE	A	B		12-30
GRO 17176	131.112	EUCRITE (POLYMICT)	A/B	A		27-63
GRO 17189	25.324	EUCRITE (POLYMICT)	A	B		26-60
GRO 17195	75.770	IRON-UNGROUPED		A		
GRO 17200	46.365	EUCRITE (UNBRECCIATED)	A/B	B		25-61
GRO 17210	184.233	EUCRITE (UNBRECCIATED)	A/B	A/B		25-60
GRO 17211	47.300	EUCRITE (POLYMICT)	A/B	B		28-65

Table 2
Newly Classified Meteorites Listed by Type

Achondrites

Sample Number	Weight(g)	Classification	Weathering	Fracturing	%Fa	%Fs
GRO 17006	40.372	EUCRITE (POLYMICT)	A/B	B		28-64
GRO 17039	8.269	EUCRITE (POLYMICT)	A/B	A		27-62
GRO 17048	23.531	EUCRITE (POLYMICT)	A/B	A/B		29-66
GRO 17049	61.353	EUCRITE (POLYMICT)	A/B	B		27-65
GRO 17099	26.701	EUCRITE (POLYMICT)	A	A/B		20-52
GRO 17168	133.858	EUCRITE (POLYMICT)	A/B	A/B		28-64
GRO 17176	131.112	EUCRITE (POLYMICT)	A/B	A		27-63
GRO 17189	25.324	EUCRITE (POLYMICT)	A	B		26-60
GRO 17211	47.300	EUCRITE (POLYMICT)	A/B	B		28-65
GRO 17070	64.631	EUCRITE (UNBRECCIATED)	A	A/B		29-60
GRO 17098	38.752	EUCRITE (UNBRECCIATED)	A/B	A/B		24-60
GRO 17200	46.365	EUCRITE (UNBRECCIATED)	A/B	B		25-61
GRO 17210	184.233	EUCRITE (UNBRECCIATED)	A/B	A/B		25-60
GRO 17175	94.864	DIOGENITE	A	B		12-30

Carbonaceous Chondrites

Sample Number	Weight(g)	Classification	Weathering	Fracturing	%Fa	%Fs
GRO 17169	78.959	CK4 CHONDRITE	A/B	A/B		11-15
GRO 17059	102.442	CK5 CHONDRITE	B	A/B	31	23
MIL 15094	10.636	CM2 CHONDRITE	Be	A/B	1-46	1
AMU 17290	14.393	CM2 CHONDRITE	Be	B/C	1-33	9
GRO 17004	52.933	CM2 CHONDRITE	Be	B/C	0-39	
GRO 17063	388.300	CR2 CHONDRITE	B	A	9-38	12-17
GRO 17064	226.400	CR2 CHONDRITE	B	A	1-36	9-19
MIL 15254	21.468	CV3 CHONDRITE	B	A	1-44	1
MIL 15255	7.492	CV3 CHONDRITE	B	A	1-52	1-15
MIL 15257	11.258	CV3 CHONDRITE	B	A	1-14	1-5

Chondrites

Sample Number	Weight(g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14080	10.340	CHONDRITE UNGROUPED	C	A	15	5-14

H Type

Sample Number	Weight(g)	Classification	Weathering	Fracturing	%Fa	%Fs
DOM 14429	40.145	H3.5 CHONDRITE	B	A	5-44	8-25
DOM 14491	18.830	H3.5 CHONDRITE	A	A	9-41	2-2

Irons

Sample Number	Weight(g)	Classification	Weathering	Fracturing	%Fa	%Fs
GRO 17051	2805.950	IRON-IAB		A		
GRO 17102	4959.500	IRON-IAB				
GRO 17195	75.770	IRON-UNGROUPED		A		

**Notes to Tables 1 and 2:

"Weathering" Categories:

A: Minor rustiness; rust haloes on metal particles and rust stains along fractures are minor.
B: Moderate rustiness; large rust haloes occur on metal particles and rust stains on internal fractures are extensive.
C: Severe rustiness; metal particles have been mostly stained by rust throughout.
E: Evaporite minerals visible to the naked eye.

"Fracturing" Categories:

A: Minor cracks; few or no cracks are conspicuous to the naked eye and no cracks penetrate the entire specimen.
B: Moderate cracks; several cracks extend across exterior surfaces and the specimen can be readily broken along the cracks.
C: Severe cracks; specimen readily crumbles along cracks that are both extensive and abundant.

Classification of the ordinary chondrites in Table 1 & 2 was done by Energy Dispersive Spectroscopic (EDS) methods using a Scanning Electron Microscope (SEM). This can include the analysis of several olivine and pyroxene grains to determine the approximate Fayalite and Ferrosilite values of the silicates, grouping them into H, L or LL chondrites. Petrologic types are determined by optical microscopy and are assigned based on the distinctiveness of chondrule boundaries on broken surfaces of a 1-3 g chip. While this technique is suitable for general characterization and delineation of equilibrated ordinary chondrites, those undertaking detailed study of any meteorite classified by optical methods alone should use caution. It is recommended that a polished thin section be requested to accompany any chip and appropriate steps for a more detailed characterization should be undertaken by the user. (Cari Corrigan, Smithsonian Institution)

Table 3

Tentative Pairings for New Meteorites

Table 3 summarizes possible pairings of the new specimens with each other and with previously classified specimens based on descriptive data in this newsletter issue. Readers who desire a more comprehensive review of the meteorite pairings in the U.S. Antarctic collection should refer to the compilation provided by Dr. E.R. D. Scott, as published in the Antarctic Meteorite Newsletter vol. 9 (no. 2) (June 1986). Possible pairings were updated in Meteoritical Bulletins 76, 79, 82 through 106, which are available online from the Meteoritical Society webpage:

http://www.lpi.usra.edu/meteor/metbull.php

CR2 CHONDRITE

GRO 17064 with GRO 17063

CV3 CHONDRITE

MIL 15255 and MIL 15257 with MIL 15254

EUCRITE

GRO 17049, GRO 17099 and GRO 17176 with GRO 17048
GRO 17098, GRO 17200, and GRO 17210 with GRO 17070
GRO 17211 with GRO 17039

H3.5 CHONDRITE

DOM14491 with DOM 14429

Petrographic Descriptions

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
DOM 14080	Dominion Range	22503	1.8 x 2.1 x 1.3	10.34	Chondrite Ungrouped

Macroscopic Description: Rachel Funk
Brown fusion crust with red/orange rust covers 50% of the exterior of this meteorite. The interior is a black matrix with red/orange rust and metal throughout.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy
The section exhibits numerous small, well-defined chondrules up to 1.5 mm in a black matrix of fine-grained silicates, metal and troilite. Polysynthetically twinned pyroxene is abundant. The meteorite is moderately weathered. Olivine is Fa_{15}, pyroxene is Fs_{5-14}. The meteorite is a low FeO chondrite of type 4 (Russell et al., MAPS 1998). The meteorite is similar to Willaroy and Suwahib (Buwah).

