

## Venus Express Radio Science Experiment - Science Operations Logbook

| Earth Occultation #10 |              |                     |             |         |               |                                 |                                |                |                     |                        |           |            |           |
|-----------------------|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|------------------------|-----------|------------|-----------|
|                       | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |
| 1                     | 1729         |                     | 014         | 14/1/11 | OCC           |                                 |                                | NNO            |                     | cancelled by MPS       |           |            |           |
| 2                     | 1730         |                     | 015         | 15/1/11 | OCC           |                                 |                                | NNO            |                     | cancelled by MPS       |           |            |           |
| 3                     | 1731         |                     | 016         | 16/1/11 | OCC           |                                 |                                | NNO            |                     | cancelled by MPS       |           |            |           |
| 4                     | 1732         |                     | 017         | 17/1/11 | OCC           | 2:00:00                         | 3:45:00                        | DSS-45         |                     | performed              | 0401      | L1a&b      |           |
| 5                     | 1733         |                     | 018         | 18/1/11 | OCC           |                                 |                                | DSN            |                     | cancelled by MPS       |           |            |           |
| 6                     | 1734         |                     | 019         | 19/1/11 | OCC           | 2:03:00                         | 3:50:00                        | DSS-45         |                     | performed              | 0402      | L1a&b      |           |
| 7                     | 1735         |                     | 020         | 20/1/11 | OCC           |                                 |                                | DSN            |                     | cancelled by MPS       |           |            |           |
| 8                     | 1736         |                     | 021         | 21/1/11 | OCC           | 2:25:26                         | 03:45:53                       | NNO            |                     | successfully performed | 0403      | L1a&b L2   |           |
| 9                     | 1737         |                     | 022         | 22/1/11 | OCC           | 2:05:00                         | 3:55:00                        | DSS-34         |                     | performed              | 0404      | L1a&b      |           |
|                       | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |

grey: status of operation to be checked

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|    |                     |                            |                    |             |                      |  |                                       |                       |                            |                              |                  |                   |                  |
|----|---------------------|----------------------------|--------------------|-------------|----------------------|--|---------------------------------------|-----------------------|----------------------------|------------------------------|------------------|-------------------|------------------|
| 10 | 1738                |                            | 023                | 23/1/11     | OCC                  | 02:27:27                               | 03:50:09                              | NNO                   |                            | successfully performed       | 0405             | L1a&b L2          |                  |
| 11 | 1739                |                            | 024                | 24/1/11     | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             |                  |                   |                  |
| 12 | 1740                |                            | 025                | 25/1/11     | OCC                  | 02:29:53                               | 03:54:23                              | NNO                   |                            | successfully performed       | 0406             | L1a&b L2          |                  |
| 13 | 1741                |                            | 026                | 26/1/11     | OCC                  | 2:10:00                                | 4:05:00                               | DSS-45                |                            | performed                    | 0407             | L1a&b             |                  |
| 14 | 1742                |                            | 027                | 27/1/11     | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             |                  |                   |                  |
| 15 | 1743                |                            | 028                | 28/1/11     | OCC                  | 02:32:47                               | 04:00:32                              | NNO                   |                            | successfully performed       | 0408             | L1a&b L2          |                  |
| 16 | 1744                |                            | 029                | 29/1/11     | OCC                  | 02:32:42                               | 04:02:30                              | NNO                   |                            | successfully performed       | 0409             | L1a&b L2          |                  |
| 17 | 1746                |                            | 031                | 31/1/11     | OCC                  | 02:35:36                               | 04:06:26                              | NNO                   |                            | successfully performed       | 0410             | L1a&b L2          |                  |
| 18 | 1748                |                            | 033                | 2/2/11      | OCC                  | 02:37:31                               | 04:10:16                              | NNO                   |                            | successfully performed       | 0411             | L1a&b L2          |                  |
|    | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 19 | 1750                |                            | 035                | 4/2/11      | OCC                  | 02:39:31                               | 04:14:02                              | NNO                   |                            | successfully performed       | 0412             | L1a&b L2          |                  |
| 20 | 1753                |                            | 038                | 7/2/11      | OCC                  | 02:42:30                               | 04:19:23                              | NNO                   |                            | successfully performed       | 0413             | L1a&b L2          |                  |

