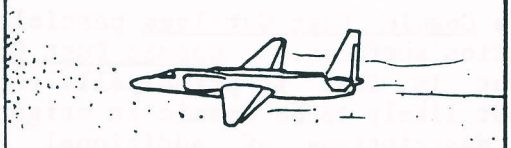
Cosmic Dust Courier



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COSMIC DUST COURIER NO. 6

Contents

NEW FRAGMENTS OF CHONDRITIC CLUSTERS SAMPLED FOR COSMIC DUST CATALOG 6

In the previous five Cosmic Dust Catalogs particles were presented from five individual collection surfaces. Cosmic Dust Catalog 6 will depart from the usual format in that it principally reports a re-sampling of particles which are most likely to be cosmic in origin. Thus, this catalog principally contains descriptions of additional fragments of large chondritic particles from which other fragments have previously been removed, characterized, and allocated. It is hoped that this re-sampling will facilitate increased interdisciplinary work on interesting chondritic particles. Cosmic Dust Catalog 6 contains descriptions of 32 additional fragments of chondritic particles from collection surfaces W7010, W7026 (previously sampled for Cosmic Dust Courier 1 -CDCr 1), W7028 (CDCr 1), W7029 (previously sampled for Cosmic Dust Catalog 2 -CDC 2), W7031 (CDCr 1), W7066 (CDCr 5), W7069 (CDCr 5), W7071 (CDCr 5), U2011 (CDCr 5), and U2015 (CDC 5 & CDCr 5). In addition, 7 chondritic particles are described from three new collection surfaces, these being U2017, U2018, and U2022. Finally, descriptions of 32 other interesting particles encountered during the particle sampling of these flags are included to round out the contents of the catalog.

Cosmic Dust Catalog 7 will describe new particles from collection surface U2022, which sampled the stratosphere over the west-central U.S. from April to May, 1984.

REPORT OF THE FIRST MEETING OF THE COSMIC DUST COMMITTEE

Representatives of principal cosmic dust research groups met during the Lunar and Planetary Science Conference, on March 13, 1985, to discuss the possibility of establishing a cosmic dust users group. This action was prompted by a request from the Lunar and Planetary Sample Team (LAPST). At this meeting were the following persons: D.S. McKay (NASA/JSC), F. Horz (NASA/JSC), D.E. Brownlee (Univ. of Washington), I.D.R. Mackinnon (Univ. of New Mexico), and R.M. Walker (Washington Univ.). M.E. Zolensky and D.P. Blanchard attended as representatives of the NASA Cosmic Dust Program.

The decision of those present at this meeting was to form a group, to be called the Cosmic Dust Committee (CDC) [not to be confused with Cosmic Dust Catalog (CDC) or Cosmic Dust Courier (CDC)] which will oversee the cosmic dust curation and allocation process. In addition, the committee hopes to provide a greater amount of advocacy for cosmic dust research. The CDC will report to LAPST, and will also be available to brief LPGRP and other advisory groups as needed. The full committee will meet during the annual Lunar and Planetary Science Conferences, and at one other time during the year as needed.

A streamlined cosmic dust allocation process was recommended by the committee, which is summarized elsewhere in this Courier. This procedure represents an attempt to speed up the sample allocation process for simple cosmic dust requests, reserving only the more complex or unique sample requests for full discussion by the assembled committee.

Discussion indicated that the next Cosmic Dust Catalog should predominantly describe more chondritic porous aggregates, which are the most frequently requested particles. Consequently, Cosmic Dust Catalog, Vol. 6, mainly

contains newly-picked fragments of chondritic porous aggregates noted on earlier flags. It was also decided that in future volumes of the Cosmic Dust Catalog particles would be grouped by type, rather than by mount number as has been the case in the past.

F. Horz described the new FOILS lab at JSC. This laboratory is a class 10,000 clean room where the LDEF surfaces, initially, will be examined. At the heart of this lab is a Mann Comparator, which permits optical scanning of large surfaces. This instrument is currently being used to examine returned satellite parts for micrometeorite impact features.

