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OF OUTER SPACE

INFORMATION FURNISHED IN CONFORMITY WITH GENERAL ASSEMBLY  
RESOLUTION 1721 B (XVI) BY STATES LAUNCHING OBJECTS INTO  
ORBIT OR BEYOND

Letter dated 8 November 1965 from the Permanent Representative of  
the United States of America addressed to the Secretary-General

In accordance with the provisions of paragraphs 1 and 2 of General Assembly resolution 1721 B (XVI), I enclose a comprehensive report constituting a complete registration of all United States space vehicles in orbit or beyond, together with their orbital characteristics revised as of 30 June 1965. Such a comprehensive report was last submitted by the United States under cover of a letter to the Secretary-General dated 6 May 1965 and similar reports, in addition to the regular twice-monthly registration, will continue to be submitted semi-annually.

(Signed) Arthur J. GOLDBERG

REGISTRATION DATA FOR UNITED STATES SPACE LAUNCHES

As of 30 June 1965

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination        | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|--------------------|---------------------|----------------------|
| 1958 Alpha 1              | Jupiter C      | B                  | 1 Feb.         | 104.3        | 33.18              | 1,579               | 341                  |
| 1958 Beta 1               | Vanguard       | D                  | 17 Mar.        | 138.4        | 34.25              | 4,309               | 659                  |
| 1958 Beta 2               | Vanguard       | B                  | 17 Mar.        | 134.0        | 34.23              | 3,939               | 648                  |
| 1959 Alpha 1              | Vanguard       | B                  | 17 Feb.        | 125.4        | 32.88              | 3,284               | 557                  |
| 1959 Alpha 2              | Vanguard       | D                  | 17 Feb.        | 129.7        | 32.90              | 3,654               | 558                  |
| 1959 Nu 1                 | Juno II        | B                  | 3 Mar.         |              | Heliocentric Orbit |                     |                      |
| 1959 Eta 1                | Vanguard       | B                  | 18 Sep.        | 129.8        | 33.34              | 3,714               | 513                  |
| 1959 Iota 1               | Juno II        | B                  | 13 Oct.        | 101.1        | 50.32              | 1,071               | 554                  |
| 1959 Iota 2               | Juno II        | D                  | 13 Oct.        | 100.9        | 50.32              | 1,052               | 550                  |
| 1960 Alpha 1              | Thor Able Star | B                  | 11 Mar.        |              | Heliocentric Orbit |                     |                      |
| 1960 Beta 1               | Thor Able Star | D                  | 1 Apr.         | 99.1         | 48.39              | 742                 | 689                  |
| 1960 Beta 2               | Thor Able Star | C                  | 1 Apr.         | 99.2         | 48.38              | 744                 | 694                  |
| 1960 Beta 3               | Thor Able Star | D                  | 1 Apr.         | 97.9         | 48.49              | 694                 | 619                  |
| 1960 Beta 4               | Thor Able Star | D                  | 1 Apr.         | 99.9         | 48.14              | 805                 | 700                  |
| 1960 Gamma 2              | Thor Able Star | C                  | 13 Apr.        | 93.7         | 51.22              | 564                 | 345                  |
| 1960 Gamma 4              | Thor Able Star | D                  | 13 Apr.        | 96.7         | 51.24              | 727                 | 476                  |
| 1960 Zeta 1               | Atlas Agena    | A                  | 24 May         | 94.3         | 33.04              | 491                 | 473                  |
| 1960 Eta 1                | Thor Able Star | C                  | 22 Jun.        | 101.6        | 66.71              | 1,056               | 615                  |
| 1960 Eta 2                | Thor Able Star | B                  | 22 Jun.        | 101.6        | 66.71              | 1,051               | 618                  |
| 1960 Eta 3                | Thor Able Star | D                  | 22 Jun.        | 101.4        | 66.68              | 1,033               | 617                  |
| 1960 Eta 4                | Thor Able Star | D                  | 22 Jun.        | 101.5        | 66.69              | 1,049               | 615                  |
| 1960 Eta 5                | Thor Able Star | D                  | 22 Jun.        | 101.5        | 66.71              | 1,045               | 615                  |

Satellite Category

- A. Development of spaceflight techniques and technology
- B. Space Research and exploration
- C. Practical applications of space-based technology
- D. Non-functional objects

