

Massachusetts Institute of Technology
Charles Stark Draper Laboratory

R. Larson

RECEIVED
OCT 16 1970
R. A LARSON

23S Memo 70-72

TO: Distribution
FROM: H. McOuat
DATE: 15 October 1970
SUBJECT: Apollo 14 Erasable Load

Attached are NASA listings that correspond to the Apollo 14 E-Load decks they have provided for MIT/DL.

The card decks will be used to manufacture K-Start Tapes of the E-load. The K-Start tapes actually load the CMC & LGC Erasables prior to lift-off.

This data is preliminary in that:

- (a) Launch dates may change
- (b) The inertial component parameters will be updated
- (c) MIT/DL will run Level VI tests with this data to assure that it is compatible with the CMC and LGC programs

There is other information available in regard to the scaling used to obtain the OCTAL numbers.

Distribution:

P. Felleman
R. Larson
S. Copps
M. Hamilton
A. Engel

B. McCoy
C. Gilson
J. Harrison
R. O'Donnell
P. Volante
A. Klumpp

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ACDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS | | | |
|-----|-----------|------|-------|-------|-------------------|--------------------|---------------------|---------------------------|--------------------------|
| | FLAGWRD3+ | 0 | 0077 | 12000 | -0 | | | | |
| | FLAGWRD8+ | 0 | 0104 | 00000 | -0 | | | | |
| | FLGWRC10+ | 0 | 0106 | 00000 | -0 | | | | |
| | MASS | + | 0 | 1243 | 0742E | 1E | 3.405670000+004 LBS | 1.544785927+004 KG | |
| | MASS | + | 1 | 1244 | 00000 | 0 | 0.000000000+000 LBS | 0.000000000+000 KG | |
| ** | LEMASS | + | 0 | 1326 | 0742E | 1E | 3.405670000+004 LBS | 1.544785927+004 KG | |
| ** | CSMASS | + | 0 | 1327 | 10414 | 1E | 3.848770000+004 LBS | 1.745772706+004 KG | |
| * | E3J22R2M+ | 0 | 1347 | 121E0 | 5E | 9.204790400+016 | M5/CS2 | 9.204790400+016 M5/CS2 | |
| * | E32C31RM+ | 0 | 1350 | 033E3 | 80 | 1.312892500+023 | M6/CS2 | 1.312892500+023 M6/CS2 | |
| * | ELBIAS | + | 0 | 1353 | 00000 | -1 | 0.000000000+000 | DEG | 0.000000000+000 REV |
| * | TOOFEW | + | 0 | 1354 | 00003 | 14 | 3.000000000+000 | UNITLESS | 3.000000000+000 UNITLESS |
| * | PEIASX | + | 0 | 1452 | 03201 | -3 | 1.270000000+000 | CM/SEC2 | 1.270000000-002 PIPS/CS |
| * | PIPASCFX+ | 0 | 1453 | 6105E | -9 | -9.100000000+002 | PPM | -9.100000000-004 PIPS/PIP | |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMCNIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|----------|-------|----|-------------------------|---------------------------|
| * | FBIASY | + 0 1454 | 04146 | -3 | 1.640000000+000 CM/SEC2 | 1.640000000-002 PIPS/CS |
| * | PIPASCFY+ | 0 1455 | 43766 | -9 | -1.710000000+003 FPM | -1.710000000-003 PIPS/PIP |
| * | FBIASZ | + 0 1456 | 03404 | -3 | 1.370000000+000 CM/SEC2 | 1.370000000-002 PIPS/CS |
| * | PIPASCFZ+ | 0 1457 | 65137 | -9 | -6.600000000+002 FPM | -6.600000000-004 PIPS/PIP |
| * | NBDX | + 0 1460 | 00163 | -5 | 9.000000000-001 MERU | 2.190514165-004 G PUL/CS |
| * | NBDY | + 0 1461 | 77263 | -5 | -2.600000000+000 MERU | -6.328152033-004 G PUL/CS |
| * | NBDZ | + 0 1462 | 00000 | -5 | -0.000000000+000 MERU | 0.000000000+000 G PUL/CS |
| * | ADIAX | + 0 1463 | 00150 | -6 | 4.000000000+000 MERU/G | 9.927568032-005 GPUL/PIP |
| * | ADIAY | + 0 1464 | 77425 | -6 | -9.000000000+000 MERU/G | -2.233702807-004 GPUL/PIP |
| * | ADIAZ | + 0 1465 | 00202 | -6 | 5.000000000+000 MERU/G | 1.240946004-004 GPUL/PIP |
| * | ADSRAX | + 0 1466 | 00000 | -6 | 0.000000000+000 MERU/G | 0.000000000+000 GPUL/PIP |
| * | ADSRAY | + 0 1467 | 00116 | -6 | 3.000000000+000 MERU/G | 7.445676024-005 GPUL/PIP |
| * | ADSRAZ | + 0 1470 | 00150 | -6 | 4.000000000+000 MERU/G | 9.927568032-005 GPUL/PIP |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|----------|------------|----|--------------------------|--------------------------|
| * | GCOMP SW | + 0 1477 | 00000 | 14 | 0.000000000+000 UNITLESS | 0.000000000+000 UNITLESS |
| | TETCSM | + 0 1570 | 37777 | -0 | | |
| | | | 1571 37777 | | | |
| | TETLEY | + 0 1642 | 37777 | -0 | | |
| | | | 1643 37777 | | | |
| * | X789 | + 0 1700 | 00000 | 3 | 0.000000000+000 RADIANS | 0.000000000+000 RADIANS |
| | | | 1701 00000 | | | |
| * | X789 | + 2 1702 | 00000 | 3 | 0.000000000+000 RADIANS | 0.000000000+000 RADIANS |
| | | | 1703 00000 | | | |
| * | X789 | + 4 1704 | 00000 | 3 | 0.000000000+000 RADIANS | 0.000000000+000 RADIANS |
| | | | 1705 00000 | | | |
| * | TEPHM | + 0 1706 | 00000 | 42 | 5.156333333+003 HR | 1.856280000+009 CS |
| | | | 1707 35222 | | | |
| | | | 1710 12700 | | | |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNECMNIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----------|----------|------|-------|----|-------------------------|---------------------------|
| * -AYO | + 0 | 1711 | 00000 | 0 | 2.949684858-005 RADIANS | 2.949684858-005 RADIANS |
| | | 1712 | 17356 | | | |
| * AXO | + 0 | 1713 | 00000 | 0 | 3.619492050-005 RADIANS | 3.619492050-005 RADIANS |
| | | 1714 | 22764 | | | |
| REFSMMAT+ | 0 | 1731 | 67054 | 1 | -5.570988600-001 | -5.570988600-001 UNITLESS |
| | | 1732 | 47700 | | | |
| REFSMMAT+ | 2 | 1733 | 02654 | 1 | 1.773637200-001 | 1.773637200-001 UNITLESS |
| | | 1734 | 36654 | | | |
| REFSMMAT+ | 4 | 1735 | 63011 | 1 | -8.112847700-001 | -8.112847700-001 UNITLESS |
| | | 1736 | 76440 | | | |
| REFSMMAT+ | 6 | 1737 | 64036 | 1 | -7.462600800-001 | -7.462600800-001 UNITLESS |
| | | 1740 | 64313 | | | |
| REFSMMAT+ | 8 | 1741 | 67335 | 1 | -5.355151400-001 | -5.355151400-001 UNITLESS |
| | | 1742 | 41726 | | | |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNECMNIC | ADDR | CCIAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS | |
|-----|-------------|------|-------|-------|-------------------|---------------------------|--------------------------|
| | REFSMMAT+10 | 1743 | 0624E | 1 | 3.953725100-001 | 3.953725100-001 UNITLESS | |
| | | 1744 | 3442C | | | | |
| | REFSMMAT+12 | 1745 | 72127 | 1 | -3.643305500-001 | -3.643305500-001 UNITLESS | |
| | | 1746 | 54734 | | | | |
| | REFSMMAT+14 | 1747 | 15154 | 1 | 8.256910100-001 | 8.256910100-001 UNITLESS | |
| | | 1750 | 01743 | | | | |
| | REFSMMAT+16 | 1751 | 0671C | 1 | 4.306943500-001 | 4.306943500-001 UNITLESS | |
| | | 1752 | 07741 | | | | |
| * | RANGEVAR+ | 0 | 1766 | 01351 | -12 | 1.111111111-005 UNITLESS | 1.111111111-005 UNITLESS |
| | | | 1767 | 24734 | | | |
| * | RATEVAR | + 0 | 1770 | 02354 | -12 | 1.877777778-005 UNITLESS | 1.877777778-005 UNITLESS |
| | | | 1771 | 047E1 | | | |
| * | RVARMIN | + 0 | 1772 | 00410 | 12 | 7.104180875+002 FT2 | 6.600000000+001 M2 |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|------------|-----|--------------------------|--------------------------|
| * | VVARMIN + | 0 | 1773 00165 | -12 | 1.877764172-001 FT2/SEC2 | 1.744500000-006 M2/CS2 |
| * | WRENDPOS+ | 0 | 2000 05750 | 14 | 1.000000000+004 FT | 3.048000000+003 M |
| * | WRENDVEL+ | 0 | 2001 00763 | 0 | 1.000000000+001 FT/SEC | 3.048000000-002 M/CS |
| * | WSHAFT + | 0 | 2002 17270 | -5 | 1.500000000+001 MILLIRAD | 1.500000000-002 RADIANS |
| * | WTRUN + | 0 | 2003 17270 | -5 | 1.500000000+001 MILLIRAD | 1.500000000-002 RADIANS |
| * | RMAX + | 0 | 2004 00023 | 19 | 2.000000000+003 FT | 6.096000000+002 M |
| * | VMAX + | 0 | 2005 00001 | 7 | 2.000000000+000 FT/SEC | 6.096000000-003 M/CS |
| * | WSURFPOS+ | 0 | 2006 00000 | 14 | 0.000000000+000 FT | 0.000000000+000 M |
| * | WSURFVEL+ | 0 | 2007 00000 | 0 | 0.000000000+000 FT/SEC | 0.000000000+000 M/CS |
| * | SHAFTVAR+ | 0 | 2010 00103 | -12 | 1.000000000+000 MILIRAD2 | 1.000000000-006 RADIANS2 |
| * | TRUNVAR + | 0 | 2011 00103 | -12 | 1.000000000+000 MILIRAD2 | 1.000000000-006 RADIANS2 |
| * | 504LM + | 0 | 2012 77772 | 0 | -3.436505795-004 RADIANS | -3.436505795-004 RADIANS |
| | | | 2013 53647 | | | |