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|----|---------------------|----------------------------|--------------------|-------------|----------------------|--|---------------------------------------|-----------------------|----------------------------|------------------------------|------------------|-------------------|------------------|
| 21 | 1756                |                            | 041                | 10/2/11     | OCC                  | 2:45:00                                | 4:20:00                               | DSS-43                |                            | performed                    | 0414             | L1a&b             |                  |
| 22 | 1758                |                            | 043                | 12/2/11     | OCC                  | 02:47:25                               | 04:27:20                              | NNO                   |                            | successfully performed       | 0415             | L1a&b L2          |                  |
| 23 | 1759                |                            | 044                | 13/2/11     | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             |                  |                   |                  |
| 24 | 1762                |                            | 047                | 16/2/11     | OCC                  |  |                                       | DSN                   |                            | cancelled by MPS             |                  |                   |                  |
| 25 | 1765                |                            | 050                | 19/2/11     | OCC                  | 03:40:51                               | 04:36:25                              | NNO                   |                            | successfully performed       | 0416             | L1a&b L2          |                  |
| 26 | 1768                |                            | 053                | 22/2/11     | OCC                  | 02:57:29                               | 04:39:26                              | NNO                   |                            | successfully performed       | 0417             | L1a&b L2          |                  |
| 27 | 1771                |                            | 056                | 25/2/11     | OCC                  | 03:00:29                               | 04:41:51                              | NNO                   |                            | successfully performed       | 0418             | L1a&b L2          |                  |
|    | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 28 | 1773                |                            | 058                | 27/2/11     | OCC                  | 03:02:25                               | 04:43:06                              | NNO                   |                            | successfully performed       | 0419             | L1a&b L2          |                  |
| 29 | 1775                |                            | 060                | 1/3/11      | OCC                  | 03:04:25                               | 04:44:10                              | NNO                   |                            | successfully performed       | 0420             | L1a&b L2          |                  |
| 30 | 1777                |                            | 062                | 3/3/11      | OCC                  | 03:06:27                               | 04:45:00                              | NNO                   |                            | successfully performed       | 0421             | L1a&b L2          |                  |
| 31 | 1779                |                            | 064                | 5/3/11      | OCC                  | 3:05:00                                | 4:50:00                               | DSS-43                |                            | performed                    | 0422             | L1a&b             |                  |

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|-------------------------|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|------------------------|-----------|------------|-----------|
| 32                      | 1781         |                     | 066         | 7/3/11  | OCC           | 03:10:30                        | 04:45:57                       | NNO            |                     | successfully performed | 0423      | L1a&b L2   |           |
| 33                      | 1783         |                     | 068         | 9/3/11  | OCC           |                                 |                                | DSN            |                     | cancelled by MPS       |           |            |           |
| 34                      | 1784         |                     | 069         | 10/3/11 | OCC           | 3:10:00                         | 4:50:00                        | DSS-34         |                     | performed              | 0425      | L1a&b      |           |
| 35                      | 1788         |                     | 073         | 14/3/11 | OCC           | 3:08:00                         | 4:50:00                        | DSS-45         |                     | performed              | 0426      | L1a&b      |           |
| 36                      | 1790         |                     | 075         | 16/3/11 | OCC           | 03:19:31                        | 04:45:00                       | NNO            |                     | successfully performed | 0427      | L1a&b L2   |           |
|                         | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |
| 37                      | 1792         |                     | 077         | 18/3/11 | OCC           | 03:21:32                        | 04:44:21                       | NNO            |                     | successfully performed | 0428      | L1a&b L2   |           |
| 38                      | 1795         |                     | 080         | 21/3/11 | OCC           | 3:48:00                         | 4:15:00                        | DSS-45         |                     | performed              | 0429      | L1a&b      |           |
| 39                      | 1796         |                     | 081         | 22/3/11 | OCC           | 3:50:00                         | 4:13:00                        | DSS-45         |                     | performed              | 0430      | L1a&b      |           |
| 40                      | 1797         |                     | 082         | 23/3/11 | OCC           | 03:26:29                        | 04:42:21                       | NNO            |                     | successfully performed | 0431      | L1a&b L2   |           |
| <b>Drag Campaign #5</b> |              |                     |             |         |               |                                 |                                |                |                     |                        |           |            |           |
|                         | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |

