Volume 18
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METEORITE NEWSLETTER

JAPANESE COLLECTION OF ANTARCTIC METEORITES

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INTRODUCTION

Classification and Description of Antarctic Meteorites

This newsletter reports 285 Yamato98 and 1 Asuka88 meteorites larger than 5 grams. They include 1 martian meteorite, 1 eucrite, and 1 R chondrite.

Followings are the members for the classifications of this volume:

Macroscopic descriptions of meteorites;
Kojima H. and Kiso H.
Microscopic descriptions and classifications of chondrites;
Kojima H. and Imae N.
Microscopic descriptions and classifications of achondrites;
Yamaguchi A.

Sample Request Deadline

Sample requests that are received by the curator before **May 25, 2009**, will be reviewed by the Committee on Antarctic Meteorite Research (CAMR), which will meet in June, 2009. Requests that are received after the May 25 deadline may be delayed for review until the CAMR meeting in December, 2009.

All sample requests should be made in writing to:

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NIPR Sample Allocation Policies and the Request Form are also available in the following web site.
http://www.metsoc2008.jp/nipr/newsletter/Newsletter_vol18.pdf

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
A-882039	EL6	393.92					A/B	A	reclassified
Y980362	L6	103.45	23.8	23.0-25.0	20.1	18.7-21.4	A/B	A	
Y980364	LL6	13.37	31.0	30.1-32.0	25.4	24.5-27.4	A/B	A	
Y980365	H6	5.34	21.3	20.4-23.1	18.2	17.4-19.5	A	A	
Y980368	H4	21.94	17.5	16.4-18.1	15.6	14.3-17.6	A	B	
Y980370	H4	10.16	19.3	18.2-20.9	17.7	16.2-22.8	A	A/B	
Y980371	L6	23.13	24.0	23.1-25.7	19.9	19.1-21.2	A/B	A/B	
Y980376	LL6	68.76	27.5	26.2-28.6	22.6	21.2-24.7	A	A	
Y980379	H3	27.70	21.9	8.5-29.4	17.0	2.9-27.0	A	A	
Y980385	L6	10.35	25.2	24.3-26.1	21.3	20.1-23.6	A/B	A/B	
Y980387	L3	18.02	26.2	24.5-31.8	19.4	7.4-27.8	A	A	
Y980388	L3	10.65	26.3	23.7-28.4	22.1	10.9-37.8	A	A	paired with Y980387
Y980389	L3	22.44	23.1	11.6-26.1	11.2	3.4-21.6	A	A/B	paired with Y980387
Y980391	H4	18.51	19.5	17.4-21.4	17.5	13.2-22.5	A	A/B	
Y980394	H4	558.52	18.6	17.5-20.6	16.3	15.4-17.4	A	A	
Y980395	L6	20.83	24.0	22.6-25.7	20.3	18.6-23.6	A	A/B	
Y980397	H5	5.07	17.4	15.6-18.9	15.4	14.5-16.2	A	A/B	
Y980398	H5	14.10	18.8	17.2-19.8	16.6	15.9-17.3	A/B	A/B	
Y980399	CM2	5.33					A/B	A	see separate entry
Y980400	L3	35.99	23.7	11.7-27.7	11.6	4.1-25.3	A	A/B	
Y980401	L6	15.00	25.6	24.3-29.3	21.4	20.0-22.9	A	A	
Y980402	H5	716.83	18.2	17.2-19.6	16.0	15.1-17.0	B/C	A	
Y980403	H5	31.32	17.7	17.0-18.6	15.8	14.9-17.7	A/B	A/B	paired with Y980402
Y980404	H5	10.18	19.4	18.3-20.9	16.8	15.1-18.5	A	A	paired with Y980402
Y980405	H5	8.48	19.5	18.5-22.1	16.9	16.0-18.4	A	A/B	paired with Y980402
Y980406	H5	4.97					A		paired with Y980402
Y980407	H6	25.61	17.7	16.7-18.5	15.5	14.0-16.5	A	B	
Y980408	H4	16.43	19.3	18.1-21.6	17.0	13.9-19.3	A	B	
Y980409	LL6	13.99	28.7	27.7-30.5	23.9	23.1-25.3	A		unbrecciated
Y980412	H6	200.94	19.2	18.3-19.7	16.7	15.8-18.0	B	B	monomict breccia
Y980413	LL3	108.57	29.1	27.7-30.2	20.4	7.0-25.4	A	A	see separate entry
Y980414	LL3	21.05	28.9	27.4-30.2	20.0	7.6-25.3	A	A	see separate entry
Y980415	LL3	6.22	30.2	28.2-31.2	22.2	13.5-25.2	A/B	A	see separate entry
Y980416	LL3	2.70					A/B		paired with Y980413
Y980417	LL3	0.33					A		paired with Y980413
Y980422	L3	13.78					A	A/B	
Y980423	L3	32.26	22.9	12.7-26.4	12.9	3.2-28.0	A	A/B	see separate entry
Y980424	L3	71.23	24.1	18.6-27.2	14.1	5.8-22.8	A	A/B	
Y980425	L6	8.75	25.4	23.7-26.9	21.6	20.7-24.4	A	A/B	
Y980429	L3	10.04	25.5	15.5-28.3	19.9	7.6-35.7	A	A/B	
Y980430	LL6	17.00	28.8	26.8-30.8	24.2	23.3-25.3	A	A	
Y980432	LL6	786.54	27.7	26.8-29.0	22.7	21.3-24.4	A/B	A	