PRELIMINARY P3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ACDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----------|----------|------|-------|----|-------------------------|-------------------------|
| * 504LM | + 2 | 2014 | 00002 | 0 | 1.425556839-004 RADIANS | 1.425556839-004 RADIANS |
| | | 2015 | 12573 | | | |
| * 504LM | + 4 | 2016 | 00001 | 0 | 1.180097461-004 RADIANS | 1.180097461-004 RADIANS |
| | | 2017 | 35676 | | | |
| * RLS | + 0 | 2020 | 00311 | 27 | 5.423974738+006 FT | 1.653227500+006 M |
| | | 2021 | 31727 | | | |
| * RLS | + 2 | 2022 | 77700 | 27 | -1.706456693+006 FT | -5.201280000+005 M |
| | | 2023 | 60177 | | | |
| * RLS | + 4 | 2024 | 77762 | 27 | -3.650410105+005 FT | -1.112645000+005 M |
| | | 2025 | 55276 | | | |
| * TLAND | + 0 | 2026 | 04530 | 28 | 1.088923861+002 HR | 3.920125900+007 CS |
| | | 2027 | 24753 | | | |
| * VELBIAS | + 0 | 2400 | 00001 | 6 | 2.500000000+000 FT/SEC | 7.620000000-003 M/CS |
| | | 2401 | 36331 | | | |