Nodal Period in minutes

Inclination to equator in degrees

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period                    | Inclination | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|---------------------------------|-------------|---------------------|----------------------|
| 1960 Iota 1               | Thor Delta     | C                  | 12 Aug.        | 113.5                           | 47.30       | 1,879               | 837                  |
| 1960 Iota 2               | Thor Delta     | D                  | 12 Aug.        | 118.1                           | 47.24       | 1,684               | 1,503                |
| 1960 Iota 3               | Thor Delta     | D                  | 12 Aug.        | 118.2                           | 47.23       | 1,686               | 1,517                |
| 1960 Iota 4               | Thor Delta     | D                  | 12 Aug.        | Current Elements not Maintained |             |                     |                      |
| 1960 Iota 5               | Thor Delta     | D                  | 12 Aug.        | 118.4                           | 47.31       | 1,683               | 1,537                |
| 1960 Nu 1                 | Thor Able Star | C                  | 4 Oct.         | 107.0                           | 28.30       | 1,215               | 950                  |
| 1960 Nu 2                 | Thor Able Star | D                  | 4 Oct.         | 106.6                           | 28.21       | 1,218               | 914                  |
| 1960 Xi 1                 | Juno II        | B                  | 3 Nov.         | 112.3                           | 49.91       | 2,242               | 419                  |
| 1960 Xi 2                 | Juno II        | D                  | 3 Nov.         | 111.8                           | 49.95       | 2,199               | 418                  |
| 1960 Xi 3                 | Juno II        | D                  | 3 Nov.         | 108.9                           | 49.38       | 1,947               | 400                  |
| 1960 Xi 4                 | Juno II        | D                  | 3 Nov.         | 110.3                           | 50.51       | 2,058               | 418                  |
| 1960 Pi 1                 | Delta          | C                  | 23 Nov.        | 98.2                            | 48.49       | 725                 | 623                  |
| 1960 Pi 2                 | Delta          | D                  | 23 Nov.        | 98.1                            | 48.49       | 717                 | 617                  |
| 1960 Pi 3                 | Delta          | D                  | 23 Nov.        | 98.1                            | 48.51       | 719                 | 620                  |
| 1960 Pi 4                 | Delta          | D                  | 23 Nov.        | 98.3                            | 48.51       | 732                 | 621                  |
| 1961 Alpha 1              | Atlas Agena    | A                  | 31 Jan.        | 94.7                            | 97.39       | 542                 | 468                  |
| 1961 Alpha 2              | Atlas Agena    | D                  | 31 Jan.        | 94.6                            | 97.39       | 535                 | 466                  |
| 1961 Delta 2              | Scout          | D                  | 16 Feb.        | 118.5                           | 38.85       | 2,592               | 632                  |
| 1961 Delta 3              | Scout          | D                  | 16 Feb.        | Current Elements not Maintained |             |                     |                      |
| 1961 Kappa 1              | Thor Delta     | B                  | 25 Mar.        | Position Uncertain              |             |                     |                      |
| 1961 Nu 1                 | Juno II        | B                  | 27 Apr.        | 107.9                           | 28.77       | 1,774               | 435                  |
| 1961 Omicron 1            | Thor Able Star | C                  | 29 Jun.        | 103.8                           | 66.82       | 997                 | 833                  |
| 1961 Omicron 2            | Thor Able Star | A                  | 29 Jun.        | 103.8                           | 66.83       | 998                 | 832                  |
| 1961 Omicron 3*           | Thor Able Star | D                  | 29 Jun.        | 103.4                           | 66.79       | 988                 | 849                  |
| 1961 Rho 1                | Thor Delta     | C                  | 12 Jul.        | 100.4                           | 47.90       | 816                 | 738                  |
| 1961 Rho 2                | Thor Delta     | D                  | 12 Jul.        | 100.3                           | 47.89       | 816                 | 738                  |
| 1961 Rho 3                | Thor Delta     | D                  | 12 Jul.        | 98.8                            | 47.93       | 796                 | 609                  |
| 1961 Rho 4                | Thor Delta     | D                  | 12 Jul.        | 102.0                           | 47.86       | 934                 | 771                  |
| 1961 Sigma 1              | Atlas Agena    | A                  | 12 Jul.        | 161.5                           | 91.36       | 3,564               | 3,328                |
| 1961 Sigma 3              | Atlas Agena    | D                  | 12 Jul.        | 161.2                           | 91.17       | 3,536               | 3,336                |
| 1961 Sigma 4              | Atlas Agena    | D                  | 12 Jul.        | 161.9                           | 91.22       | 3,579               | 3,345                |
| 1961 Upsilon 1            | Delta          | B                  | 16 Aug.        | Current Elements not Maintained |             |                     |                      |
| 1961 A-Delta 1            | Atlas Agena    | A                  | 21 Oct.        | 166.0                           | 95.94       | 3,755               | 3,492                |
| 1961 A-Delta 3            | Atlas Agena    | D                  | 21 Oct.        | 165.6                           | 95.83       | 3,740               | 3,482                |
| 1961 A-Delta 4            | Atlas Agena    | D                  | 21 Oct.        | 166.4                           | 95.86       | 3,802               | 3,485                |

\* 203 pieces of space debris associated with 1961 Omicron 3 have been identified.

