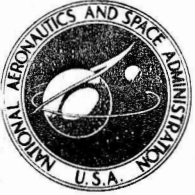


EG/MIT/Silver



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS 77058

REPLY TO
ATTN OF: FS63-73-61

APR 24 1973

MEMORANDUM

TO: WC/Integration Division
Attn: WC3/Michael A. Collins

FROM: FS/Chief, Flight Support Division

SUBJECT: Skylab CMC Erasable Final Erasable Load

Enclosure 1 to this memorandum consists of the current values for the parameters in the Prelaunch Erasable Load for the Skylab CMC. This erasable load is based on the SKYLARK 48 CMC program, which was released on November 10, 1972, and the Skylab 1/2 mission.

A number in the REV column next to a parameter mnemonic denotes the number of times that that particular parameter value has been changed in official erasable load publications since the original publication of October 8, 1971.

A single or double star (* or **) next to a parameter mnemonic denotes that it is also in the Inflight Erasable Load. These parameters would have to be verified or reloaded in order to completely initialize the CMC LGC in orbit. A single star denotes loading by ground uplink; a double star denotes loading by the astronaut via the DSKY.

Enclosure 2 is the Inflight Erasable Load in uplink format. All values in the Inflight Erasable Load are consistent with the values in the Prelaunch Erasable Load.

Enclosure 2 is the OWS state vector at SL-2 insertion + 1 minute. This vector is not included in the K-start tape, but will be manually loaded on the pad via V71.

Questions or comments regarding Skylab CMC erasable loads should be directed to Mr. J. A. Martin, extension 4296.

James C. Stokes, Jr.
2 Enclosures

cc: See list attached

FS63/JAMartin:jvm:4/12/73:4296

cc:

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C. D. Sykes

J. R. Gilbert

J. A. Martin, Jr. (5)

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|--------|-------|----|--------------------|--------------------|
| | FLAGWRD1+ | 0 0075 | 00000 | 0 | | |
| | FLAGWRD3+ | 0 0077 | 40000 | 0 | | |
| | FLGWRD10+ | 0 0106 | 00000 | 0 | | |
| * | C31FLWRD+ | 0 0373 | 00000 | 0 | | |
| * | N26/PRI + | 0 1016 | 00000 | 14 | 0.0 MIN | 0.0 CS |
| * | N26/2CAD+ | 0 1017 | 00000 | 0 | | 0.0 |
| | | 1020 | 00000 | | | |
| 3 | PIPTIME + | 0 1035 | 01604 | 28 | 1.4757600000 07 CS | 1.4757600000 07 CS |
| | | 1036 | 27340 | | | |

PREDICTED VALUE OF AGC CLOCK AT L/O 40059036

| | | | | | | |
|---|-----------|--------|-------|----|--------------------|-------------------|
| 1 | PGNCSALT+ | 0 1122 | 00000 | 29 | 2.6812007870 02 FT | 8.1723000000 01 M |
| | | 1123 | 00051 | | | |

