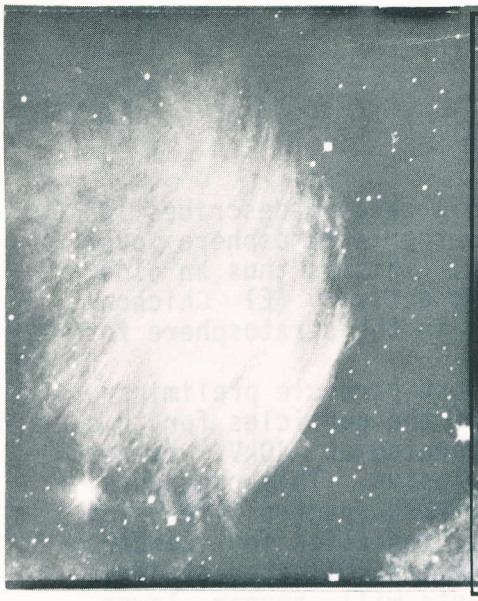
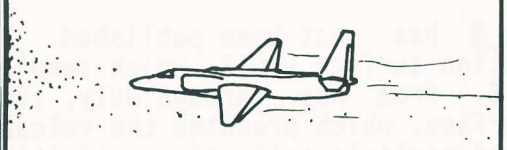


Cosmic Dust Courier



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COSMIC DUST COURIER NO. 7

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COSMIC DUST CATALOG 8 PUBLISHED

Cosmic Dust Catalog 8 has just been published. This catalog describes 123 particles from collection surface W7013, which sampled the stratosphere over the west-central U.S. from May through July, 1981. This is thus an older vintage collection surface, which predates the volcanic activity (El Chichon, Ruiz) which has plagued particle collection activities in the stratosphere for the past 5 years.

In a move to increase the efficiency of the Cosmic Dust particle preliminary characterization procedure at JSC, the chemistry of the particles for this latest catalog have been collected employing a STEM operated at 40kV, rather than on a SEM at 20kV as was done for Catalogs 4-7 inclusive. This procedural change introduces several changes in the appearance of EDX spectra with which users should be familiar. To wit, the the continuum of radiation for spectra collected at 40kV will appear higher than that for spectra collected at 20kV. In addition, the relative peak heights for light elements will appear lower, compared to heavier elements, than they would at 20kV. However, standard spectra have been re-collected at these new operating conditions, and are included in Catalog 8. Comparison of these standard spectra with analogous spectra from earlier catalogs will allow the user to compare and contrast the chemistry of Cosmic Dust particles appearing in Catalog 8 with samples featured in earlier publications.

Many new chondritic particles appear in Catalog 8. In addition, a particular effort was made to characterize many spherical particles, in light of renewed interest in this morphological type.

Finally, since particles in Catalog 8 are arranged by particle type, and thus do not appear in strict numerical order, a particle index has been included in this catalog for the user's reading pleasure. A similar table for particles listed in Cosmic Dust Catalogs 6 & 7, as well as previous Cosmic Dust Couriers, is provided later in this Courier.

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

The past year has finally seen the construction of the long-awaited next generation of Cosmic Dust collector, the Large Area Collector (LAC). This collector will feature a collection impaction surface with approximately an order of magnitude larger surface area than conventional collectors. The LAC should thus permit the collection of an order of magnitude more particles per collection period than the conventional collection aparatus, with more large grains being harvested. The availability of larger Cosmic Dust samples will permit new analytical techniques to be employed in their characterization, and allow more consortium studies to take place.

The support pylons for the LAC have recently been constructed by Lockheed/Ames, with the actual collector mechanism being fabricated in Houston at JSC. Final assembly of the LAC will occur at JSC during December and January (1986-1987). Integration of the LAC onto the aircraft and testing will then be performed during the spring of 1987.

If flight testing of the LAC proceeds as scheduled, samples will be available from it by the end of 1987.

