#257

APOLLO 14

APOLLO 16

ACTIVE SEISMIC EVENT

71-008C-05A
72-031C-02A

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See

documentation and

dump for 71-008C-02A

APOLLO 14 LM/ALSEP

ACTIVE SEISMIC EVENT TAPES

71-008C-05A

This data set has been restored. There was originally one 7-track, 800 BPI tapes written in Binary. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tape was created on a 1108 computer and the restored tape was created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR005646	DS005646	D012902	1	02/15/71 - 02/15/71 (a)

(a) D012902: Read errors occurred in records 347, 368, 473, 540, 700, 711 of file 1.

APOLLO 16

LM/ALSEP ACTIVE SEISMIC EVENT TAPES

72-031C-02A

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED FOUR 7-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN UNIVAC 1108 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005513	DS005513	D012899	1	04/21/72 - 04/21/72 (a)
		D012898	2	04/24/72 - 04/24/72
		D012900	3	05/23/72 - 05/23/72 (b)
		D012901	4	05/23/72 - 05/23/72

(a) D012899 - ONE ERROR, RECORD 12, FILE 1
(b) D012900 - ONE ERROR, RECORD 944, FILE 1

APOLLO 14 & APOLLO 16

ACTIVE SEISMIC EVENT

71-008C-05A

72-031C-02A

This data set catalog consists of 4 Apollo 16 and one Apollo 14 Active Seismic Event tapes produced on a Univac 1108 computer. The tapes are 7-track, 800 BPI, binary, with one file each.

Apollo 16 72-031C-02A

D#	C#	TIME SPAN
D-12898	C-11032	4/24/72 - 4/24/72
D-12899	C-11033	4/21/72 - 4/21/72
D-12900	C-11034	5/23/72 - 5/23/72
D-12901	C-11035	5/23/72 - 5/23/72

Apollo 14 71-008C-05A

D#	C#	TIME SPAN
D-12902	C-11031	2/15/71 - 2/15/71

From NASA [illegible] "Data Proc. Plan for Apollo Lunar Surface & Subsatellite Exp." July 23, 1971

74009C-05A
72051C-02A
ACTIVE SEISMIC

TABLE A1 ALSEP TELEMETRY DOWNLINK CHARACTERISTICS

Normal Bit Rate	Contingency Bit Rate	ASE Bit Rate(1)	LSP Bit Rate(2)
1060 bits/sec	530 bits/sec	10.6 kbps	3.533 kbps
10 bits/word	10 bits/word	20 bits/word	30 bits/word
64 words/frame	64 words/frame	4 subwords/word	4 subwords/word
640 bits/frame	640 bits/frame	5 bits/subword	7 bits/subword
603.77 ms/frame	1.21 sec/frame	32 words/frame	60 words/frame
		640 bits/frame	1800 bits/frame
		0.060377 sec/frame	0.5095 sec/frame

Most significant bit is transmitted first.

$$\text{Normal bit rate} = 10 \text{ bits/word} \times 64 \text{ words/frame} \times \frac{1 \text{ frame}}{0.60377 \text{ sec}} = 1060 \text{ bits/sec}$$

$$\text{Contingency bit rate} = 10 \text{ bits/word} \times 64 \text{ words/frame} \times \frac{1 \text{ frame}}{1.21 \text{ sec}} = 530 \text{ bits/sec}$$

$$\text{ASE bit rate} = 20 \text{ bits/word} \times 32 \text{ words/frame} \times \frac{1 \text{ frame}}{0.060377 \text{ sec}} = 10600 \text{ bits/sec}$$

$$\text{LSP bit rate} = 30 \text{ bits/word} \times 60 \text{ words/frame} \times \frac{1 \text{ frame}}{0.5095 \text{ sec}} = 3533 \text{ bits/sec}$$

NOTES:

1. Active Seismic data only. ASE is scheduled for Apollo 16 ALSEP.
2. Lunar Seismic Profiling experiment only. LSP is scheduled for Apollo 17 ALSEP, and it will also have the capability to operate at the normal bit rate.

TABLE A2 ALSEP MAIN FRAME WORD ASSIGNMENT (APOLLO 15)

Each box contains one 10-bit word

Total bits per frame – 10 × 64 = 640 bits

1 Sync	2 Sync	3 Sync and ID	4 PSE	5 LSM	6 PSE	7 SWS	8 PSE
9 PSE	10 PSE	11 PSE	12 PSE	13 PSE	14 PSE	15 SIDE	16 PSE
17 LSM	18 PSE	19 LSM	20 PSE	21 LSM	22 PSE	23 SWS	24 HFE
25 PSE	26 PSE	27 PSE	28 PSE	29 PSE	30 PSE	31 SIDE	32 PSE
33 House-keeping	34 PSE	35 PSE	36 PSE	37 PSE	38 PSE	39 SWS	40 PSE
41 PSE	42 PSE	43 PSE	44 PSE	45 PSE	46 Command Verifi-cation	47 SIDE	48 PSE
49 LSM	50 PSE	51 LSM	52 PSE	53 LSM	54 PSE	55 SWS	56 SIDE
57 PSE	58 PSE	59 PSE	60 PSE	61 PSE	62 PSE	63 SIDE	64 PSE