PAGE 1

ENCLOSURE 1

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|---------|--------------|--------------------------|----|-------------------------|---------------------------|
| 1 | PADLONG + 0 | 1124 30652 1125 33016 | 0 | 2.793789091D 02 DEG | 7.760525253D-01 REV |
| PAD 39R | | | | | |
| 1 * | FIXTIME + 0 | 1333 00000 1334 00000 | 28 | 0.0 SEC | 0.0 CS |
| * | CDJCHKWD + 0 | 1356 00005 | 14 | 5.000000000D 00 CS | 5.000000000D 00 CS |
| 2 * | PBIASX + 0 | 1452 01054 | -6 | 1.017060367D-02 FT/SEC2 | 5.299145297D-04 PIPS/CS |
| 2 * | PIPASCFX + 0 | 1453 75674 | -9 | -1.300000000D 02 PPM | -1.300000000D-04 PIPS/PIP |
| 2 * | PBIASY + 0 | 1454 01361 | -6 | 1.377952756D-02 FT/SEC2 | 7.179487180D-04 PIPS/CS |
| 2 * | PIPASCFY + 0 | 1455 66252 | -9 | -5.900000000D 02 PPM | -5.900000000D-04 PIPS/PIP |
| 2 * | PBIASZ + 0 | 1456 00634 | -6 | 7.545931759D-03 FT/SEC2 | 3.931623932D-04 PIPS/CS |
| 2 * | PIPASCFZ + 0 | 1457 77010 | -9 | -6.000000000D 01 PPM | -6.000000000D-05 PIPS/PIP |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|----------|-------|----|-------------------------|---------------------------|
| 2 * | NBDX | + 0 1460 | 77731 | -5 | -3.000000000D-01 MERU | -7.301713884D-05 G PUL/CS |
| 2 * | NBDY | + 0 1461 | 76401 | -5 | -6.000000000D 00 MERU | -1.460342777D-03 G PUL/CS |
| 2 * | NBDZ | + 0 1462 | 77001 | -5 | -4.000000000D 00 MERU | -9.735618512D-04 G PUL/CS |
| 2 * | ADIAX | + 0 1463 | 00230 | -3 | 8.000000000D 00 MERU/G | 1.161525460D-03 GPUL/PIP |
| 2 * | ADIAY | + 0 1464 | 77547 | -3 | -8.000000000D 00 MERU/G | -1.161525460D-03 GPUL/PIP |
| 2 * | ADIAZ | + 0 1465 | 77524 | -3 | -9.000000000D 00 MERU/G | -1.306716143D-03 GPUL/PIP |
| 2 * | ADSRAX | + 0 1466 | 77640 | -3 | -5.000000000D 00 MERU/G | -7.259534125D-04 GPUL/PIP |
| 2 * | ADSRAY | + 0 1467 | 00321 | -3 | 1.100000000D 01 MERU/G | 1.597097508D-03 GPUL/PIP |
| 2 * | ADSRAZ | + 0 1470 | 77706 | -3 | -3.000000000D 00 MERU/G | -4.355720475D-04 GPUL/PIP |
| 2 * | TEPHEM | + 0 1700 | 00012 | 42 | 7.608000000D 03 HRS | 2.738880000D 09 CS |
| | | | 1701 | | 06377 | |
| | | | 1702 | | 37000 | |

TEPHEM OF MIDNITE 5/13/73

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|--------------------------|----|--------------------------|--------------------------|
| 3 | REFSMMAT+ | 0 | 1717 12704 1720 06263 | 1 | 6.802000000D-01 UNITLESS | 6.802000000D-01 UNITLESS |