ERUPTION OF NEVADO DEL RUIZ HINDERS COSMIC DUST COLLECTION EFFORTS

On November 13, 1985, a small Plinian eruption of the Colombian volcano Nevado del Ruiz ejected 3.5×10^{10} kg of mixed dacite and andesite tephra into the atmosphere. The maximum eruption column height was 31km, well above the altitude at which Cosmic Dust particles are collected by NASA (20km). Thus our efforts to collect Cosmic Dust in the stratosphere were scaled back such that only one collection surface was sampling at any particular time. Consequently, our yearly harvest of Cosmic Dust collection surfaces for the past year has been relatively small. Our U-2 pilots report that there is still a perceptable cloud in the stratosphere from this eruption, although most of the tephra particles have now settled below the collection altitude. The major effect we now see on our collection surfaces is an enhanced abundance of sulfuric acid droplets. Particle collection activities have consequently been restored to their pre-eruption level.

The much more unfortunate effects of this volcanic eruption were the deaths of at least 25,000 persons, due to the action of lahars, making this the greatest volcanic disaster since 1902 (Mount Pelee in Martinique). Shown here are two photographs of Nevado del Ruiz. The first was taken during a quiescent period in February 1985. The second photo shows fumarolic activity from the remnants of the volcano in December, 1985.

We are indebted to Dr. Jose Luis Naranjo Henao, Faculty of Geology and Mines, University of Caldas, Colombia, for providing the photographs and information regarding Nevado del Ruiz.

INDEX OF COSMIC DUST PARTICLES LISTED IN CATALOGS 6&7

AND ALL COSMIC DUST COURIERS

Particles in Catalogs 6-8 have been listed by particle type, and thus do not appear in strict numerical order. A particle index has been included in Catalog 8, however no such index was included in either Catalog 6 or 7. In addition, no sample index has been printed listing the various Cosmic Dust samples which have appeared only in Cosmic Dust Couriers. To rectify this situation the following table has been produced. All particles which appeared in Catalogs 6 and 7, or any Courier, are listed below in numerical order (by collection surface and mount) along with publication, volume, and page number in which they appeared.

Index of Samples Published in the COSMIC DUST CATALOG Volume 6 (Nov. 1985)

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
U2011 C 1	18	U2017 A 5	32
U2011 C 2	19	U2017 A 6	74
U2011 C 3	20	U2017 A 7	75
U2011 C 4	21	U2017 A 9	40
U2011 C 5	22	U2017 A 10	41
U2011 C 6	70	U2017 A 11	42
U2011 C 7	23	U2017 A 12	33
U2011 C 8	71	U2018 A 1	54
U2015 G 1	24	U2018 A 2	55
U2015 G 2	72	U2018 A 3	56
U2015 G 3	25	U2018 A 4	57
U2015 G 4	26	U2018 A 5	58
U2015 G 5	27	U2018 A 6	59
U2015 G 6	39	U2022 A 1	60
U2015 G 7	28	U2022 A 2	61
U2017 A 1	29	U2022 A 3	34
U2017 A 2	30	U2022 A 4	35
U2017 A 3	73	U2022 A 5	62
U2017 A 4	31	W7010 C 1	2

Index of Samples Published in the COSMIC DUST CATALOG Volume 6 - Concluded

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
W7010 C 2	3	W7031 E 2	10
W7010 C 3	64	W7031 E 3	11
W7010 C 4	4	W7031 E 4	12
W7026 B 1	44	W7031 E 5	66
W7026 B 2	45	W7031 E 6	67
W7028 D 1	5	W7066 B 1	13
W7028 D 2	46	W7066 B 2	14
W7028 D 3	65	W7066 B 3	50
W7028 D 4	38	W7066 B 4	51
W7028 D 5	47	W7069 B 1	15
W7028 D 6	48	W7069 B 2	16
W7028 D 7	49	W7069 B 3	17
W7029 K 1	6	W7071 B 1	68
W7029 K 2	7	W7071 B 2	52
W7029 K 3	8	W7071 B 3	53
W7031 E 1	9	W7071 B 4	69