I.	Data System (CONT) A. Control B. Command Verification C. Housekeeping	5 Words
II.	Passive Seismic Experiment (PSE)	42 Words
III.	Lunar Surface Magnetometer Experiment (LSM)	7 Words
IV.	Solar Wind Spectrometer Experiment (SWS)	4 Words
V.	Suprathermal Ion Detector Experiment (SIDE)	5 Words
VI.	Heat Flow Experiment (HFE)	1 Word
		64 Words Total

TABLE A3 ALSEP MAIN FRAME WORD ASSIGNMENT (APOLLO 16)

Each box contains one 10-bit word

Total bits per frame = 10 × 64 = 640 bits

1 Sync	2 Sync	3 Sync and ID	4 PSE	5 LSM	6 PSE	7 N/A(1)	8 PSE
9 PSE	10 PSE	11 PSE	12 PSE	13 PSE	14 PSE	15 N/A(1)	16 PSE
17 LSM	18 PSE	19 LSM	20 PSE	21 LSM	22 PSE	23 HFE	24 PSE
25 PSE	26 PSE	27 PSE	28 PSE	29 PSE	30 PSE	31 N/A(1)	32 PSE
33 House-keeping	34 PSE	35 PSE	36 PSE	37 PSE	38 PSE	39 N/A(1)	40 PSE
41 PSE	42 PSE	43 PSE	44 PSE	45 PSE	46 Command Verifi-cation	47 N/A(1)	48 PSE
49 LSM	50 PSE	51 LSM	52 PSE	53 LSM	54 PSE	55 N/A(1)	56 N/A(1)
57 PSE	58 PSE	59 PSE	60 PSE	61 PSE	62 PSE	63 N/A(1)	64 PSE

I.	Data System (CONT)	5 Words
	A. Control	
	B. Command Verification	
	C. Housekeeping	
II.	Passive Seismic Experiment (PSE)	43 Words
III.	Lunar Surface Magnetometer Experiment (LSM)	7 Words
IV.	Heat Flow Experiment (HFE)	1 Word
V.	Unassigned	8 Words
		64 Words Total

NOTE:

1. N/A: Not assigned.

TABLE B1 TELEMETRY

A. DOWNLINK CHARACTERISTICS

The Particles and Fields Lunar Orbital Subsatellite (P&FS) telemetry downlink has the following characteristics:

- 128 bits/sec
- 8 bits/word
- 32 words/frame
- 1 frame/2 seconds
- 8 frames/data cycle
- 1 data cycle/16 seconds
- 16 words/second

The real-time and dump formats are identical for words 6 and 22 of all frames. During real time, measurement S03R will be in these words; during dump, word 6 will contain measurement S01D while word 22 contains S02D.

TABLE B1 TELEMETRY

B. SUBSATELLITE MAIN FRAME WORD ASSIGNMENT

Frame

Word	1/17	2/18	3/19	4/20	5/21	6/22	7/23	8/24	9/25	10/26	11/27	12/28	13/29	14/30	15/31	16/32
1	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D(1)	24A2 S04B	4DS1 S17B	12DS1 S06B	192DS1 D08B	24DS2 S19B	4DS1 S16B	24DS3 S11B	48DS1 S21B	24DS4 S07B	4DS1 S16B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D(1)	24DS6 S08B	4DS1 S16B	12DS1 S06B	192DS2 D09B	24DS8 T01B	4DS1 S16B	24DS9 S13B	48DS2 S25B	24DS10 S09B	4DS1 S16B
2	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S16B	12DS1 S06B	192DS3 T03B	24DS2 S18B	4DS1 S16B	24DS3 S11B	48DS3 S23B	24DS4 S07B	4DS1 S16B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S16B	12DS1 S06B	192DS4 T02B	24DS8 T01B	4DS1 S16B	24DS9 S13B	48DS4 S27B	24DS10 S09B	4DS1 S16B
3	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S16B	12DS1 S06B	192DP1 BL3	24DS2 S18B	4DS1 S17B	24DS3 S11B	48DS1 S20B	24DS4 S07B	4DS1 S17B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S17B	12DS7 S06B	192DS5 T04B	24DS8 T01B	4DS1 S17B	24DS9 S13B	48DS2 S24B	24DS10 S09B	4DS1 S17B
4	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S17B	12DS1 S06B	192A1 S34B	24DS2 S19B	4DS1 S17B	24DS3 S11B	48DS3 S22B	24DS4 S07B	4DS1 S17B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S17B	12DS1 S06B	192A2 E02B	24DS8 T01B	4DS1 S17B	24DS9 S13B	48DS4 S26B	24DS10 S09B	4DS1 S17B
5	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S17B	12DS1 S06B	192A3 E03B	24DS2 S19B	4DS1 S16B	24DS3 S11B	48DS1 S21B	24DS4 S07B	4DS1 S16B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S16B	12DS1 S06B	192A4 E04B	24DS8 T01B	4DS1 S16B	24DS9 S13B	48DS2 S25B	24DS10 S09B	4DS1 S16B
6	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S16B	12DS1 S06B	192A5 S15B	24DS2 S18B	4DS1 S16B	24DS3 S11B	48DS3 S23B	24DS4 S07B	4DS1 S16B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S16B	12DS1 S06B	192A6 E06B	24DS8 T01B	4DS1 S16B	24DS9 S13B	48DS4 S27B	24DS10 S09B	4DS1 S16B
7	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S16B	12DS1 S06B	192A7 E05B	24DS2 S18B	4DS1 S17B	24DS3 S11B	48DS1 S20B	24DS4 S07B	4DS1 S17B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S17B	12DS1 S06B	192A8 S14B	24DS8 T01B	4DS1 S17B	24DS9 S13B	48DS2 S24B	24DS10 S09B	4DS1 S17B
8	2DP1 D01B	2DP2 D02B	2DP3 BL4	2DP4 BL1	24DS1 S10B	24A1 S01D	24A2 S04B	4DS1 S17B	12DS1 S06B	192A9 S29B	24DS2 S19B	4DS1 S17B	24DS3 S11B	48DS3 S22B	24DS4 S07B	4DS1 S17B
	2A1 C03B	2A2 D12B	2DP5 BL2	2DP6 BL5	24DS7 S12B	24DS5 S02D	24DS6 S08B	4DS1 S17B	12DS1 S06B	192A10 S30B	24DS8 T01B	4DS1 S17B	24DS9 S13B	48DS4 S26B	24DS10 S09B	4DS1 S17B