PRELIMINARY P3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|------------|----|-------------------------|-----------------------|
| * | RBRFGX | + 0 | 2402 77777 | 24 | -1.773725000+003 FT | -5.406313800+002 M |
| | | | 2403 57665 | | | |
| * | RAPFGX | + 0 | 2404 00000 | 24 | 9.491910105+001 FT | 2.893134200+001 M |
| | | | 2405 00717 | | | |
| * | RBRFGZ | + 0 | 2406 77773 | 24 | -1.448802690+004 FT | -4.415950600+003 M |
| | | | 2407 66000 | | | |
| * | RAPFGZ | + 0 | 2410 77777 | 24 | -1.572079987+001 FT | -4.791699800+000 M |
| | | | 2411 77662 | | | |
| * | VBRFGX | + 0 | 2412 77767 | 10 | -1.681064567+002 FT/SEC | -5.123884800-001 M/CS |
| | | | 2413 71517 | | | |
| * | VAPFGX | + 0 | 2414 00000 | 10 | 2.083579987+000 FT/SEC | 6.350751800-003 M/CS |
| | | | 2415 03201 | | | |
| * | VERFGZ | + 0 | 2416 77774 | 10 | -7.761436680+001 FT/SEC | -2.365685900-001 M/CS |
| | | | 2417 46700 | | | |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------------------|----|--------------------------|------------------------|
| * | VAPFGZ | + 0 | 2420 00000 2421 01227 | 10 | 8.303187992-001 FT/SEC | 2.530811700-003 M/CS |
| * | ABRFGX | + 0 | 2422 77772 2423 72405 | -4 | -6.472360236-001 FT/SEC2 | -1.972775400-005 M/CS2 |
| * | AAPFGX | + 0 | 2424 00004 2425 12111 | -4 | 5.402850066-001 FT/SEC2 | 1.646788700-005 M/CS2 |
| * | ABRFGZ | + 0 | 2426 77674 2427 70443 | -4 | -8.414381890+000 FT/SEC2 | -2.564703600-004 M/CS2 |
| * | AAPFGZ | + 0 | 2430 77776 2431 43634 | -4 | -2.354229987-001 FT/SEC2 | -7.175693000-006 M/CS2 |
| * | VBRFG* | + 0 | 2432 77767 2433 57361 | 13 | -1.397058596+003 FT/SEC | -4.258234600+000 M/CS |
| * | VAPFG* | + 0 | 2434 00000 2435 11740 | 13 | 5.094557087+001 FT/SEC | 1.552821000-001 M/CS |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----------|--------------------|-------------|-------|-----|--------------------------|--------------------------|
| * 2437 | ABRFG* E333C | + 0 2436 | 77154 | -4 | -5.048629265+001 FT/SEC2 | -1.538822200-003 M/CS2 |
| * 2441 | AAPFG* E6653 | + 0 2440 | 77764 | -4 | -1.412537992+000 FT/SEC2 | -4.305415800-005 M/CS2 |
| * 2443 | JBRFG* 1721E | + 0 2442 | 0012E | -21 | 8.257294947-003 FT/SEC3 | 2.516823500-009 M/CS3 |
| * 2445 | JAPFG* 07700 | + 0 2444 | 00730 | -21 | 4.509242126-002 FT/SEC3 | 1.374417000-008 M/CS3 |
| * 2447 | GAINBRAK+ 3777E | 0 2446 | 37777 | 0 | 9.999999900-001 UNITLESS | 9.999999900-001 UNITLESS |
| * 2451 | GAINAFPR+ 00000 | 0 2450 | 00000 | 0 | 0.000000000+000 UNITLESS | 0.000000000+000 UNITLESS |
| * 2452 | TCGFBRAK+ 00567 | 0 2452 | 00567 | 17 | 3.000000000+001 SEC | 3.000000000+003 CS |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|--------------------------|-----|---------------------------|---------------------------|
| * | TCGIBRAK+ | 0 | 2453 25762 | 17 | 9.000000000+002 SEC | 9.000000000+004 CS |
| * | TCGFAPPR+ | 0 | 2454 00113 | 17 | 6.000000000+000 SEC | 6.000000000+002 CS |
| * | TCGIAPPR+ | 0 | 2455 04704 | 17 | 2.000000000+002 SEC | 2.000000000+004 CS |
| * | VIGN | + 0 | 2456 00416 2457 22241 | 10 | 5.548153543+003 FT/SEC | 1.691077200+001 M/CS |
| * | RIGNX | + 0 | 2460 77726 2461 74337 | 24 | -1.381168996+005 FT | -4.209803100+004 M |
| * | RIGNZ | + 0 | 2462 77115 2463 46122 | 24 | -1.460770308+006 FT | -4.452427900+005 M |
| * | KIGNX/B4+ | 0 | 2464 77122 2465 76151 | 4 | -4.190000000-001 UNITLESS | -4.190000000-001 UNITLESS |
| * | KIGNY/B8+ | 0 | 2466 71613 2467 74336 | -16 | -9.049999985-007 FT/FT2 | -2.969160100-006 M-1 |

PRELIMINARY F3 ERASABLE LCAD LUM 178

| REV | MNEMCNIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------------------------------|-------|----|--------------------------|--------------------------|
| * | KIGNV/B4+ | 0 2470 7220E 2471 57777 | | 18 | -4.700000000+002 SEC | -4.700000000+004 CS |
| * | LOWCRIT | + 0 2472 04114 | | 14 | 5.985007886+003 LBF | 2.124377200+003 DPSTROTP |
| * | HIGHCRIT | + 0 2473 04454 | | 14 | 6.615008568+003 LBF | 2.347995800+003 DPSTROTP |
| * | TAUHZ | + 0 2474 07E40 | | 11 | 5.000000000+000 SEC | 5.000000000+002 CS |
| * | GHZ | + 0 2475 14632 | | 0 | 4.000000000-001 UNITLESS | 4.000000000-001 UNITLESS |
| * | AHZLIM | + 0 2476 00017 | | -4 | 1.938979987+000 FT/SEC2 | 5.910011000-005 M/CS2 |
| * | 2LATE466+ | 0 2477 00000 2500 0022E | | 28 | 1.500000000+000 SEC | 1.500000000+002 CS |
| * | DELQFIX | + 0 2503 00000 2504 0466E | | 24 | 5.000000000+002 FT | 1.524000000+002 M |
| * | LRVMAX | + 0 2511 01717 | | 7 | 2.499999967+003 FT/SEC | 7.619999900+000 M/CS |
| * | LRVF | + 0 2512 00116 | | 7 | 1.999999967+002 FT/SEC | 6.095999900-001 M/CS |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|----------|-------|----|--------------------------|--------------------------|
| * | LRWVZ | + 0 2513 | 11463 | 0 | 3.000000000-001 UNITLESS | 3.000000000-001 UNITLESS |
| * | LRWVY | + 0 2514 | 11463 | 0 | 3.000000000-001 UNITLESS | 3.000000000-001 UNITLESS |
| * | LRWVX | + 0 2515 | 11463 | 0 | 3.000000000-001 UNITLESS | 3.000000000-001 UNITLESS |
| * | LRWVFZ | + 0 2516 | 06315 | 0 | 2.000000000-001 UNITLESS | 2.000000000-001 UNITLESS |
| * | LRWVFY | + 0 2517 | 06315 | 0 | 2.000000000-001 UNITLESS | 2.000000000-001 UNITLESS |
| * | LRWVFX | + 0 2520 | 06315 | 0 | 2.000000000-001 UNITLESS | 2.000000000-001 UNITLESS |
| * | LRWVFF | + 0 2521 | 03146 | 0 | 1.000000000-001 UNITLESS | 1.000000000-001 UNITLESS |
| * | ABSC0 | + 0 2522 | 67111 | 18 | -2.379999967+005 FT | -7.254239900+004 M |
| * | ABSC1 | + 0 2523 | 75701 | 18 | -5.700000000+004 FT | -1.737360000+004 M |
| * | ABSC2 | + 0 2524 | 76132 | 18 | -4.900000000+004 FT | -1.493520000+004 M |
| * | ABSC3 | + 0 2525 | 77452 | 18 | -1.120000000+004 FT | -3.413760000+003 M |
| * | ABSC4 | + 0 2526 | 77640 | 18 | -5.000000000+003 FT | -1.524000000+003 M |
| * | SLOPE0 | + 0 2527 | 77774 | 6 | -1.105000000-002 RADIANS | -1.105000000-002 RADIANS |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|----------|-----------------------|----|--------------------------|--------------------------|
| * | SLOPE1 | + 0 2530 | 77743 | E | -1.088000000-001 RADIANS | -1.088000000-001 RADIANS |
| * | SLOPE2 | + 0 2531 | 00011 | E | 3.704000000-002 RADIANS | 3.704000000-002 RADIANS |
| * | SLOPE3 | + 0 2532 | 77753 | E | -7.903000000-002 RADIANS | -7.903000000-002 RADIANS |
| * | SLOPE4 | + 0 2533 | 77774 | E | -1.200000000-002 RADIANS | -1.200000000-002 RADIANS |
| * | RODSCALE+ | 0 2534 | 14370 | -7 | 1.000000000+000 FT/SEC | 3.048000000-003 M/CS |
| * | TAUROD | + 0 2535 | 11300 | S | 1.500000000+000 SEC | 1.500000000+002 CS |
| | | | 2536 00000 | | | |
| * | LAG/TAU | + 0 2537 | 07356 | 0 | 2.333300000-001 UNITLESS | 2.333300000-001 UNITLESS |
| | | | 2540 34075 | | | |
| * | MINFORCE+ | 0 2541 | 00001 | 12 | 9.799999814+002 LBF | 4.359257100-001 KG M/CS2 |
| | | | 2542 27631 | | | |
| * | MAXFORCE+ | 0 2543 | 00013 | 12 | 6.299999961+003 LBF | 2.802379600+000 KG M/CS2 |
| | | | 2544 06551 | | | |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMCNIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------------------|----|-------------------------|------------------------|
| * | J1PARM | + 0 | 2545 07017 2546 32346 | 23 | 6.046952700+006 FT | 1.843111183+006 M |
| * | K1PARM | + 0 | 2547 75545 2550 64662 | 23 | -3.150277900+005 FT/RAD | -6.033144086+005 M/REV |
| * | J2PARM | + 0 | 2551 07020 2552 32012 | 23 | 6.048609900+006 FT | 1.843616297+006 M |
| * | K2PARM | + 0 | 2553 73324 2554 53775 | 23 | -6.276302600+005 FT/RAD | -1.201984051+006 M/REV |
| * | THETCRIT | + 0 | 2555 76347 2556 56551 | 0 | -1.741421853+001 DEG | -4.837282929-002 REV |
| * | RAMIN | + 0 | 2557 03326 2560 07515 | 24 | 5.880068250+006 FT | 1.792244803+006 M |
| * | YLIM | + 0 | 2561 00016 2562 32446 | 24 | 8.200000000+000 N.MI. | 1.518640000+004 M |