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980436	H4	11.94	18.6	17.3-21.6	16.8	15.5-20.6	A/B	A/B	
Y980438	L6	508.12	24.3	23.2-25.7	20.0	18.2-20.9	B	A	
Y980439	L3	22.24	24.6	14.5-26.9	14.2	3.4-28.2	A	A/B	
Y980440	L3	27.44	24.4	17.4-30.1	13.8	2.6-22.2	A/B	A	
Y980446	L3	24.84	23.8	12.8-25.5	16.3	8.0-28.1	A/B	A/B	
Y980448	L3	125.88	24.0	18.0-30.8	14.5	4.3-28.1	A	A	
Y980449	L3	12.49	25.4	20.4-27.0	20.0	8.7-31.9	A	A	
Y980451	LL6	8.44	28.7	27.8-30.3	24.0	21.8-26.2	A	A	
Y980452	L3	5.16	26.0	19.1-30.6	19.8	12.0-33.7	A	A	
Y980453	L3	13.02	26.0	19.2-28.9	21.1	8.8-39.6	A	A/B	
Y980456	LL6	14.77	28.8	27.5-30.8	23.7	23.0-25.2	A/B	A	
Y980457	L3	55.01	24.8	20.6-26.3	13.0	4.6-21.5	A	A	
Y980460	LL6	252.11	27.5	26.2-28.2	22.4	20.5-23.2	A	A/B	
Y980461	LL6	56.09	28.3	27.4-29.5	23.5	22.6-24.5	A/B	A/B	
Y980462	H6	635.98	18.0	17.5-18.7	15.9	14.4-16.7	A	A/B	monomict breccia
Y980463	L6	102.38	24.8	24.1-25.7	20.7	19.9-21.7	A	A	
Y980464	H5	20.80	18.3	17.0-19.5	16.0	14.5-18.4	A	A/B	
Y980465	H3	37.83	12.6	0.3-28.1	8.5	0.6-28.6	A	A	
Y980466	L6	694.57	24.6	23.5-25.9	20.9	19.6-21.6	A	A/B	
Y980468	H6	6.08	20.3	18.8-25.2	17.6	16.3-20.6	A	B	
Y980469	L4	108.06	24.1	22.7-26.8	19.6	16.9-20.9	A	B	
Y980470	H5	11.82	18.6	17.4-20.4	16.6	15.6-17.6	A/B	A/B	breccia
Y980472	H3	130.14	17.9	17.1-19.2	15.7	14.2-18.6	A	B	
Y980473	LL6	547.36	29.3	28.0-32.3	23.5	22.4-24.7	A/B	A	
Y980474	L3	7.61	22.9	21.4-25.5	18.8	5.2-22.6	A	A	
Y980475	H5	41.12	18.5	17.6-19.1	15.8	14.1-17.1	A/B	A	
Y980477	L6	6.31	25.3	23.3-27.0	21.3	20.2-23.4	A/B	A	
Y980478	H6	1413.80	19.2	18.0-19.9	16.8	14.7-17.9	A	A	
Y980479	H6	7.38					A	A	
Y980480	L3	8.09	25.7	16.3-29.2	19.3	9.1-27.4	A	A/B	
Y980481	LL6	63.95	27.6	26.4-28.7	22.9	21.8-23.5	B	A	
Y980484	L3	6.14	25.6	13.4-29.0	19.9	11.4-29.3	A	A/B	
Y980488	LL6	12.49	28.9	27.3-31.7	23.5	22.6-24.2	A/B	A	
Y980490	L3	21.23	24.7	19.2-26.4	14.6	3.9-25.6	A	A/B	
Y980497	Sher	8.71	22.8	17.9-26.6	21.4	17.9-25.0		A	see separate entry
Y980502	H3	22.10	16.5	14.4-18.0	15.0	10.7-20.0	A	B	
Y980505	L3	41.11	24.9	16.2-27.6	11.2	2.4-24.7	A	A	
Y980513	H4	32.86	18.8	17.4-20.6	15.1	12.4-16.9	A	B	
Y980520	L4	6.00	25.4	23.7-29.3	21.4	19.6-22.5	A/B	A	
Y980523	L6	136.93	24.4	23.5-25.6	20.4	19.5-21.9	A	A	
Y980524	EH6	24.30			0.2	0.0-0.5	A/B	A	metal vein (2x10mm)
Y980526	L6	10.83	25.6	24.3-27.4	21.6	20.9-23.1	A	A	thick vein