NOTE:

1. Words 6 and 22 are 24A1 (S03R) in the real-time format.

APOLLO 14 ACTIVE SEISMIC DATA TAPE DESCRIPTION

ALSEP ACTIVE SEISMIC TYPE B
10 Frames of Data/Record
17Ø-48 Bit Words or 228-36 Bit Words/Record
Time is Read for each Frame of Data

0	47 FORTRAN 36	HEADER 12		0
1	47 DAYS (BCD)	24	YEAR	0
2	47 (BCD) 36			0
3	47 BINARY MILLISECONDS(0)		12 BINARY	0
4	MILLISECONDS(1)	BINARY MILLISEC-		
5	ONDS(2)	BINARY MILLISECONDS(3)		
6	BINARY MILLISECONDS(4)		BINARY	
7	MILLISECONDS(5)	BINARY MILLISEC-		
8	ONDS(6)	BINARY MILLISECONDS(7)		
9	BINARY MILLISECONDS(8)		BINARY	
10	47 MILLISECONDS(9)	24	CONTROL WORD(0)	0
11	47 DATA WORD(2)	23 24	DATA WORD(3)	4 0
12	DATA WORD(4)			
	•			
	•			
	DATA WORD(32)		CONTROL WORD(1)	
27	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
42	DATA WORD(32)		CONTROL WORD(2)	
43	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
58	DATA WORD(32)		CONTROL WORD(3)	
59	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
74	DATA WORD(32)		CONTROL WORD(4)	

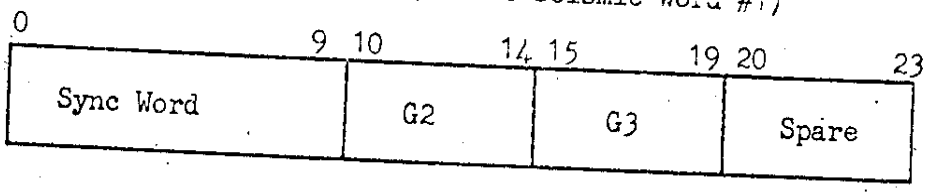
75	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
90	DATA WORD(32)		CONTROL WORD(5)	
91	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
106	DATA WORD(32)		CONTROL WORD(6)	
107	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
122	DATA WORD(32)		CONTROL WORD(7)	
123	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
138	DATA WORD(32)		CONTROL WORD(8)	
139	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
154	DATA WORD(32)		CONTROL WORD(9)	
155	DATA WORD(2)		DATA WORD(3)	
	DATA WORD(4)			
	•			
	•			
170	DATA WORD(32)			

SYNC PATTERN - 10 Bits = 0354_8

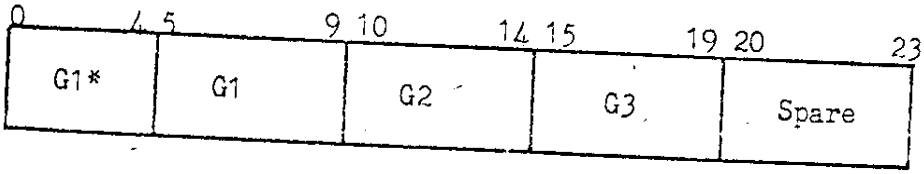
ACTIVE SEISMIC TAPE FORMAT (ARRAY 1)

Each physical record will contain 20 ALSEP frames and timing. The 20 bit Active Seismic data word will be left adjusted in a 24 bit computer word.