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
DOM 14429	Dominion Range	22792	4.4 x 3.0 x 1.5	40.145	H3.5 Chondrite
DOM 14491		23415	2.2 x 2.0 x 2.0	18.830	

Macroscopic Description: Rachel Funk, Cecilia Satterwhite
The exteriors of these meteorites are covered with black/brown fusion crust; some rust is visible. The exposed surfaces reveal the interiors are a black matrix with gray, beige and white chondrules that are up to 3 mm in size.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy
The sections exhibit numerous small, well-defined chondrules (up to 1.5 mm) in a black matrix of fine-grained silicates, metal and troilite. Weak shock effects are present. Polysynthetically twinned pyroxene is extremely abundant. The meteorites are highly weathered. Silicates are unequilibrated; olivines range from Fa_{5-44} and pyroxenes from Fs_{2-25}. The meteorites are H3 chondrites (estimated subtype 3.5) and are likely paired.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
MIL 15094	Miller Range	24149	2.3 x 1.8 x 1.6	10.636	CM2 Chondrite

Macroscopic Description: Cecilia Satterwhite
80% of the exterior is brown/black fusion crust with fractures and evaporites; areas without fusion crust are dark brown with oxidation. The interior is a fine-grained black matrix with heavy oxidation in areas; light/weathered specks/inclusions are visible and some areas are rusty.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy
The section consists of a few small chondrules (up to 0.5 mm), mineral grains and CAIs set in a black matrix; rare metal and sulfide grains are present. Olivine compositions are Fa_{1-46} and one pyroxene analysis was Fs_1Wo_3. Aqueous alteration of the matrix is substantial, but the chondrules are only modestly altered. The meteorite is a CM2 chondrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
MIL 15254	Miller Range	23335	3.1 x 2.7 x 1.6	21.468	CV3 Chondrite
MIL 15255		23397	2.8 x 1.8 x 0.6	7.492	
MIL 15257		23383	2.0 x 1.8 x 1.2	11.258	

Macroscopic Description: Cecilia Satterwhite

Exteriors of these meteorites have 50-60% black/brown fusion crust with heavy oxidation in some areas. The interiors are a dark gray to black matrix with oxidation scattered throughout; small white and weathered specks are visible.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The sections exhibit large chondrules (up to 3 mm) and CAIs in a dark matrix. Olivines range from Fa_{0-52}, and pyroxenes from Fs_{1-15}. The paired meteorites are moderately weathered, unequilibrated, CV3 carbonaceous chondrites.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
AMU 17290	Amundsen Glacier	24715	4.3 x 3.2 x 1.5	14.393	CM2 chondrite

Macroscopic Description: Cecilia Satterwhite

Some black patches of fusion crust are on the exterior surface. The rest of the exterior is dark gray to black with fractures, pits and evaporite. There is one large hollow pit on one surface and some mm sized inclusions are visible. The interior is a dark gray to black matrix with some oxidation and tiny specks of lighter/weathered colors.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section consists of a few small chondrules (up to 0.5 mm), mineral grains and CAIs set in a black matrix; rare metal and sulfide grains are present. Olivine compositions are Fa_{0-33} with a peak at Fa_{0-2}. Orthopyroxene is Fs_9. Aqueous alteration of the matrix is substantial, but the chondrules are only modestly altered. The meteorite is a CM2 chondrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17004	Grosvenor Mountains	25740	5.0 x 4.3 x 2.3	52.933	CM2 chondrite

Macroscopic Description: Cecilia Satterwhite

40% of the exterior has black, frothy, fractured and pitted fusion crust. The areas without fusion crust are brown and heavily fractured/pitted with rusty areas. Some weathered inclusions/chondrules and minor evaporites are visible. The interior is a black matrix with an evaporite rim on one surface, and some oxidation in areas. Some mm-sized weathered and white inclusions are visible.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section consists of a few small chondrules (up to 0.5 mm), mineral grains and CAIs set in a black matrix; rare metal and sulfide grains are present. Olivine compositions are Fa_{0-39}. Aqueous alteration of the matrix is substantial, but the chondrules are only modestly altered. The meteorite is a CM2 chondrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17006	Grosvenor Mountains	25708	4.5 x 3.0 x 2.0	40.372	Eucrite (Polymict)

Macroscopic Description: Cecilia Satterwhite

The exterior is 35% covered with black, glassy fusion crust. The exposed surface is a gray matrix with white clasts and minor amounts of rust. The meteorite is pitted. The fresh interior surface has a light gray and white matrix with white 1-2 mm white clasts and 1 mm sized rust spots.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section represents a single, coarse-grained, cataclastized, brecciated, cumulate eucrite. The section is composed of coarse (up to 2 mm) pyroxene and plagioclase, crosscut by numerous offset fractures. Mineral compositions are homogeneous with orthopyroxene ($Fs_{63-66}Wo_2$), with lamellae of augite ($Fs_{20-29}Wo_{52-66}$), and plagioclase ($An_{88-92}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~31. The meteorite is a polymict eucrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17039	Grosvenor Mountains	25544	2.5 x 1.7 x 1.3	8.269	Eucrite (Polymict)
GRO 17211		25551	3.6 x 3.6 x 2.0	47.3	

Macroscopic Description: Rachel Funk, Kellye Pando, Cecilia Satterwhite

The exteriors of these meteorites have black glassy fusion crust. The exposed interiors have a gray matrix with white clasts throughout. The clasts are 2-4 mm in size and some are weathered to a beige color. There are some fractures cutting through the interiors of the meteorites. The fresh interiors have a light gray to white matrix with white clasts 2-4 mm in size. Minor amounts of orange rust are present.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The sections consist of a fine-grained brecciated matrix with up to 2.5 mm clasts of coarse-grained eucritic material. Mineral compositions are homogeneous with orthopyroxene ($Fs_{65}Wo_2$), lamellae of augite ($Fs_{27}Wo_{52-65}$), and plagioclase ($An_{88}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~31. The meteorites are polymict eucrites.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17048	Grosvenor Mountains	25575	3.8 x 2.4 x 2.0	23.531	Eucrite (Polymict)
GRO 17049		25590	4.0 x 3.7 x 3.5	61.353	
GRO 17099		25736	3.2 x 2.8 x 2.6	26.701	
GRO 17176		25601	7.0 x 5.0 x 2.5	131.112	

Macroscopic Description: Rachel Funk, Cecilia Satterwhite

The exteriors range from 60% to 90% black, glassy fusion crust, with some rust spots. The exposed surfaces vary in color from gray to black to white, with white and tan clasts and minor amounts of rust. The fresh interior surfaces have light gray and white matrices with white 1-2 mm white clasts and 1 mm sized rust spots.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

These sections are similar enough to suggest that they represent a single, coarse-grained, cataclastized, brecciated, cumulate eucrite. The sections are composed of coarse (up to 2 mm) pyroxene and plagioclase crosscut by numerous offset fractures. Mineral compositions are homogeneous with orthopyroxene ($Fs_{63-66}Wo_2$), with lamellae of augite ($Fs_{20-29}Wo_{52-66}$), and plagioclase ($An_{88-92}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~31. The meteorites are polymict eucrites.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17051	Grosvenor Mountains	25594	19.0 x 8.0 x 5.0	2805.95	Iron-IAB

Macroscopic Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This roughly rectangular mass measures ~20 x 8 x 6 cm. One side is flattened with shallow indentations, likely regmaglypts, and exhibits both weathering (including an overall brownish stain and rust haloes) and whitish regions suggestive of evaporites. The other side exhibits deep indentation with evaporite deposits in the lowest portion of those indentations, suggestive of extensive weathering and possible ablation of less resistant phases.