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980527	H4	10.35	19.0	18.3-20.5	16.5	15.1-17.8	A/B	A	
Y980528	Euc	12.63	30.8	30.8-30.8	40.6	22.1-66.5	A	A	see separate entry
Y980529	H6	5.74	19.1	18.4-20.7	17.2	15.8-20.7	A	B/C	
Y980531	H4	6.78	19.2	17.9-20.5	17.0	15.7-18.8	A	A/B	
Y980532	H6	19.59	18.5	17.7-19.6	16.5	15.4-17.0	A	A	
Y980533	H4	5.80	19.2	16.7-22.3	16.8	15.5-18.8	A	A/B	large spinel (0.6mm)
Y980537	H6	12.35	18.9	17.5-22.3	16.6	15.3-17.9	A	A/B	
Y980540	LL6	16.76	30.6	29.4-32.3	26.0	24.3-30.8	B	A	thin vein
Y980541	H5	18.47	19.1	18.5-21.2	17.4	15.9-21.2	A	B	
Y980542	L6	15.19	25.5	24.7-26.1	21.2	20.2-21.8	A	A	
Y980543	L6	12.55	25.4	24.4-28.8	21.4	20.3-22.2	A	A	
Y980544	H3	35.57	17.2	16.0-18.0	15.3	13.7-16.6	B	A	see separate entry
Y980545	H4	5.03	19.1	18.0-22.7	16.7	15.9-18.2	A	B	
Y980555	H6	5.86	19.9	18.5-22.0	18.0	15.9-21.2	A	B	
Y980559	LL3	51.75	29.4	28.2-30.3	19.7	8.0-23.8	A/B	A	
Y980560	LL3	14.04	30.4	28.7-33.1	23.2	12.1-27.1	A	A	
Y980563	H4	6.63	19.5	18.5-22.8	17.2	15.8-20.5	A	B	
Y980564	H4	10.07	19.7	18.1-22.6	17.0	15.9-18.8	A/B	B	brecciaed with H6 clasts
Y980565	H5	17.97	19.3	18.4-21.4	17.4	16.0-21.4	A	B	
Y980567	L6	5.94	25.5	24.9-27.4	21.4	19.9-23.5	A/B	A	
Y980568	H4	30.21	17.9	16.9-18.8	15.2	13.5-16.4	A	B	
Y980571	H4	15.91	19.1	18.1-20.7	17.2	15.9-21.0	A	B	
Y980572	LL4	16.35	27.7	26.5-29.2	23.4	22.4-26.6	A/B	B	
Y980573	H6	8.33	20.0	18.4-22.1	17.3	15.9-19.8	A	A/B	
Y980575	H4	10.16	18.6	16.4-22.2	16.9	15.5-19.6	A	A/B	
Y980576	H3	57.25	13.5	0.4-27.8	9.8	0.7-32.1	A/B	A/B	see separate entry
Y980577	H3	16.49					A		paired with Y980576
Y980579	H4	12.54	17.8	16.6-19.0	15.9	14.7-17.8	A	A/B	
Y980580	H4	14.63	18.7	17.4-19.9	16.9	15.6-21.1	A	A/B	
Y980582	H4	9.10	19.4	17.7-24.7	17.1	15.3-20.6	A	B	
Y980585	LL3	15.76	26.6	24.7-32.5	13.8	4.1-23.0	A/B	A/B	
Y980586	LL3	13.51	25.9	18.7-29.1	15.5	6.3-23.4	A	A/B	paired with Y980585
Y980588	L3	43.36	24.0	15.0-26.5	16.2	3.2-30.6	A	A/B	
Y980589	H5	17.55	18.9	17.9-22.7	16.6	15.7-19.3	A	B/C	
Y980591	LL6	15.51	28.8	27.1-31.4	23.9	22.7-25.7	B	A	
Y980592	L6	79.24	25.3	24.6-26.3	20.6	19.8-21.4	A	A	
Y980593	L3	10.91	25.9	19.0-27.3	18.4	6.9-34.8	A/B	A/B	
Y980595	L3	17.80	25.5	18.4-31.1	18.1	8.7-28.0	A	A	
Y980596	L6	5.91	25.4	24.1-26.4	21.9	21.3-24.0	A	A	
Y980597	L3	53.27	23.1	7.2-26.4	12.9	3.6-23.1	A	A/B	
Y980618	H4	9.20	19.3	18.6-20.5	17.5	14.8-22.1	A	A/B	
Y980619	L4	21.51	25.2	23.5-26.7	20.9	19.0-22.7	A/B	B	