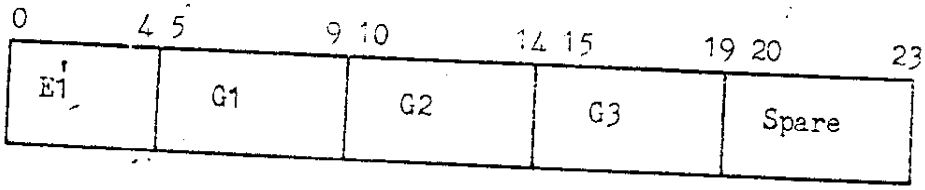
Word 1	Days in BCD mode
Word 2	Year in BCD mode
Word 3,4	Spare
Words 5,6	Time of frame 1 in binary milliseconds (48 bits)
Words 7,8	Time of frame 2 in binary milliseconds (48 bits)
⋮	⋮
Words 43,44	Time of frame 20 in binary milliseconds (48 bits)
Word 45	Control word (Active Seismic Word #1)



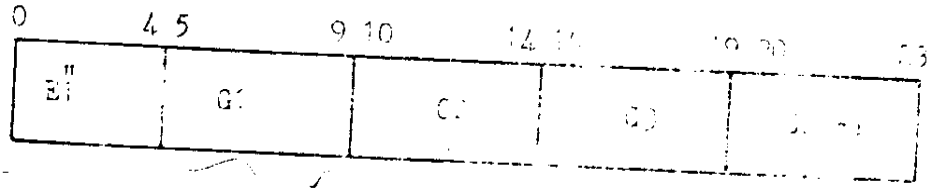
Word 46 (Active Seismic Word #2)



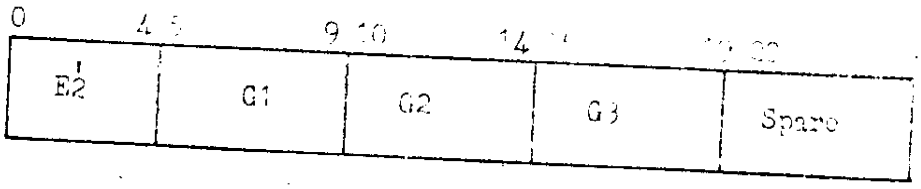
Word 47 (Active Seismic Word #3)



Word 48 (Active Seismic Word #4)



Word 49 (Active Seismic Word #5)



Word 50 (Active Seismic Word #6)

0	4 5	9 10	14 15	19 20 23
E2"	G1	G2	G3	Spare

⋮ ⋮ ⋮ ⋮ ⋮

Word 72 (Active Seismic Word #28)

0	4 5	9 10	14 15	19 20 23
E13"	G1	G2	G3	Spare

Word 73 (Active Seismic Word #29)

0	4 5	9 10	14 15	19 20 23
Mark Frame	G1	G2	G3	Spare

Word 74 (Active Seismic Word #30)

0	4 5	9 10	14 15	19 20 23
Word Count	G1	G2	G3	Spare

Word 75 (Active Seismic Word #31)

0	4 5	9 10	14 15	19 20 23
Event Bit Count	G1	G2	G3	Spare

Word 76 (Active Seismic Word #32)

0	4 5	9 10	14 15	19 20 23
—	G1	G2	G3	Spare

Mode ID & Command Verification

Word 77 - 108 Active Seismic Words 1-32 Frame #2

. . . . .

. . . . .

. . . . .

Word 653 - 684 Active Seismic Words 1-32 Frame #20

Binary tape (odd parity), ~~800~~ 6250 BPI
9 track, $\frac{1}{2}$ inch, 2400 ft. reel
Standard EOF

ACTIVE SEISMIC WORD FORMAT

TYPICAL ENGINEERING WORD FORMAT

	RTG TEMP			
WORD 2	X X X X –	G1	G2	G3

BLANK
2^4
2^5
2^6
MOST SIGNIFICANT BIT (2^7)