All present at the meeting agreed that membership in the CDC should not be limited to the founding members. It was felt that other research groups, particularly foreign ones, should be encouraged to participate. Individuals wishing to do so should contact any of the committee members listed above.

COSMIC DUST SAMPLE ALLOCATION PLAN

1. Curator receives the sample request and acts as the single point of contact for all communications with the requester.

2. Curator reviews the sample request as written.

3. Based on his knowledge of the sample inventory and JSC laboratory capability, the Curator decides whether the requested allocation is feasible. If it is feasible, step (5) is next. If it is not feasible, step (4) is next.

4. Curator contacts the requester directly (by telephone or letter) to obtain the clarifications necessary to make the sample request feasible. Upon receipt of acceptable clarifications, the Curator proceeds again through steps (2) and (3) to step (5).

5. Curator decides whether the final form of the sample request (and its allocation plan) would require a "simple" or a "complex" allocation. A "complex" allocation is one which would involve more than 25% of the total number of particles of any specific type or size that the Curator estimates would be collected during the year of collection in progress at that time. A "simple" allocation is one which would not violate the "25%" rule. "Complex" allocations would be handled in step (8) whereas "simple" allocations would be handled in step (6).

6. Curator mails copies of the original request (plus modifications or clarifications) and the allocation plan to each Cosmic Dust Committee (CDC) member for review.

7. CDC members reply in writing to the curator and suggest one of the three following courses of action for each part of the request:

   (a) Proceed with the allocation plan (Go to step (9)).

   (b) Recycle (go back to step (3)) for further clarification before review.

(c) Refer to next formal CDC meeting (go to step (8)).

A single recommendation for the allocation request to be referred to the next formal CDC meeting will automatically result in this action being taken. A single recommendation to recycle the allocation request for further clarification before review will result in this action being taken.

8. The fully assembled CDC arrives at one of the three following decisions for each part of any "complex" allocation request, and each part of any "simple" allocation request which has been referred to a formal CDC meeting in step (7):

   (a) Proceed with allocation according to the plan proposed by the Curator or developed by the CDC (go to step (9)).

   (b) Recycle request (go to step (3)) for further clarification and additional review.

   (c) Deny request (go to step (9)).

9. A member of the CDC, acting as corresponding member to LAPST, reports to the fully assembled LAPST on the allocation recomendations of the CDC. LAPST arrives at one of the three following decisions for each part of the CDC allocation plan:

   (a) Proceed with the allocation according to the plan proposed by the CDC (go to step (12)).

   (b) Recycle request (go to step (3)) for further clarification and additional review.

   (c) Deny request (go to step (10)).

10. Curator transmits to NASA Headquarters a written summary as in (12) but with the LAPST recommendation against allocation. Given NASA Headquarters concurrence, step (11) is next.

11. Curator informs requester that his request is denied. Steps (12) and (13) are not necessary.

12. Curator transmits to NASA Headquarters a written summary of the sample request, the allocation plan, and the LAPST recommendation for allocation. Given NASA Headquarters concurrence, step (13) is next.

13. Curator proceeds with approved allocation plan and sends samples to requester.

LARGE-AREA COLLECTORS: CURRENT STATUS AND PLANS FOR THE FUTURE

Current design and construction status of the Large-Area Collector (LAC) was reviewed at a meeting convened by M. Zolensky and J. Townsend (NASA/JSC) at the Johnson Space Center on September 13, 1985. Attendees included G. Shelton (NASA/Ames) and W. Ferguson (Lockheed/Burbank, CA), representing the U2/ER-2 aircraft group at NASA/Ames Research Center, J. Bohannon, T. Davis (NASA/JSC), G. Cathey and R. Darney (Lockheed/JSC) of the JSC team who designed the LAC, and D. Blanchard (NASA/JSC) and J. Warren (Northrop/JSC) as additional representatives of the NASA/JSC Cosmic Dust Program.

The group agreed that the LAC had reached an acceptable design, and final construction plans were discussed. All parties were positive about building and flying the LAC's.