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980623	H4	5.09	19.1	17.6-21.3	16.6	15.8-17.4	A	A/B	
Y980625	H4	17.05	19.3	18.4-20.1	16.9	15.9-18.5	A/B	B	
Y980627	H4	57.24	17.5	16.2-18.2	15.6	14.6-16.4	A/B	A	
Y980630	L6	50.90	24.3	23.7-25.5	20.4	18.5-21.7	A	A	
Y980631	L5	45.02	23.9	22.8-25.3	19.9	18.2-20.9	A/B	A	
Y980639	H4	20.61	17.8	16.9-18.9	15.4	13.5-16.4	A	A	
Y980640	H4	39.36	17.8	17.1-18.5	15.4	14.4-16.1	A	A	
Y980642	H5	7.56	19.5	18.6-21.2	17.0	15.8-17.7	A	A	
Y980646	L6	559.70	24.4	22.5-26.1	20.5	19.3-21.6	A/B	A	
Y980647	L6	165.75	23.6	22.3-25.1	19.6	18.5-20.5	A/B	A	
Y980649	L6	20.39	24.1	22.7-24.9	19.9	17.7-23.1	A	A	bearing a thin shock vein
Y980654	L6	23.11	24.1	22.8-25.5	20.2	18.6-23.5	A	A	
Y980656	H4	10.14	19.2	15.7-28.5	16.3	5.2-25.6	A	A/B	
Y980657	L6	16.68	25.7	23.8-28.0	21.7	20.7-23.3	A/B	A	
Y980658	H5	11.14	19.7	17.9-22.7	17.3	15.8-19.0	A	A	
Y980660	H3	12.39	16.9	0.8-36.0	17.8	7.0-31.0	A/B	A	
Y980662	H4	54.00	17.9	16.5-19.4	15.5	14.0-16.8	A	A/B	
Y980663	H5	119.40	18.3	16.7-19.7	16.0	14.7-17.7	A/B	A/B	
Y980664	H5	73.82	18.4	17.6-19.0	15.9	14.7-16.8	A	B	
Y980665	H5	74.77	18.0	17.0-18.8	15.6	14.8-16.5	A	A/B	
Y980673	H5	7.85	19.7	18.4-22.5	17.5	16.4-20.6	A	A/B	
Y980674	H5	44.73	18.6	17.1-19.9	16.4	15.1-18.4	A	A	
Y980675	H5	7.19	19.4	17.0-21.3	17.0	15.9-17.8	A	A	
Y980680	H4	7.12	18.6	17.0-22.4	16.2	15.0-17.7	A	A/B	
Y980681	H	5.62	19.1	17.7-21.3	17.1	16.2-18.3	A	A/B	shock melted
Y980682	H	7.94	19.4	18.4-21.9	17.0	16.2-19.4	B	A/B	partially shock melted
Y980684	H6	5.76	19.7	18.4-20.4	17.5	16.3-20.1	A	A	see separate entry
Y980687	H4	11.45	20.0	19.1-24.0	17.4	16.3-19.5	A	A	
Y980688	L6	6.89	25.0	23.4-27.2	21.5	20.5-23.0	A	A	
Y980690	H5	10.70	19.2	17.8-21.3	17.1	15.1-21.1	A	A	shock melt veins
Y980700	L6	21.25	24.7	22.9-25.7	20.7	19.0-22.8	A	A	
Y980701	H4	18.40	19.6	18.5-20.3	17.9	16.1-21.3	A/B	A/B	
Y980702	R6	92.99					A	A	
Y980703	R6	30.59	39.1	38.4-40.2			A	A	see separate entry
Y980705	R6	5.79	40.2	39.1-41.1			A	A	paired with Y980702
Y980706	L6	14.45	25.9	23.3-28.0	21.6	20.7-23.0	A	A	
Y980708	H5	5.04	20.0	18.9-21.0	17.5	16.9-18.2	A	A/B	
Y980711	H5	5.63	19.2	17.8-21.0	17.1	16.1-19.4	A	A/B	
Y980712	H4	22.97	19.2	18.2-20.0	17.3	15.7-20.7	A/B	A/B	
Y980713	H4	5.57	19.6	18.3-20.2	17.2	16.4-18.1	A	A/B	
Y980723	H5	26.49	18.4	17.9-19.2	16.0	15.1-16.6	A/B	A	see separate entry
Y980729	H5	9.19	19.8	18.8-21.2	17.7	10.4-20.7	A/B	A/B	