REV 2 OF E-LOAD TAPE

| | | | | | | |
|-----|-----------|-----|--|-----|-------------------------|--------------------------|
| 1 * | FMDOT | + 0 | 1741 01150 | 3 | 6.627000000D 01 LBS/SEC | 3.005956636D-01 KG/CS |
| * | RVAR | + 0 | 1742 00000 1743 00000 | -16 | 0.0 PERC ERR | 0.0 PERC ERR |
| * | RVARMIN | + 0 | 1744 77777 1745 77777 1746 42757 | 40 | -4.000000000D 04 FT2 | -3.716121600D 03 M2 |
| 1 * | EIMP1SEC+ | 0 | 1747 01631 | 14 | 2.070000000D 04 LBF SEC | 9.207818743D 02 KG M/CS |
| 1 * | EFIMP01 | + 0 | 1750 02167 | 14 | 2.569230000D 04 LBF | 1.142850442D 03 KGM/CS/S |
| 1 * | EFIMP16 | + 0 | 1751 01615 | 14 | 2.043200000D 04 LBF | 9.088606404D 02 KGM/CS/S |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------------------|-----|--------------------------|--------------------------|
| * | LADPAD | + 0 | 1752 10000 | 0 | 2.500000000D-01 UNITLESS | 2.500000000D-01 UNITLESS |
| * | LODPAD | + 0 | 1753 07146 | 0 | 2.250000000D-01 UNITLESS | 2.250000000D-01 UNITLESS |
| * | DVTHRESH | + 0 | 1754 00620 | -2 | 2.000000000D 00 FT/SEC | 6.096000000D-03 M/CS |
| * | ALTVAR | + 0 | 1755 37723 | -16 | 1.521680000D-05 RADIANS2 | 1.521680000D-05 RADIANS2 |
| 1 * | WRENDPOS | + 0 | 2000 00137 | 19 | 1.000000000D 04 FT | 3.048000000D 03 M |
| 1 * | WRENDVEL | + 0 | 2001 00763 | 0 | 1.000000000D 01 FT/SEC | 3.048000000D-02 M/CS |
| * | RMAX | + 0 | 2002 00023 | 19 | 2.000000000D 03 FT | 6.096000000D 02 M |
| * | VMAX | + 0 | 2003 00001 | 7 | 2.000000000D 00 FT/SEC | 6.096000000D-03 M/CS |
| * | EMSALT | + 0 | 2004 00002 2005 26244 | 29 | 2.900000000D 05 FT | 8.839200000D 04 M |
| * | LOSS | + 0 | 2006 10621 2007 36153 | 0 | 9.883177800D 01 DEG | 2.745327167D-01 REV |
| * | CMDD | + 0 | 2010 77521 2011 63232 | -1 | -1.915980354D 00 DEG | -5.322167650D-03 REV |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|--------------|--------------------------|--------------------------------------|--------------------------|----------------------------|---------------------|-------------------------------------|
| | * CARG | + 0 | 2012 17550 2013 32553 | 0 | 1.766784958D 02 DEG | 4.907735996D-01 REV |
| 1 | * LMATRIX + 0 | 2014 37777 2015 27212 | 0 | 9.999833480D-01 | UNITLESS | 9.999833480D-01 UNITLESS |
| 1 | * LMATRIX + 2 | 2016 77651 2017 51100 | 0 | -5.292650310D-03 | UNITLESS | -5.292650310D-03 UNITLESS |
| 1 | * LMATRIX + 4 | 2020 77732 2021 51576 | 0 | 2.300743010D-03 | UNITLESS | 2.300743010D-03 UNITLESS |
| 1 | * LMATRIX + 6 | 2022 00126 2023 26672 | 0 | 5.292631690D-03 | UNITLESS | 5.292631690D-03 UNITLESS |
| 1 | * LMATRIX + 8 | 2024 37777 2025 30520 | 0 | 9.999859930D-01 | UNITLESS | 9.999859930D-01 UNITLESS |