The support pylons for the LAC will be constructed by Lockheed/Ames, with the actual collector mechanism being fabricated in Houston. Final assembly of the LAC will occur at JSC. The LAC will be constructed in the following year, with the target date for completion being May, 1986. If this date can be met, then integration onto the aircraft and testing could be performed one month later at Wallops Island.

The collection surface area of the LAC's will be over an order of magnitute larger than that of the current flags. Therefore, use of the LAC's should increase the collection rate of large (>50 micrometer) particles and, thereby, facilitate the use of many types of particle analyses not currently possible. Larger particles should also encourage more inter-disciplinary and interlaboratory research. If construction of the LAC proceeds as scheduled, samples will be available from it by the end of 1986.

ITEMIZED LISTING OF AVAILABLE SAMPLES

Prompt allocation of samples in response to approved sample requests serves the interests of the cosmic dust science community but also creates a minor problem in parallel efforts to publicize the current status of available samples. Unlike lunar and meteorite samples, cosmic dust samples, with the exception of relatively rare paticles greater than 20-30-micrometer size, cannot be split or subdivided for allocation to more than one sample requestor. Therefore, once an individual dust particle has been approved for allocation to a given investigator, it immediately becomes unavailable for allocation to other investigators.

As an aid to researchers planning future sample requests, the current availability of samples in inventory (both cataloged and uncataloged) is summarized in Table 1. The information in Table 1 is explained in the accompanying "Key to Table 1" and in the following discussion. The key to Table 1 is mostly self-explanatory. For complete clarity, though, the following additional explanations are offered for each column of the table:

Line Number

The first and last columns of the table are simply reference numbers that identify the respective lines in the table. Those numbers are included as an aid in reading individual lines in the table.

Sample Number

The generic designation of each dust particle begins with the number of the collection surface on which it was collected. Because only collection "flags" (small-area collectors) are currently being flown, the "Sample Number" entry refers to the flag number. Flags flown on the WB57F aircraft are numbered "W7iii," and those flown on U-2 or ER-2 aircraft are numbered "U2iii," where "...iii" is a three-digit (integer) number.

Flag Status

This column indicates the type of work that has been performed on the flag in question. The "p" notation indicates that particles have been picked from the flag in the NASA/JSC Cosmic Dust Laboratory whereas the "r" notation indicates that the flag has been "reserved" (set aside to assure that representative sample material will be available for future scientific studies). An entry of "I..." indicates that the entire flag has been allocated to a cosmic dust investigator (see "Key to Table 1" for identification). A blank entry in the "Flag Status" column indicates that no sample processing has yet occurred for that flag. Flag status "Discarded" indicates that both the flag and its particle load have been discarded, due to excessive amounts of ground contamination being found on the collection surface.

Mount Status

For flags from which particles have been picked, the "Mount Status" column identifies the sample mounts that have been created during the picking operation. The current procedure for picking and preliminary examination

of particles utilizes a scanning electron microscopy (SEM) mount with 16 uniquely defined particle storage locations. The mounts that receive particles from a given flag are designated "A, B, C,..., etc." in the order that they are filled with particles. A blank entry in the "Mount Status" column indicates that no particle mounts have yet been created for the flag in question.

Particle Status

This group of 16 columns summarizes the status of each of the 16 particles that comprise the normal sample load of the SEM mount identified under the "Mount Status" column on the same line. An entry of "I..." indicates that the particle has been allocated to a sample investigator (see "Key to Table 1" for identification). An entry of "n" indicates that the particle was lost during handling whereas an entry of "u" indicates that no particle has yet been assigned the sample number in question. If the "Mount Status" column indicates that a particle mount has been created, a blank entry under one of the "Particle Status" columns on the same line indicates that the particle in question exists and is available for allocation. If more than 16 particles were documented on the mount, status of each of the extra particles is given in the "Comments" column (see below) using the same notation just described.