PRELIMINARY 13 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-------------------|-------------|-------|-------|----|--------------------------|--------------------------|
| * 2563 2564 | ABTRDCT + 0 | 00007 | 23346 | 7 | 1.950000000+001 FT/SEC | 5.943600000-002 M/CS |
| * 2565 2566 | COSTHET1+ 0 | 00000 | 00000 | 2 | 0.000000000+000 UNITLESS | 0.000000000+000 UNITLESS |
| * 2567 2570 | COSTHET2+ 0 | 06733 | 07535 | 2 | 8.660254037-001 UNITLESS | 8.660254037-001 UNITLESS |
| * 2631 2632 | CLAND + 0 | 00000 | 00000 | 24 | 0.000000000+000 FT | 0.000000000+000 M |
| * 2633 2634 | DLAND + 2 | 00000 | 00000 | 24 | 0.000000000+000 FT | 0.000000000+000 M |
| * 2635 2636 | CLAND + 4 | 00000 | 00000 | 24 | 0.000000000+000 FT | 0.000000000+000 M |
| * 3000 | HIASCENT+ 0 | 02324 | | 16 | 1.090000000+004 LBS | 4.944156833+003 KG |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|----------|-------|----|--------------------------|--------------------------|
| ** | ROLLTIME+ | 0 3001 | 05236 | 14 | 2.718000000+001 SEC | 2.718000000+003 CS |
| ** | FITTIME | + 0 3002 | 04302 | 14 | 2.242000000+001 SEC | 2.242000000+003 CS |
| * | DKTRAP | + 0 3003 | 77001 | -3 | -3.888888889-003 REV/SEC | -3.888888889-003 REV/SEC |
| * | DKOMEGAN+ | 0 3004 | 00012 | 14 | 1.000000000+001 UNITLESS | 1.000000000+001 UNITLESS |
| * | DKKAOSN | + 0 3005 | 00074 | 14 | 6.000000000+001 UNITLESS | 6.000000000+001 UNITLESS |
| * | LMTRAF | + 0 3006 | 77001 | -3 | -3.888888889-003 REV/SEC | -3.888888889-003 REV/SEC |
| * | LMOMEGAN+ | 0 3007 | 00000 | 14 | 0.000000000+000 UNITLESS | 0.000000000+000 UNITLESS |
| * | LMKAOSN | + 0 3010 | 00074 | 14 | 6.000000000+001 UNITLESS | 6.000000000+001 UNITLESS |
| * | DKDB | + 0 3011 | 00201 | 15 | 2.580000000+002 REV-1 | 2.580000000+002 REV-1 |
| * | IGNAOSQ | + 0 3012 | 02252 | -2 | 6.560000000+000 DEG/SEC2 | 1.822222224-002 REV/SEC2 |
| * | IGNAOSR | + 0 3013 | 00231 | -2 | 8.400000000-001 DEG/SEC2 | 2.333333335-003 REV/SEC2 |
| * | DCWNTCRK+ | 0 3113 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |
| * | DOWNTCRK+ | 1 3114 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |

PRELIMINARY F3 ERASABLE LOAD LUM 178

| REV | MNECMNIC | ADDR | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|----------|------------|----|-------------------------|-------------------------|
| * | DWNTCRK+ | 2 3115 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |
| * | DWNTCRK+ | 3 3116 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |
| * | DWNTCRK+ | 4 3117 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |
| * | DWNTCRK+ | 5 3120 | 00000 | 5 | 0.000000000+000 JET SEC | 0.000000000+000 JET SEC |
| * | AGSK | + 0 3371 | 04225 | 28 | 1.000000000+002 HR | 3.600000000+007 CS |
| | | | 3372-10400 | | | |
| * | AZBIAS | + 0 3373 | 00000 | -1 | 0.000000000+000 DEG | 0.000000000+000 REV |
| * | ATIGINC | + 0 3400 | 00001 | 28 | 3.000000000+000 MIN | 1.800000000+004 CS |
| | | | 3401 03120 | | | |
| * | PTIGINC | + 0 3402 | 00001 | 28 | 3.000000000+000 MIN | 1.800000000+004 CS |
| | | | 3403-03120 | | | |
| * | AOTAZ | + 0 3404 | 65253 | -1 | -6.000000000+001 DEG | -1.666666668-001 REV |
| * | AOTAZ | + 1 3405 | 00000 | -1 | 0.000000000+000 DEG | 0.000000000+000 REV |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ADDR | CCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|-------|-------|----------------------------|--------------------------|
| * | AOTAZ | + 2 | 3406 | 12525 | -1 6.000000000+001 DEG | 1.666666668-001 REV |
| * | AOTAZ | + 3 | 3407 | 25253 | -1 1.200000000+002 DEG | 3.333333336-001 REV |
| * | AOTAZ | + 4 | 3410 | 40000 | -1 1.799890135+002 DEG | 4.999694824-001 REV |
| * | ACTAZ | + 5 | 3411 | 52525 | -1 -1.200000000+002 DEG | -3.333333336-001 REV |
| * | AOTEL | + 0 | 3412 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | AOTEL | + 1 | 3413 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | AOTEL | + 2 | 3414 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | AOTEL | + 3 | 3415 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | AOTEL | + 4 | 3416 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | AOTEL | + 5 | 3417 | 10000 | -1 4.500000000+001 DEG | 1.250000001-001 REV |
| * | LRHMAX | + 0 | 3420 | 35610 | 14 5.000000000+004 FT | 1.524000000+004 M |
| * | LRWH | + 0 | 3421 | 13146 | 0 3.500000000-001 UNITLESS | 3.500000000-001 UNITLESS |
| * | ZOONTIME+ | 0 | 3422 | 05050 | 14 2.600000000+001 SEC | 2.600000000+003 CS |