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination        | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|--------------------|---------------------|----------------------|
| 1961 A-Eta 1              | Thor Able Star | C.                 | 15 Nov.        | 105.8        | 32.42              | 1,100               | 959                  |
| 1961 A-Eta 2              | Thor Able Star | B.                 | 15 Nov.        | 105.8        | 32.42              | 1,106               | 955                  |
| 1961 A-Eta 3              | Thor Able Star | D                  | 15 Nov.        | 105.6        | 32.43              | 1,096               | 950                  |
| 1962 Alpha 1              | Atlas Agena    | B.                 | 26 Jan.        |              | Heliocentric Orbit |                     |                      |
| 1962 Alpha 2              | Atlas Agena    | D                  | 26 Jan.        |              | Heliocentric Orbit |                     |                      |
| 1962 Beta 1               | Delta          | C.                 | 8 Feb.         | 100.4        | 48.30              | 844                 | 714                  |
| 1962 Beta 2               | Delta          | D                  | 8 Feb.         | 101.4        | 48.13              | 941                 | 703                  |
| 1962 Beta 3               | Delta          | D                  | 8 Feb.         | 99.5         | 48.41              | 759                 | 700                  |
| 1962 Beta 4               | Delta          | D                  | 8 Feb.         | 100.3        | 48.31              | 836                 | 708                  |
| 1962 Zeta 1               | Thor Delta     | B.                 | 7 Mar.         | 96.0         | 32.83              | 581                 | 552                  |
| 1962 Zeta 2               | Thor Delta     | D                  | 7 Mar.         | 96.0         | 32.83              | 581                 | 548                  |
| 1962 Kappa 1              | Atlas          | B.                 | 9 Apr.         | 153.0        | 86.64              | 3,411               | 2,785                |
| 1962 Kappa 3              | Atlas          | D                  | 9 Apr.         | 152.6        | 86.65              | 3,370               | 2,796                |
| 1962 Kappa 4              | Atlas          | D                  | 9 Apr.         | 153.3        | 86.66              | 3,427               | 2,799                |
| 1962 Mu 2                 | Atlas Agena    | D                  | 23 Apr.        |              | Heliocentric Orbit |                     |                      |
| 1962 Omicron 1            | Delta          | B.                 | 26 Apr.        | 100.4        | 53.88              | 1,160               | 397                  |
| 1962 Omicron 2            | Delta          | D                  | 26 Apr.        | 100.5        | 53.87              | 1,149               | 395                  |
| 1962 A-Alpha 1            | Thor Delta     | C.                 | 19 Jun.        | 100.5        | 58.11              | 974                 | 588                  |
| 1962 A-Alpha 2            | Thor Delta     | D                  | 19 Jun.        | 100.4        | 58.11              | 965                 | 588                  |
| 1962 A-Alpha 3            | Thor Delta     | D                  | 19 Jun.        | 101.7        | 58.22              | 1,085               | 598                  |
| 1962 A-Alpha 4            | Thor Delta     | D                  | 19 Jun.        | 99.1         | 58.00              | 861                 | 570                  |
| 1962 A-Epsilon 1          | Thor Delta     | C                  | 10 Jul.        | 157.8        | 44.82              | 5,644               | 943                  |
| 1962 A-Epsilon 2          | Thor Delta     | D                  | 10 Jul.        | 157.6        | 44.79              | 5,630               | 944                  |
| 1962 A-Omicron 1          | Blue Scout     | A.                 | 23 Aug.        | 99.5         | 98.70              | 857                 | 617                  |
| 1962 A-Omicron 2          | Blue Scout     | D                  | 23 Aug.        | 98.2         | 98.62              | 744                 | 606                  |
| 1962 A-Omicron 3          | Blue Scout     | D                  | 23 Aug.        | 100.8        | 98.74              | 975                 | 619                  |
| 1962 A-Omicron 4          | Blue Scout     | D                  | 23 Aug.        | 99.5         | 98.70              | 854                 | 619                  |
| 1962 A-Rho 1              | Atlas Agena B  | B.                 | 27 Aug.        |              | Heliocentric Orbit |                     |                      |
| 1962 A-Rho 2              | Atlas Agena B  | D                  | 27 Aug.        |              | Heliocentric Orbit |                     |                      |
| 1962 A-Psi 1              | Thor Delta     | C                  | 18 Sep.        | 98.7         | 58.33              | 710                 | 686                  |
| 1962 A-Psi 2              | Thor Delta     | D                  | 18 Sep.        | 98.7         | 58.33              | 705                 | 684                  |
| 1962 A-Psi 3              | Thor Delta     | D                  | 18 Sep.        | 99.4         | 58.43              | 764                 | 694                  |
| 1962 A-Psi 4              | Thor Delta     | D                  | 18 Sep.        | 98.0         | 58.24              | 685                 | 644                  |
| 1962 B-Alpha 1            | Thor Agena B   | B                  | 29 Sep.        | 105.5        | 80.48              | 1,034               | 1,002                |
| 1962 B-Alpha 2            | Thor Agena B   | D                  | 29 Sep.        | 105.4        | 80.48              | 1,028               | 1,002                |
| 1962 B-Alpha 3            | Thor Agena B   | D                  | 29 Sep.        | 105.4        | 80.51              | 1,023               | 1,002                |
| 1962 B-Alpha 4            | Thor Agena B   | D                  | 29 Sep.        | 105.5        | 80.44              | 1,041               | 995                  |