Thick Section (,2) Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This section exhibits a coarse Widmanstätten pattern with kamacite lamellae of ~1 mm in width. Kamacite exhibits subgrain boundaries and α_2 structure and some grains exhibit a distinct darkening and cross-hatching suggestive of Neumann bands. Taenite ranges from thin ribbons to coarser areas with well-developed plessitic structure. Brecciated and weathered inclusions of troilite and daubréelite are present. Taken together these features are suggestive of extensive shock. Compositionally, this iron has 7.3 wt.% Ni, and 0.08 wt.% P, determined from microprobe transects. Classification is uncertain, but the meteorite may be a IAB iron.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17059	Grosvenor Mountains	25507	8.0 x 3.0 x 2.5	102.442	CK5 Chondrite

Macroscopic Description: Cecilia Satterwhite

The exterior is 75% black fractured fusion crust with some gray matrix and evaporites visible. The interior is a gray matrix with some oxidation and tiny inclusions visible.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section consists of a few large (up to 2 mm), poorly-defined chondrules in a matrix of finer-grained silicates, sulfides and very abundant magnetite. The meteorite displays little weathering, but is extensively shock blackened. Silicates are homogeneous. Olivine is Fa_{31} and orthopyroxene is Fs_{23}. The meteorite appears to be a CK5 chondrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17063	Grosvenor Mountains	25639	8.0 x 5.0 x 4.5	388.3	CR2 Chondrite
GRO 17064		25714	6.0 x 6.0 x 5.5	226.4	

Macroscopic Description: Cecilia Satterwhite

The exteriors have black fusion crust, patches on some surfaces; areas without fusion crust are black/gray with brown weathered areas; abundant inclusions/chondrules of various sizes and colors are visible; surfaces are pitted in areas. The interiors are dark gray to black in areas with some brown oxidation; abundant inclusions/chondrules of various sizes and colors are present.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The sections exhibit large (up to 2 mm), well-defined, metal-rich chondrules and CAIs in a dark matrix of FeO-rich phyllosilicate. Polysynthetically twinned pyroxene is abundant. Silicates are unequilibrated; olivines range from $Fa_{1-38,}$ with most Fa_{0-2}, and pyroxenes from $Fs_{9-19}Wo_{1-2}$. The meteorites are likely paired CR2 chondrites.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17070	Grosvenor Mountains	25591	5.0 x 3.2 x 2.6	64.631	Eucrite (Unbrecciated)
GRO 17098		25637	3.4 x 2.7 x 2.5	38.752	
GRO 17200		25604	3.1 x 2.8 x 3.7	46.365	
GRO 17210		25766	6.5 3.2 x 4.6	184.233	

Macroscopic Description: Rachel Funk, Cecilia Satterwhite

The exteriors have 50-65% black, glassy fusion crust. The exposed surfaces show darker gray matrices with light gray and white inclusions and a slightly gray matrix with white and dark gray inclusions. The fresh surfaces reveal a gray matrix with darker gray and white inclusions. Minor amounts of rust are present.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The sections are dominated by coarse grained basaltic material which is unbrecciated and heavily shocked. Mineral compositions are homogeneous with orthopyroxene ($Fs_{61}Wo_{2-5}$), augite ($Fs_{25}Wo_{44}$), and plagioclase ($An_{80-88}Or_{1-4}$). The Fe/Mn ratio of the pyroxene is ~33. The paired meteorites are coarse-grained, shocked, unbrecciated eucrites.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17102	Grosvenor Mountains	25624	12.0 x 11.5 x 10.0	4959.5	Iron-IAB

Macroscopic Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This cone-shaped mass is ~12x12x10 cm. The rounded upper surface exhibits a pitted surficial layer overlying a smoother undersurface. Areas up to 3 x 8 cm are primarily this smoother undersurface suggestive of multiple generations of fusion crust formation. The underside is partially bound by a lip of fusion crust and is somewhat flattened but irregular with indentations up to 3 cm in dimension. Overall the meteorite has the appearance of an oriented individual.

Thin Section (,2) Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This thick section exhibits a poorly developed Widmanstätten pattern with short, stubby kamacite lamellae (l/w=3-4). Kamacite lamellae often contain horsetail graphite in the direction of elongation of the lamellae. Coarse schreibersite and taenite up to 0.5 mm in width with plessitic interiors present. Inclusions of sphalerite are found as minor phases. Weathering is pervasive on the edges of the meteorite. No fusion crust was observed, but α_2 structure extends ~2 mm into the section. Compositionally, this iron has 8.0 wt.% Ni, and 0.08 wt.% P, determined from microprobe transects. The composition, structure and inclusions suggest that this meteorite is a IAB iron.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17168	Grosvenor Mountains	25784	5.5 x 5.0 x 3.3	133.858	Eucrite (Polymict)

Macroscopic Description: Rachel Funk, Cecilia Satterwhite

The exterior is 85% covered by black, glassy fusion crust. The exposed surface has a gray matrix with tan and white clasts (up to 2 mm in size). Some of the clasts have minor rust around them. The fresh interior is a light gray matrix with abundant beige clasts that are up to 5 mm in size. There are some white inclusions present.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The meteorite is dominated by fine-grained (~200 micron average grain size) basaltic material which occurs as both the host and clasts within the meteorite. Clasts up to 0.5 mm exhibit acicular to equigranular textures. Mineral compositions are homogeneous with orthopyroxene ($Fs_{64}Wo_2$), with lamellae of augite ($Fs_{28}Wo_{43}$), and plagioclase ($An_{64}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~32. The meteorite is a polymict eucrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17169	Grosvenor Mountains	25798	5.4 x 4.4 x 2.5	78.959	CK4 Chondrite

Macroscopic Description: Cecilia Satterwhite

The exterior is 85% covered with black/brown fractured fusion crust. Some gray matrix is visible and is pitted and weathered in areas. The interior is a gray matrix with mm sized light, dark and weathered inclusions and minor oxidation.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section consists of large (up to 2 mm), well-defined chondrules in a matrix of finer-grained silicates, sulfides and very abundant magnetite. The meteorite is little weathered, but extensively shock blackened. Silicates are homogeneous. Olivine is Fa_{33} and orthopyroxene is Fs_{11-15}. The meteorite is a CK4 chondrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17175	Grosvenor Mountains	25513	4.2 x 3.8 x 3.4	94.864	Diogenite

Macroscopic Description: Rachel Funk, Cecilia Satterwhite

The exterior is 25% covered in black, patchy fusion crust. The exposed interior has an overall greenish color. The matrix is gray and beige with some white clasts. The surface is heavily pitted with a cave-like structure in the center of the sample. Some green crystals are visible to the naked eye. The fresh interior shows a fine-grained beige, gray and white matrix. Some green crystals are visible.

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

This meteorite consists of small (~200 micron average) fragments of basaltic material which occur as both the host and clasts within the meteorite. Occasional coarser grains and clasts (with sizes up to 0.5 mm) are observed. Mineral compositions are homogeneous with orthopyroxene ($Fs_{30}Wo_2$), with lamellae of augite ($Fs_{12}Wo_{44}$), and plagioclase ($An_{92}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~29. Orthopyroxene is the dominant modal phase, which makes this meteorite a diogenite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17189	Grosvenor Mountains	25797	3.5 x 2.5 x 1.7	25.324	Eucrite (Polymict)

Macroscopic Description: Rachel Funk, Cecilia Satterwhite

The exterior is 70% covered in black glassy fusion crust. The exposed surface is a gray matrix with black veins running along fractures. There are white inclusions present. There are minor amounts of rust near the fusion crust. The fresh surface shows a coarse-grained gray matrix with white inclusions. There are fractures with black veins running along them

Thin Section (,2) Description: Cari Corrigan, Tim McCoy

The section is dominated by a single clast of fine-grained eucritic material, with adhering brecciated, fine to coarse eucritic fragments. Mineral compositions are homogeneous with orthopyroxene ($Fs_{60}Wo_2$), augite ($Fs_{26}Wo_{43}$), and plagioclase ($An_{90-92}Or_{0.5}$). The Fe/Mn ratio of the pyroxene is ~31. The meteorite is a polymict eucrite.