WORD 3	X X X X –	G1 –	G2	G3

2^0
2^1
2^2
2^3

DS-18

EVENT MARK	0 0 1 0 0			

MODE ID

1 0 0 – –	CALIBRATE
0 1 0 – –	ARM THUMPER
0 0 1 – –	ARM GRENADES

DAY
1-68

Dob Milly

ACTIVE SEISMIC WORD FORMAT
TYPE B

Shows 1 frame

1 — word count each frame .060377 sec
32 words/frame

0	SYNC. WORD 00001110 11	G2	G3	1 G1	G1	G2	G3	2 RTG TEMP #1 COLD	G1	G2	G3	3 RTG TEMP # COLD	G1	G2	G3
4	SHUNT REG (I) #1	G1	G2	G3	5 SHUNT REG (I) #1	G1	G2	G3	6 5 VOLT TM	G1	G2	G3	7 5 VOLT TM	G1	G2	G3
8	ROLL	G1	G2	G3	9 ROLL	G1	G2	G3	10 PITCH	G1	G2	G3	11 PITCH	G1	G2	G3
12	GLA TEMP.	G1	G2	G3	13 GLA TEMP	G1	G2	G3	14 CAL PULSE	G1	G2	G3	15 CAL PULSE	G1	G2	G3
16	3.75v	G1	G2	G3	17 5.75v	G1	G2	G3	18 1.25v	G1	G2	G3	19 1.25v	G1	G2	G3
	1100				0100				0100				0001			
20	C.E. TEMP. A/D	G1	G2	G3	21 C.E TEMP A/D	G1	G2	G3	22 RTG OUT VOLTS	G1	G2	G3	23 RTG OUT VOLTS	G1	G2	G3
24	RTG OUT (I)	G1	G2	G3	25 RTG OUT (I)	G1	G2	G3	26 RTG TEMP #1 HOT	G1	G2	G3	27 RTG TEMP #1 HOT	G1	G2	G3
28	MARK EVENT	G1	G2	G3	29 WORD COUNT	G1	G2	G3	30 BIT COUNT	G1	G2	G3	31 MODE ID	G1	G2	
	00100															

From: J. Newton

The following bit formats for ASE words 29 and 30 were obtained from R. Day at Bendix, Ann Arbor.

Word 29 is the word count.

Word 30 is the bit count.

Word 29			Word 29		Word 29	
	Word	Count	Word	Count	Word	Count
0	0	00000	.024528 13	01101	26	11010
30188678	1	00001	.0264149 14	01110	27	11011
377356						
.566034	2	00010	15	01111	28	11100
754712	3	00011	16	10000	29	11101
943390	4	00100	17	10001	30	11110
01132068	5	00101	18	10010	31	11111
	6	00110	19	10011		
.013207467		00111	20	10100		
.015094248		01000	21	10101		
.016981029		01001	22	10110		
.018867810		01010	23	10111		
07545811		01011	24	11000		
.022641612		01100	25	11001		

Word 30			Word 30		Word 30	
Bit		Bit Count	Bit	Bit Count	Bit	Bit Count
0		00001	9	10011	18	00111
1		01100	10	10001	19	00011
2		01110	11	11100		
3		01111	12	11110		
4		01011	13	11111		
5		01001	14	11011		
6		10100	15	11001		
7	1	10110	16	00100		
8	2	10111	17	00110		
	4					
	16					
	23					

note BIT COUNT is not in binary

115 1972

Dupe of D-12898 4/24/72

FILE 0001 REC 0001 CH 1368

0001	000344000001	000000010105	000001110702	000077777777	000020160314	000020160454	000020160661	000020161531
0049	000020161652	000020161746	000020162437	000020162731	000020163113	000020164136	416671403146	106011443060
0097	030136607007	106041471060	403562206306	262042046060	724662400676	634031462200	170666000746	320001522300
0145	177331201152	210011733020	115731001543	010014427120	541031400341	106076155040	524154605415	544025344420
0193	345464200461	542030016460	144353403455	400003560600	014607606207	466031514640	307304402607	146006630140
0241	734303003615	020035140640	722301401302	434012174240	307607403033	560051160600	661434203636	006010544440
0289	565074402152	234047331540	103153403023	102066335220	131611600714	456031016140	170464601343	746005176420
0337	410420200357	044010473660	405411401054	662071542300	515605401256	144053104560	604314400511	414022337440
0385	203320403232	006050336160	142254603512	420040523340	155216606051	404024450240	307171407060	022041674760
0433	466151201467	660034206300	202663006020	170007366600	542146400432	220023367060	035525206165	210021470060
0481	074315402341	430057672460	104140201075	176075451740	106323004163	460020637200	146302005575	010044674520
0529	256614602402	504026645540	004754406067	046034327040	462204606061	474014420440	427226002212	606042754600
0577	326146006231	460056122600	037334201330	262003544000	156002475460	431554203514	542015151000	673570201524
0625	546051314440	610674407304	514013074300	070741000312	614054326160	131271403022	214061366640	161665406003
0673	220043543140	014723407147	224061672220	066331406441	516070311560	640141404166	544055505240	373042604231
0721	624022505660	506140403406	436014707600	374141003470	456037216460	163043001614	602056304620	417054205460
0769	410046746340	017035004640	742042420520	474014604730	246046741060	725430604620	146062143660	421432206306
0817	066034731620	630316203172	122020466020	717662200342	630073046160	510321205224	035747406003	214003401560
0865	267370601030	522032603300	121016201633	426052301220	037012202615	402043421100	026157001717	606046142740
0913	470420003231	254020654460	316424006661	442030626000	366164007400	046031474020	614406203456	126022571260
0961	231701002347	062021420360	070616202304	036003541520	234711601501	556016043560	160461401556	354034070060
1009	004636601146	746011636660	106332601043	162050635460	156166601774	306055542140	041410204424	672044645420
1057	446074200053	142045737720	471211204541	570016714420	063144604754	440051546300	712451005523	504055030640
1105	155613400355	044014302040	143403401477	316016163340	144251200624	332016205720	363051200630	116016331100
1153	163155004622	152006115560	163315007510	046046312460	163100605473	474052114460	031147407606	244063106460
1201	111603200304	646006064620	311603601602	342054360720	722502207072	620063261220	035741003416	210042362540
1249	142334206116	160056163400	734616203307	160062271400	604614201147	470070631600	370303000347	030063470300
1297	670334002543	130076070300	334303000263	706015630100	230167004542	212054402120	724325006327	336014261460
1345	411734604742	160021461700	314606201667	162077777777				