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination | Apogee (Kilometres)             | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|-------------|---------------------------------|----------------------|
| 1962 B-Gamma 1            | Thor Delta     | B                  | 2 Oct.         |              |             | Current Elements not Maintained |                      |
| 1962 B-Gamma 2            | Thor Delta     | D                  | 2 Oct.         |              |             | Current Elements not Maintained |                      |
| 1962 B-Eta 1              | Atlas Agena B  | B                  | 18 Oct.        |              |             | Heliocentric Orbit              |                      |
| 1962 B-Eta 2              | Atlas Agena B  | D                  | 18 Oct.        |              |             | Heliocentric Orbit              |                      |
| 1962 B-Kappa 1            | Thor Agena     | A                  | 26 Oct.        | 126.0        | 71.42       | 3,684                           | 194                  |
| 1962 B-Lambda 1           | Thor Delta     | B                  | 27 Oct.        | 311.7        | 18.04       | 17,385                          | 307                  |
| 1962 B-Lambda 2           | Thor Delta     | D                  | 27 Oct.        |              |             | Insufficient Observations       |                      |
| 1962 B-Mu 1               | Thor Able Star | B                  | 31 Oct.        | 107.9        | 50.14       | 1,183                           | 1,076                |
| 1962 B-Mu 2               | Thor Able Star | D                  | 31 Oct.        | 107.6        | 50.17       | 1,166                           | 1,067                |
| 1962 B-Tau 1              | Thor Agena     | A                  | 13 Dec.        | 106.0        | 70.33       | 1,856                           | 229                  |
| 1962 B-Tau 2              | Thor Agena     | A                  | 13 Dec.        | 111.0        | 70.35       | 2,305                           | 236                  |
| 1962 B-Tau 4              | Thor Agena     | A                  | 13 Dec.        | 99.1         | 70.31       | 1,208                           | 218                  |
| 1962 B-Tau 5              | Thor Agena     | A                  | 13 Dec.        | 105.9        | 70.28       | 1,840                           | 230                  |
| 1962 B-Tau 6              | Thor Agena     | D                  | 13 Dec.        | 110.0        | 70.36       | 2,210                           | 239                  |
| 1962 B-Upsilon 1          | Thor Delta     | C                  | 13 Dec.        | 185.1        | 47.54       | 7,438                           | 1,320                |
| 1962 B-Upsilon 2          | Thor Delta     | D                  | 13 Dec.        | 184.8        | 47.52       | 7,412                           | 1,329                |
| 1962 B-Chi 1              | Scout          | B                  | 16 Dec.        | 104.1        | 52.02       | 1,181                           | 748                  |
| 1962 B-Psi 1              | Scout          | A                  | 19 Dec.        | 99.1         | 90.66       | 736                             | 695                  |
| 1962 B-Psi 2              | Scout          | D                  | 19 Dec.        | 97.6         | 90.76       | 724                             | 571                  |
| 1962 B-Psi 3              | Scout          | D                  | 19 Dec.        | 99.1         | 90.66       | 736                             | 694                  |
| 1962 B-Psi 4              | Scout          | D                  | 19 Dec.        | 100.2        | 90.50       | 841                             | 696                  |
| 1963-3A                   | Thor Agena     | A                  | 16 Jan.        | 94.4         | 81.90       | 522                             | 460                  |
| 1963-4A                   | Thor Delta     | C                  | 14 Feb.        |              |             | Current Elements not Maintained |                      |
| 1963-4B                   | Thor Delta     | D                  | 14 Feb.        |              |             | Current Elements not Maintained |                      |
| 1963-5A                   | Blue Scout     | A                  | 19 Feb.        | 97.7         | 100.47      | 796                             | 501                  |
| 1963-5B                   | Blue Scout     | D                  | 19 Feb.        | 97.7         | 100.47      | 793                             | 505                  |
| 1963-5C                   | Blue Scout     | D                  | 19 Feb.        | 96.8         | 100.47      | 743                             | 471                  |
| 1963-5D                   | Blue Scout     | D                  | 19 Feb.        | 98.3         | 100.46      | 830                             | 528                  |
| 1963-9A                   | Thor Delta     | B                  | 3 Apr.         | 94.0         | 57.65       | 679                             | 256                  |
| 1963-13A                  | Thor Delta     | C                  | 7 May          | 225.3        | 42.76       | 10,807                          | 965                  |
| 1963-13B                  | Thor Delta     | D                  | 7 May          | 225.1        | 46.75       | 10,794                          | 961                  |
| 1963-14A                  | Atlas Agena    | A                  | 9 May          | 166.4        | 87.36       | 3,669                           | 3,622                |
| 1963-14B                  | Atlas Agena    | A                  | 9 May          | 166.4        | 87.00       | 4,198                           | 3,095                |
| 1963-14C                  | Atlas Agena    | A                  | 9 May          | 166.4        | 87.35       | 3,685                           | 3,606                |
| 1963-14D                  | Atlas Agena    | D                  | 9 May          |              |             | Current Elements not Maintained |                      |
| 1963-14E                  | Atlas Agena    | D                  | 9 May          | 166.1        | 87.39       | 3,647                           | 3,615                |
| 1963-14F                  | Atlas Agena    | D                  | 9 May          | 166.8        | 87.35       | 3,675                           | 3,647                |