Index of Samples Published in the COSMIC DUST CATALOG Number 7 (Nov. 1985)

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
U2022 B 1	2	U2022 B 8	4
U2022 B 2	2	U2022 B 9	105
U2022 B 3	56	U2022 B 11	57
U2022 B 5	102	U2022 B 12	5
U2022 B 6	103	U2022 B 14	58
U2022 B 7	104	U2022 B 15	59

Index of Samples Published in the COSMIC DUST CATALOG Number 7 - Continued

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
U2022 B 16	60	U2022 C 23	69
U2022 B 17	50	U2022 C 24	114
U2022 B 20	61	U2022 C 25	115
U2022 B 23	106	U2022 D 1	70
U2022 B 24	107	U2022 D 2	71
U2022 B 25	108	U2022 D 3	72
U2022 C 1	109	U2022 D 4	73
U2022 C 3	110	U2022 D 5	74
U2022 C 4	111	U2022 D 6	75
U2022 C 5	112	U2022 D 10	116
U2022 C 6	113	U2022 D 11	13
U2022 C 7	6	U2022 D 13	76
U2022 C 8	7	U2022 D 14	14
U2022 C 9	8	U2022 D 16	77
U2022 C 10	9	U2022 D 17	78
U2022 C 11	51	U2022 D 18	117
U2022 C 12	10	U2022 D 19	118
U2022 C 13	11	U2022 E 1	119
U2022 C 14	62	U2022 E 2	120
U2022 C 15	63	U2022 E 3	121
U2022 C 16	64	U2022 E 4	122
U2022 C 17	65	U2022 E 5	123
U2022 C 18	12	U2022 E 6	124
U2022 C 19	66	U2022 E 7	125
U2022 C 20	67	U2022 E 8	15
U2022 C 21	68	U2022 E 9	16

Index of Samples Published in the COSMIC DUST CATALOG Number 7 - Continued

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
U2022 E 10	79	U2022 F 6	23
U2022 E 11	80	U2022 F 7	92
U2022 E 12	81	U2022 F 8	52
U2022 E 13	82	U2022 F 9	24
U2022 E 14	83	U2022 F 10	25
U2022 E 15	84	U2022 F 11	93
U2022 E 16	17	U2022 F 12	26
U2022 E 17	18	U2022 F 13	27
U2022 E 18	85	U2022 F 14	133
U2022 E 19	86	U2022 F 15	28
U2022 E 20	126	U2022 F 16	94
U2022 E 21	127	U2022 F 17	29
U2022 E 22	128	U2022 F 18	30
U2022 E 23	129	U2022 F 19	95
U2022 E 24	19	U2022 G 1	31
U2022 E 25	20	U2022 G 2	32
U2022 E 26	87	U2022 G 3	33
U2022 E 27	130	U2022 G 4	96
U2022 E 28	88	U2022 G 5	97
U2022 E 29	89	U2022 G 6	34
U2022 E 30	131	U2022 G 7	35
U2022 E 31	132	U2022 G 8	36
U2022 F 1	90	U2022 G 9	37
U2022 F 2	91	U2022 G 10	38
U2022 F 4	21	U2022 G 11	53
U2022 F 5	22	U2022 G 12	134

Index of Samples Published in the COSMIC DUST CATALOG Number 7 - Concluded

SAMPLE NUMBER	PAGE NO.	SAMPLE NUMBER	PAGE NO.
U2022 G 13	39	U2022 G 19	54
U2022 G 14	40	U2022 G 20	44
U2022 G 15	98	U2022 G 21	45
U2022 G 16	41	U2022 G 22	46
U2022 G 17	42	U2022 G 23	99
U2022 G 18	43	U2022 G 24	47