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| 41 |                     |                            | 142                | 22/5/11     | DRAG                 | 05:25:02                               | 12:19:12                              | CEB                   |                            | successfully performed       | 0444             | L1a&b L2          |                  |
| 42 |                     |                            | 142                | 22/5/11     | DRAG                 | 13:45:30                               | 14:50:42                              | CEB                   |                            | successfully performed       | 0445             | L1a&b L2          |                  |
| 43 | 1858                |                            | 143                | 23/5/11     | DRAG                 | 00:36:06                               | 04:34:28                              | NNO                   |                            | successfully performed       | 0432             | L1a&b L2          |                  |
| 44 |                     |                            | 143                | 23/5/11     | DRAG                 | 05:24:28                               | 07:59:08                              | CEB                   |                            | successfully performed       | 0446             | L1a&b L2          |                  |
| 45 |                     |                            | 143                | 23/5/11     | DRAG                 | 09:25:26                               | 10:28:06                              | CEB                   |                            | successfully performed       | 0447             | L1a&b L2          |                  |
| 46 |                     |                            | 144                | 24/5/11     | DRAG                 | 05:23:58                               | 12:19:04                              | CEB                   |                            | successfully performed       | 0448             | L1a&b L2          |                  |
| 47 |                     |                            | 144                | 24/5/11     | DRAG                 | 13:45:23                               | 14:49:30                              | CEB                   |                            | successfully performed       | 0449             | L1a&b L2          |                  |
| 48 | 1859                |                            | 144                | 24/5/11     | DRAG                 | 0:00:00                                | 4:56:00                               | DSS-43                |                            | performed                    | 0433             | L1a&b             |                  |
| 49 | 1860                |                            | 145                | 25/5/11     | DRAG                 | 00:33:19                               | 04:31:40                              | NNO                   |                            | unknown                      | 0434             |                   |                  |
|    | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 50 |                     |                            | 145                | 25/5/11     | DRAG                 | 05:23:29                               | 07:58:59                              | CEB                   |                            | successfully performed       | 0450             | L1a&b L2          |                  |
| 51 |                     |                            | 145                | 25/5/11     | DRAG                 | 09:25:00                               | 10:28:00                              | CEB                   |                            | successfully performed       | 0451             | L1a&b L2          |                  |

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|----|---------------------|----------------------------|--------------------|-------------|----------------------|--|---------------------------------------|-----------------------|----------------------------|------------------------------|------------------|-------------------|------------------|
| 52 |                     |                            | 146                | 26/5/11     | DRAG                 | 05:23:00                               | 12:18:57                              | CEB                   |                            | successfully performed       | 0452             | L1a&b L2          |                  |
| 53 |                     |                            | 146                | 26/5/11     | DRAG                 | 13:45:14                               | 14:48:28                              | CEB                   |                            | successfully performed       | 0453             | L1a&b L2          |                  |
| 54 | 1861                |                            | 146                | 26/5/11     | DRAG                 | 0:00:00                                | 4:56:00                               | DSS-43                |                            | performed                    | 0435             | L1a&b             |                  |
| 55 | 1862                |                            | 147                | 27/5/11     | DRAG                 | 00:30:30                               | 04:28:52                              | NNO                   |                            | unknown                      | 0436             | L1a&b L2          |                  |
| 56 |                     |                            | 147                | 27/5/11     | DRAG                 | 05:22:36                               | 07:58:52                              | CEB                   |                            | successfully performed       | 0454             | L1a&b L2          |                  |
| 57 |                     |                            | 147                | 27/5/11     | DRAG                 | 09:25:11                               | 10:28:06                              | CEB                   |                            | successfully performed       | 0455             | L1a&b L2          |                  |
| 58 |                     |                            | 148                | 28/5/11     | DRAG                 | 05:22:12                               | 12:18:45                              | CEB                   |                            | successfully performed       | 0456             | L1a&b L2          |                  |
|    | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 59 |                     |                            | 148                | 28/5/11     | DRAG                 | 13:45:04                               | 14:47:27                              | CEB                   |                            | successfully performed       | 0457             | L1a&b L2          |                  |
| 60 | 1863                |                            | 148                | 28/5/11     | DRAG                 | 0:00:00                                | 4:56:00                               | DSS-43                |                            | performed                    | 0437             | L1a&b             |                  |
| 61 | 1864                |                            | 149                | 29/5/11     | DRAG                 | 00:27:40                               | 04:26:00                              | NNO                   |                            | unknown                      | 0438             | L1a&b L2          |                  |
| 62 |                     |                            | 149                | 29/5/11     | DRAG                 | 05:21:50                               | 07:58:40                              | CEB                   |                            | successfully performed       | 0458             | L1a&b L2          |                  |