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination | Apogee (Kilometres)             | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|-------------|---------------------------------|----------------------|
| 1963-14G                  | Atlas Agena    | D                  | 9 May          | 166.4        | 87.34       | 3,694                           | 3,596                |
| 1963-14H                  | Atlas Agena    | D                  | 9 May          | 166.4        | 87.35       | 3,668                           | 3,623                |
| 1963-22A                  | Scout          | A                  | 16 Jun.        | 99.7         | 90.01       | 762                             | 728                  |
| 1963-22B                  | Scout          | D                  | 16 Jun.        | 99.7         | 90.01       | 762                             | 728                  |
| 1963-22C                  | Scout          | D                  | 16 Jun.        | 101.2        | 90.21       | 890                             | 744                  |
| 1963-22D                  | Scout          | D                  | 16 Jun.        | 98.1         | 89.82       | 771                             | 567                  |
| 1963-24A                  | Thor Delta     | C                  | 19 Jun.        | 97.4         | 58.24       | 642                             | 629                  |
| 1963-24B                  | Thor Delta     | D                  | 19 Jun.        | 97.3         | 58.24       | 637                             | 626                  |
| 1963-24C                  | Thor Delta     | D                  | 19 Jun.        | 97.9         | 58.34       | 677                             | 637                  |
| 1963-24D                  | Thor Delta     | D                  | 19 Jun.        | 96.9         | 58.07       | 636                             | 582                  |
| 1963-25B                  | Thor Agena     | A                  | 27 Jun.        | 132.2        | 82.15       | 4,097                           | 339                  |
| 1963-26A                  | Scout          | A                  | 28 Jun.        | 102.0        | 49.72       | 1,293                           | 415                  |
| 1963-27A                  | Thor Agena     | A                  | 29 Jun.        | 94.6         | 82.33       | 521                             | 484                  |
| 1963-30A                  | Atlas Agena    | A                  | 19 Jul.        | 167.8        | 88.48       | 3,729                           | 3,676                |
| 1963-30B                  | Atlas Agena    | A                  | 19 Jul.        | 167.2        | 89.48       | 4,040                           | 3,299                |
| 1963-30C                  | Atlas Agena    | D                  | 19 Jul.        | 167.5        | 88.42       | 3,720                           | 3,656                |
| 1963-30D                  | Atlas Agena    | A                  | 19 Jul.        | 167.6        | 98.15       | 4,510                           | 2,876                |
| 1963-30E                  | Atlas Agena    | D                  | 19 Jul.        | 168.3        | 88.43       | 3,783                           | 3,656                |
| 1963-31A                  | Thor Delta     | C                  | 26 Jul.        | 1436.0       | 31.78       | 35,810                          | 35,759               |
| 1963-31B                  | Thor Delta     | D                  | 26 Jul.        |              |             | Current Elements not Maintained |                      |
| 1963-38A                  | Thor Able Star | D                  | 28 Sep.        | 107.1        | 89.91       | 1,109                           | 1,078                |
| 1963-38B                  | Thor Able Star | A                  | 28 Sep.        | 107.4        | 89.91       | 1,133                           | 1,078                |
| 1963-38C                  | Thor Able Star | A                  | 28 Sep.        | 106.3        | 89.92       | 1,134                           | 1,076                |
| 1963-38D                  | Thor Able Star | D                  | 28 Sep.        | 107.3        | 89.92       | 1,129                           | 1,080                |
| 1963-38E                  | Thor Able Star | D                  | 28 Sep.        | 107.1        | 89.94       | 1,104                           | 1,082                |
| 1963-39A                  | Atlas Agena    | A                  | 17 Oct.        | 6486.3       | 37.86       | 115,496                         | 101,049              |
| 1963-39B                  | Atlas Agena    | A                  | 17 Oct.        |              |             | Current Elements not Maintained |                      |
| 1963-39C                  | Atlas Agena    | A                  | 17 Oct.        | 6512.3       | 37.76       | 115,295                         | 102,986              |
| 1963-46A                  | Thor Delta     | B                  | 27 Nov.        | 5610.7       | 35.20       | 192,042                         | 4,385                |
| 1963-47A                  | Atlas Centaur  | A                  | 27 Nov.        | 107.8        | 30.35       | 1,772                           | 475                  |
| 1963-47B                  | Atlas Centaur  | D                  | 27 Nov.        | 107.2        | 30.07       | 1,617                           | 577                  |
| 1963-47C                  | Atlas Centaur  | D                  | 27 Nov.        | 107.5        | 30.05       | 1,630                           | 585                  |
| 1963-47D                  | Atlas Centaur  | D                  | 27 Nov.        | 108.0        | 29.91       | 1,658                           | 610                  |
| 1963-47E                  | Atlas Centaur  | D                  | 27 Nov.        | 108.6        | 30.44       | 1,758                           | 565                  |
| 1963-47F                  | Atlas Centaur  | D                  | 27 Nov.        | 108.7        | 30.46       | 1,754                           | 571                  |
| 1963-47G                  | Atlas Centaur  | D                  | 27 Nov.        | 107.8        | 30.00       | 1,643                           | 607                  |
| 1963-47H                  | Atlas Centaur  | D                  | 27 Nov.        | 105.9        | 30.40       | 1,583                           | 486                  |