PRELIMINARY H3 ERASABLE LOAD LUM 178

| REV | MNEMONIC | ACDF | CTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|------|---------------------|-----------------------------|---------------------------|
| * | TENDBRAK+ | 0 | 3423 | 01407 | 17 6.200000000+001 SEC | 6.200000000+003 CS |
| * | TENDAPPR+ | 0 | 3424 | 00226 | 17 1.200000000+001 SEC | 1.200000000+003 CS |
| * | DELTTFAP+ | 0 | 3425 | 75632 | 17 -9.000000000+001 SEC | -9.000000000+003 CS |
| * | LEADTIME+ | 0 | 3426 | 77743 | 17 2.200000000+000 SEC | -2.200000000+002 CS |
| * | RPCRTIME+ | 0 | 3427 | 01407 | 17 6.200000000+001 SEC | 6.200000000+003 CS |
| * | RPCRTGSW+ | 0 | 3430 | 57777 | 1 -1.000000000+000 UNITLESS | -1.000000000+000 UNITLESS |
| * | TNEWA | + 0 | 3431 | 20000 3432 00000 | 28 1.342177280+008 CS | 1.342177280+008 CS |
| * | LRWH1 | + 0 | 3756 | 13146 | 0 3.500000000-001 UNITLESS | 3.500000000-001 UNITLESS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|----------------------------|----|--------------------------|--------------------------|
| | FLAGWRD1+ | 0 0075 00000 | -0 | | |
| | FLAGWRD3+ | 0 0077 00000 | -0 | | |
| | FLAGWRD8+ | 0 0104 00200 | -0 | | |
| | FLAGWRD9+ | 0 0105 00004 | -0 | | |
| * | NO.PASS + | 0 0736 37777 | 14 | 1.638300000+004 UNITLESS | 1.638300000+004 UNITLESS |
| | PIPTIME + | 0 1041 01716 1042 03700 | 28 | 1.596000000+007 | 1.596000000+007 |

PREDICTED VALUE OF AGC CLOCK AT L/O 44/20

| | | | | | |
|--|-----------|----------------------------|----|---------------------|---------------------|
| | PGNCSALT+ | 0 1133 00000 1134 00055 | 29 | 2.933070866+002 FT | 8.940000000+001 M |
| | PADLONG + | 0 1135 30653 1136 23562 | 0 | 2.793958666+002 DFG | 7.760996295-001 REV |

PAD 39A

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-------------|------|--------------------------|-----|---------------------------|---------------------------|
| * | CDUCHKWD+ | 0 | 1346 00005 | 14 | 5.000000000+000 CS | 5.000000000+000 CS |
| * | RTFD1 | + 0 | 1347 06510 1350 07025 | 3 | 1.660263700+000 | 1.660263700+000 UNITLESS |
| * | DVTHRESH+ | 0 | 1351 00620 | -2 | 2.000000000+000 FT/SEC | 6.096000000-003 M/CS |
| * | HORIZONTAL+ | 0 | 1352 00000 1353 33260 | 29 | 2.800000000+001 KM | 2.800000000+004 M |
| * | ALTVAR | + 0 | 1354 37723 | -16 | 1.521680000-005 RADIANS2 | 1.521680000-005 RADIANS2 |
| * | EMDOT | + 0 | 1355 01164 | 3 | 6.760000000+001 LBS/SEC | 3.066284421-001 KG/CS |
| * | PBIASX | + 0 | 1452 77231 | -6 | -6.561679790-003 FT/SEC/2 | -3.418803419-004 PIPS/CS |
| * | PIPASCFX+ | 0 | 1453 71220 | -9 | -4.100000000+002 PPM | -4.100000000-004 PIPS/PIP |
| * | PBIASY | + 0 | 1454 00327 | -6 | 3.937007870-003 FT/SEC/2 | 2.051282049-004 PIPS/CS |
| * | PIPASCFY+ | 0 | 1455 71344 | -9 | -4.000000000+002 PPM | -4.000000000-004 PIPS/PIP |
| * | PBIASZ | + 0 | 1456 77055 | -6 | -8.530183730-003 FT/SEC/2 | -4.444444446-004 PIPS/CS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|----------|-------|-------|-------------------------|---------------------------|
| * | PIPASCFZ+ | 0 1457 | 73716 | -9 | -2.500000000+002 PPM | -2.500000000-004 PIPS/PIP |
| * | NBDX | + 0 1450 | 00115 | -5 | 6.000000000-001 MFRU | 1.460342777-004 G PUL/CS |
| * | NBDY | + 0 1461 | 77064 | -5 | -3.600000000+000 MERU | -8.762056661-004 G PUL/CS |
| * | NBDZ | + 0 1462 | 00263 | -5 | 1.400000000+000 MFRU | 3.407466479-004 G PUL/CS |
| * | ADIAX | + 0 1463 | 00046 | -3 | 2.000000000+000 MERU/G | 2.903813648-004 GPUL/PIP |
| * | ADIAY | + 0 1464 | 77663 | -3 | -4.000000000+000 MERU/G | -5.807627296-004 GPUL/PIP |
| * | ADIAZ | + 0 1465 | 01437 | -3 | 4.200000000+001 MERU/G | 6.098008661-003 GPUL/PIP |
| * | ADSRAX | + 0 1466 | 00023 | -3 | 1.000000000+000 MERU/G | 1.451906824-004 GPUL/PIP |
| * | ADSRAY | + 0 1467 | 00071 | -3 | 3.000000000+000 MERU/G | 4.355720472-004 GPUL/PIP |
| * | ADSRAZ | + 0 1470 | 77706 | -3 | -3.000000000+000 MERU/G | -4.355720472-004 GPUL/PIP |
| | TFPHM | + 0 1706 | 00006 | 42 | 5.112000000+003 HRS | 1.840320000+009 CS |
| | | | 1707 | 33304 | | |
| | | | 1710 | 07000 | | |

TFPHM TO MIDNIGHT PRIOR TO JAN 30, 1971

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----------|----------|------|-------|----|--------------------------|--------------------------|
| * UNITW | + 0 | 1711 | 00000 | 0 | 2.949684858-005 UNITLESS | 2.949684858-005 UNITLESS |
| | | 1712 | 17356 | | | |
| * UNITW | + 2 | 1713 | 00000 | 0 | 3.619492054-005 UNITLESS | 3.619492054-005 UNITLESS |
| | | 1714 | 22764 | | | |
| * UNITW | + 4 | 1715 | 37777 | 0 | 9.999999963-001 UNITLESS | 9.999999963-001 UNITLESS |
| | | 1716 | 37777 | | | |
| REFSMMAT+ | 0 | 1733 | 12702 | 1 | 6.800000010-001 UNITLESS | 6.800000010-001 UNITLESS |
| | | 1734 | 21727 | | | |

REV 0 OF E LOAD TAPE

| | | | | | | |
|-----------|---|------|-------|---|--------------------------|--------------------------|
| REFSMMAT+ | 2 | 1735 | 00152 | 1 | 1.300000100-002 UNITLESS | 1.300000100-002 UNITLESS |
| | | 1736 | 17677 | | | |