FILE 0001 REC 0002 CH 1368

0001	000344000001	000000010105	000001110702	000077777777	000020164257	000020164602	000020165164	000020165420
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0097	031430604314	376003162660	620422003146	234026170440	324723403206	320034473440	504717601607	174001072620
0145	120707603157	146002270420	106327400704	674016007140	632475600204	316077003160	160330001134	016016423460
0193	463274001552	240016077460	406234605433	314001664300	227035206374	322035040320	117070201021	740056206020
0241	547550201736	140047143460	423274204015	046055556440	431544404604	644047740460	047416606314	040073435060
0289	206406202161	262021311240	255116002355	142061310200	630432202315	562033050720	630761205233	032053364420
0337	437011000355	504023511200	637153201610	554023155160	020067006161	644012242300	071574206304	750063401440
0385	314433205301	536043647200	214530603147	010007204360	110036001162	140014623520	647025603162	342040420720
0433	547305007072	150027420460	014270604607	162046173220	124323201655	122060452220	035402207472	702074763000
0481	716360006464	002034613020	256423206225	250031053300	216614604037	066044316620	314732400603	110045575120
0529	431471403154	506073061040	360614603026	326054442060	331434601101	154030103240	506037203231	630004144360
0577	061052205640	502063105120	103031603054	306052403500	317231005347	310053633100	705034005616	142000762160
0625	361454601363	114072160060	623634603340	244052113700	427303003431	632075603160	611573003437	100042310160
0673	547411006217	514044341140	427504404700	064074064540	120714404031	474054730600	474306003554	030035404620
0721	460746000354	624067346140	630631401034	706014644160	142061207710	156056303120	032634200530	346004361420
0769	043414204776	342070561420	463060607123	700042006620	631646206231	062043242620	430466206301	350063457400
0817	630056203310	470043044700	637556600122	062043160720	617462201062	472070460040	035423403060	664043162040
0865	721100405307	334073700340	406120403144	230013073340	136050603004	042051061020	150351203172	032014027160
0913	546014605554	142047474740	144050604443	644044600440	061704404655	474053450040	473700007162	220073431440
0961	015016201154	754012531520	144615404674	714003555520	222423202664	206010442100	140425201704	660017003620
1009	770076205603	162051167000	304203002672	620035523300	305211403103	434065327600	307311403037	114036141700
1057	107471401036	614030235440	111615206314	050030365540	331621200034	672061460400	374760603302	350057563100
1105	514331200357	166012307640	315563401250	124051513000	714114407072	622015440140	507441005043	440000636160
1153	156001205563	316015063200	056672401475	144024346240	266646600436	146024770200	246606602442	032034236300
1201	334341603223	146015124320	352314201443	152055530120	354370201550	402015433500	035434006346	200040530620
1249	735542000255	472025154300	241003606346	406026540460	665142202555	432043070740	040607004714	066045062320
1297	472011206124	164034631700	207745200662	142041633620	223620606632	146012326420	561245005042	250030016660
1345	121302406011	610056171460	477614400736	144077777777				

FILE 0001 REC 0003 CH 1368

0001	000344000001	000000010105	000001110702	000077777777	000020167322	000020167447	000020170374	000020170700
0049	000020171053	000020171332	000020171513	000020171607	000020171703	000020172205	035710603711	334023243620

FILE 0001 REC 0027 CH 1368

1249	350635404502	354000663540	025625405056	254076520540	745165407645	554074454540	204535202045	352000453520
1297	104535206051	350024513500	205534601471	346015113460	111534406121	344001213420	632534005525	240071252360
1345	012523200125	230001252300	012523000525	226077777777				