Comments

This column provides additional information that is needed to supplement or clarify entries made elsewhere in the table. Types of information listed under "Comments" include identification of flags that contain abundant terrestrial contamination (e.g., volcanic material), allocation status of particles existing on individual sample mounts but numbered outside the normal 1-16 series, and cross-references to samples that have been renumbered.

If the "Comments" column indicates that a flag is significantly contaminated (entry of "Ground contam.", "Volcanic ash", etc.), other areas on that line in the table will commonly contain descriptive information that does not follow the normal column-by-column definitions given above. In that case, the information given reflects the fact that, because of fundamental differences between "contamination" and "cosmic" material, processing and sample alloca- tions of the "contamination" followed a different course than is normally followed for "cosmic" samples. "Volcanic" contaminants, as listed in Table 1, are attributable almost exclusively to the March/April 1982 eruption of El Chichon volcano (see Courier 3) whereas "ground" contaminants accrue from instances in which flight crew errors lead to exposure of flags at undesirably low (tropospheric) altitudes. Although "cosmic" particles may occur on some of the contaminated flags, their selection from among abundant contaminant particles would be extremely time-consuming.

Allocation status information found in the "Comments" column follows the same format described above for the "Particle Status" column, except that the allocation status code is separated from the particle number by a "/" symbol. For example, the entry of "Also 17/I7; 18-19" under "Comments" on line 203 in the table indicates that, in addition to the normal complement

of 16 particles on sample mount U2001D, particles 17-19 were also deposited but that particle U2001D17 has been allocated to investigator I7.

Cross-references to other sample numbers occur under "Comments" in those cases where sample renumbering has occurred. Normally, sample renumbering is avoided but does occur in each case where preliminary examination of a small fragment of a large (usually, > 20-micrometer size) particle indicates that the large particle is probably of extraterrestrial ("cosmic") origin. Then, the number assigned to the preliminary examination fragment will be replaced by a new number indicating that the fragment was the first split of a large cosmic particle. For example, preliminary examination of a large particle on flag W7029 indicated that the particle was cosmic, leading to the naming of the particle as W7029*A. Therefore, as shown on line 53 of the table, the preliminary examination fragment that was originally named W7029C1 was renamed as W7029*A1. By referring to the status information for W7029*A, given on line 62 of the table, it is clear that W7029*A1 was allocated to investigator I1 and that additional fragments of the particle were allocated to several other investigators.

TABLE 1

NASA/JSC COSMIC DUST PROGRAM: SAMPLE AVAILABILITY SUMMARY

Effective Date: November, 1985

SAMPLE NUMBER	FLAG STATUS	MOUNT STATUS	PARTICLE STATUS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	COMMENTS
W7001																			Ground contam.
W7002																			Ground contam.
W7003																			Ground contam.
W7004																			Ground contam.
W7005																			Ground contam.
W7006																			Ground contam.
W7007																			Ground contam.
W7008																			Ground contam.
W7009																			
W7010	p; I11	A	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	Also 17-32/I1; 8 = W7010*A1
	I11	B	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	Also 17-39/I1
		C						u	u	u	u	u	u	u	u	u	u	u	
W7010*A			I1	I1															
W7011	r																		
W7012	I2																		
W7013																			
W7014																			
W7015																			
W7016	r																		
W7017	p; I1	A	n	I1	I1	I1	I1	I1	I1	I1	I1	n	I1	I1	I1	I1	n	I1	Also 17/n, 18/I1
	I1	B	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	n	I1	
		C		I1			I1			n			n		n	n	n		Also 17
		D	n		I6	n					n	n				n	n	n	
	I1	E	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	I1	Also 17-19/I1
		F			I4	I1		n				n	I6				I4	I1	
	I1	G	I1		I1	I5		I1		I1		I1	n	I5	I1	I1	I3		
		H	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	Storage only
		I	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	Storage only
	I1	J																	
	I1	K																	
	I1	L																	
	I1	M																	
	I1	N																	
	I1	O																	
W7018	I3																		
W7019																			
W7020	r																		
W7021	I3																		
W7022																			
W7023	r																		
W7024																			
W7025	r																		
W7026	p	A	I4		u	u	u	u	u	u	u	u	u	u	u	u	u	u	1 = W7026*A1
W7026		B			u	u	u	u	u	u	u	u	u	u	u	u	u	u	