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|-------------|---------------------|----------------------|
| 1963-49A                  | Thor Able Star | D                  | 5 Dec.         | 106.8        | 89.96       | 1,093               | 1,067                |
| 1963-49B                  | Thor Able Star | A                  | 5 Dec.         | 107.1        | 89.96       | 1,124               | 1,066                |
| 1963-49C                  | Thor Able Star | A                  | 5 Dec.         | 107.1        | 89.96       | 1,127               | 1,061                |
| 1963-49D                  | Thor Able Star | D                  | 5 Dec.         | 107.1        | 89.95       | 1,120               | 1,063                |
| 1963-49E                  | Thor Able Star | D                  | 5 Dec.         | 107.1        | 89.98       | 1,128               | 1,059                |
| 1963-49F                  | Thor Able Star | D                  | 5 Dec.         | 107.1        | 89.97       | 1,133               | 1,056                |
| 1963-53A                  | Scout          | B                  | 19 Dec.        | 115.2        | 78.66       | 2,313               | 620                  |
| 1963-53B                  | Scout          | D                  | 19 Dec.        | 115.9        | 78.61       | 2,399               | 592                  |
| 1963-53C                  | Scout          | D                  | 19 Dec.        | 115.8        | 78.60       | 2,390               | 594                  |
| 1963-53D                  | Scout          | D                  | 19 Dec.        | 115.9        | 78.63       | 2,397               | 593                  |
| 1963-53E                  | Scout          | D                  | 19 Dec.        | 115.9        | 78.64       | 2,391               | 605                  |
| 1963-53F                  | Scout          | D                  | 19 Dec.        | 115.9        | 78.64       | 2,376               | 606                  |
| 1963-53G                  | Scout          | D                  | 19 Dec.        | 115.8        | 78.60       | 2,376               | 607                  |
| 1963-53H                  | Scout          | D                  | 19 Dec.        | 115.8        | 78.61       | 2,382               | 602                  |
| 1963-54A                  | Thor Delta     | C                  | 21 Dec.        | 99.4         | 58.53       | 758                 | 698                  |
| 1963-54B                  | Thor Delta     | D                  | 21 Dec.        | 99.3         | 58.51       | 749                 | 701                  |
| 1963-54C                  | Thor Delta     | D                  | 21 Dec.        | 101.1        | 58.47       | 925                 | 694                  |
| 1963-54D                  | Thor Delta     | D                  | 21 Dec.        | 97.7         | 58.50       | 704                 | 591                  |
| 1964-1A                   | Thor Agena     | A                  | 11 Jan.        | 103.4        | 69.93       | 930                 | 916                  |
| 1964-1B                   | Thor Agena     | A                  | 11 Jan.        | 103.4        | 69.92       | 934                 | 911                  |
| 1964-1C                   | Thor Agena     | A                  | 11 Jan.        | 103.4        | 69.91       | 934                 | 910                  |
| 1964-1D                   | Thor Agena     | A                  | 11 Jan.        | 103.5        | 69.92       | 932                 | 913                  |
| 1964-1E                   | Thor Agena     | A                  | 11 Jan.        | 103.5        | 69.92       | 934                 | 912                  |
| 1964-2A                   | Thor Agena     | D                  | 19 Jan.        | 101.3        | 99.09       | 847                 | 795                  |
| 1964-2B                   | Thor Agena     | A                  | 19 Jan.        | 101.3        | 99.10       | 828                 | 811                  |
| 1964-2C                   | Thor Agena     | A                  | 19 Jan.        | 101.3        | 99.11       | 832                 | 812                  |
| 1964-3A                   | Delta          | C                  | 21 Jan.        | 194.7        | 46.33       | 7,418               | 2,082                |
| 1964-3B                   | Delta          | D                  | 21 Jan.        | 194.8        | 46.35       | 7,395               | 2,110                |
| 1964-4A                   | Thor Agena     | C                  | 25 Jan.        | 108.3        | 81.50       | 1,292               | 1,005                |
| 1964-4B                   | Thor Agena     | D                  | 25 Jan.        | 108.9        | 81.51       | 1,307               | 1,048                |
| 1964-4C                   | Thor Agena     | D                  | 25 Jan.        | 108.8        | 81.49       | 1,310               | 1,039                |
| 1964-4D                   | Thor Agena     | D                  | 25 Jan.        | 108.8        | 81.55       | 1,309               | 1,039                |
| 1964-4E                   | Thor Agena     | D                  | 25 Jan.        | 95.8         | 81.57       | 826                 | 289                  |
| 1964-5A                   | Saturn         | A                  | 25 Jan.        | 92.7         | 31.44       | 548                 | 257                  |
| 1964-11A                  | Thor Agena     | A                  | 28 Feb.        | 94.6         | 82.07       | 509                 | 490                  |
| 1964-11B                  | Thor Agena     | D                  | 28 Feb.        | 92.2         | 82.04       | 384                 | 377                  |
| 1964-11C                  | Thor Agena     | D                  | 28 Feb.        | 92.7         | 82.07       | 417                 | 404                  |