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| 63 |      |                     | 149         | 29/5/11 | DRAG          | 09:24:59                        | 10:28:06                       | CEB            |  | successfully performed | 0459      | L1a&b L2   |           |
|----|------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|--|------------------------|-----------|------------|-----------|
| 64 | 1865 |                     | 150         | 30/5/11 | DRAG          | 0:00:00                         | 3:21:08                        | DSS-43         |  | performed              | 0439      | L1a&b      |           |
| 65 |      |                     | 150         | 30/5/11 | DRAG          | 05:21:32                        | 12:18:37                       | CEB            | Gravity  | successfully performed | 0460      | L1a&b L2   |           |
| 66 |      |                     | 150         | 30/5/11 | DRAG          | 13:44:55                        | 14:46:39                       | CEB            | Gravity  | successfully performed | 0461      | L1a&b L2   |           |
| 67 | 1866 |                     | 151         | 31/5/11 | DRAG          | 00:24:54                        | 04:23:15                       | NNO            |  | unknown                | 0440      |            |           |
| 68 |      | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates  | performed? cancelled?  | Volume-ID | processed? | archived? |
| 68 |      |                     | 151         | 31/5/11 | DRAG          | 05:21:16                        | 07:58:28                       | CEB            | Gravity  | unknown                | 0462      | L1a&b L2   |           |
| 69 |      |                     | 151         | 31/5/11 | DRAG          | 09:24:47                        | 10:28:06                       | CEB            |  | unknown                | 0463      | L1a&b L2   |           |
| 70 | 1867 |                     | 152         | 1/6/11  | DRAG          | 0:00:00                         | 4:51:11                        | DSS-43         |  | performed              | 0441      | L1a&b      |           |
| 71 |      |                     | 152         | 1/6/11  | DRAG          | 05:21:00                        | 12:18:25                       | CEB            |  | unknown                | 0464      | L1a&b L2   |           |
| 72 |      |                     | 152         | 1/6/11  | DRAG          | 13:44:43                        | 14:46:00                       | CEB            |  | unknown                | 0465      |            |           |
| 73 | 1868 |                     | 153         | 2/6/11  | DRAG          | 00:22:05                        | 04:20:26                       | NNO            | white: planned task<br>yellow: task to be completed<br>green: task completed<br>dark red: task failed or cancelled after ESOC PTR<br>light red: task cancelled by ESOC PTR | unknown                | 0442      |            |           |

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| 74                           |              |                     | 153         | 2/6/11  | DRAG          | 05:20:50                        | 07:58:20                       | CEB            |                     | unknown                | 0466      |            |           |
|------------------------------|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|------------------------|-----------|------------|-----------|
| 75                           |              |                     | 153         | 2/6/11  | DRAG          | 09:24:36                        | 11:28:07                       | CEB            |                     | unknown                | 0467      |            |           |
| 76                           | 1869         |                     | 154         | 3/6/11  | DRAG          | 0:00:00                         | 4:54:11                        | DSS-43         |                     | performed              | 0443      | L1a&b      |           |
| <b>Earth Occultation #11</b> |              |                     |             |         |               |                                 |                                |                |                     |                        |           |            |           |
|                              | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |
| 77                           | 1880         |                     | 165         | 14/6/11 | OCC           | 1:45:16                         | 3:00:01                        | DSS-45         |                     | performed              | 0468      | L1a&b      |           |
| 78                           | 1881         |                     | 166         | 15/6/11 | OCC           | 1:45:06                         | 3:00:00                        | DSS-43         |                     | performed              | 0469      | L1a&b      |           |
| 79                           | 1882         |                     | 167         | 16/6/11 | OCC           | 1:41:25                         | 3:00:01                        | DSS-43         |                     | performed              | 0470      | L1a&b      |           |
| 80                           | 1883         |                     | 168         | 17/6/11 | OCC           | 01:46:32                        | 02:31:01                       | NNO            |                     | successfully performed | 0471      | L1a&b L2   |           |
| 81                           | 1884         |                     | 169         | 18/6/11 | OCC           | 1:45:06                         | 3:04:13                        | DSS-43         |                     | performed              | 0472      | L1a&b      |           |
| 82                           | 1885         |                     | 170         | 19/6/11 | OCC           | 01:48:23                        | 02:33:45                       | NNO            |                     | successfully performed | 0473      | L1a&b L2   |           |
| 83                           | 1886         |                     | 171         | 20/6/11 | OCC           | 1:50:06                         | 3:07:32                        | DSS-43         |                     | performed              | 0474      | L1a&b      |           |