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980730	H6	11.62	19.0	18.3-20.4	17.1	14.9-20.6	A	A/B	
Y980731	H4	6.03	19.6	18.9-20.3	17.2	16.7-17.7	A	A/B	
Y980738	H4	68.99	18.7	17.7-19.8	16.5	15.8-17.8	A	A	
Y980739	H4	40.70	18.7	17.8-19.6	16.2	14.3-17.1	A	A	
Y980740	H3	44.82	21.0	17.3-22.4	12.3	4.7-27.4	A	A	
Y980741	H4	16.80	19.7	18.5-22.7	17.7	15.3-21.5	A	A	
Y980742	H6	6.37	19.5	18.4-23.3	17.1	15.5-22.4	A	A	
Y980744	L6	72.98	23.3	22.5-24.7	19.7	18.7-21.1	A/B	A	
Y980745	L6	20.47	23.9	23.3-24.7	19.9	18.2-22.2	A	A	
Y980747	H6	55.35	18.3	17.2-19.3	16.2	15.0-17.3	A	A	
Y980752	H6	12.14	18.8	17.9-19.8	17.0	16.0-18.9	A	A/B	
Y980756	H6	34.35	19.7	17.6-22.6	17.0	14.4-22.0	A/B	A/B	
Y980758	H5	35.53	18.7	17.6-20.2	16.8	16.0-17.6	B	A/B	
Y980759	H5	8.66	19.5	17.8-21.5	17.8	16.3-21.3	A	A	
Y980762	H4	17.66	19.2	18.0-21.5	17.4	16.2-21.0	A	A	
Y980763	L6	5.87	25.3	24.4-27.6	21.8	20.3-24.3	A	A	
Y980768	L3	6.40	25.0	17.5-29.3	20.1	11.1-30.2	A/B	A	see separate entry
Y980771	H6	42.76	17.9	16.6-19.5	15.6	14.4-17.3	A	A	
Y980782	L5	39.00	22.9	21.9-24.0	19.4	17.8-20.8	A/B	A	
Y980784	H5	6.90	19.5	18.4-22.4	16.8	15.4-17.8	B	A	
Y980787	H5	5.55	19.4	17.7-21.7	17.2	16.1-18.8	A/B	A	
Y980789	H5	5.13	19.1	18.3-21.0	17.6	16.0-20.6	A/B	A/B	
Y980791	H5	18.19	19.1	17.9-20.6	17.1	15.9-20.0	A/B	A	
Y980792	H5	20.48	18.9	17.4-19.7	16.5	15.6-18.4	A/B	A/B	
Y980796	H4	6.93	19.6	18.6-22.4	17.2	15.9-19.6	A	A	
Y980799	H5	29.11	18.8	18.0-20.6	16.1	15.1-17.3	A/B	A/B	
Y980800	L6	8.82	25.7	23.7-27.8	22.1	20.6-24.8	A	A	
Y980802	H4	8.60	19.5	17.6-21.8	16.9	16.0-18.9	A	A	
Y980804	L5	5.50	25.2	23.6-28.8	21.4	19.9-25.6	A	A	
Y980805	L6	59.17	24.2	22.6-25.8	20.6	19.4-23.2	A	A	see separate entry
Y980806	L6	13.34	25.8	23.9-28.9	21.9	21.0-23.7	A	A	see separate entry
Y980807	H4	29.59	18.3	16.9-21.0	16.5	15.1-21.7	A	A	
Y980808	L6	10.50	25.3	23.6-27.1	21.5	20.8-22.7	A	A	shock melt veins
Y980809	L6	18.36	25.5	23.7-27.4	21.9	20.3-24.6	A/B	A	shock melt veins
Y980810	L6	27.46	24.5	23.2-25.9	20.7	19.9-21.3	B	A	shock melt veins
Y980811	L5	227.01	24.0	23.0-25.2	20.0	18.9-21.7	B/C	A	
Y980814	H6	12.97	18.8	17.1-19.6	16.9	16.3-17.8	A	A	
Y980815	L6	25.93	24.6	23.6-25.6	20.4	19.6-20.9	A/B	A	
Y980816	H4	8.78	19.2	15.1-20.7	16.2	6.8-17.8	A	A	
Y980817	L6	151.07	24.8	23.2-26.6	20.8	19.1-23.1	A	A	
Y980821	L6	8.12	25.7	24.1-27.9	22.1	21.4-23.7	A	A	
Y980823	L6	19.10	25.5	23.4-26.7	21.4	20.4-22.7	A	A	

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980824	L6	14.21	25.7	24.1-29.6	21.6	20.2-25.0	A	A	
Y980834	H6	5.79	19.9	19.2-21.7	17.3	15.9-18.0	A	A	
Y980836	H4	9.18	20.8	17.5-25.1	17.8	15.6-21.1	A	A	
Y980839	CM2	21.00	15.4	0.3-58.4	1.2	0.4-4.6	A	A	
Y980841	H6	44.86	17.8	16.9-18.6	15.8	14.7-16.8	A	A	
Y980844	L3	39.56	24.3	15.8-27.0	14.8	3.0-33.9	A	A	
Y980847	L3	10.43	26.1	16.1-30.0	16.1	8.0-19.8	A/B	A	
Y980850	L3	7.85	26.3	22.2-28.1	15.5	5.8-23.7	A	A	
Y980852	L6	196.91	24.1	23.2-26.1	20.5	19.6-22.5	A	A	
Y980853	H4	130.31	18.7	17.9-19.7	16.0	13.9-17.4	A	A	
Y980855	H3	6.93	18.1	4.2-23.4	16.6	14.0-20.0	A/B	A	
Y980860	H6	25.85	17.8	16.9-18.4	15.7	14.4-16.5	A	A	
Y980861	L6	109.82	23.9	22.4-26.6	20.0	18.9-21.1	A	A	
Y980866	L5	17.66	23.8	22.7-28.2	20.0	18.8-22.2	A	A	
Y980873	L6	81.29	24.3	23.1-25.1	20.1	19.1-21.9	B	A/B	shock melt veins
Y980875	H	7.33	20.4	19.3-23.3	17.7	16.8-21.7	A/B	A/B	shock melted
Y980876	H	13.42	19.7	18.1-22.4	17.1	15.8-17.6	A	A	partially shock melted
Y980877	H	10.15	20.2	19.3-22.0	17.5	16.3-18.3	A	A	partially shock melted
Y980878	H5	8.20	19.6	18.4-22.1	17.6	15.8-20.1	A	A	
Y980879	H4	9.03	19.9	18.4-21.2	17.5	16.7-18.4	A/B	A/B	
Y980881	H4	9.04	18.7	17.5-21.1	16.4	15.7-17.0	A	A	
Y980883	LL6	6.71	30.3	27.5-32.3	24.7	22.4-25.9	A	A	
Y980885	L6	12.75	24.8	23.5-26.2	21.1	20.0-24.6	A	A	shock darkened
Y980887	H6	8.89	19.7	18.6-20.8	17.2	16.7-18.2	A	A	
Y980889	H6	6.47	19.8	18.1-23.5	17.1	15.9-19.0	A	A	
Y980891	LL6	15.97	26.4	25.3-29.1	22.6	21.3-27.3	A/B	A	
Y980893	LL6	8.97	26.0	24.6-29.2	21.7	20.3-24.2	A	A	
Y980903	H4	180.74	17.7	17.1-18.5	15.4	12.7-17.2	A	A	
Y980904	H4	5.85	19.4	18.6-21.1	17.3	14.7-21.6	A	A	
Y980917	H4	81.01	18.1	17.4-18.9	16.4	15.0-19.0	A	A	
Y980918	L6	24.69	24.6	23.3-26.0	20.2	18.8-21.7	A/B	A	many shock veins
Y980922	H5	11.56	20.3	19.6-21.3	17.8	16.5-21.8	A	A	
Y980924	H4	10.06	19.8	17.5-24.0	17.3	15.8-20.4	A/B	A	
Y980926	H4	8.95	19.9	18.3-22.9	17.3	16.2-19.0	A/B	A	
Y980927	H4	70.82	18.1	17.1-19.4	15.6	14.6-16.2	A/B	A	
Y980934	H5	6.38	20.2	19.0-26.5	17.5	16.9-18.1	A	A	
Y980943	H5	32.61	17.9	17.2-18.4	15.9	14.5-16.8	A/B	A	
Y980947	H5	10.28	19.0	17.2-19.9	16.9	15.7-17.7	A/B	A	
Y980948	H5	110.32	17.9	16.5-19.1	15.6	14.0-16.9	A	A	
Y980968	H4	10.15	19.7	18.5-21.4	17.5	16.5-19.3	A/B	A/B	
Y980975	H4	7.78	20.3	18.9-23.1	17.0	16.3-18.0	A	A	
Y980976	H5	7.78	19.5	18.8-21.9	17.1	16.5-18.6	A/B	A	