| International Designation | Launch Vehicle         | Satellite Category | Date of Launch | Nodal Period | Inclination                     | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|------------------------|--------------------|----------------|--------------|---------------------------------|---------------------|----------------------|
| 1964-15A                  | Scout                  | B                  | 27 Mar.        | 100.1        | 51.60                           | 1,231               | 287                  |
| 1964-15B                  | Scout                  | D                  | 27 Mar.        | 99.4         | 51.66                           | 1,176               | 286                  |
| 1964-15C                  | Scout                  | D                  | 27 Mar.        | 103.5        | 51.36                           | 1,475               | 371                  |
| 1964-26A                  | Scout                  | A                  | 4 Jun.         | 103.1        | 90.50                           | 950                 | 860                  |
| 1964-26B                  | Scout                  | D                  | 4 Jun.         | 103.9        | 90.18                           | 933                 | 902                  |
| 1964-26C                  | Scout                  | D                  | 4 Jun.         | 102.3        | 90.87                           | 944                 | 794                  |
| 1964-26D                  | Scout                  | D                  | 4 Jun.         | 103.1        | 90.51                           | 948                 | 863                  |
| 1964-31A                  | Thor Agena             | A                  | 18 Jun.        | 101.6        | 99.76                           | 837                 | 831                  |
| 1964-31B                  | Thor Agena             | A                  | 18 Jun.        | 101.6        | 99.77                           | 841                 | 830                  |
| 1964-31C                  | Thor Agena             | D                  | 18 Jun.        | 101.6        | 99.79                           | 842                 | 826                  |
| 1964-35A                  | Thor Agena             | A                  | 2 Jul.         | 94.8         | 82.08                           | 529                 | 494                  |
| 1964-40A                  | Atlas Agena            | A                  | 17 Jul.        | 6024.8       | 38.83                           | 104,200             | 102,402              |
| 1964-40B                  | Atlas Agena            | A                  | 17 Jul.        | 6004.3       | 40.64                           | 113,306             | 92,798               |
| 1964-40C                  | Atlas Agena            | A                  | 17 Jul.        | 2349.2       | 38.30                           | 103,998             | 319                  |
| 1964-41B                  | Atlas Agena            | D                  | 28 Jul.        |              | Barycentric Orbit               |                     |                      |
| 1964-45B                  | Atlas Agena            | A                  | 14 Aug.        | 126.7        | 95.70                           | 3,685               | 271                  |
| 1964-47A                  | Thrust-Augmented Delta | C                  | 19 Aug.        | 1436.2       | 0.10                            | 35,792              | 35,784               |
| 1964-47B                  | Thrust-Augmented Delta | D                  | 19 Aug.        |              | Current Elements not Maintained |                     |                      |
| 1964-51A                  | Scout                  | B                  | 25 Aug.        | 103.9        | 79.92                           | 1,020               | 870                  |