| 1 | * LMATRIX +10 | 2026 77777 2027 70624 | 0 | -1.375004650D-05 | UNITLESS | -1.375004650D-05 UNITLESS |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-------------|------|-------|----|--------------------------|--------------------------|
| 1 * | LMATRIX +12 | 2030 | 00045 | 0 | 2.300783990D-03 UNITLESS | 2.300783990D-03 UNITLESS |
| | | 2031 | 26214 | | | |
| 1 * | LMATRIX +14 | 2032 | 00000 | 0 | 1.572072510D-06 UNITLESS | 1.572072510D-06 UNITLESS |
| | | 2033 | 00646 | | | |
| 1 * | LMATRIX +16 | 2034 | 37777 | 0 | 9.999973550D-01 UNITLESS | 9.999973550D-01 UNITLESS |
| | | 2035 | 36472 | | | |
| 1 * | AZ0 + 0 | 2036 | 30640 | 0 | 2.791547710D-02 DEG | 7.754299194D-01 REV |
| | | 2037 | 24464 | | | |
| * | TCS + 0 | 2040 | 00015 | 28 | 2.220000000D 03 SEC | 2.220000000D 05 CS |
| | | 2041 | 21460 | | | |
| * | EPS1 + 0 | 2042 | 00000 | 0 | 2.500000000D-03 DEG | 6.944444445D-06 REV |
| | | 2043 | 03510 | | | |
| * | DHNCC + 0 | 2044 | 00001 | 29 | 1.215223100D 05 FT | 3.704000009D 04 M |
| | | 2045 | 04130 | | | |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|--------------------------|----|-------------------------------|---------------------|
| * | EPS2 | + 0 | 2046 00000 2047 00230 | 29 | 1.000000000D 03 FT | 3.048000000D 02 M |
| * | DELHI | + 0 | 2050 00000 2051 22054 | 29 | 6.076115485D 04 FT | 1.852000000D 04 M |
| * | NH1 | + 0 | 2052 00400 | 5 | 5.000000000D-01 REV | 5.000000000D-01 REV |
| * | WRD TIME | + 0 | 2240 00017 | 28 | 2.400000000D 03 SEC | 2.400000000D 05 CS |
| * | MINBLKTM | + 0 | 2241 00002 | 28 | 3.288000000D 02 SEC | 3.288000000D 04 CS |
| * | TBEFCOMP | + 0 | 2242 00005 | 28 | 8.220000000D 02 SEC | 8.220000000D 04 CS |
| * | BRNBLKTM | + 0 | 2243 00005 | 28 | 8.220000000D 02 SEC | 8.220000000D 04 CS |
| * | MAXW TIME | + 0 | 2244 00026 | 28 | 3.616800000D 03 SEC | 3.616800000D 05 CS |
| * | FINCMP TM | + 0 | 2245 00003 | 28 | 4.932000000D 02 SEC | 4.932000000D 04 CS |
| 1 * | INTVAR | + 0 | 2246 03410 | 15 | 3.600000000D 03 M2 | 3.600000000D 03 M2 |
| 1 * | NBQA(YZ) | + 0 | 2255 00000 2256 00000 | 1 | 0.0 UNITLESS | 0.0 UNITLESS |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|----------------|------------------------|-----------------|------------------|---------------|-------------------------------------|-------------------------------------|
| 1 * | NBOA(YZ)+ 2 | 2257 | 15066 | 1 | 8.191520423D-01 UNITLESS | 8.191520423D-01 UNITLESS |
| | | 2260 | 17626 | | | |
| 1 * | NBOA(YZ)+ 4 | 2261 | 66645 | 1 | 5.735764354D-01 UNITLESS | 5.735764354D-01 UNITLESS |
| | | 2262 | 50301 | | | |
| 1 * | NBOA(YZ)+ 6 | 2263 | 00000 | 1 | 0.0 UNITLESS | 0.0 UNITLESS |
| | | 2264 | 00000 | | | |
| 1 * | NBOA(YZ)+ 8 | 2265 | 66645 | 1 | 5.735764354D-01 UNITLESS | 5.735764354D-01 UNITLESS |
| | | 2266 | 50301 | | | |
| 1 * | NBOA(YZ)+10 | 2267 | 62711 | 1 | -8.191520423D-01 UNITLESS | -8.191520423D-01 UNITLESS |