Meteorite	C.	Wt.(g)	%Fa	Range	%Fs	Range	F.	W.	Comments
Y980977	H5	6.67	19.4	18.4–20.9	17.0	15.2–20.7	A	A	
Y980997	H4	12.98	19.8	18.4–22.8	17.1	14.2–19.1	A	A	
Y980998	H4	5.43	19.3	18.3–21.0	17.1	15.7–23.0	A	A	
Y981006	H5	203.15	18.7	17.9–19.5	16.3	14.9–17.7	B	A	
Y981007	H5	7.83	19.4	17.3–23.5	17.3	15.9–21.4	A	A	
Y981009	H3	11.92	18.4	16.6–20.4	13.9	7.2–28.0	A	A/B	
Y981014	H	20.56	19.4	18.3–20.2	16.6	15.6–17.8	B	A/B	shock melted
Y981015	H5	7.98	20.5	17.2–24.2	17.3	15.9–19.2	A/B	A/B	
Y981020	H5	7.55	20.1	18.8–22.7	17.4	16.5–18.8	A/B	A	
Y981021	H5	186.32	18.5	17.8–18.8	16.7	15.7–18.1	B	A	
Y981022	H5	21.68	19.0	18.4–19.6	16.9	15.7–18.9	A	A	
Y981023	H4	72.92	18.2	17.3–19.2	16.0	15.3–17.6	A/B	A	
Y981024	H4	40.17	18.1	17.5–18.8	15.8	14.7–16.7	B	A	
Y981025	H5	22.23	18.4	17.4–19.5	15.9	15.0–16.9	A	A	
Y981026	H4	8.20	19.2	18.3–21.2	16.9	15.8–19.6	A	A	
Y981027	H4	5.64	19.3	17.4–20.5	16.8	15.8–18.6	A	A	
Y981032	H5	9.89	20.2	18.4–24.9	18.0	15.7–22.5	A	A	
Y981033	L6	168.10	24.3	23.4–25.5	20.4	19.8–21.7	A	A	
Y981036	H5	237.87	18.5	17.8–19.4	16.3	15.5–17.1	B	A/B	
Y981037	H4	6.84	19.3	17.7–20.7	17.3	15.4–20.6	A	A	
Y981040	H5	6.41	18.8	17.9–20.8	16.6	15.7–19.5	A	A/B	
Y981042	H5	66.13	17.1	15.9–18.1	14.8	14.0–15.7	A/B	A/B	
Y981044	H6	5.07	20.6	19.6–23.4	17.5	16.2–19.5	A	A	
Y981045	H4	9.01	19.0	18.2–20.4	16.3	15.0–18.5	A/B	A/B	
Y981058	H5	9.11	19.1	17.7–20.4	17.1	15.6–20.5	A	A/B	
Y981067	H5	8.67	19.5	17.7–22.0	17.5	15.6–21.8	A	A	
Y981069	H5	24.23	17.8	17.1–18.8	15.5	14.9–16.2	A	A/B	
Y981070	H4	8.01	17.4	15.7–19.1	16.1	15.0–19.1	A	A/B	
Y981078	H5	36.03	17.9	17.3–18.9	15.8	14.9–16.4	A	A/B	
Y981080	H5	10.28	19.0	17.2–21.2	17.3	15.4–22.1	A/B	A/B	
Y981081	H5	9.14	19.3	18.3–21.7	17.0	15.5–19.4	A/B	A/B	
Y981082	H5	5.03	19.3	18.2–21.5	17.1	15.2–20.1	A	A	
Y981086	H4	5.22	19.2	18.1–21.6	16.8	15.8–20.6	A	A	
Y981090	H4	8.68	19.4	18.1–23.9	16.6	14.8–19.9	A/B	A/B	