Index of Samples Published in the
Cosmic Dust Courier Number 1 (Mar. 1982)

SAMPLE NUMBER	PAGE NO.
W7029 B 13	4
W7029 C 1	3

Index of Samples Published in the
Cosmic Dust Courier Number 2 (Jun. 1982)

SAMPLE NUMBER	PAGE NO.
W7026 A 1	7
W7028 A 4	8
W7031 A 1	9
W7031 A 2	10
W7031 A 5	11
W7031 A 9	12

Index of Samples Published in the
Cosmic Dust Courier Number 5 (Jun. 1984)

SAMPLE NUMBER	PAGE NO.
U2011 A 2	3
U2011 A 4	4
U2011 A 5	5
U2015 A 1	6
U2015 A 2	7
U2015 A 3	8
U2015 A 8	9
W7066 A 1	10
W7066 A 5	11
W7069 A 1	12
W7069 A 2	13
W7071 A 1	14
W7071 A 2	15

STATUS OF COSMIC DUST COLLECTION SURFACES (FLAGS)

The table below indicates the current status of all Cosmic Dust collection surfaces which have been flown to date and received into the Curatorial Office.

TABLE 1

NASA/JSC COSMIC DUST PROGRAM: STATUS OF FLAGS

Effective Date: December, 1986

FLAG #	LOCATION	COMMENTS
U2001	AT JSC	PICKED
U2002	AT JSC	RESERVED
U2003	AT JSC	VOLCANIC ASH
U2004	AT JSC	VOLCANIC ASH/RESERVED
U2005	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
U2006	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
U2007	AT JSC	VOLCANIC ASH/IN PETRI DISH
U2008	AT JSC	VOLCANIC ASH/RESERVED
U2009	AT JSC	GROUND CONTAMINATION
U2010	AT JSC	GROUND CONTAMINATION
U2011	AT JSC	PICKED
U2012	AT JSC	RESERVED
U2013	AT JSC	PICKED
U2014	WALKER,RM	
U2015	AT JSC	PICKED
U2016	AT JSC	GROUND CONTAMINATION?
U2017	AT JSC	PICKED
U2018	AT JSC	PICKED
U2019	AT JSC	GROUND CONTAMINATION
U2020	AT JSC	GROUND CONTAMINATION
U2021	AT JSC	GROUND CONTAMINATION
U2022	AT JSC	PICKED
U2023	AT JSC	VOLCANIC AEROSOL?/RESERVED
U2024	MCKAY,DS	
U2025	AT JSC	RESERVED
U2026	AT JSC	CONTAMINATION/BROKEN HELICOIL/RESERVED
U2027	DISPOSED BY JSC	GROUND CONTAMINATION/DISCARDED
U2028	DISPOSED BY JSC	GROUND CONTAMINATION/DISCARDED
U2029	AT JSC	IN PLEX COFFIN/RESERVED
U2030	DISPOSED BY JSC	GROUND CONTAMINATION/DISCARDED
U2031	DISPOSED BY JSC	GROUND CONTAMINATION/DISCARDED
U2032	DISPOSED BY JSC	GROUND CONTAMINATION/DISCARDED
U2033	AT JSC	IN PLEX COFFIN
U2034	AT JSC	IN PLEX COFFIN
U2035	AT JSC	IN PLEX COFFIN
U2036	AT JSC	IN PLEX COFFIN
U2037	AT JSC	IN PLEX COFFIN
U2038	AT JSC	IN PLEX COFFIN
U2039	AT JSC	IN PLEX COFFIN