| | | 2270 | 60151 | | | |
| * | RTRIDDT + 0 | 2334 | 05017 | 31 | 2.401574803D-04 FT/SEC3 | 7.320000000D-11 M/CS3 |
| | | 2335 | 17677 | | | |
| 2 * | 1/2ALPHA+ 0 | 2373 | 15742 | 19 | 6.345457400D 00 SEC2/DEG | 2.284364664D 05 DS2/REV |
| | | 2374 | 24357 | | | |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|---------|---------------|------|---------------------|----|----------------------|----------------------|
| 1 | AZIMUTH + 0 | 2400 | 67777 2401 56270 | 0 | -9.001211111D 01 DEG | -2.500336420D-01 REV |
| 1 | LATITUDE+ 0 | 2402 | 02426 2403 32724 | 0 | 2.862687861D 01 DEG | 7.951910726D-02 REV |
| PAD 39B | | | | | | |
| 1 | TAZEL1 + 0 | 2432 | 55011 | -1 | -1.067757496D 02 DEG | -2.965993045D-01 REV |
| 1 | TAZEL1 + 1 | 2433 | 77277 | -2 | -1.757722222D 00 DEG | -4.882561728D-03 REV |
| 1 | TAZEL1 + 2 | 2434 | 64522 | -1 | -6.378230550D 01 DEG | -1.771730708D-01 REV |
| 1 | TAZEL1 + 3 | 2435 | 77315 | -2 | -1.678888922D 00 DEG | -4.663580339D-03 REV |
| 2 | LAUNCHAZ+ 0 | 2633 | 04134 2634 23536 | 0 | 4.703500000D 01 DEG | 1.306527778D-01 REV |
| 2 | * ETDECAY + 0 | 3000 | 00101 | 14 | 6.480000000D-01 SEC | 6.480000000D 01 CS |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|--------------------------|------|-------|----|---------------------------|---------------------------|
| * | EKPRIME + 0 | 3001 | 00123 | -5 | 1.583100000D-04 R/CS/RAD | 1.583100000D-04 R/CS/RAD |
| * | EKPRIME + 1 | 3002 | 00175 | -5 | 2.384190000D-04 R/CS/RAD | 2.384190000D-04 R/CS/RAD |
| * | EKTLX/I + 0 | 3003 | 17433 | 18 | 1.274000000D 05 P/AR/SC2 | 1.274000000D 05 P/AR/SC2 |
| * | EKTLX/I + 1 | 3004 | 04500 | 16 | 9.472000000D 03 P/AR/SC2 | 9.472000000D 03 P/AR/SC2 |
| * | EKTLX/I + 2 | 3005 | 00334 | 16 | 8.800000000D 02 P/AR/SC2 | 8.800000000D 02 P/AR/SC2 |
| * | ERE ² FRAC+ 0 | 3006 | 01000 | 2 | 1.250000000D-01 UNITLESS | 1.250000000D-01 UNITLESS |
| * | ERE ² FRAC+ 1 | 3007 | 00232 | 2 | 3.750000000D-02 UNITLESS | 3.750000000D-02 UNITLESS |
| 3** | PACTOFF + 0 | 3010 | 00056 | 14 | 1.088000000D 00 DEG | 4.585879873D 01 COU PULS |
| 3** | YACTOFF + 0 | 3011 | 00023 | 14 | 4.410000000D-01 DEG | 1.858798735D 01 COU PULS |
| * | HBN10 + 0 | 3012 | 37777 | 0 | 9.999389648D-01 UNITLESS | 9.999389648D-01 UNITLESS |
| * | HBN11/2 + 0 | 3013 | 00000 | 1 | 0.0 UNITLESS | 0.0 UNITLESS |
| * | HBN12 + 0 | 3014 | 00000 | 0 | 0.0 UNITLESS | 0.0 UNITLESS |
| * | HBD11/2 + 0 | 3015 | 54360 | 1 | -1.220581055D 00 UNITLESS | -1.220581055D 00 UNITLESS |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|------------|----|---------------------------|---------------------------|
| * | HBD12 | + 0 | 3016 21075 | 0 | 5.3497314500-01 UNITLESS | 5.3497314500-01 UNITLESS |