Sample No.	Location	Field No.	Dimensions (cm)	Weight (g)	Classification
GRO 17195	Grosvenor Mountains	25771	3.0 x 2.9 x 2.0	75.77	Iron-Ungrouped

Macroscopic Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This very small meteorite is roughly equidimensional triangular shaped and measures 3x3x2 cm. The meteorite appears to have been lodged in soil with one side slightly flattened and coated in evaporite deposits. The rounded, upper side exhibits a pronounced Widmanstätten pattern on the exterior surface formed by preferential ablation by windborne particles in Antarctica. The exposed Widmanstätten pattern has band widths of ~1 mm, suggesting a medium octahedrite.

Thick Section (,2) Description: Cari Corrigan, Nicole Lunning, Tim McCoy

This thick section exhibits a well-developed Widmanstätten pattern with kamacite lamellae average width of 0.6 mm. Taenite exhibits extensive plessite development. Throughout the section, α_2 structure is present suggesting reheating. Single inclusions of chromite and schreibersite were observed. Fusion crust is absent but a few pockets of micromelting and dendritic crystallization were observed at the weathered surface. Compositionally, this iron has 10.1 wt.% Ni, and 0.04 wt.% P, determined from microprobe transects. The relatively high Ni and low P concentrations are unlike any of the major groups, suggesting an ungrouped classification.

Table of Reclassification and magnetic susceptibility of Dominion Range samples

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08001	1305.400	Euc Brec	-	3.47		33,1
DOM 08002	173.220	LL (Imp Melt)	-	3.86		33,1
DOM 08003	108.980	CM2	-	3.27		33,1
DOM 08004	294.500	CO3	-	4.89	DOM 08004	32,2
DOM 08005	88.760	Euc Brec	-	3.16		32,2
DOM 08006	667.300	CO3	-	4.92		32,2
DOM 08007	24.732	H5	-	4.99		33,1
DOM 08008	27.070	Euc Brec	-	2.80		33,1
DOM 08012	18.550	Ureilite	-	4.87		32,2
DOM 08013	28.750	CM2	-	3.87	DOM 08010	32,2
DOM 08014	19.613	Euc Brec	-	2.71		32,2
DOM 08017	1021.100	L5	-	4.85		40,1
DOM 08018	1447.800	L6	-	4.83		40,1
DOM 08019	1434.480	L5	-	4.63		40,1
DOM 08020	1020.600	L5	-	4.84		40,1
DOM 08021	1009.100	L5	-	4.54		40,1
DOM 08022	825.300	LL5	L5	4.89		34,1
DOM 08023	834.100	L6	-	4.57		40,1
DOM 08024	912.300	LL6	L6	4.72		34,2
DOM 08025	566.100	L6	-	4.44		40,1
DOM 08026	222.480	LL6	L6	4.68		34,1
DOM 08027	240.580	LL6	-	3.29		34,2
DOM 08028	281.720	L5	H5	5.10		34,2
DOM 08029	227.020	LL5	-	4.39		34,2
DOM 08030	255.300	L5	-	4.88		34,2
DOM 08031	325.900	L6	-	4.66		40,1
DOM 08032	212.400	LL5	L5	4.62		34,1
DOM 08033	319.700	LL5	L5	4.99		34,1
DOM 08034	96.897	L5	-	4.87		34,1
DOM 08035	251.400	LL6	-	4.26		34,1
DOM 08036	153.126	LL6	L6	4.54		34,2
DOM 08037	172.556	LL5	L5	4.49		34,1
DOM 08038	131.332	LL6	L6	4.50		34,1
DOM 08039	89.830	LL6	-	4.40		34,1
DOM 08040	106.713	LL6	L6	4.61		34,1
DOM 08041	145.774	LL5	L5	4.60		34,1
DOM 08042	125.488	LL6	L6	4.54		34,1
DOM 08043	83.450	LL5	L5	4.57		34,1
DOM 08044	124.432	LL6	H6	5.01		34,1
DOM 08045	82.859	LL6	-	4.34		34,1
DOM 08046	122.367	LL5	L5	4.80		34,1
DOM 08047	78.808	LL6	L6	4.69		34,1
DOM 08048	64.815	LL6	-	4.19		34,1
DOM 08049	70.331	LL5	L5	4.60		34,1
DOM 08050	154.162	LL6	L6	4.55		34,1
DOM 08051	193.111	LL5	L5	4.57		34,1
DOM 08052	88.684	LL5	L5	4.48		34,1
DOM 08053	74.637	LL5	L5	4.58		34,1
DOM 08054	68.210	L6	-	4.86		34,1
DOM 08055	44.344	LL6	L6	4.65		34,1
DOM 08056	65.944	LL6	L6	4.62		34,1
DOM 08057	44.239	L6	LL6	4.31		34,1

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08058	54.151	LL6	-	4.36		34,1
DOM 08059	88.031	LL6	L6	4.62		34,1
DOM 08060	49.430	LL6	L6	4.66		34,2
DOM 08061	48.430	L5	H5	4.97		34,1
DOM 08062	51.570	LL6	L6	4.64		34,1
DOM 08063	58.740	LL6	L6	4.69		34,2
DOM 08064	39.290	L5	H5	4.98		34,1
DOM 08065	56.250	LL6	L6	4.62		34,2
DOM 08066	115.570	LL5	H5	4.98		34,1
DOM 08067	28.870	LL6	L6	4.68		34,2
DOM 08068	19.120	LL6	L6	4.54		34,2
DOM 08069	33.980	LL6	L6	4.65		34,2
DOM 08070	35.060	LL6	L6	4.70		34,2
DOM 08071	23.000	L6	-	4.49		34,2
DOM 08072	28.420	LL6	L6	4.64		34,2
DOM 08073	25.020	LL6	L6	4.66		34,2
DOM 08074	38.700	LL6	L6	4.61		34,2
DOM 08075	20.910	LL6	L6	4.58		34,2
DOM 08076	16.480	LL6	L6	4.68		34,2
DOM 08077	19.430	LL6	L6	4.58		34,1
DOM 08078	16.780	LL6	L6	4.73		34,2
DOM 08079	12.520	LL6	L6	4.71		34,2
DOM 08080	149.856	LL5	L5	4.49		34,1
DOM 08081	193.476	LL5	L5	4.55		34,1
DOM 08082	255.200	LL5	L5	4.63		34,1
DOM 08083	220.108	LL6	L6	4.52		34,1
DOM 08084	247.900	L5	LL5	4.14		34,1
DOM 08085	10.310	LL6	L6	4.62		34,2
DOM 08086	28.770	LL5	L5	4.66		34,2
DOM 08087	38.230	LL5	H5	4.97		34,1
DOM 08088	34.110	L5	H5	4.98		34,2
DOM 08089	53.070	LL6	L6	4.71		34,1
DOM 08090	33.880	LL6	L6	4.68		34,1
DOM 08091	31.760	L6	H6	5.02		34,2
DOM 08092	47.760	LL6	L6	4.58		34,2
DOM 08093	24.370	LL5	L5	4.70		34,2
DOM 08094	55.760	L5	-	4.60		34,2
DOM 08095	18.000	L5	-	4.64		34,2
DOM 08096	28.070	LL6	H6	4.95		34,1
DOM 08097	56.360	LL6	L6	4.63		34,1
DOM 08098	21.300	LL5	L5	4.60		34,2
DOM 08099	21.240	L6	-	4.71		34,2
DOM 08100	15.360	LL6	L6	4.60		34,2
DOM 08101	22.740	LL6	L6	4.71		34,2
DOM 08102	18.860	LL6	L6	4.43		34,2
DOM 08103	14.660	LL5	H5	5.00		34,1
DOM 08104	28.840	LL6	L6	4.57		34,1
DOM 08105	13.720	LL6	L6	4.62		34,2
DOM 08106	16.240	LL6	L6	4.55		34,2
DOM 08107	16.940	LL6	L6	4.72		34,2
DOM 08108	14.920	LL6	L6	4.65		34,2
DOM 08109	23.280	LL5	H5	4.96		34,2
DOM 08110	85.990	L6	H6	5.10		34,1
DOM 08111	36.290	L6	H6	4.95		34,1