FILE 0001 REC 0028 CH 1368

0001	000344000001	000000010105	000001110702	000077777777	000025033270	000025033415	000025033744	000025034103
0049	000025034445	000025034660	000025035035	000025035201	000025035364	000025035522	035722605325	226021212260
0097	352120404515	224001352240	031132205105	322077053220	751132207715	322075213220	212132202125	322001253220
0145	112532206125	652020037020	741327200115	376001033660	217440207723	176043660300	222564007611	340000217400
0193	353122200550	454000372320	604174606220	776003562460	434420606417	612070076060	750421207407	622062045700
0241	771257600374	466015554760	033055601601	464012000720	015570005402	704056217140	313027205762	336005766320
0289	427613204076	036044737420	220203404077	610043000220	250463205760	416035420360	613705406122	216060350160
0337	730025400166	222064057140	212760606560	100055372020	551351207072	002067701520	754404200170	472001244760
0385	057024600134	256001501160	763331007203	730073163360	003075207716	122000457760	440173200066	060035232420
0433	676201002715	706027014400	027232406121	674070360000	540704001644	766017720140	035457200171	462001746740
0481	310351005413	700074277660	001375400024	450040017100	336643605672	022037740520	760577404221	740077331060
0529	360155007746	226001435700	062174003533	022041054420	176272601377	210061066220	174474001650	722017407400
0577	564036401724	016024370120	740364201342	674003544100	055657601175	452001602400	462760406403	666003224000
0625	676517400043	330076075560	454017604411	756040504020	165606604556	276002117400	361137600023	342025060000
0673	771063606016	416065016200	373313000237	024014407620	104074201563	114040216360	202601203737	122070573540
0721	500627604167	176021340700	015027600154	276054137000	634261007101	440077016120	250145003705	154050762340
0769	047613604277	500027645340	106764003120	040026406400	203750001345	760020763000	003621604033	056060277600
0817	164127006037	314035626140	042724601206	014070173600	576027000137	416030775040	035425206602	710001544660
0865	013707600153	340025340360	771176200256	076036016400	127633604566	332050717500	007763404474	324040710220
0913	754016400077	016043417400	155152002336	014055510360	734070001115	574071330060	702651607766	504077603720
0961	050022001760	350047053720	056025202761	310003540640	474417206577	100005737000	157457607623	500074275020
1009	303536607613	702071747720	125407001072	074046617120	436504002201	440025011100	330134002703	240024036400
1057	007617605146	012025530360	770041607030	160041251740	530070000237	112034455440	560050000627	052024730140
1105	203641400355	200043321760	344720205427	704076033000	016630206633	500041323120	077447402174	166040700640
1153	520110402535	176076013460	237422404064	332041340440	117724400056	126046560340	447243607110	036040574520
1201	774246001045	440021656000	402752400535	724000773760	607101004037	014075410160	035407204400	174026030760
1249	550102606157	650024777100	712542604172	236076147740	006603601062	036036010360	130402604007	260077007600
1297	165041606037	036035027600	514101004037	216000270120	036005600075	110075412700	354224000760	762007403300
1345	476477000540	604072140560	705641607016	774003574160				

FILE 0001 REC 0029 CH 1368

0001	000344000001	000000010105	000001110702	000077777777	000025035662	000025036143	000025036270	000025037007
0049	000025037135	000025037275	000025032707	000025033003	000025033077	000025033174	416760002176	700042104220
0097	557360000164	076002025020	437007607040	346011554720	012445406634	372020637000	275266C03705	600027055000
0145	371574007413	700037002760	423623604164	056074000240	670042001720	256064646600	052752401211	760036007420
0193	144003606025	276040601720	671413202615	054003544340	005626600070	332057004760	326256606230	234037000720
0241	344203407700	636040337620	273614401450	522004374200	370323606036	254044160160	675403607400	426033604060
0289	725556004357	740006600040	327540202747	106051574160	520342606762	026052074040	170705400370	150003721060
0337	746771000354	424003765000	036710204171	744011705760	543047407640	032070027020	662206405174	066011640360
0385	226544401276	176074100340	751017604376	426072047360	750247604312	024001700740	007607404257	704000721420
0433	046675001702	620042773720	607521607040	036072406160	627733606031	036020651000	035413404003	702074035100
0481	760350006715	104074463540	200331600142	700077600340	367613600107	630040013400	261764002303	740032320760
0529	407643204071	076000761240	115111604017	152073344160	641652001504	640057465360	260066000744	736012177600
0577	122742002546	140006634040	073140607034	270003544000	120100007760	474001754000	761370207202	064007362640
0625	017017406602	266001440740	660000001351	640037053400	332174007301	714032100360	527607200272	034075506560
0673	417534001312	644017257600	170041007200	620002772160	754465606027	014000770420	364040605773	210070455240
0721	027630200167	164023303740	235257405320	146040403300	135055400310	174003562420	300720205212	124023777400
0769	657411405003	420036033140	622227000161	076005755760	150160204374	776050406720	157360000065	744007763340
0817	647403402500	072044761360	127642604076	166044741400	134561603705	540033002760	205467075326	240021262420
0865	352214204522	144001160460	031604605112	050077160500	751615007716	250075222500	212225002122	350001223500
0913	152235006122	450025224460	212244601512	444015064420	106643606056	330000563300	625232605452	226070521260
0961	005202600051	626000515260	005142600451	326003553260	265132602051	326034513260	425132607451	326002512240
1009	505132407655	326074653260	767132407505	326021113240	211572400115	324011113240	610532402465	322020553220
1057	145132201451	322014513220	604532000045	220062452200	544522007045	220040652220	004522200045	222000512220
1105	045122200355	222026512220	205522403455	224044552240	006122400265	324044653260	767142607465	526076716300
1153	746613202062	234020563440	005634601056	350060523500	244635002046	352014463520	144635201046	252060422520
1201	204215206242	054054417540	704575400045	754000457540	005205400056	154004622540	035625403706	354021063540
1249	350635404502	354000663540	025625405056	254076520540	745165407645	554074454540	204535202045	352000453520
1297	104535206051	350024513500	205534601471	346015113460	111534406121	344001213420	632534005525	240071252360