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|----|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|------------------------|-----------|------------|-----------|
| 84 | 1887         |                     | 172         | 21/6/11 | OCC           | 01:50:15                        | 02:36:31                       | NNO            |                     | successfully performed | 0475      | L1a&b L2   |           |
| 85 | 1888         |                     | 173         | 22/6/11 | OCC           | 01:51:14                        | 03:13:42                       | NNO            |                     | successfully performed | 0476      | L1a&b L2   |           |
| 86 | 1889         |                     | 174         | 23/6/11 | OCC           | 1:50:06                         | 2:25:39                        | DSS-45         |                     | performed              | 0477      | L1a&b      |           |
| 87 | 1890         |                     | 175         | 24/6/11 | OCC           | 01:53:13                        | 03:17:36                       | NNO            |                     | successfully performed | 0478      | L1a&b L2   |           |
| 88 | 1891         |                     | 176         | 25/6/11 | OCC           | 1:52:08                         | 2:29:56                        | DSS-43         |                     | performed              | 0479      | L1a&b      |           |
| 89 | 1892         |                     | 177         | 26/6/11 | OCC           | 01:55:16                        | 03:21:28                       | NNO            |                     | successfully performed | 0480      | L1a&b L2   |           |
| 90 | 1894         |                     | 179         | 28/6/11 | OCC           | 01:57:28                        | 03:25:18                       | NNO            |                     | successfully performed | 0481      | L1a&b L2   |           |
| 91 | 1897         |                     | 182         | 1/7/11  | OCC           | 1:56:18                         | 3:35:01                        | DSS-34         |                     | performed              | 0482      | L1a&b      |           |
| 92 | 1899         |                     | 184         | 3/7/11  | OCC           | 02:04:37                        | 03:31:22                       | NNO            |                     | successfully performed | 0483      | L1a&b L2   |           |
| 93 | 1901         |                     | 186         | 5/7/11  | OCC           | 02:06:12                        | 03:38:51                       | NNO            |                     | successfully performed | 0484      | L1a&b L2   |           |
| 94 | 1903         |                     | 188         | 7/7/11  | OCC           | 02:09:02                        | 03:42:44                       | NNO            |                     | successfully performed | 0485      | L1a&b L2   |           |

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|                         |                         |                                    |                        |             |                      |  |   |                           |                            |                                  |                  |                   |                  |
|-------------------------|-------------------------|------------------------------------|------------------------|-------------|----------------------|--|---|---------------------------|----------------------------|----------------------------------|------------------|-------------------|------------------|
| 95                      | 1904                    |                                    | 189                    | 8/7/11      | OCC                  |  |   | NNO                       |                            | cancelled by<br>MPS              |                  |                   |                  |
|                         | <b>orbit<br/>number</b> | <b>DSN<br/>tracking<br/>number</b> | <b>day of<br/>year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time<br/>(UT)<br/>planned/<br/>actual</b> | <b>stop time<br/>(UT)<br/>planned/<br/>actual</b> | <b>ground<br/>station</b> | <b>target; coordinates</b> | <b>performed?<br/>cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 96                      | 1906                    |                                    | 191                    | 10/7/11     | OCC                  | 02:13:37   | 03:48:33  | NNO                       |                            | successfully<br>performed        | 0486             | L1a&b L2          |                  |
| 97                      | 1907                    |                                    | 192                    | 11/7/11     | OCC                  |  |   | NNO                       |                            | cancelled by<br>MPS              |                  |                   |                  |
| <b>Drag Campaign #6</b> |                         |                                    |                        |             |                      |  |   |                           |                            |                                  |                  |                   |                  |
|                         | <b>orbit<br/>number</b> | <b>DSN<br/>tracking<br/>number</b> | <b>day of<br/>year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time<br/>(UT)<br/>planned/<br/>actual</b> | <b>stop time<br/>(UT)<br/>planned/<br/>actual</b> | <b>ground<br/>station</b> | <b>target; coordinates</b> | <b>performed?<br/>cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 98                      |                         |                                    | 255                    | 12/9/11     | DRAG                 | 08:34:00   | 15:37:29  | CEB                       |                            | unknown                          | 0499             |                   |                  |
| 99                      |                         |                                    | 255                    | 12/9/11     | DRAG                 | 16:50:01   | 17:43:06  | CEB                       |                            | unknown                          | 0500             |                   |                  |
| 100                     | 1971                    |                                    | 256                    | 13/9/11     | DRAG                 |  |   | DSN                       |                            | failed                           | 0487             |                   |                  |
| 101                     |                         |                                    | 256                    | 13/9/11     | DRAG                 | 08:20:12   | 15:23:42  | CEB                       |                            | unknown                          | 0501             |                   |                  |
| 102                     |                         |                                    | 256                    | 13/9/11     | DRAG                 | 16:50:01   | 17:43:06  | CEB                       |                            | unknown                          | 0502             |                   |                  |
| 103                     | 1972                    |                                    | 257                    | 14/9/11     | DRAG                 | 03:32:35   | 07:30:52  | NNO                       |                            | unknown                          | 0488             |                   |                  |