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SAMPLE NUMBER	FLAG STATUS	MOUNT STATUS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	COMMENTS
W7026*A			I4	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7027	(I2); p	A			c	I11	n			I12	n	n	I2	I12	I11		I11	I12	Also 17; 18/n
W7027		B	I14	I14	I14	I14	I14	I14	I14	I9	I14	n	n	n	I14	I14	I14	n	
		C	n			I2		n	I9					I12					
		D				n				I12		n							Also 17-18
		E								I12	I15	I15		n					Also 17/12
		F			I12								I13						Also 17
		G													I13				Also 17-27
		H	u																Also 17-19
		I															u	u	
W7028	p	A				I4											u	u	
		B	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	I4x	Also 17/I4x
		D								u	u	u	u	u	u	u	u	u	
W7028*C			I4	u	I3	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7029	p	A						I6	I1			I4							Also 17-19
		B	I4	I4		I1					I1		n			I6			Also 17/I6; 13 = W7029*B1
	I1	C	I1	n	I1	n	n	n	I1	I1	I1	n	n	I1	I1	I1	I1	I1	Also 17/n; 1 = W7029*A1
		D														I1			
		E			I1								I1	I15	I4	I11		I13	Also 17-20/n
		F	n			I4					n		n	n	I7	n	n	n	Also 17/I1
		G		I7	I1						I1	I4	I1			I7	I4		
		H							I4	I4	I1	I1	I1		I7	n	I1	n	
		I	I1							I1					n	I7			Also 17-20;18/I11
		J	n		I1	I15		n	n		n	I13							Also 17/n, 19/I1, 18, 20
		K				u	u	u	u	u	u	u	u	u	u	u	u	u	
W7029*A			I1	I8	u	u	u	u	u	I3	u	u	u		I3	u	I2	I3	Also 17/I8, 22-26/I1
W7029*B				I3	I6	I1	I1	I1	I1	u	u	u	u	u					
W7030	r																		
W7031	(I2), p	A					I4										u	u	1 = W7031*A1, 2 = W7031*B1, 5 = W7031*C1 9 = W7031*D1
		E							u	u	u	u	u	u	u	u	u	u	
W7031*A				I1	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7031*B				u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7031*C			I4	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7031*D				u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7032	p	A								u	u	u	u	u	u	u	u	u	
W7033	Rinsed onto Nucleopore filter membrane																		Volcanic ash
W7034	Rinsed onto Nucleopore filter membrane																		Volcanic ash
W7035	r																		Volcanic ash
W7036	p	A	Contingency sample "scoops"																Volcanic ash