| * | HBN20 | + 0 | 3017 37777 | 0 | 9.9993896480-01 UNITLESS | 9.9993896480-01 UNITLESS |
| * | HBN21/2 | + 0 | 3020 60465 | 1 | -9.6215820300-01 UNITLESS | -9.6215820300-01 UNITLESS |
| * | HBN22 | + 0 | 3021 00000 | 0 | 0.0 UNITLESS | 0.0 UNITLESS |
| * | HBD21/2 | + 0 | 3022 54360 | 1 | -1.2205810550 00 UNITLESS | -1.2205810550 00 UNITLESS |
| * | HBD22 | + 0 | 3023 21075 | 0 | 5.3497314500-01 UNITLESS | 5.3497314500-01 UNITLESS |
| * | HBN30 | + 0 | 3024 37777 | 0 | 9.9993896480-01 UNITLESS | 9.9993896480-01 UNITLESS |
| * | HBN31/2 | + 0 | 3025 57142 | 1 | -1.0504150390 00 UNITLESS | -1.0504150390 00 UNITLESS |
| * | HBN32 | + 0 | 3026 33106 | 0 | 8.4802246100-01 UNITLESS | 8.4802246100-01 UNITLESS |
| * | HBD31/2 | + 0 | 3027 50741 | 1 | -1.4411621090 00 UNITLESS | -1.4411621090 00 UNITLESS |
| * | HBD32 | + 0 | 3030 31162 | 0 | 7.8820800800-01 UNITLESS | 7.8820800800-01 UNITLESS |
| 1 * | SLOPE2 | + 0 | 3031 12173 | -2 | 8.0000000000-01 (D/S)/D | 8.0000000000-02 (R/DS)/R |
| 1 * | SLOPE2 | + 1 | 3032 07534 | -2 | 6.0000000000-01 (D/S)/D | 6.0000000000-02 (P/DS)/R |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|------------|------|--------------|-----|---------------------------|---------------------------|
| 1 * | WLH/SLOP+ | 0 | 3033 00114 | -1 | 8.3300000000D-01 DEG | 2.313888889D-03 REV |
| 2 * | WLH/SLOP+ | 1 | 3034 00057 | -1 | 5.1600000000D-01 DEG | 1.433333333D-03 REV |
| 2 * | WL-H/SLP+ | 0 | 3035 00056 | -1 | 5.0000000000D-01 DEG | 1.388888889D-03 REV |
| * | WL-H/SLP+ | 1 | 3036 00017 | -1 | 1.6666000000D-01 DEG | 4.629444445D-04 REV |
| 1 * | ECP | + | 0 3037 05202 | 0 | 1.641851530D-01 UNITLESS | 1.641851530D-01 UNITLESS |
| 1 * | ECYW | + | 0 3040 72640 | 0 | -1.620297210D-01 UNITLESS | -1.620297210D-01 UNITLESS |
| 1 * | ALPHAP | + | 0 3041 66734 | 0 | -2.834078070D-01 UNITLESS | -2.834078070D-01 UNITLESS |
| 1 * | ALPHAYW | + | 0 3042 24562 | 0 | 6.475829330D-01 UNITLESS | 6.475829330D-01 UNITLESS |
| 1 * | KMJDOCKD | + | 0 3043 00024 | -13 | 5.406933200D-02 DEG/SEC2 | 1.501925889D-07 RV/DS*CS |
| 1 * | KMJDOCKD+ | 0 | 3044 00024 | -13 | 5.317410800D-02 DEG/SEC2 | 1.477058556D-07 RV/DS*CS |
| 1 * | KMJ2DOCKD+ | 0 | 3045 00025 | -13 | 5.578385600D-02 DEG/SEC2 | 1.549551556D-07 RV/DS*CS |
| 1 * | J/MDOCKD | + | 0 3046 01475 | 27 | 1.886467000D 01 SEC2/DEG | 6.791281200D 06 DS CS)/P |
| 1 * | J/MDOCKD+ | 0 | 3047 12016 | 27 | 1.168331500D 02 SEC2/DEG | 4.205993400D 07 DS CS)/P |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------------|------|-------|----|--------------------------|--------------------------|
| 1 * | J/M2DCKD+ 0 | 3050 | 11537 | 27 | 1.128488000D 02 SEC2/DEG | 4.062556800D 07 DS CS)/R |
| | * CLKDELTA+ 0 | 3055 | 00247 | 14 | 1.670000000D 00 SEC | 1.670000000D 02 CS |
| | ** CAPDATR3+ 0 | 3070 | 11111 | 0 | | |