Dupe of 012899
4/21/72

FILE 0001 REC 0001 CH 1368

0001	000344000001	000000010102	000001110702	000077777777	000421323767	000421324317	000421324666	000421325072
0049	000421327120	000421327244	000421327340	000421327573	000421331361	000421333031	035710604116	132042606360
0097	115446206140	272041442700	606023204546	262030622440	344626203061	234034702320	707023403110	130021101300
0145	015311403074	514030305140	503311406314	116014345160	143111603433	506014354600	143664600266	446046166460
0193	061463002666	030026164300	361640205223	430041661300	471152601114	126031145320	110754406155	526023145320
0241	555454604631	620070305400	563140205474	426024342340	312606202435	446014267240	223352602626	312034315120
0289	463165403111	462006311620	431151603611	450063105140	321115402304	754063111420	470435006331	452044306440
0337	412274400354	540043405440	114454400310	564063544400	614444401464	462032665300	624253205344	450062626660
0385	127314401306	444062622760	316046206120	262071622220	614353202166	230063304660	213325406066	222054732320
0433	313123204463	230030730300	411014005071	132034711300	707211201556	130050335220	035604601333	246007336460
0481	543324204631	046046330460	433344606610	242077114220	761162604714	222046146220	521072204655	620047146220
0529	461332005754	622047131020	440507004305	650046623100	654451005164	650045222300	511423006522	330031147340
0577	305433407214	314030451040	354633403445	124003577640	534776204747	764077477660	663776401643	756052477600
0625	562776206223	762056337640	522776002023	722003537620	202776600227	720023437260	722376007633	762076437640
0673	762376407227	762074237620	602776207233	762067577600	232776206227	762075437220	334376000047	762002577640
0721	003376200357	760020377620	023776202363	762072337620	766376207763	760077377600	735375407423	760071437660
0769	727377406363	606022336100	635336207560	416032402660	015016000360	114001100600	034406405354	022046340200
0817	773402206750	062016240620	535001605750	016062200160	574403205224	060020200600	025402202020	020002200200
0865	232005607224	056076300360	774004407620	062072300560	742001606024	022073500200	664003602224	022063541200
0913	743422203224	316001506140	023341400037	616003537320	523376204647	752077577220	663771601737	716053637160
0961	575373206347	754057577540	534775202127	746003540200	002402000340	016053500160	462001607744	016067500160
1009	162402005354	016057500160	623401605754	016053440160	203401600350	016021440160	023401602350	020073340200
1057	763401607744	020076300160	723001607420	016030240160	723401606640	016022240200	564402007510	020032340200
1105	013401600356	402023610020	272620005756	402023364000	711620201676	202027660020	215240202406	002024136020
1153	240220202015	002026516020	323160202771	602033314020	247140202651	202026712020	331120203271	202032512020
1201	310120202411	202025012020	201120202511	202027514020	277140202771	602027722020	035402205354	022047540220
1249	775002206750	022017440220	532002205744	022063400240	573402005320	022020300220	023402202030	022002300220
1297	223002407224	024076240240	763002207624	022072300260	742002201424	024072240240	662402402224	022056240240
1345	742402203224	022000300220	023002200024	022077777777				

FILE 0001 REC 0002 CH 1368

0001	000344000001	000000010102	000001110702	000077777777	000421333160	000421333254	000421333650	000421334033
0049	000421334127	000421334334	000421334671	000421335012	000421335130	000421335314	035402402350	024073500220
0097	775402207754	122077503240	735732407423	624065577220	735372206753	722023537220	575372207547	722033437220
0145	014372200253	722001337220	025772205243	722046737220	764772206643	722016477220	523772405637	720062437200
0193	563772405247	724021177420	024772002137	730003377200	225372407343	722077377300	773372207743	734073277240
0241	742372405143	726073377260	674374202343	730056577520	753372603253	732000437300	024775000047	750002477520
0289	532775404647	752076377500	664375201637	750052377540	564375406237	756056437540	524375602037	754002377560
0337	203775600356	402003610020	170560006755	400073360000	651160007671	400067656000	655120006401	400060120000
0385	600100006411	202002512020	223100202371	202017312020	107120006251	200066716000	771120007671	200076514000
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