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SAMPLE NUMBER	FLAG STATUS	MOUNT STATUS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	COMMENTS
		B	Contingency sample "scoops"																
		C-K	"Scoops" onto electron microscopy substrates / I5																
W7037	Rinsed	onto Nucleopore filter membrane / I10																	Volcanic ash
W7038	Rinsed	onto Nucleopore filter membrane																	Volcanic ash
W7039	Rinsed	into Freon-113																	Volcanic ash
W7040	r																		Volcanic ash
W7041	Rinsed	into Freon-113																	Volcanic ash
W7042	Rinsed	into Freon-113																	Volcanic ash
W7043	Rinsed	into Freon-113																	Volcanic ash
W7044	Rinsed	into Freon-113																	Volcanic ash
W7045	Rinsed	into Freon-113																	Volcanic ash
W7046	Rinsed	into Freon-113																	Volcanic ash
W7047	Rinsed	into Freon-113																	Volcanic ash
W7048	r																		Deployment failed
W7049	Rinsed	into Freon-113																	Volcanic ash
W7050	Rinsed	into Freon-113																	Volcanic ash
W7051	r																		Volcanic ash
W7052	Rinsed	into Freon-113																	Volcanic ash
W7053	r																		Volcanic ash
W7054	Rinsed	into Freon-113																	Volcanic ash
W7055	Rinsed	into Freon-113																	Volcanic ash
W7056	r																		Volcanic ash
W7057	r																		Broken flag
W7058	p	A-B	Droplets mounted on electron microscopy substrates / I5																Volcanic aerosol
W7059																			Volcanic aerosol
W7060																			Volcanic aerosol
W7061																			Volcanic aerosol
W7062																			Volcanic aerosol
W7063																			Volcanic aerosol
W7064																			Volcanic aerosol
W7065																			Volcanic aerosol
W7066	p	A					I15	u	u	u	u	u	u	u	u	u	u	u	1 = W7066*A1; 5 = W7066*A2
		B					u	u	u	u	u	u	u	u	u	u	u	u	
W7066*A				I15															
W7067	r																		
W7068	p	A				u	u	u	u	u	u	u	u	u	u	u	u	u	
W7069	p	A		I13	u	u	u	u	u	u	u	u	u	u	u	u	u	u	1 = W7069*A1 2 = W7069*B1
		B				u	u	u	u	u	u	u	u	u	u	u	u	u	
W7069*A																			
W7069*B			I13																
W7070	r																		

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SAMPLE NUMBER	FLAG STATUS	MOUNT STATUS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	COMMENTS
W7071	p	A			u	u	u	u	u	u	u	u	u	u	u	u	u	u	1 = W7071*A1
		B					u	u	u	u	u	u	u	u	u	u	u	u	
W7071*A					u	u	u	u	u	u	u	u	u	u	u	u	u	u	
W7072	I3																		
W7073	p	A		u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
U2001	p	A			I7		I11			I11	I1			I12					Also 17/n; 18-20
		B	I4	n	I1	n	n			I7	I1	I11					I1		Also 17/I4
		C				I11		I13			n	I1	I12				I4	I1	Also 17
		D				I1			I13				I4						Also 17/I7; 18-19
		E		I1	I4		I4			I7								I1	Also 17-20
U2002	r																		
U2003																			Volcanic ash
U2004	r																		Volcanic ash
U2005																			Ground contam.
U2006																			Ground contam.
U2007																			Volcanic ash
U2008	r																		Volcanic ash
U2009																			Ground contam.
U2010																			Ground contam.
U2011	p	A						u	u	u	u	u	u	u	u	u	u	u	2 = U2011*A1
																			3 = U2011*A2
																			4 = U2011*A3
																			5 = U2011*B1
		C									u	u	u	u	u	u	u	u	
U2011*A																			
U2011*B																			
U2012	r																		
U2013	p	A			u	u	u	u	u	u	u	u	u	u	u	u	u	u	
U2014	I3																		
U2015	p	A								I16	u	u	u	u	u	u	u	u	1 = U2015*A1
																			2 = U2015*A2
																			3 = U2015*A3
																			4 = U2015*A4
																			8 = U2015*B1
		B																	Also 17-22
		C																	Also 17-27
		D																	Also 17-26
		E	n	n															Also 17
		F		n	I13		n	n						I13					Also 19-22
		G								u	u	u	u	u	u	u	u	u	
U2015*A						u	u	u	u	u	u	u	u	u	u	u	u	u	
U2015*B				u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
U2016																			Ground contam. ?

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SAMPLE NUMBER	FLAG STATUS	MOUNT STATUS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	COMMENTS
U2017	p	A													u	u	u	u	
U2018	p	A							u	u	u	u	u	u	u	u	u	u	
U2019																			Ground contam.
U2020																			Ground contam.
U2021																			Ground contam.
U2022	p	A						u	u	u	u	u	u	u	u	u	u	u	
U2022	P	B				n						n			n				Also 17,20,23-25
U2022	p	C		n															Also 17-21,23-25
U2022	p	D							n	n	n			n					Also 17-19
U2022	p	E																	Also 17-31
U2022	p	F			n														Also 17-19
U2022	p	G																	Also 17-24
U2023	r																		Volcanic aerosol?
U2024	I1																		
U2025	r																		
U2026	r																		Broken helicoil
U2027	Discarded																		Ground contam.
U2028	Discarded																		Ground contam.
U2029	r																		
U2030	Discarded																		Ground contam.
U2031	Discarded																		Ground contam.
U2032	Discarded																		Ground contam.