| | ** CH5FAIL + 0 | 3071 | 00146 | 0 | | |
| | ** CH6FAIL + 0 | 3072 | 00030 | 0 | | |
| 1** | DKRATE + 0 | 3073 | 00722 | -9 | 2.000000000D-01 DEG/SEC | 5.55555556D-05 REV/DS |
| 1** | DKD3 + 0 | 3074 | 00056 | -1 | 5.000000000D-01 DEG | 1.38888889D-03 REV |
| | ** WHICHDAP+ 0 | 3075 | 00000 | 0 | | 0.0 |
| | ** WHICHX2 + 0 | 3076 | 00000 | 0 | | 0.0 |
| | ** CAPDATR1+ 0 | 3114 | 31102 | 0 | | |
| | ** CAPDATR2+ 0 | 3115 | 01111 | 0 | | |
| 2** | LEMMASS + 0 | 3121 | 00000 | 16 | 0.0 LBS | 0.0 KG |
| 2** | CSMASS + 0 | 3122 | 06574 | 16 | 3.044250000D 04 LBS | 1.380848572D 04 KG |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-------------|------|-------|-----|---------------------------|--------------------------|
| | POLYNUM + 0 | 3312 | 00005 | 14 | 5.0000000000 00 UNITLESS | 5.0000000000 00 UNITLESS |
| 3 | POLYNUM + 1 | 3313 | 00000 | 5 | 5.4639720000-02 DEG | 1.5177700000-04 REV |
| | | 3314 | 02371 | | | |
| 3 | POLYNUM + 3 | 3315 | 00063 | -9 | 2.2167630000-01 DEG/SEC | 6.1576750000-06 REV/CS |
| | | 3316 | 24740 | | | |
| 3 | POLYNUM + 5 | 3317 | 00367 | -23 | 6.4867174000-03 DEG/SEC2 | 1.8018659450-09 REV/CS2 |
| | | 3320 | 24541 | | | |
| 3 | POLYNUM + 7 | 3321 | 00070 | -37 | 8.9707548000-06 DEG/SEC3 | 2.4918763340-14 REV/CS3 |
| | | 3322 | 03454 | | | |
| 3 | POLYNUM + 9 | 3323 | 76052 | -51 | -9.5787142000-07 DEG/SEC4 | -2.6607539450-17 REV/CS4 |
| | | 3324 | 53270 | | | |
| 3 | POLYNUM +11 | 3325 | 02124 | -65 | 6.6041030100-09 DEG/SEC5 | 1.8344730580-21 REV/CS5 |
| | | 3326 | 33675 | | | |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | DCAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-------------|------------|------|------------------|-------------------|---------------------------|
| 3 | POLYNUM +13 | 3327 77241 | -79 | -1.2743408000-11 | DEG/SEC6 | -3.539835556D-26 REV/CS6 |
| | | 3330 55637 | | | | |
| | SATRLRT + 0 | 3331 00000 | 0 | 1.0000000000 00 | DEG/SEC | 2.777777778D-05 REV/CS |
| | | 3332 16441 | | | | |
| 4 | RPSTART + 0 | 3333 02006 | 14 | 1.0300000000 01 | SEC | 1.0300000000 03 CS |
| 4 | POLYSTOP+ 0 | 3334 50324 | 14 | -1.2075000000 02 | SEC | -1.2075000000 04 CS |
| | SATRATE + 0 | 3341 00000 | 12 | 0.0 | OUTPTPUL | 0.0 OUTPTPUL |
| | SATRATE + 1 | 3342 00344 | 12 | 5.7000000000 01 | OUTPTPUL | 5.7000000000 01 OUTPTPUL |
| | SATRATE + 2 | 3343 77433 | 12 | -5.7000000000 01 | OUTPTPUL | -5.7000000000 01 OUTPTPUL |
| | SATRATE + 3 | 3344 00000 | 12 | 0.0 | OUTPTPUL | 0.0 OUTPTPUL |
| | SATSCALE+ 0 | 3351 10000 | 2 | 1.0000000000 00 | UNITLESS | 1.0000000000 00 UNITLESS |
| 2 * | ALFAPAD + 0 | 3377 74266 | -1 | -2.0490000000 01 | DEG | -5.691666667D-02 REV |
| | LAT(SPL)+ 0 | 3400 04277 | 0 | 4.9200000000 01 | DEG | 1.366666667D-01 REV |
| | | 3401 04543 | | | | |