TABLE 1 Continued

FLAG #	LOCATION	COMMENTS
U2040	AT JSC	IN PLEX COFFIN
U2041	AT JSC	IN PLEX COFFIN
U2042	AT JSC	IN PLEX COFFIN
U2043	AT JSC	IN PLEX COFFIN
W7001	AT JSC	GROUND CONTAMINATION/PICKED
W7002	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7003	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7004	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7005	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7006	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7007	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7008	AT JSC	GROUND CONTAMINATION/IN PETRI DISH
W7009	AT JSC	
W7010	AT JSC	PICKED
W7011	AT JSC	RESERVED
W7012	BROWNLEE,DE	
W7013	AT JSC	PICKED
W7014	AT JSC	
W7015	AT JSC	
W7016	AT JSC	RESERVED
W7017	AT JSC	PICKED
W7018	WALKER,RM	
W7019	AT JSC	
W7020	AT JSC	RESERVED
W7021	WALKER,RM	WALKER,RM
W7022	AT JSC	
W7023	AT JSC	RESERVED
W7024	AT JSC	
W7025	AT JSC	RESERVED
W7026	AT JSC	PICKED
W7027	AT JSC	PICKED/PREVIOUSLY ALLOCATED TO BROWNLEE
W7028	AT JSC	PICKED
W7029	AT JSC	PICKED
W7030	AT JSC	RESERVED
W7031	AT JSC	PICKED/PREVIOUSLY ALLOCATED TO BROWNLEE
W7032	AT JSC	PICKED
W7033	AT JSC	VOLCANIC ASH/COMPLETELY RINSED ONTO NUCLEOPORE FILTER
W7034	AT JSC	VOLCANIC ASH/COMPLETELY RINSED ONTO NUCLEOPORE FILTER
W7035	AT JSC	VOLCANIC ASH/RESERVED
W7036	AT JSC	VOLCANIC ASH/PICKED
W7037	ZOLLER,WH	VOLCANIC ASH/COMPLETELY RINSED ONTO NUCLE. FILTER/ZOLLER,WH
W7038	AT JSC	VOLCANIC ASH/COMPLETELY RINSED ONTO NUCLEOPORE FILTER
W7039	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7040	AT JSC	VOLCANIC ASH/RESERVED
W7041	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7042	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7043	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7044	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7045	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7046	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7047	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7048	AT JSC	DEPLOYMENT FAILED/RESERVED
W7049	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE

TABLE 1 Concluded

FLAG #	LOCATION	COMMENTS
W7050	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7051	AT JSC	VOLCANIC ASH/RESERVED
W7052	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7053	AT JSC	VOLCANIC ASH/RESERVED
W7054	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7055	AT JSC	VOLCANIC ASH/COMPLETELY RINSED INTO FREON-113 BOTTLE
W7056	AT JSC	VOLCANIC ASH/COLLECTOR INVERTED/RESERVED
W7057	AT JSC	VOLCANIC AEROSOL/BROKEN FLAG/RESERVED
W7058	AT JSC	VOLCANIC AEROSOL
W7059	AT JSC	VOLCANIC AEROSOL
W7060	AT JSC	VOLCANIC AEROSOL
W7061	AT JSC	VOLCANIC AEROSOL
W7062	AT JSC	VOLCANIC AEROSOL
W7063	AT JSC	VOLCANIC AEROSOL
W7064	AT JSC	VOLCANIC AEROSOL
W7065	AT JSC	VOLCANIC AEROSOL
W7066	AT JSC	PICKED
W7067	AT JSC	RESERVED
W7068	AT JSC	PICKED
W7069	AT JSC	PICKED
W7070	AT JSC	RESERVED
W7071	AT JSC	PICKED
W7072	WALKER,RM	WALKER,RM
W7073	AT JSC	PICKED

TABLE OF RENUMBERED CHONDRITIC COSMIC DUST PARTICLES

Occasionally, in the course of detailed chondritic Cosmic Dust particle characterization, it is found that several grains originated from the same large chondritic cluster particle. Chondritic particles are particularly prone to disaggregating during the collection process in the stratosphere, as well as during particle picking from the collection surface. When this is recognized, and in order to explicitly recognize this relationship, the particle is renumbered. The new, renumbered name contains a *. For example, W7028 A4 and W7028 D1 were recognized as originating from the same large chondritic particle. This larger particle was posthumously named W7028 *C, and W7028 A4 and W7028 D1 were renumbered W7028 *C1 and W7028 *C2, respectively. The following table lists all particles which have to date been so renumbered.