KEY TO TABLE 1

A, B, C, etc. - SEM particle-mount designation used in preliminary examination or storage.

I . . . - sample allocated to Investigator "I . . ." (see separate listing, below).

I . . . x - sample allocated to Investigator "I . . ." but without prior SEM examination (i.e., no catalog-type data were published).

(I . . .) - sample now at NASA/JSC but previously allocated to Investigator "I . . .".

c - particle tentatively identified as a laboratory contaminant.

n - sample lost during handling or preliminary examination.

p - particles "picked" (i.e., retrieved from collection surface) to yield samples as listed.

r - reserved for posterity.

u - unassigned sample number (i.e., no sample having this number exists in inventory).

Investigators:

I1: D. S. McKay (NASA/Johnson Space Center, Houston, TX, USA)

I2: D. E. Brownlee (Univ. of Washington, Seattle, WA, USA)

I3: R. M. Walker (Washington Univ., St. Louis, MO, USA)

I4: P. R. Buseck (Arizona State Univ., Tempe, AZ, USA)

I5: M. Maurette (Laboratoire Rene Bernas, Orsay, France)

I6: G. L. Nord, Jr. (U. S. Geological Survey, Reston, VA, USA)

I7: R. H. Hewins (Rutgers Univ., New Brunswick, NJ, USA)

I8: J. C. Laul (Battelle Pacific Northwest Labs, Richland, WA, USA)

I9: E. K. Gibson, Jr. (NASA/Johnson Space Center, Houston, TX, USA)

I10: W. H. Zoller (Univ. of Maryland, College Park, MD, USA)

I11: T. Esat (Australian National Univ., Canberra, Australia)

I12: K. Yamakoshi (Univ. of Tokyo, Japan)

I13: J. Bradley (McCrone & Associates, Chicago, IL, USA)

I14: R.D. Vis (NatuurKundig Laboratorium, Amsterdam, The Netherlands)

I15: M.E. Zolensky (NASA/Johnson Space Center, Houston, TX, USA)

I16: F.J. Rietmeijer (Lockheed/Johnson Space Center, Houston, TX, USA)

GUIDELINES FOR PREPARING A SAMPLE REQUEST

All sample requests should be made in writing to:

Curator/Cosmic Dust
Code SN2/Planetary Materials Branch
NASA/Johnson Space Center
Houston, TX 77058 USA.

Information may be obtained by telephone via (713) 483-6241 or -3274 [FTS 525-6241 or -3274].

Each request should refer to specific samples by their official identification numbers and should contain enough information to permit evaluation of the proposed study and the adequacy of the requestor's facilities. All necessary information should probably be condensable into a one- or two-page letter, although informative attachments (e.g., copies of pages from related proposals, reprints of publications, flow diagrams for analyses) are welcome. In addition, a brief statement regarding the desired method of mounting or containerizing the samples for shipment to the requestor should be included (see article on "Sample Containers for Shipment of Allocated Dust Particles" on pages 14-21 of Cosmic Dust Courier No. 4). Each sample request will be reviewed by the Cosmic Dust Committee (CDC), and the Lunar and Planetary Sample Team (LAPST), committees of scientists that advises NASA on matters related to the curation and allocation of extraterrestrial samples. The NASA/JSC Planetary Materials Branch will arrange for all required CDC and LAPST reviews and will inform requestors of results as rapidly as possible.

Prospective sample requestors may select samples from among those described in any issue of the Cosmic Dust Catalog or Cosmic Dust Courier series. However, reference should be made to Table 1 of this newsletter to check the availability of each sample before it is requested. In addition, we encourage investigators to contact us in advance of submitting their sample requests if further information is desired.