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|     |              |                     |             |         |               |                                 |                                |                |                     |                       |           |            |           |
|-----|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|-----------------------|-----------|------------|-----------|
| 104 |              |                     | 257         | 14/9/11 | DRAG          | 08:20:10                        | 15:23:39                       | CEB            |                     | unknown               | 0503      |            |           |
| 105 |              |                     | 257         | 14/9/11 | DRAG          | 16:49:58                        | 17:43:06                       | CEB            |                     | unknown               | 0504      |            |           |
| 106 | 1973         |                     | 258         | 15/9/11 | DRAG          |                                 |                                | DSN            |                     | failed                | 0489      |            |           |
|     | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled? | Volume-ID | processed? | archived? |
| 107 |              |                     | 258         | 15/9/11 | DRAG          | 08:08:58                        | 15:12:28                       | CEB            |                     | unknown               | 0505      |            |           |
| 108 |              |                     | 258         | 15/9/11 | DRAG          | 16:38:47                        | 17:31:55                       | CEB            |                     | unknown               | 0506      |            |           |
| 109 | 1974         |                     | 259         | 16/9/11 | DRAG          | 03:36:29                        | 07:34:45                       | NNO            |                     | unknown               | 0490      |            |           |
| 110 |              |                     | 259         | 16/9/11 | DRAG          | 08:11:18                        | 15:14:49                       | CEB            |                     | unknown               | 0507      |            |           |
| 111 |              |                     | 259         | 16/9/11 | DRAG          | 16:41:07                        | 17:34:18                       | CEB            |                     | unknown               | 0508      |            |           |
| 112 | 1975         |                     | 260         | 17/9/11 | DRAG          | 3:10:06                         | 7:10:53                        | DSS-43         |                     | performed             | 0491      | L1a&b      |           |
| 113 |              |                     | 260         | 17/9/11 | DRAG          | 08:13:38                        | 15:17:09                       | CEB            |                     | unknown               | 0509      |            |           |
| 114 |              |                     | 260         | 17/9/11 | DRAG          | 16:43:28                        | 17:36:39                       | CEB            |                     | unknown               | 0510      |            |           |

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|     | orbit number | DSN tracking number | day of year | date    | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled? | Volume-ID | processed? | archived? |
|-----|--------------|---------------------|-------------|---------|---------------|---------------------------------|--------------------------------|----------------|---------------------|-----------------------|-----------|------------|-----------|
| 115 | 1976         |                     | 261         | 18/9/11 | DRAG          | 03:40:21                        | 07:38:36                       | NNO            |                     | unknown               | 0492      |            |           |
| 116 |              |                     | 261         | 18/9/11 | DRAG          | 08:16:00                        | 15:19:31                       | CEB            |                     | unknown               | 0511      |            |           |
| 117 |              |                     | 261         | 18/9/11 | DRAG          | 16:45:50                        | 17:39:03                       | CEB            |                     | unknown               | 0512      |            |           |
| 118 | 1977         |                     | 262         | 19/9/11 | DRAG          | 3:05:06                         | 7:25:50                        | DSS-43         |                     | performed             | 0493      | L1a&b      |           |
| 119 |              |                     | 262         | 19/9/11 | DRAG          | 08:18:22                        | 15:21:54                       | CEB            |                     | unknown               | 0513      |            |           |
| 120 |              |                     | 262         | 19/9/11 | DRAG          | 16:48:13                        | 17:41:26                       | CEB            |                     | unknown               | 0514      |            |           |
| 121 | 1978         |                     | 263         | 20/9/11 | DRAG          | 03:44:15                        | 07:42:29                       | NNO            |                     | unknown               | 0494      |            |           |
| 122 |              |                     | 263         | 20/9/11 | DRAG          | 08:20:42                        | 15:24:16                       | CEB            |                     | unknown               | 0515      |            |           |
| 123 |              |                     | 263         | 20/9/11 | DRAG          | 16:50:34                        | 17:43:50                       | CEB            |                     | unknown               | 0516      |            |           |
| 124 | 1979         |                     | 264         | 21/9/11 | DRAG          |                                 |                                | DSN            |                     | unknown               | 0495      |            |           |