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08112	30.793	LL6	L6	4.51		34,1
DOM 08113	58.593	LL6	L6	4.41		34,1
DOM 08114	27.032	LL6	-	4.12		34,1
DOM 08115	65.307	H6	-	5.08		34,1
DOM 08116	95.774	LL5	L5	4.48		34,1
DOM 08117	43.898	H5	-	5.00		34,1
DOM 08118	102.806	L5	-	4.50		34,1
DOM 08119	54.746	LL5	L5	4.48		34,1
DOM 08122	11.320	L6	H6	5.15		34,2
DOM 08123	20.310	LL6	L6	4.69		34,2
DOM 08124	18.190	LL6	L6	4.74		34,2
DOM 08125	20.880	L6	-	4.62		34,2
DOM 08126	13.520	L5	H5	5.33		34,2
DOM 08127	14.950	L5	-	4.66		34,2
DOM 08128	18.290	LL6	L6	4.60		34,2
DOM 08129	14.240	LL6	L6	4.50		34,2
DOM 08130	17.230	H5	L5	4.70		34,2
DOM 08132	14.500	LL6	L6	4.61		34,2
DOM 08134	14.860	L5	H5	5.17		34,2
DOM 08135	12.750	L5	-	4.45		34,2
DOM 08136	18.820	H5	-	5.09		34,2
DOM 08137	13.690	LL6	H6	5.05		34,2
DOM 08139	21.760	CO3	-	4.82	DOM 08004	34,2
DOM 08140	39.080	LL6	L6	4.71		34,2
DOM 08141	20.350	LL6	L6	4.67		34,2
DOM 08142	21.120	L5	H5	5.14		34,2
DOM 08143	13.940	L6	H6	5.12		34,2
DOM 08144	35.280	L5	H5	4.98		34,2
DOM 08145	20.420	L5	H5	5.26		34,2
DOM 08146	30.000	LL5	L5	4.57		34,2
DOM 08147	44.110	LL6	L6	4.52		34,2
DOM 08148	33.990	LL6	L6	4.72		34,2
DOM 08149	43.390	H6	-	5.07		34,2
DOM 08150	12.155	LL6	L6	4.69		34,2
DOM 08151	18.503	LL6	L6	4.68		34,2
DOM 08152	17.008	H5	L5	4.54		34,2
DOM 08154	10.426	L5	-	4.85		34,2
DOM 08155	22.170	LL6	L6	4.58		34,2
DOM 08156	14.367	LL6	L6	4.74		34,2
DOM 08157	19.071	LL6	L6	4.78		34,2
DOM 08159	13.823	L5	-	4.63		34,2
DOM 08160	35.594	LL6	L6	4.46		34,2
DOM 08161	18.814	LL6	-	4.26		34,2
DOM 08162	31.194	H4	L4	4.63		34,2
DOM 08163	19.877	L6	H6	5.08		34,2
DOM 08164	60.688	L5	H5	5.11		34,2
DOM 08165	49.991	LL6	L6	4.52		34,2
DOM 08166	38.158	L6	H6	5.03		34,2
DOM 08167	37.288	H5	-	4.91		34,2
DOM 08168	20.418	L5	H5	5.07		34,2
DOM 08169	38.486	L6	H6	4.95		34,2
DOM 08170	10.980	LL6	L6	4.63		34,2
DOM 08171	17.350	LL6	L6	4.62		34,2
DOM 08172	38.010	H6	L6	4.59		34,2

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08173	15.350	LL6	L6	4.56		34,2
DOM 08174	28.380	LL6	L6	4.68		34,2
DOM 08175	15.610	LL6	L6	4.55		34,2
DOM 08177	31.030	LL6	L6	4.62		34,2
DOM 08178	22.450	LL6	L6	4.71		34,2
DOM 08179	29.780	LL6	L6	4.56		34,2
DOM 08180	22.740	LL5	L5	4.59		34,2
DOM 08181	35.240	LL6	L6	4.57		34,2
DOM 08182	42.660	LL5	L5	4.70		34,2
DOM 08183	28.290	L6	-	4.54		34,2
DOM 08184	32.790	LL6	L6	4.60		34,2
DOM 08185	49.290	LL6	L6	4.67		34,2
DOM 08186	74.410	LL6	L6	4.72		34,2
DOM 08187	27.890	LL6	L6	4.67		34,2
DOM 08188	77.510	L6	-	4.65		34,2
DOM 08189	30.760	LL6	L6	4.68		34,2
DOM 08190	15.460	LL6	L6	4.61		34,2
DOM 08191	19.230	LL6	L6	4.61		34,2
DOM 08192	23.320	LL6	L6	4.67		34,2
DOM 08193	20.200	LL6	L6	4.54		34,2
DOM 08194	14.350	LL6	L6	4.65		34,2
DOM 08195	40.730	LL6	L6	4.52		34,2
DOM 08196	28.330	L6	H6	4.94		34,2
DOM 08197	22.550	LL6	L6	4.66		34,2
DOM 08198	13.880	LL6	L6	4.68		34,2
DOM 08199	21.620	L5	H5	5.16		34,2
DOM 08200	15.929	LL5	-	4.26		34,1
DOM 08201	21.108	LL5	L5	4.67		34,1
DOM 08202	21.750	L5	-	4.64		34,1
DOM 08203	33.172	LL5	-	4.13		34,1
DOM 08204	24.069	LL6	L6	4.49		34,1
DOM 08205	17.656	LL6	L6	4.49		34,1
DOM 08206	38.973	LL6	L6	4.58		34,1
DOM 08207	22.579	LL6	L6	4.88		34,1
DOM 08208	27.053	LL6	L6	4.60		34,1
DOM 08209	25.418	L6	-	4.63		34,1
DOM 08210	15.943	LL6	L6	4.42		34,1
DOM 08211	12.620	LL6	L6	4.63		34,1
DOM 08215	14.553	LL6	L6	4.53		34,1
DOM 08216	13.031	L6	-	4.61		34,1
DOM 08217	13.350	LL6	L6	4.80		34,1
DOM 08218	18.343	L6	-	4.76		34,1
DOM 08219	21.854	LL6	H6	4.94		34,1
DOM 08221	41.190	LL6	L6	4.68		34,2
DOM 08222	16.640	LL6	L6	4.63		34,2
DOM 08223	21.310	LL6	L6	4.63		34,2
DOM 08224	31.560	L6	-	4.67		34,2
DOM 08225	21.690	LL6	L6	4.65		34,2
DOM 08226	21.220	LL6	L6	4.67		34,2
DOM 08227	20.360	L6	-	4.69		34,2
DOM 08228	18.070	LL6	L6	4.65		34,2
DOM 08229	11.240	LL6	L6	4.64		34,2
DOM 08230	29.612	LL6	L6	4.53		34,1
DOM 08231	23.262	LL6	L6	4.56		34,1