TABLE 2

NASA/JSC COSMIC DUST PROGRAM:

RENUMBERED CLUSTER PARTICLES

Effective Date: December, 1986

OLD PARTICLE NUMBER	NEW PARTICLE CLUSTER NUMBER
U2011 A 2	U2011 *A 1
U2011 A 4	U2011 *A 2
U2011 A 5	U2011 *B 1
U2015 A 1	U2015 *A 1
U2015 A 2	U2015 *A 2
U2015 A 3	U2015 *A 3
U2015 A 8	U2015 *B 1
W7010 A 8	W7010 *A 1
W7010 C 1	W7010 *A 3
W7010 C 2	W7010 *A 4
W7010 C 4	W7010 *A 5
W7026 A 1	W7026 *A 1
W7028 A 4	W7028 *C 1
W7028 D 1	W7028 *C 2
W7029 B 13	W7029 *B 1
W7029 C 1	W7029 *A 1
W7029 K 1	W7029 *A 27
W7029 K 2	W7029 *B 8
W7031 A 1	W7031 *A 1
W7031 A 2	W7031 *B 1
W7031 A 5	W7031 *C 1
W7031 A 9	W7031 *D 1
W7031 E 1	W7031 *A 3
W7031 E 2	W7031 *C 2
W7031 E 3	W7031 *B 2
W7031 E 4	W7031 *B 3
W7066 A 1	W7066 *A 1
W7066 A 5	W7066 *A 2
W7066 B 1	W7066 *A 3
W7066 B 2	W7066 *A 4
W7069 A 1	W7069 *A 1
W7069 A 2	W7069 *B 1
W7069 B 1	W7069 *B 2
W7069 B 2	W7069 *A 2
W7069 B 3	W7069 *A 3
W7071 A 1	W7071 *A 2
W7071 A 2	W7071 *A 1

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 particles 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 is summarized in the following table. This table has been simplified for this courier. In place of the usual jam-packed sample availability table we have instead provided a simple, easy to read listing of the samples which remain in our coffers. This table thus lists all Cosmic Dust samples which remain available as of 12/11/86.

TABLE 3

NASA/JSC COSMIC DUST PROGRAM: SAMPLE AVAILABILITY

Effective Date: December, 1986

MOUNT #	PARTICLES AVAILABLE FOR ALLOCATION
U2001 A	1 2 4 6 7 10 11 13 14 15 16 18 19 20
U2001 B	6 7 12 13 16
U2001 C	1 2 3 5 7 8 12 13 14 17
U2001 D	1 2 3 5 6 8 9 10 12 13 14 15 16 18 19
U2001 E	1 4 6 7 9 10 11 12 13 14 15 17 18 19 20
U2011 A	1 3 6 7 8 9 10 11
U2011 C	1 3 5 6 8 9
U2011 *A	1 2
U2013 A	1 2
U2015 A	4 5 6 7
U2015 B	1 2 4 5 6 7 10 11 12 13 14 15 16 17 18 20 21 22
U2015 C	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 26 27
U2015 D	1 2 3 4 5 7 8 9 10 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