Notes

C: classification　F: fracturing　W: weathering

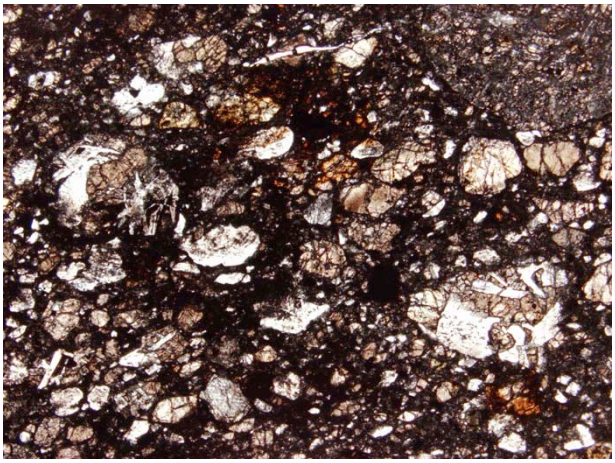
Fracturing index:
A: No or a few narrow cracks are visible.
B: Several cracks extend across exterior surface.
C: Severe cracks.

Weathering index:
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.

Width = 5.1 mm

Y980497 Olivine-phyric shergottite

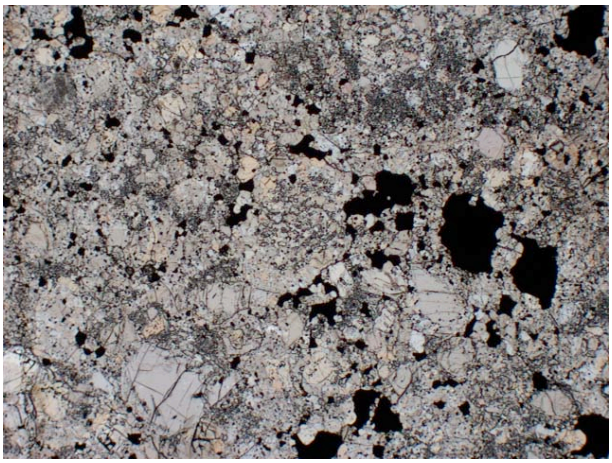
The PTS shows a porphyritic texture composed of olivine phenocrysts (up to 2 mm) set in a fine-grained matrix. The fine-grained matrix consists of orthopyroxene laths (~ 10-20 x 30-50 μm) with dark glassy materials filling the interstices. The composition of olivine is Fa18-27 and that of low-Ca pyroxene is Fs18-25 with FeO/MnO = 19-42 (av. ~30). This meteorite is probably paired with Y980459.



Width = 5.1 mm

Y980528 Brecciated eucrite

The PTS shows a brecciated matrix composed of granular clasts, breccia clasts, and mineral fragments set in a dark matrix. The meteorite is shocked and pyroxene and plagioclase show strong mottled extinction. The composition of low-Ca pyroxenevaries from En70Wo1 - En28Wo42 (FeO/MnO = ~31) and that of plagioclase is An96-87.



Y980703 R6 chondrite

Although the specimen is an unbrecciated chondritic meteorite, the modal abundance of chondrules is much lower than those of ordinary chondrites. The composition of olivine is clustered at Fa38-40. The coarse-grained matrix is recrystallized and abundant metamorphosed plagioclase occurs. Thus, it is an equilibrated Rumuruti chondrite, R6, and may be paired with Y980702 and Y980705, which show similar textures and have similar compositions. The shock stage of the specimen is very low because significant undulatory extinction is absent.

Width = 2.3 mm

Y980399	CM2	Although the specimen is a heavily altered CM, olivine survives.
Y980413	LL3	Brecciated with LL6 clasts.
Y980414	LL3	Brecciated; paired with Y980413.
Y980415	LL3	Brecciated; paired with Y980413.
Y980423	L3	Thin section contains a large chondrule (3x2 mm); paired with Y980422.
Y980544	H3	Clear glass commonly occurs.
Y980576	H3	The specimen is rich in glass-rich chondrules; petrologic type below 3.2
Y980684	H6	Contains shock-melt fragments.
Y980723	H5	Thin section contains a large, micro-porphyritic, equilibrated chondrule.
Y980768	L3	Thin section contains an ultra fine-grained, layered chondrule.
Y980805	L6	Contains abundant shock melt veins.
Y980806	L6	Contains abundant shock melt veins.

REQUIREMENTS AND PROCEDURES FOR RESEARCH USING THE JAPANESE NIPR ANTARCTIC METEORITE COLLECTION

Requests for research samples are welcome from all qualified scientists. In general, requests are reviewed and considered by the Committee on Antarctic Meteorite Research (CAMR) of the National Institute of Polar Research (NIPR), which meets one to two times each year. Consortium-type sample requests may also be submitted. After a request is approved, samples are sent to the researcher from the Curator of Antarctic Meteorites, NIPR.