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08232	20.378	LL6	L6	4.71		34,1
DOM 08233	18.884	LL6	L6	4.71		34,1
DOM 08234	37.491	LL5	L6	4.55		34,1
DOM 08235	25.801	LL6	L6	4.67		34,1
DOM 08236	27.559	H6	-	4.95		34,1
DOM 08237	31.324	LL6	L6	4.56		34,1
DOM 08238	29.901	LL6	L6	4.63		34,1
DOM 08239	24.191	H5	-	5.15		34,1
DOM 08240	37.443	LL6	-	4.40		34,1
DOM 08241	20.557	LL6	-	4.22		34,1
DOM 08242	25.113	H6	L6	4.58		34,1
DOM 08243	43.244	LL6	L6	4.45		34,1
DOM 08244	45.384	LL6	L6	4.44		34,1
DOM 08245	42.200	LL6	L6	4.45		34,1
DOM 08246	42.321	LL6	-	4.34		34,1
DOM 08247	61.735	LL6	L6	4.55		34,1
DOM 08248	32.946	LL6	-	4.33		34,1
DOM 08249	72.204	LL5	L5	4.76		34,1
DOM 08250	22.930	L6	-	4.66		34,2
DOM 08251	20.010	LL6	L6	4.65		34,2
DOM 08252	28.770	LL6	L6	4.66		34,2
DOM 08253	37.880	LL6	L6	4.69		34,2
DOM 08254	25.510	LL6	L6	4.68		34,2
DOM 08255	29.290	LL6	L6	4.68		34,2
DOM 08256	78.460	LL5	-	4.17		34,2
DOM 08257	19.780	L5	-	4.67		34,2
DOM 08258	48.390	LL6	-	4.35		34,2
DOM 08259	64.170	LL6	L6	4.71		34,2
DOM 08261	22.610	L6	-	4.66		34,2
DOM 08262	15.010	LL6	L6	4.66		34,2
DOM 08263	12.430	L5	H5	5.03		34,2
DOM 08266	30.060	LL6	L6	4.56		34,2
DOM 08267	19.840	LL6	L6	4.64		34,2
DOM 08268	30.000	LL6	L6	4.73		34,2
DOM 08269	29.320	LL6	L6	4.55		34,2
DOM 08270	29.520	LL6	L6	4.51		34,2
DOM 08271	64.990	L6	H6	4.98		34,2
DOM 08272	52.670	LL6	-	4.16		34,2
DOM 08273	56.600	LL6	L6	4.77		34,2
DOM 08274	33.150	LL6	L6	4.63		34,2
DOM 08275	60.900	LL6	L6	4.65		34,2
DOM 08276	36.800	LL6	L6	4.66		34,2
DOM 08277	21.040	LL6	L6	4.59		34,2
DOM 08278	83.610	LL6	L6	4.78		34,2
DOM 08279	30.850	LL6	L6	4.46		34,2
DOM 08280	23.970	L6	-	4.56		34,2
DOM 08281	15.320	LL6	L6	4.56		34,2
DOM 08282	20.810	LL6	L6	4.61		34,2
DOM 08285	25.020	LL6	L6	4.52		34,2
DOM 08287	12.600	LL6	L6	4.68		34,2
DOM 08288	13.990	L6	LL6	4.31		34,2
DOM 08290	24.820	LL6	L6	4.78		34,2
DOM 08291	28.720	LL6	L6	4.48		34,2
DOM 08292	29.170	LL5	L5	4.63		34,2

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08293	20.820	LL6	L6	4.68		34,2
DOM 08294	28.710	L6	-	4.82		34,2
DOM 08295	28.510	H5	L5	4.76		34,2
DOM 08296	23.700	L6	H6	5.19		34,2
DOM 08297	57.090	LL6	L6	4.69		34,2
DOM 08298	23.920	LL6	L6	4.61		34,2
DOM 08299	22.160	LL6	L6	4.60		34,2
DOM 08302	15.610	L6	-	4.66		34,2
DOM 08303	11.120	L6	-	4.78		34,2
DOM 08306	13.290	L6	-	4.58		34,1
DOM 08312	12.870	LL6	L6	4.60		34,1
DOM 08313	18.520	L5	H5	4.91		34,2
DOM 08314	12.890	L6	H6	4.91		34,2
DOM 08316	20.340	LL6	L6	4.65		34,1
DOM 08317	28.170	L6	H6	5.02		34,2
DOM 08319	19.160	LL6	L6	4.70		34,1
DOM 08321	14.100	LL6	L6	4.60		34,1
DOM 08323	15.870	L5	H5	4.96		34,2
DOM 08324	12.410	LL6	L6	4.54		34,2
DOM 08325	18.850	LL6	-	3.98		34,1
DOM 08326	19.120	LL6	L6	4.70		34,1
DOM 08328	19.540	LL6	L6	4.57		34,1
DOM 08330	18.040	L6	-	4.64		33,2
DOM 08331	21.010	H6	L6	4.89		33,2
DOM 08332	24.030	L6	-	4.56		33,2
DOM 08333	35.640	LL6	L6	4.61		33,2
DOM 08334	19.760	LL6	-	3.57		34,1
DOM 08335	30.580	L6	-	4.72		34,1
DOM 08336	26.110	LL6	L6	4.78		33,2
DOM 08337	27.620	L (Imp Melt)	-	4.60	DOM 08397	34,1
DOM 08338	18.980	L6	-	4.80		33,2
DOM 08339	34.840	LL6	L6	4.65		33,2
DOM 08344	11.380	L6	H6	5.14		34,1
DOM 08347	10.320	L6	H6	5.17		34,1
DOM 08351	26.300	CO3	-	4.88	DOM 08004	34,1
DOM 08352	14.630	H6	LL6	4.20		33,2
DOM 08353	12.680	L5	-	4.65		34,1
DOM 08356	10.960	LL6	L6	4.62		33,2
DOM 08359	21.350	LL6	L6	4.52		33,2
DOM 08360	14.610	L6	LL6	4.35		34,2
DOM 08361	38.720	LL6	L6	4.53		34,2
DOM 08362	19.780	LL6	L6	4.55		34,2
DOM 08363	24.290	LL6	L6	4.67		34,2
DOM 08364	20.950	LL5	L5	4.73		34,2
DOM 08365	18.970	L6	-	4.86		34,2
DOM 08366	48.730	L6	H6	5.10		34,2
DOM 08367	20.930	H6	-	5.28		34,2
DOM 08368	28.450	LL6	L6	4.60		34,2
DOM 08369	18.040	LL6	L6	4.62		34,2
DOM 08390	83.270	H5	-	5.10		34,1
DOM 08391	80.620	H6	LL6	4.11		33,2
DOM 08392	79.100	L6	-	4.55		34,1
DOM 08393	34.170	LL6	L6	4.68		33,2
DOM 08394	42.430	LL6	L6	4.58		33,2