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|                              |              |                     |             |          |               |                                 |                                |                |                     |                        |           |            |           |
|------------------------------|--------------|---------------------|-------------|----------|---------------|---------------------------------|--------------------------------|----------------|---------------------|------------------------|-----------|------------|-----------|
| 125                          |              |                     | 264         | 21/9/11  | DRAG          | 08:23:04                        | 15:26:32                       | CEB            |                     | unknown                | 0517      |            |           |
| 126                          |              |                     | 264         | 21/9/11  | DRAG          | 16:52:51                        | 17:46:09                       | CEB            |                     | unknown                | 0518      |            |           |
| 127                          | 1980         |                     | 265         | 22/9/11  | DRAG          | 03:48:06                        | 07:46:23                       | NNO            |                     | unknown                | 0496      |            |           |
| 128                          |              |                     | 265         | 22/9/11  | DRAG          | 08:25:30                        | 15:25:21                       | CEB            |                     | unknown                | 0519      |            |           |
| 129                          |              |                     | 265         | 22/9/11  | DRAG          | 16:51:38                        | 17:44:55                       | CEB            |                     | unknown                | 0520      |            |           |
| 130                          | 1981         |                     | 266         | 23/9/11  | DRAG          | 3:45:46                         | 7:00:23                        | DSS-43         |                     | unknown                | 0497      |            |           |
| 131                          |              |                     | 266         | 23/9/11  | DRAG          | 08:27:54                        | 15:24:05                       | CEB            |                     | unknown                | 0521      |            |           |
| 132                          |              |                     | 266         | 23/9/11  | DRAG          | 16:50:23                        | 17:43:41                       | CEB            |                     | unknown                | 0522      |            |           |
| 133                          | 1982         |                     | 267         | 24/9/11  | DRAG          | 03:51:59                        | 07:50:14                       | NNO            |                     | unknown                | 0498      |            |           |
| <b>Earth Occultation #12</b> |              |                     |             |          |               |                                 |                                |                |                     |                        |           |            |           |
|                              | orbit number | DSN tracking number | day of year | date     | VeRa activity | start time (UT) planned/ actual | stop time (UT) planned/ actual | ground station | target; coordinates | performed? cancelled?  | Volume-ID | processed? | archived? |
| 134                          | 2034         |                     | 319         | 15/11/11 | OCC           | 07:30:22                        | 08:53:13                       | NNO            |                     | successfully performed | 0523      | L1a&b L2   |           |

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|     |                     |                            |                    |             |                      |  |                                       |                       |                            |                              |                  |                   |                  |
|-----|---------------------|----------------------------|--------------------|-------------|----------------------|--|---------------------------------------|-----------------------|----------------------------|------------------------------|------------------|-------------------|------------------|
| 135 | 2035                |                            | 320                | 16/11/11    | OCC                  | 07:32:52                               | 08:57:27                              | NNO                   |                            | successfully performed       | 0524             | L1a&b L2          |                  |
| 136 | 2037                |                            | 322                | 18/11/11    | OCC                  | 07:37:22                               | 09:06:13                              | NNO                   |                            | successfully performed       | 0525             | L1a&b L2          |                  |
| 137 | 2039                |                            | 324                | 20/11/11    | OCC                  | 07:42:50                               | 09:14:03                              | NNO                   |                            | successfully performed       | 0526             | L1a&b L2          |                  |
| 138 | 2040                |                            | 325                | 21/11/11    | OCC                  | 07:45:19                               | 09:18:05                              | NNO                   |                            | successfully performed       | 0527             | L1a&b L2          |                  |
| 139 | 2042                |                            | 327                | 23/11/11    | OCC                  | 07:50:16                               | 09:25:57                              | NNO                   |                            | successfully performed       | 0528             | L1a&b L2          |                  |
| 140 | 2044                |                            | 329                | 25/11/11    | OCC                  | 07:55:14                               | 09:33:35                              | NNO                   |                            | successfully performed       | 0529             | L1a&b L2          |                  |
| 141 | 2046                |                            | 331                | 27/11/11    | OCC                  | 08:00:10                               | 09:40:55                              | NNO                   |                            | successfully performed       | 0530             | L1a&b L2          |                  |
| 142 | 2049                |                            | 334                | 30/11/11    | OCC                  | 08:07:36                               | 09:51:23                              | NNO                   |                            | successfully performed       | 0531             | L1a&b L2          |                  |
|     | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 143 | 2054                |                            | 339                | 5/12/11     | OCC                  | 08:19:55                               | 10:07:07                              | NNO                   |                            | successfully performed       | 0532             | L1a&b L2          |                  |
| 144 | 2055                |                            | 340                | 6/12/11     | OCC                  | 08:22:17                               | 10:09:05                              | NNO                   |                            | successfully performed       | 0533             | L1a&b L2          |                  |
| 145 | 2056                |                            | 341                | 7/12/11     | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             |                  |                   |                  |