TEPHEM TO MIDNIGHT PRIOR TO JAN 30, 1971

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANDCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|--------------------------|----|--------------------------|--------------------------|
| * | EK1VAL | + 0 | 1765 00001 1766 24315 | 23 | 1.884800000+004 LBF SEC | 8.384008100+002 KG M/CS |
| * | EK2VAL | + 0 | 1767 00000 1770 15514 | 23 | 4.909100000+003 LBF SEC | 2.183676473+002 KG M/CS |
| * | FK3VAL | + 0 | 1771 00522 | 9 | 2.375710000+004 LBF | 1.056768457+001 KG M/CS2 |
| * | FANG | + 0 | 1772 02210 1773 25231 | 7 | 2.038500000+004 LBF | 9.067699762+000 KG M/CS2 |
| * | E3J22R2M+ | 0 | 1774 12160 | 58 | 9.204790400+016 M5/CS2 | 9.204790400+016 M5/CS2 |
| * | E32C31RM+ | 0 | 1775 03363 | 80 | 1.312892500+023 M6/CS2 | 1.312892500+023 M6/CS2 |
| * | TRUNSF | + 0 | 1776 00251 | 27 | 1.000000000-001 1/DEG/SC | 1.382400000+006 P/REV/CS |
| * | SHAFTSF | + 0 | 1777 00522 | 25 | 5.000000000-002 1/DEG/SC | 6.912000000+005 P/REV/CS |
| * | WRENDPOS+ | 0 | 2000 00137 | 19 | 1.000000000+004 FT | 3.048000000+003 M |
| * | WRENDVEL+ | 0 | 2001 00763 | 0 | 1.000000000+001 FT/SEC | 3.048000000-002 M/CS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------------------|----|------------------------|----------------------|
| * | RMAX | + 0 | 2002 00023 | 19 | 2.000000000+003 FT | 6.096000000+002 M |
| * | VMAX | + 0 | 2003 00001 | 7 | 2.000000000+000 FT/SEC | 6.096000000-003 M/CS |
| * | WORBPOS | + 0 | 2004 00000 | 19 | 0.000000000+000 FT | 0.000000000+000 M |
| * | WORBVEL | + 0 | 2005 00000 | 0 | 0.000000000+000 FT/SEC | 0.000000000+000 M/CS |
| * | S22WSUBL | + 0 | 2006 00471 | 19 | 3.280839895+004 FT | 1.000000000+004 M |
| * | RPVAR | + 0 | 2007 00364 2010 04400 | 28 | 4.000000000+006 M2 | 4.000000000+006 M2 |
| ≠ | 504LM | + 0 | 2011 77772 2012 53647 | 0 | -3.436505795-004 RAD | -3.436505795-004 RAD |
| * | 504LM | + 2 | 2013 00002 2014 12573 | 0 | 1.425556839-004 RAD | 1.425556839-004 RAD |
| * | 504LM | + 4 | 2015 00001 2016 35676 | 0 | 1.180097460-004 RAD | 1.180097460-004 RAD |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----------|----------|------|-------|----|---------------------|--------------------|
| * EMSALT | + 0 | 2017 | 00002 | 29 | 2.962583000+005 FT | 9.029952984+004 M |
| | | 2020 | 30136 | | | |
| * ATIGINC | + 0 | 2021 | 00001 | 28 | 3.000000000+000 MIN | 1.800000000+004 CS |
| | | 2022 | 03120 | | | |
| * PTIGINC | + 0 | 2023 | 00001 | 28 | 3.000000000+000 MIN | 1.800000000+004 CS |
| | | 2024 | 03120 | | | |
| * RLS | + 0 | 2025 | 00311 | 27 | 5.423974738+006 FT | 1.653227500+006 M |
| | | 2026 | 31727 | | | |
| * RLS | + 2 | 2027 | 77700 | 27 | -1.706456693+006 FT | -5.201280000+005 M |
| | | 2030 | 60177 | | | |
| * RLS | + 4 | 2031 | 77762 | 27 | -3.650410105+005 FT | -1.112645000+005 M |
| | | 2032 | 55276 | | | |
| * TIMFMO | + 0 | 2033 | 00007 | 42 | 5.321988553+003 HRS | 1.915915879+009 CS |
| | | 2034 | 04312 | | | |
| | | 2035 | 07147 | | | |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|----------|----------|------|-----------|----|-------------------|------------------------|
| * VECOEM | + 0 | 2036 | 77775-203 | | -9.566854050-066 | -9.566854050-066 M/CS9 |
| | | 2037 | 77411 | | | |
| * VECOEM | + 2 | 2040 | 00003-203 | | 1.796125120-065 | 1.796125120-065 M/CS9 |
| | | 2041 | 31036 | | | |
| * VECOEM | + 4 | 2042 | 00001-203 | | 8.838053000-066 | 8.838053000-066 M/CS9 |
| | | 2043 | 33443 | | | |
| * VECOEM | + 6 | 2044 | 00003-177 | | 9.772662089-058 | 9.772662089-058 M/CS8 |
| | | 2045 | 02115 | | | |
| * VECOEM | + 8 | 2046 | 77775-177 | | -7.168524660-058 | -7.168524660-058 M/CS8 |
| | | 2047 | 70001 | | | |
| * VECOEM | +10 | 2050 | 77777-177 | | -3.161875170-058 | -3.161875170-058 M/CS8 |
| | | 2051 | 40174 | | | |
| * VECOEM | +12 | 2052 | 77774-151 | | -7.285241430-050 | -7.285241430-050 M/CS7 |
| | | 2053 | 62760 | | | |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANDCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------|--------------------|-------------------|------------------------|
| * | VECOEM | +14 | 2054 2055 | 00004-151 36300 | 1.058247780-049 | 1.058247780-049 M/CS7 |
| * | VECOEM | +16 | 2056 2057 | 00002-151 15226 | 5.164647980-050 | 5.164647980-050 M/CS7 |
| * | VECOEM | +18 | 2060 2061 | 00077-125 03412 | 9.055838780-041 | 9.055838780-041 M/CS6 |
| * | VECOEM | +20 | 2062 2063 | 77754-125 75526 | -2.736814720-041 | -2.736814720-041 M/CS6 |
| * | VECOEM | +22 | 2064 2065 | 77771-125 72235 | -8.864789250-042 | -8.864789250-042 M/CS6 |
| * | VECOEM | +24 | 2066 2067 | 77461 -99 70714 | -1.985844300-032 | -1.985844300-032 M/CS5 |
| * | VECOEM | +26 | 2070 2071 | 77510 -99 61414 | -1.766581690-032 | -1.766581690-032 M/CS5 |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--------------|----------------|----------------------|------------------------|
| * | VECOEM | +28 | 2072 2073 | 77622 70025 | -99 -1.052026300-032 | -1.052026300-032 M/CS5 |
| * | VECOEM | +30 | 2074 2075 | 76777 71317 | -73 -3.310054050-024 | -3.310054050-024 M/CS4 |
| * | VECOEM | +32 | 2076 2077 | 01363 04371 | -73 4.879979150-024 | 4.879979150-024 M/CS4 |
| * | VECOEM | +34 | 2100 2101 | 00555 13342 | -73 2.361067790-024 | 2.361067790-024 M/CS4 |
| * | VECOEM | +36 | 2102 2103 | 04303 36426 | -47 9.731601240-016 | 9.731601240-016 M/CS3 |
| * | VECOEM | +38 | 2104 2105 | 01477 27000 | -47 3.607005100-016 | 3.607005100-016 M/CS3 |
| * | VECOEM | +40 | 2106 2107 | 01077 27652 | -47 2.496894840-016 | 2.496894840-016 M/CS3 |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS | |
|-----|----------|------|--------------|----------------|-------------------|--------------------|------------------------|
| * | VECOEM | +42 | 2110 2111 | 02631 37371 | -21 | 4.173442570-008 | 4.173442570-008 M/CS2 |
| * | VECOEM | +44 | 2112 2113 | 70643 71747 | -21 | -1.069911800-007 | -1.069911800-007 M/CS2 |
| * | VECOEM | +46 | 2114 2115 | 74315 55007 | -21 | -5.362652190-008 | -5.362652190-008 M/CS2 |
| * | VECOEM | +48 | 2116 2117 | 66437 70077 | 5 | -9.437980650+000 | -9.437980650+000 M/CS |
| * | VECOEM | +50 | 2120 2121 | 75440 54216 | 5 | -2.436750530+000 | -2.436750530+000 M/CS |
| * | VECOEM | +52 | 2122 2123 | 76105 73515 | 5 | -1.863546610+000 | -1.863546610+000 M/CS |
| * | VECOEM | +54 | 2124 2125 | 76002 71056 | 31 | -1.338528080+008 | -1.338528080+008 M |