FINAL E-LOAD SL-2

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|--------------|------|-------|----|----------------------|----------------------|
| 1 | LNG(SPL)+ 0 | 3402 | 77263 | 0 | -7.3000000000 00 DEG | -2.027777778D-02 REV |
| | | 3403 | 70464 | | | |
| | * SBDELT + 0 | 3424 | 00121 | 14 | 8.1000000000 01 SEC | 8.1000000000 01 CS |
| 1 * | ELEV + 0 | 3640 | 02314 | 0 | 2.7000000000 01 DEG | 7.500000001D-02 REV |
| | | 3641 | 31463 | | | |
| 4 * | TTPI + 0 | 3642 | 00226 | 23 | 2.4578700000 04 SEC | 2.4578700000 06 CS |
| | | 3643 | 00416 | | | |

FINAL E-LOAD SL-2

| A | B | C | D | E | F | G | H | I | J | K | L | M | | | | |
|--------|-------|-------|-------|--------|-----|-------|-------|--------|-------|-----|-------|--------|-------|-------|-------|-------|
| ID V71 | V71 | V71 | V71 | ID V71 | V71 | V71 | V71 | ID V71 | V71 | V72 | V72 | ID V72 | | | | |
| 01 | 00021 | 00024 | 00016 | 00017 | 01 | 00016 | 00017 | 00023 | 00020 | 01 | 00011 | 00012 | 00017 | 00015 | 01 | 00023 |
| 02 | 01452 | 02014 | 02255 | 01741 | 02 | 02000 | 02036 | 03012 | 03033 | 02 | 02240 | 03000 | 00373 | 01700 | 02 | 01333 |
| 03 | 01054 | 37777 | 00000 | 01150 | 03 | 00137 | 30640 | 37777 | 00114 | 03 | 00017 | 00101 | 00000 | 00012 | 03 | 00000 |
| 04 | 75674 | 27212 | 00000 | 00000 | 04 | 00763 | 24464 | 00000 | 00057 | 04 | 00002 | 00123 | 01016 | 01701 | 04 | 01334 |
| 05 | 01361 | 77651 | 15066 | 00000 | 05 | 00023 | 00015 | 00000 | 00056 | 05 | 00005 | 00175 | 00000 | 06377 | 05 | 00000 |
| 06 | 66252 | 51100 | 17626 | 77777 | 06 | 00001 | 21460 | 54360 | 00017 | 06 | 00005 | 17433 | 01017 | 01702 | 06 | 02334 |
| 07 | 00634 | 77732 | 66645 | 77777 | 07 | 00002 | 00000 | 21075 | 05202 | 07 | 00026 | 04500 | 00000 | 37000 | 07 | 05017 |
| 10 | 77010 | 51576 | 50301 | 42757 | 10 | 26244 | 03510 | 37777 | 72640 | 10 | 00003 | 00334 | 01020 | 02373 | 10 | 02335 |
| 11 | 77731 | 00126 | 00000 | 01631 | 11 | 10621 | 00001 | 60465 | 66734 | 11 | 03410 | 01000 | 00000 | 15742 | 11 | 17677 |
| 12 | 76401 | 26672 | 00000 | 02167 | 12 | 36153 | 04130 | 00000 | 24562 | 12 | | 00232 | 01356 | 02374 | 12 | 03424 |
| 13 | 77001 | 37777 | 66645 | 01615 | 13 | 77521 | 00000 | 54360 | 00024 | 13 | | 00005 | 24357 | 13 | 00121 | |
| 14 | 00230 | 30520 | 50301 | 10000 | 14 | 63232 | 00230 | 21075 | 00024 | 14 | | 01477 | 03377 | 14 | 03640 | |
| 15 | 77547 | 77777 | 62711 | 07146 | 15 | 17550 | 00000 | 37777 | 00025 | 15 | | 00000 | 74266 | 15 | 02314 | |
| 16 | 77524 | 70624 | 60151 | 00620 | 16 | 32553 | 22054 | 57142 | 01475 | 16 | | 03055 | | 16 | 03641 | |
| 17 | 77640 | 00045 | | 37723 | 17 | | 00400 | 33106 | 12016 | 17 | | 00247 | | 17 | 31463 | |
| 20 | 00321 | 26214 | | | 20 | | | 50741 | 11537 | 20 | | | | 20 | 03642 | |
| 21 | 77706 | 00000 | | | 21 | | | 31162 | | 21 | | | | 21 | 00226 | |
| 22 | | 00646 | | | 22 | | | 12173 | | 22 | | | | 22 | 03643 | |
| 23 | | 37777 | | | 23 | | | 07534 | | 23 | | | | 23 | 00416 | |
| 24 | | 36472 | | | 24 | | | | | 24 | | | | | | |

ENCLOSURE 2

Nominal OWS vector at CMS insertion plus 34 seconds.

X = -10596451.7 ft.
Y = 10652976.5 ft.
Z = 16544190.7 ft.
 \dot{X} = -20866.7441 ft/sec
 \dot{Y} = -13005.7275 ft/sec
 \dot{Z} = -4981.0197 ft/sec
GET = 00:10:24.0

The V71 state vector load for this vector is:

V71
00020
01501
77776
77635
55714
00143
02732
00231
34367
60062
76701
66055
74455
74150
65727
00003
31700

00021 ref FS63-73-76