TABLE 3 Continued

MOUNT #	PARTICLES AVAILABLE FOR ALLOCATION
U2015 E	3 4 5 6 8 9 10 11 12 13 14 15 16 17
U2015 F	1 4 7 8 9 10 11 13 14 16 17 18 19 20 21 22
U2015 G	2 4 5 6 7
U2015 *A	1 2 3
U2017 A	1 3 4 5 6 7 9 10 11 12
U2018 A	1 2 3 4 5 6
U2022 A	1 2 3 4 5
U2022 B	2 3 5 6 7 9 11 14 15 16 17 20 22 23 25
U2022 C	3 4 5 6 7 10 11 12 15 16 18 21
U2022 D	1 2 3 4 5 6 10 13 14 17 18 19
U2022 E	1 2 3 4 5 6 7 8 10 11 13 14 15 17 18 19 20 21 22 23 24 27 28 29 30 31
U2022 F	1 2 5 7 8 10 11 12 14 15 16 19
U2022 G	2 3 4 5 6 8 9 11 12 13 15 16 17 18 21 22 23 24
W7010 C	3 5
W7010 *A	3 4 5
W7013 A	1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 21
W7013 B	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
W7013 C	1 2 3 4 5 6 7 8 9 10 11 13 16 17
W7013 D	1 3 5 6 8 9 10 11 12 13 14 15 16 17
W7013 E	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
W7013 F	1 2 3 4 5 6 7 8 9 10 12 13 14 15 16 17
W7013 G	1 2 3 4 5 6 7 9 10 11 12 13 14 15 16
W7013 H	3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23 24
W7017 C	1 3 4 6 7 9 10 12 16 17
W7017 D	2 3 5 6 7 8 11 12
W7017 F	1 2 7 8 9 11 12 13 14

TABLE 3 Continued

MOUNT #	PARTICLES AVAILABLE FOR ALLOCATION
W7017 G	2 5 7 9 16
W7026 A	2 3
W7026 B	1 2
W7027 A	1 2 3 6 7 14 17
W7027 C	2 5 8 9 10 11 13 14 15 16
W7027 D	1 3 5 6 7 9 11 12 13 14 15 16 17 18
W7027 E	1 2 3 4 5 6 7 11 13 14 15 16
W7027 F	1 2 4 5 6 7 8 9 10 12 13 14 15 16 17 18 19 20
W7027 G	1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
W7027 H	3 4 5 6 7 8 9 10 12 13 14 16 18 19
W7027 I	1 2 3 4 5 6 7 8 9 10 11 12 13 14
W7028 A	1 2 5 6 7 8 9 10 11 12 13
W7028 D	2 3 4 5 6 7
W7029 A	1 2 3 4 5 6 8 9 11 12 13 14 15 16 17 18 19
W7029 B	3 5 6 7 8 10 12 14 15 16 18
W7029 D	1 2 3 4 5 6 8 9 10 11 12 13 15 16
W7029 E	1 2 4 6 7 9 15
W7029 F	2 3 5 6 7 8 10 16
W7029 G	1 4 5 6 7 8 12 13 16
W7029 H	1 2 3 4 5 12
W7029 I	2 3 4 5 6 7 9 10 11 12 15 16 17 20
W7029 J	2 5 8 11 12 13 14 15 16 18 19 20
W7029 K	3
W7029 *A	3 4 5 6 7 9 10 11 14 18 19 20 21
W7029 *B	3 8
W7031 A	3 4 6 7 8 10 11 12 13 14

TABLE 3 Concluded

MOUNT #	PARTICLES AVAILABLE FOR ALLOCATION
W7031 B	1
W7031 *A	1
W7031 *B	2 3
W7031 *C	2
W7031 *D	1
W7032 A	1 2 3 4 5 6 7
W7036 B	1 2 3 4 5 6
W7066 A	2 3 4
W7066 B	3 4
W7066 *A	1 4
W7068 A	1 2 3
W7069 *A	1 2 3
W7069 *B	2
W7071 B	1 2 3
W7071 *A	1 2
W7073 A	1

INVESTIGATORS WHO HAVE RECEIVED SAMPLES TO DATE

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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) 483-5128 [FTS 525-5128]. NOTE that this is a new telephone number.

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 advise 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 the sample availability table of this newsletter to check the status 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.

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