PRELIMINARY H-3 PRFLAUNCH FRASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|----------|----------|------|---------------------|----|------------------------|----------------------|
| * VFCOEM | +56 | 2126 | 04770 2127 07136 | 31 | 3.345251680+008 | 3.345251680+008 M |
| * VECOEM | +58 | 2130 | 02375 2131 04715 | 31 | 1.673990160+008 | 1.673990160+008 M |
| * RESO | + 0 | 2132 | 14650 2133 12113 | 38 | 3.615422388+011 FT | 1.101980744+011 M |
| * RESO | + 2 | 2134 | 65411 2135 72642 | 38 | -2.953715805+011 FT | -9.002925773+010 M |
| * RESO | + 4 | 2136 | 73351 2137 43037 | 38 | -1.280806299+011 FT | -3.903897600+010 M |
| * VESO | + 0 | 2140 | 14427 2141 13747 | 9 | 6.585643737+004 FT/SEC | 2.007304211+002 M/CS |
| * VESO | + 2 | 2142 | 14732 2143 02326 | 9 | 6.785264478+004 FT/SEC | 2.068148613+002 M/CS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|----------|----------|------|-------|-----|-------------------------|------------------------|
| * VESO | + 4 | 2144 | 05465 | 9 | 2.942006794+004 FT/SEC | 8.967236709+001 M/CS |
| | | 2145 | 20402 | | | |
| * OMEGAS | + 0 | 2146 | 00545 | -26 | 1.172028674-005 DEG/SEC | 3.255635206-010 REV/CS |
| | | 2147 | 36577 | | | |
| * INTVAR | + 0 | 2377 | 00142 | 15 | 1.960000000+002 M2 | 1.960000000+002 M2 |
| AZIMUTH | + 0 | 2400 | 67777 | 0 | -9.000000000+001 DEG | -2.500000000-001 REV |
| | | 2401 | 77777 | | | |
| LATITUDE | + 0 | 2402 | 02426 | 0 | 2.850842218+001 DEG | 7.946783940-002 REV |
| | | 2403 | 00022 | | | |

PAD 39A

| | | | | | | |
|--------|-----|------|-------|----|----------------------|----------------------|
| TAZEL1 | + 0 | 2432 | 55006 | -1 | -1.068080000+002 DEG | -2.966888889-001 REV |
| TAZEL1 | + 1 | 2433 | 77221 | -2 | -2.011000000+000 DEG | -5.586111112-003 REV |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|----------|------|--|-----|--------------------------|--------------------------|
| | TAZEL1 | + 2 | 2434 63611 | -1 | -6.881100000+001 DEG | -1.911416667-001 REV |
| | TAZFL1 | + 3 | 2435 77220 | -2 | -2.016000000+000 DEG | -5.600000000-003 REV |
| | LAUNCHAZ | + 0 | 2633 06317 2634 33474 | 0 | 7.206730350+001 DEG | 2.001869542-001 REV |
| * | WMIDPOS | + 0 | 3000 00436 | 19 | 3.000000000+004 FT | 9.144000000+003 M |
| | | | | | 30,000 FEET | |
| * | WMIDVEL | + 0 | 3001 02732 | 0 | 3.000000000+001 FT/SEC | 9.144000000-002 M/CS |
| | | | | | 30 FT/SEC | |
| * | RVAR | + 0 | 3002 00000 3003 00000 | -16 | 0.000000000+000 PERC ERR | 0.000000000+000 PERC ERR |
| * | RVARMIN | + 0 | 3004 77777 3005 77777 3006 42757 | 40 | 4.000000000+004 FT2 | -3.716121600+003 M2 |

(200FT)2 (A NEGATIVE NUMBER FOR CODING EASE)

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|------------|----|--------------------------|--------------------------|
| * | LADPAD | + 0 | 3007 10510 | 0 | 2.700000000-001 UNITLESS | 2.700000000-001 UNITLESS |
| * | LODPAD | + 0 | 3010 06477 | 0 | 2.070000000-001 UNITLESS | 2.070000000-001 UNITLESS |
| * | ALFAPAD | + 0 | 3011 74372 | -1 | -1.974000000+001 DEG | -5.483333334-002 REV |
| * | P37RANGE+ | 0 | 3012 01605 | 0 | 1.187470000+003 N.MI. | 5.497546297-002 #REV# |
| * | FTDECAY | + 0 | 3013 00075 | 14 | 6.120000000-001 SEC | 6.120000000+001 CS |
| * | EKPRIME | + 0 | 3014 00123 | -5 | 1.583099000-004 R/CS/RAD | 1.583099000-004 R/CS/RAD |
| * | EKPRIME | + 1 | 3015 00175 | -5 | 2.384186000-004 R/CS/RAD | 2.384186000-004 R/CS/RAD |
| * | EKTLX/I | + 0 | 3016 17433 | 18 | 1.274000000+005 AREV/SC2 | 1.274000000+005 AREV/SC2 |
| * | EKTLX/I | + 1 | 3017 04500 | 16 | 9.472000000+003 AREV/SC2 | 9.472000000+003 ARFV/SC2 |
| * | EKTLX/I | + 2 | 3020 00334 | 16 | 8.800000000+002 AREV/SC2 | 8.800000000+002 AREV/SC2 |
| * | EREPFRAC+ | 0 | 3021 01000 | 2 | 1.250000000-001 UNITLESS | 1.250000000-001 UNITLESS |

