

## EUROPEAN ACTIVITIES IN METEORITE AND COSMIC DUST COLLECTION ON ANTARCTICA - EUROMET\*

During 1990, a consortium comprising of all the European groups active in meteorite research was established for the purpose of prospecting for extraterrestrial materials on Antarctica. Financial support for such an effort has been promised by the European Commission but national agencies in the participating countries are contributing directly to the various programmes planned and to establishing the curatorial facilities envisaged. Three related field ventures are currently in progress:

- (i) a search in the Frontier Mountains for meteorites, involving an Italian-supported party.
- (ii) a reconnaissance of areas for future collecting activities, employing German logistics and
- (iii) an attempt to melt 300 tonnes of blue ice for the purpose of recovering all the cosmic dust grains  $> 10 \mu\text{m}$ , sponsored by French resources.

As a result of communications received from the Frontier Mountains, we already know that the meteorite search party has been successful. In a little under three weeks the four-man team have recovered in excess of 200 new specimens to augment the 42 meteorites previously found there by Ganovex IV(1). More details of the collection will hopefully be available in time for the Houston meeting.

EUROMET's curatorial responsibilities have commenced with preliminary characterisation of 198 meteorites collected in the Allan Hills in 1988 (2). These samples have been transferred to EUROMET by the Max-Planck-Institut at Mainz, which carried out the *ad hoc* expedition leading to their recovery in connection with Ganovex V(2). Identifications for two individual stones have already been reported in the scientific literature (3) but the systematic study of the smaller specimens in the collection has now begun by R. Hutchison, A.L. Graham and P. Bland of the British Museum (Natural History). Their results are given below with some general comments:

The microprobe data were obtained by an E.D.S. system so are adequate only for the purpose of initial classification. Of the 46 new meteorites investigated, most (24) stones are H5, but this includes several textural variants; brecciation and/or veining is common and H5 is associated with H4 and H6 in four additional stones. The L-group is poorly represented by only six stones, of which four are type 6. Two H3's and an LL3 or L3 were found, but the highlight of the work is the discovery that ALH88046 is sulphide-rich, unequilibrated and is an EH3. A silicide of Ni(Fe) - perryite? - is present, troilite contains  $\sim 0.5 \text{ wt\% Cr}$  and  $\sim 0.2 \text{ wt\% Ti}$ , and  $2.5 \text{ wt\% Si}$  was determined in kamacite.

References: (1) G. Delisle *et al* (1989). *Geol.JB.* E38, 483 - 513; (2) G. Delisle *et al.* (1989). *Antarctic J. U.S.* 24 (5), 50 - 52; (3) F. Wlotzka *et al.* (1989). *Meteoritics*, 24, 341-342.

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EUROPEAN COLLECTION OF ANTARCTIC METEORITES  
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CLASSIFICATION OF 46 ALLAN HILLS METEORITES

Meteorite	Weight (g)	Olivine (Fo)	Pyroxene (En) (Wo)		Plagioclase (Ab) (Or) (An)			Class
ALH88001	428.29	80.5						H5
ALH88003	341.92	74.9						L4
ALH88005	282.05	74.8						L6
ALH88006	233.38	75.0						L4
ALH88007	156.77	81.6						H5
ALH88009	152.70	79.5						H5
ALH88014	84.07	81.6	82.1	2.1				H5
ALH88015	83.68	74.1						L6
ALH88018	67.13	81.0	83.3	1.3				H5
ALH88020	53.71	97 - 75						H3
ALH88021	50.95	81.2	82.9	1.2				H5
ALH88022	47.17	80.8						H5
ALH88023	44.00	74.7						L6
ALH88024	37.85	74.9	77.8	1.4	83.5	5.7	10.1	L6
ALH88025	37.23	82.2	83.5	1.3				H5
ALH88026	37.11	81.2	83.4	1.3				H5
ALH88027	31.64	81.1	83.1	1.2				H5
ALH88028	29.91	80.5	82.5	1.5				H5
ALH88029	29.13	81.2	82.9	1.0				H5
ALH88030	28.45	80.7	83.0	1.2				H5
ALH88031	27.78	80.8	82.9	1.2	3.4	4.6	8.3	H5
ALH88032	27.44	81.1	83.0	1.4	82.5	3.6	13.9	H6
ALH88033	27.33	81.0	83.3	1.2				H5
ALH88034	26.65	80.5						H6
ALH88035	26.60	80.1						H5
ALH88036	26.39	99 - 59						H3
ALH88037	25.24	80.2						H4
ALH88038	25.15	81.7	84.1	0.8				H5
ALH88039	24.90	81.2	84.4	1.2	80.1	7.8	12.1	H5
ALH88040	24.60	82.0	83.5	1.3	82.2	6.3	11.5	H5
ALH88041	23.54	75.8	79.3	1.4	84.0	5.3	10.7	L5
ALH88042	22.56	81.0	83.3	1.2	45.2	50.4	4.4	H5
ALH88043	21.10	81.7	83.0	1.0	18.5	0.1	81.4	H4
ALH88044	21.00	99 - 71						shocked L3 or LL3
ALH88046	20.73	99	97 - 81					EH3
ALH88047	20.61	80.8	82.6	1.8	83.6	5.5	10.9	H5
ALH88048	20.59	80.9	82.7	1.2	79.7	3.1	17.1	H5
ALH88049	20.05	80.5	82.9	1.2	80.8	5.7	13.5	H5,6 breccia
ALH88050	49.63	80.9	82.8	1.1	81.9	5.5	12.6	H6,7
ALH88051	19.27	81.0	82.9	1.2	81.3	5.2	13.5	H4,5 breccia
ALH88053	18.16	80.7	83.0	1.7	83.1	3.6	13.3	H4
ALH88054	17.82	81.0	82.9	1.1	83.8	4.6	11.6	H5,6
ALH88055	17.52	80.9	82.9	1.4	80.6	5.3	14.1	H6
ALH88056	17.34	80.9	83.0	2.7	83.7	4.6	11.7	H5 shocked
ALH88057	16.61	80.8	82.9	1.1	85.0	4.1	11.0	H5 breccia
ALH88058	15.06	80.6	82.7	1.4	81.9	6.4	11.7	H5,6 breccia