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08395	53.210	LL6	L6	4.44		33,2
DOM 08396	44.790	LL5	L5	4.76		33,2
DOM 08397	68.770	L (Imp Melt)	LL (Imp Melt)	4.35		34,1
DOM 08398	59.710	LL5	L5	4.55		33,2
DOM 08399	85.500	L6	-	4.66		33,2
DOM 08400	49.910	L6	H6	4.94		34,2
DOM 08401	97.860	L5	H5	4.93		34,2
DOM 08402	55.750	L5	H5	5.08		34,2
DOM 08403	78.670	L5	-	4.89		34,2
DOM 08404	70.270	L6	H6	5.02		34,2
DOM 08405	92.800	L5	H5	5.13		34,2
DOM 08406	45.880	L5	H5	5.04		34,2
DOM 08407	115.610	L6	H6	5.09		34,2
DOM 08408	71.320	LL6	L6	4.77		34,2
DOM 08409	76.490	LL5	-	4.34		34,2
DOM 08410	29.340	L6	H6	5.22		34,2
DOM 08411	47.380	LL5	L5	4.65		33,2
DOM 08412	37.650	LL5	L5	4.74		33,2
DOM 08413	32.520	LL5	L5	4.58		33,2
DOM 08414	41.980	H6	-	5.15		33,2
DOM 08415	41.960	L6	-	4.48		33,2
DOM 08416	82.040	LL5	L5	4.66		33,2
DOM 08417	31.520	L6	-	4.64		33,2
DOM 08418	29.610	L6	-	4.65		33,2
DOM 08419	92.950	L5	-	4.62		33,2
DOM 08420	54.750	LL6	L6	4.56		34,2
DOM 08421	49.060	LL6	L6	4.66		34,2
DOM 08422	17.850	LL6	L6	4.60		34,2
DOM 08423	24.930	LL5	L5	4.78		34,2
DOM 08424	53.090	LL6	L6	4.70		34,2
DOM 08425	31.410	LL6	L6	4.61		34,2
DOM 08426	24.780	LL6	L6	4.59		34,2
DOM 08427	45.010	LL6	L6	4.58		34,2
DOM 08428	19.720	LL6	L6	4.64		34,2
DOM 08429	23.270	LL6	L6	4.52		34,2
DOM 08430	108.680	LL5	L5	4.71		33,2
DOM 08431	128.920	LL6	L6	4.70		33,2
DOM 08432	59.780	LL5	L5	4.69		33,2
DOM 08433	65.880	LL5	L5	4.65		33,2
DOM 08434	85.580	LL6	L6	4.80		33,2
DOM 08435	60.460	H6	-	4.91		33,2
DOM 08436	147.270	LL5	-	3.85		33,2
DOM 08437	45.470	LL6	L6	4.61		33,2
DOM 08438	113.070	LL6	L6	4.76		33,2
DOM 08439	106.190	LL6	L6	4.68		33,2
DOM 08440	29.700	L5	-	4.68		34,1
DOM 08441	12.740	L6	-	4.67		34,1
DOM 08442	14.230	H5	L5	4.66		34,1
DOM 08443	20.120	L5	H5	5.05		34,1
DOM 08444	36.750	L5	-	4.60		34,1
DOM 08445	12.330	L6	-	4.55		34,1
DOM 08446	25.810	L5	-	4.64		34,1
DOM 08447	18.610	L6	-	4.61		34,1
DOM 08448	57.630	LL5	L5	4.66		34,1

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08449	40.540	LL6	L6	4.62		34,1
DOM 08450	20.410	LL5	L5	4.72		34,1
DOM 08451	11.590	L6	-	4.63		34,1
DOM 08453	14.890	L6	-	4.74		34,1
DOM 08454	30.430	LL5	L5	4.61		34,1
DOM 08455	18.980	H6	-	5.10		34,1
DOM 08456	10.710	H6	L6	4.62		34,1
DOM 08457	16.950	LL6	L6	4.73		34,1
DOM 08458	19.200	LL6	L6	4.71		34,1
DOM 08459	21.270	LL6	L6	4.61		34,1
DOM 08460	53.410	LL5	L5	4.68		34,1
DOM 08461	122.410	L6	H6	4.97		34,1
DOM 08462	133.880	LL5	L5	4.57		34,1
DOM 08463	160.890	LL5	H5	4.92		34,1
DOM 08464	72.600	L6	H6	4.98		34,1
DOM 08465	92.500	L6	H6	5.06		34,1
DOM 08466	48.680	LL5	L5	4.65		34,1
DOM 08467	82.490	LL5	L5	4.57		34,1
DOM 08468	64.810	H3.5	L3.5	4.55		34,1
DOM 08469	148.790	LL5	L5	4.69		34,1
DOM 08470	36.313	LL6	L6	4.62		34,1
DOM 08471	31.255	LL6	L6	4.66		34,1
DOM 08472	18.503	LL5	L5	4.56		34,1
DOM 08473	14.869	LL5	L5	4.57		34,1
DOM 08474	17.445	LL6	L6	4.53		34,1
DOM 08475	17.927	L5	-	4.48		34,1
DOM 08476	25.079	CV3	-	3.59		34,1
DOM 08477	14.539	LL5	L5	4.70		34,1
DOM 08478	21.157	LL5	L5	4.59		34,1
DOM 08479	11.899	L6	-	4.56		34,1
DOM 08480	14.450	H5	L5	4.67		34,1
DOM 08482	21.400	LL6	L6	4.50		34,1
DOM 08483	19.200	L6	-	4.63		34,1
DOM 08484	22.370	LL6	L6	4.66		34,1
DOM 08485	18.310	LL6	L6	4.54		34,1
DOM 08486	23.040	LL6	L6	4.53		34,1
DOM 08487	25.210	LL6	L6	4.57		34,1
DOM 08488	25.210	LL6	L6	4.65		34,1
DOM 08489	12.890	LL5	L5	4.67		34,1
DOM 08490	18.540	LL6	L6	4.46		34,1
DOM 08491	34.470	L5	-	4.63		34,1
DOM 08492	35.650	LL6	L6	4.46		34,1
DOM 08493	22.760	LL5	L5	4.59		34,1
DOM 08494	21.190	L6	H6	5.01		34,1
DOM 08495	38.060	H6	-	4.96		34,1
DOM 08496	15.530	L6	H6	5.03		34,1
DOM 08497	28.720	L6	-	4.47		34,1
DOM 08498	16.910	LL6	L6	4.49		34,1
DOM 08499	55.380	LL6	L6	4.60		34,1
DOM 08500	65.836	LL6	L6	4.59		34,1
DOM 08501	68.736	LL5	H5	5.04		34,1
DOM 08502	68.757	LL6	L6	4.56		34,1
DOM 08503	15.281	LL6	-	4.01		34,1
DOM 08504	51.177	LL6	L6	4.47		34,1