THIS VALUE IS DOUBLED BEFORE IT IS USED

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|-------|-------|----------------------------|---------------------------|
| * | EREPFRAC+ | 1 | 3022 | 00232 | 2 3.750000000-002 UNITLESS | 3.750000000-002 UNITLESS |
| ** | PACTOFF + | 0 | 3023 | 77703 | 14 -1.420000000+000 DEG | -5.985247629+001 CDU PULS |
| ** | YACTOFF + | 0 | 3024 | 00067 | 14 1.316000000+000 DEG | 5.546891465+001 CDU PULS |
| * | HBN10 | + 0 | 3025 | 37777 | 0 9.999389648-001 | 9.999389648-001 UNITLESS |
| * | HBN11/2 | + 0 | 3026 | 00000 | 1 0.000000000+000 | 0.000000000+000 UNITLESS |
| * | HBN12 | + 0 | 3027 | 00000 | 0 0.000000000+000 | 0.000000000+000 UNITLESS |
| * | HBD11/2 | + 0 | 3030 | 54360 | 1 -1.220581055+000 | -1.220581055+000 UNITLESS |
| * | HBD12 | + 0 | 3031 | 21075 | 0 5.349731445-001 | 5.349731445-001 UNITLESS |
| * | HBN20 | + 0 | 3032 | 37777 | 0 9.999389648-001 | 9.999389648-001 UNITLESS |
| * | HBN21/2 | + 0 | 3033 | 60465 | 1 -9.621582031-001 | -9.621582031-001 UNITLESS |
| * | HBN22 | + 0 | 3034 | 00000 | 0 0.000000000+000 | 0.000000000+000 UNITLESS |
| * | HBD21/2 | + 0 | 3035 | 54360 | 1 -1.220581055+000 | -1.220581055+000 UNITLESS |
| * | HBD22 | + 0 | 3036 | 21075 | 0 5.349731445-001 | 5.349731445-001 UNITLESS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|--------------------------|----|--------------------------|---------------------------|
| * | H9N30 | + 0 | 3037 37777 | 0 | 9.999389648-001 | 9.999389648-001 UNITLESS |
| * | H8N31/2 | + 0 | 3040 57142 | 1 | -1.050415039+000 | -1.050415039+000 UNITLESS |
| * | H9N32 | + 0 | 3041 33106 | 0 | 8.480224609-001 | 8.480224609-001 UNITLESS |
| * | H8D31/2 | + 0 | 3042 50741 | 1 | -1.441162109+000 | -1.441162109+000 UNITLESS |
| * | H8D32 | + 0 | 3043 31162 | 0 | 7.882080078-001 | 7.882080078-001 UNITLESS |
| ** | DAPDATR1+ | 0 | 3066 31102 | -0 | | |
| ** | DAPDATR2+ | 0 | 3067 01111 | -0 | | |
| ** | LEMMASS | + 0 | 3073 07344 | 16 | 3.361520000+004 LBS | 1.524759824+004 KG |
| ** | CSMMASS | + 0 | 3074 16233 | 16 | 6.457560000+004 LBS | 2.929099945+004 KG |
| | POLYNUM | + 0 | 3261 00005 | 14 | 5.000000000+000 UNITLESS | 5.000000000+000 UNITLESS |
| | POLYNUM | + 1 | 3262 77777 3263 74411 | 5 | -7.646894000-002 DFG | -2.124137222-004 REV |
| | POLYNUM | + 3 | 3264 00051 3265 36055 | -9 | 1.799880000-001 DEG/SEC | 4.999666667-006 REV/CS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUF IN AGC UNITS |
|-----|-------------|------|-------|-----|---------------------------|--------------------------|
| | POLYNUM + 5 | 3266 | 00543 | -23 | 9.298907000-003 DEG/SEC2 | 2.583029722-009 REV/CS2 |
| | | 3267 | 00222 | | | |
| | POLYNUM + 7 | 3270 | 76132 | -37 | -1.492420000-004 DEG/SEC3 | -4.145611111-013 REV/CS3 |
| | | 3271 | 57562 | | | |
| | POLYNUM + 9 | 3272 | 04121 | -51 | 2.078269000-006 DEG/SEC4 | 5.772969445-017 REV/CS4 |
| | | 3273 | 33143 | | | |
| | POLYNUM +11 | 3274 | 72576 | -65 | -1.601873000-008 DEG/SEC5 | -4.449647223-021 REV/CS5 |
| | | 3275 | 53233 | | | |
| | POLYNUM +13 | 3276 | 02272 | -79 | 4.401981000-011 DEG/SEC6 | 1.222772500-025 REV/CS6 |
| | | 3277 | 37152 | | | |
| | SATRLRT + 0 | 3300 | 00000 | 0 | 1.000000000+000 DEG/SEC | 2.777777778-005 REV/CS |
| | | 3301 | 16441 | | | |
| | RPSTART + 0 | 3302 | 02241 | 14 | 1.185000000+001 SEC | 1.185000000+003 CS |

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNFMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|--------|-------|----|--------------------------|--------------------------|
| | POLYSTOP+ | 0 3303 | 42631 | 14 | 1.495000000+002 SEC | -1.495000000+004 CS |
| | SATRATE + | 0 3321 | 00000 | 12 | 0.000000000+000 OUTPTPUL | 0.000000000+000 OUTPTPUL |
| | SATRATE + | 1 3322 | 00344 | 12 | 5.700000000+001 OUTPTPUL | 5.700000000+001 OUTPTPUL |

2.5 DEGREE ATTITUDE ERROR, 0.75 VOLTS

| | | | | | | |
|--|-----------|--------|-------|----|---------------------------|---------------------------|
| | SATRATE + | 2 3323 | 77433 | 12 | -5.700000000+001 OUTPTPUL | -5.700000000+001 OUTPTPUL |
| | SATRATE + | 3 3324 | 00000 | 12 | 0.000000000+000 OUTPTPUL | 0.000000000+000 OUTPTPUL |
| | SATSCALE+ | 0 3331 | 10000 | 2 | 1.000000000+000 UNITLESS | 1.000000000+000 UNITLESS |

0.3 VOLTS/DEG

| | | | | | | |
|---|-----------|--------|-------|---|--------------------------|--------------------------|
| * | HORISLP + | 0 3376 | 00000 | 0 | 0.000000000+000 UNITLESS | 0.000000000+000 UNITLESS |
| | | 3377 | 00000 | | | |

| | | | | | | |
|--|-----------|--------|-------|---|---------------------|---------------------|
| | LAT(SPL)+ | 0 3400 | 02265 | 0 | 2.648000016+001 DEG | 7.355555600-002 REV |
| | | 3401 | 04227 | | | |

26.48 DEG NORTH GEODETIC

PRELIMINARY H-3 PRELAUNCH ERASABLE LOAD COMMANCHE 108

| REV | MNEMONIC | ADDR | OCTAL | SF | ENGINEERING VALUE | VALUE IN AGC UNITS |
|-----|-----------|------|------------|----|----------------------|----------------------|
| | LNG(SPL)+ | 0 | 3402 76370 | 0 | -1.704999999+001 DEG | -4.736111110-002 REV |
| | | | 3403 41106 | | | |

-17.05 DEG WEST GEODETIC