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|     |                     |                            |                    |             |                      |  |                                       |                       |                            |                              |                  |                   |                  |
|-----|---------------------|----------------------------|--------------------|-------------|----------------------|--|---------------------------------------|-----------------------|----------------------------|------------------------------|------------------|-------------------|------------------|
| 146 | 2058                |                            | 343                | 9/12/11     | OCC                  | 08:29:45                               | 10:18:07                              | NNO                   |                            | successfully performed       | 0534             | L1a&b             |                  |
| 147 | 2059                |                            | 344                | 10/12/11    | OCC                  | 08:32:13                               | 10:20:40                              | NNO                   |                            | successfully performed       | 0535             | L1a&b             |                  |
| 148 | 2060                |                            | 345                | 11/12/11    | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             |                  |                   |                  |
| 149 | 2062                |                            | 347                | 13/12/11    | OCC                  | 08:31:57                               | 10:20:04                              | NNO                   |                            | successfully performed       | 0536             | L1a&b             |                  |
| 150 | 2063                |                            | 348                | 14/12/11    | OCC                  | 08:30:35                               | 10:18:25                              | NNO                   |                            | successfully performed       | 0537             | L1a&b             |                  |
| 151 | 2065                |                            | 350                | 16/12/11    | OCC                  | 08:27:52                               | 10:14:53                              | NNO                   |                            | successfully performed       | 0538             | L1a&b             |                  |
| 152 | 2066                |                            | 351                | 17/12/11    | OCC                  |  |                                       | NNO                   |                            | cancelled by MPS             | 0539             |                   |                  |
|     | <b>orbit number</b> | <b>DSN tracking number</b> | <b>day of year</b> | <b>date</b> | <b>VeRa activity</b> | <b>start time (UT) planned/ actual</b> | <b>stop time (UT) planned/ actual</b> | <b>ground station</b> | <b>target; coordinates</b> | <b>performed? cancelled?</b> | <b>Volume-ID</b> | <b>processed?</b> | <b>archived?</b> |
| 153 | 2068                |                            | 353                | 19/12/11    | OCC                  | 08:23:46                               | 10:08:55                              | NNO                   |                            | successfully performed       | 0540             | L1a&b             |                  |
| 154 | 2069                |                            | 354                | 20/12/11    | OCC                  | 08:22:24                               | 10:06:46                              | NNO                   |                            | successfully performed       | 0541             | L1a&b             |                  |
| 155 | 2071                |                            | 356                | 22/12/11    | OCC                  | 08:19:39                               | 10:02:12                              | NNO                   |                            | successfully performed       | 0542             | L1a&b             |                  |
| 156 | 2072                |                            | 357                | 23/12/11    | OCC                  | 08:18:18                               | 09:59:50                              | NNO                   |                            | successfully performed       | 0543             | L1a&b             |                  |

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|     |      |  |     |          |     |          |          |     |  |                        |      |       |  |
|-----|------|--|-----|----------|-----|----------|----------|-----|--|------------------------|------|-------|--|
| 157 | 2074 |  | 359 | 25/12/11 | OCC | 08:17:03 | 09:54:50 | NNO |  | successfully performed | 0544 | L1a&b |  |
| 158 | 2075 |  | 360 | 26/12/11 | OCC | 08:15:41 | 09:52:14 | NNO |  | performed              | 0545 | L1a&b |  |
| 159 | 2077 |  | 362 | 28/12/11 | OCC | 08:12:56 | 09:46:51 | NNO |  | successfully performed | 0546 | L1a&b |  |
| 160 | 2078 |  | 363 | 29/12/11 | OCC | 08:11:34 | 09:44:05 | NNO |  | successfully performed | 0547 | L1a&b |  |
| 161 | 2080 |  | 365 | 31/12/11 | OCC |          |          | NNO |  | cancelled by MPS       | 0548 |       |  |

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