NIPR SAMPLE ALLOCATION POLICIES

I. Basic guidelines for allocation of meteorites at NIPR

1. All samples are provided on a loan basis, and remain the property of NIPR.
2. The pristine mass of the meteorite other than small rare meteorites after allocation must be at least 2/3 of the original mass. Pristine mass is defined as that portion of a specimen which has never been allocated, after initial polished thin section (PTS) preparation.
3. The pristine mass of small rare meteorites (less than 50 grams) after allocation must be at least 80% of the original mass. Rare meteorites are defined as meteorites other than type 4-6 ordinary chondrites, including rare type portions of large meteorites.
4. Allocations of any rare meteorite should generally be limited to samples less than 1 gram.
5. The term of the PTS loan will be for no more than 12 months. PTS should be returned promptly upon completion of the proposed research period.
6. PTS of any small meteorite (less than 5 grams) will not be, in general, loaned out but will be available for on-site use by scientists visiting NIPR.
7. Allocations will not be allowed until the meteorite has been announced and typed (classified) in a published issue of Meteorite News or an NIPR catalog.
8. Allocation from any meteorite that is under consortium study will generally not be permitted.
9. Investigators are strongly encouraged to limit requests to not more than 10 samples per request/review cycle. Higher numbers of samples may be approved, but in general, only 10 samples will be eligible for expeditious allocation processing. Investigators who request more than 10 samples should designate a subset for high-priority processing. A request for a chip for analysis plus a corresponding thin section for petrologic study of the same meteorite or clast will generally be counted as a single request, in relation to the 10 -sample limit.
10. Investigators are encouraged to use NIPR sample request forms. However, all sample requests that fully comply with the following guidelines will receive careful consideration.

    Requests should consist of three parts:

    a. Background information: title of the research project; for the requesting scientist, his or her name, affiliation and position (e.g., University of Paris, Professor), and office address, including phone and preferably FAX and email; and for any coinvestigators, their name, affiliation, and position.

    b. A text section, explaining the general nature and purpose of the proposed research, and including details on the justification for each individual sample request.

    c. A summary table, with columns for each of the following information categories:

    (1) Specimen name (e.g., Yamato-86032, or Y-86032).

    (2) Preferred weight (the weight of sample you believe is justified for the proposed research).

(3) Minimum weight (estimated weight below which the proposed research would not be worth pursuing; in general, approved allocations will be at or very near the *preferred* weight).
(4) An instruction regarding preferred sampling site (e.g., fusion crust, inner part, outer part, central, etc.).
(5) Sample form (e.g., single chip, cube, plate, fragments, many grains, powder, PTS, etc.).

II. Guidelines for expedited allocation by the Curator of the NIPR

The following guidelines set forth the conditions under which the Curator of Antarctic Meteorites at NIPR can allocate samples without review and approval by the CAMR. If the Curator has any doubt about the allocation of any sample, the request should be referred to CAMR.

1. Allocation of polished thin sections except for destructive analysis
   The original mass of the meteorite must be larger than 5 grams for type 4-6 ordinary chondrites or over 10 grams for all other meteorites.
2. Allocation of samples in a form other than PTS
   a. The total available pristine mass of the meteorite at NIPR must be larger than 20 grams for type 4-6 ordinary chondrites or over 50 grams for all other meteorites.
   b. Allocations of up to 5 grams or 1 weight % of the original mass of type 4-6 ordinary chondrites or up to 1 gram or 1 weight % of all other meteorites (whichever is less) can be made by the Curator.

SAMPLE DISTRIBUTION

1. Sublease (transfer) of sample is not permitted, except to persons listed as coinvestigators on the written request for samples. If sublease to a person not originally listed as coinvestigator becomes necessary, a new written request must be submitted to the Curator of Antarctic Meteorites.
2. Promptly upon completion of the proposed research, unused or remaining meteorite samples must be returned to the Curator of Antarctic Meteorites, NIPR.

REPORTING RESULTS

1. Research results should be reported promptly, preferably by presentation at the annual NIPR Symposium on Antarctic Meteorites, and/or full-length publication in the Polar Science. http://ees.elsevier.com/polar/
   The Symposium is held once each year, customarily in early June.
2. For the reference of the Curator of Antarctic Meteorites, investigators are requested to send three copies of each full-length paper published on allocated samples, and one copy of each abstract about them, to the Curator. Reference copies of articles and abstracts published through NIPR are not necessary.

Mail requests to: Dr. Hideyasu Kojima
Curator, Antarctic Meteorite Research Center
National Institute of Polar Research (NIPR)
9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173-8515, Japan
Phone: (81) 3-3962-2938, FAX: (81) 3-3962-5711
E-mail: curator@nipr.ac.jp

Send requests to: Antarctic Meteorite Research Center, National Institute of Polar Research, 9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173-8515, Japan, Phone (81) 03-3962-2938, FAX (81) 03-3962-5711, E-mail curator@nipr.ac.jp

No. [ ]

NIPR Research Program for Antarctic Meteorites

Research project: _____

Date: Period of the project (months):

Principal investigator

Name: Signature _____

Affiliation & position:

Office address:

Phone: ext. FAX:

E-mail:

Coinvestigator(s)

Name(s):

Affiliation(s) & position(s):

Description of research plan and justification for sample request:

(continue)

	specimen name	preferred weight	minimum weight	sampling instructions	sample form
	(e.g., Y-86032)	(e,g,, 0.25g)	(e.g., 0.1g)	(e.g., interior)	(e.g., chip(s))
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

received

Send requests to: Antarctic Meteorite Research Center, National Institute of Polar Research, 9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173-8515, Japan, Phone (81) 03-3962-2938, FAX (81) 03-3962-5711, E-mail curator@nipr.ac.jp

No.

received