Sample	Weight (g)	AMN Classification	New Classification	Magnetic Susceptibility	Pairing Group	AMN
DOM 08505	42.396	L6	-	4.57		34,1
DOM 08506	48.880	LL6	-	4.16		34,1
DOM 08507	37.465	LL6	-	4.32		34,1
DOM 08508	28.471	L6	-	4.54		34,1
DOM 08509	29.255	H5	L5	4.64		34,1
DOM 08510	166.495	LL6	-	4.09		33,2
DOM 08511	124.851	LL6	-	3.54		33,2
DOM 08512	208.315	LL5	-	4.37		33,2
DOM 08513	102.151	LL5	L5	4.69		33,2
DOM 08514	67.101	LL6	L6	4.78		33,2
DOM 08515	16.188	LL6	L6	4.71		34,1
DOM 08516	21.981	LL6	L6	4.52		34,1
DOM 08517	28.403	LL6	L6	4.55		34,1
DOM 08518	18.932	LL6	L6	4.71		34,1
DOM 08519	22.642	H6	L6	4.89		34,1
DOM 08520	31.077	LL6	L6	4.56		34,1
DOM 08521	15.972	LL6	L6	4.48		34,1

Sample Request Guidelines

The Meteorite Working Group (MWG), is a peer-review committee which meets twice a year to guide the collection, curation, allocation, and distribution of the U.S. collection of Antarctic meteorites. The deadline for submitting a request is 2 weeks prior to the scheduled meeting.

Requests that are received by the MWG secretary by **Sept. 20, 2018** deadline will be reviewed at the MWG meeting on **Oct. 4-5 in Washington, DC.** Requests that are received after the deadline may be delayed for review until MWG meets again in the **Spring of 2019**. Please submit your requests on time. Questions pertaining to sample requests can be directed to the MWG secretary by e-mail, fax or phone.

Requests for samples are welcomed from research scientists of all countries, regardless of their current state of funding for meteorite studies. Graduate student requests should have a supervising scientist listed to confirm access to facilities for analysis. All sample requests will be reviewed in a timely manner. Sample requests that do not meet the curatorial allocation guidelines will be reviewed by the Meteorite Working Group (MWG). Issuance of samples does not imply a commitment by any agency to fund the proposed research. Requests for financial support must be submitted separately to an appropriate funding agency. As a matter of policy, U.S. Antarctic meteorites are the property of the National Science Foundation, and all allocations are subject to recall.

Samples can be requested from any meteorite that has been made available through announcement in any issue of the ***Antarctic Meteorite Newsletter*** (beginning with 1(1) in June, 1978). Many of the meteorites have also been described in five *Smithsonian Contributions to the Earth Sciences*: Nos. 23, 24, 26, 28, and 30. Tables containing all classified meteorites as of August 2006 have been published in the Meteoritical Bulletins and *Meteoritics* and *Meteoritics and Planetary Science.*

They are also available online at:

http://www.meteoriticalsociety.org/simple_template.cfm?code=pub_bulletin

The most current listing is found online at:

http://curator.jsc.nasa.gov/antmet/us_clctn.cfm

All sample requests should be made electronically using the form at:

http://curator.jsc.nasa.gov/antmet/requests.cfm

The purpose of the sample request form is to obtain all information MWG needs prior to their deliberations to make an informed decision on the request. Please use this form if possible.

The preferred method of request transmittal is via e-mail. Please send requests and attachments to:

JSC-ARES-MeteoriteRequest@nasa.gov

Type **MWG Request** in the e-mail subject line. Please note that the form has signature blocks. The signature blocks should only be used if the form is sent via Fax or mail.

Each request should accurately refer to meteorite samples by their respective identification numbers and should provide detailed scientific justification for proposed research. Specific requirements for samples, such as sizes or weights, particular locations (if applicable) within individual specimens, or special handling or shipping procedures should be explained in each request. Some meteorites are small, of rare type, or are considered special because of unusual properties. Therefore, it is very important that all requests specify both the optimum amount of material needed for the study and the minimum amount of material that can be used. Requests for thin sections that will be used in destructive procedures such as ion probe, laser ablation, etch, or repolishing must be stated explicitly.

Consortium requests should list the members in the consortium. All necessary information should be typed on the electronic form, although informative attachments (reprints of publication that explain rationale, flow diagrams for analyses, etc.) are welcome.

Antarctic Meteorite Laboratory Contact Numbers

Please submit request to: **JSC-ARES-MeteoriteRequest@nasa.gov**

Kevin Righter
Curator
Mail code X12
NASA Johnson Space Center
Houston, Texas 77058
(281) 483-5125
kevin.righter-1@nasa.gov

Cecilia Satterwhite
Lab Manager/MWG Secretary
Mail code X12
NASA Johnson Space Center
Houston, Texas 77058
(281) 483-6776
cecilia.e.satterwhite@nasa.gov

FAX: 281-483-5347

Meteorites On-Line

Several meteorite web sites are available to provide information on meteorites from Antarctica and elsewhere in the world. Some specialize in information on martian meteorites and on possible life on Mars. Here is a general listing of ones we have found. We have not included sites focused on selling meteorites even though some of them have general information. Please contribute information on other sites so we can update the list.

JSC Curator, Antarctic meteorites	http://curator.jsc.nasa.gov/antmet/
JSC Curator, HED Compendium	http://curator.jsc.nasa.gov/antmet/hed/
JSC Curator, Lunar Meteorite Compendium	http://curator.jsc.nasa.gov/antmet/lmc/
JSC Curator, Mars Meteorite Compendium	http://curator.jsc.nasa.gov/antmet/mmc/
ANSMET	http://caslabs.case.edu/ansmet/
Smithsonian Institution	http://mineralsciences.si.edu/
Lunar Planetary Institute	http://www.lpi.usra.edu
NIPR Antarctic meteorites	http://www.nipr.ac.jp/
Meteoritical Bulletin online Database	http://www.lpi.usra.edu/meteor/metbull.php
Museo Nazionale dell'Antartide	http://www.mna.it/collezioni/catalogo-meteoriti-sede-di-siena
BMNH general meteorites	http://www.nhm.ac.uk/our-science/collections/mineralogy-collections/meteorites-collection.html
UHI planetary science discoveries	http://www.psrd.hawaii.edu/index.html
Meteoritical Society	http://www.meteoriticalsociety.org/
Meteoritics and Planetary Science	http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1945-5100
Meteorite Times Magazine	https://www.meteorite-times.com/
Geochemical Society	http://www.geochemsoc.org
Washington Univ. Lunar Meteorite	http://meteorites.wustl.edu/lunar/moon_meteorites.htm
Washington Univ. "meteor-wrong"	http://meteorites.wustl.edu/meteorwrongs/meteorwrongs.htm
Portland State Univ. Meteorite Lab	http://meteorites.pdx.edu/
Northern Arizona University	http://www4.nau.edu/meteorite/
Martian Meteorites	http://www.imca.cc/mars/martian-meteorites.htm

Other Websites of Interest

OSIRIS-REx	http://osiris-rex.lpl.arizona.edu/
Mars Exploration	http://mars.jpl.nasa.gov
Rovers	http://marsrovers.jpl.nasa.gov/home/
Near Earth Asteroid Rendezvous	http://near.jhuapl.edu/
Stardust Mission	http://stardust.jpl.nasa.gov
Genesis Mission	http://genesismission.jpl.nasa.gov
ARES	http://ares.jsc.nasa.gov/
Astromaterials Curation	http://curator.jsc.nasa.gov/