| 1964-51B                  | Scout                  | D                  | 25 Aug.        | 103.9        | 79.92                           | 1,015               | 870                  |
| 1964-51C                  | Scout                  | D                  | 25 Aug.        | 103.5        | 79.84                           | 987                 | 860                  |
| 1964-51D                  | Scout                  | D                  | 25 Aug.        | 103.5        | 79.82                           | 1,044               | 804                  |
| 1964-51E                  | Scout                  | D                  | 25 Aug.        | 103.5        | 79.82                           | 1,046               | 800                  |
| 1964-52A                  | Thor Agena             | C                  | 28 Aug.        | 98.3         | 98.66                           | 930                 | 428                  |
| 1964-52B                  | Thor Agena             | D                  | 28 Aug.        | 98.3         | 98.66                           | 931                 | 428                  |
| 1964-54A                  | Atlas Agena            | B                  | 5 Sep.         | 3842.0       | 39.73                           | 145,485             | 4,274                |
| 1964-60A                  | Thor Delta             | B                  | 4 Oct.         | 2080.3       | 33.72                           | 94,288              | 917                  |
| 1964-63A                  | Thor Able Star         | D                  | 6 Oct.         | 106.3        | 89.92                           | 1,076               | 1,037                |
| 1964-63B                  | Thor Able Star         | A                  | 6 Oct.         | 106.6        | 89.93                           | 1,090               | 1,050                |
| 1964-63C                  | Thor Able Star         | A                  | 6 Oct.         | 106.6        | 89.94                           | 1,083               | 1,055                |
| 1964-63D                  | Thor Able Star         | D                  | 6 Oct.         | 106.6        | 89.91                           | 1,080               | 1,063                |
| 1964-63E                  | Thor Able Star         | A                  | 6 Oct.         | 106.6        | 89.92                           | 1,087               | 1,055                |
| 1964-63F                  | Thor Able Star         | D                  | 6 Oct.         | 106.6        | 89.92                           | 1,090               | 1,054                |
| 1964-64A                  | Scout                  | B                  | 10 Oct.        | 104.8        | 79.71                           | 1,079               | 390                  |
| 1964-64B                  | Scout                  | D                  | 10 Oct.        | 104.7        | 79.71                           | 1,078               | 390                  |
| 1964-64C                  | Scout                  | D                  | 10 Oct.        | 104.1        | 79.37                           | 1,064               | 839                  |
| 1964-64D                  | Scout                  | D                  | 10 Oct.        | 105.5        | 80.09                           | 1,120               | 917                  |



| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination        | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|--------------------|---------------------|----------------------|
| 1964-72A                  | Thor Agena     | A                  | 4 Nov.         | 94.9         | 82.05              | 526                 | 508                  |
| 1964-72B                  | Thor Agena     | D                  | 4 Nov.         | 94.8         | 82.04              | 519                 | 504                  |
| 1964-72C                  | Thor Agena     | D                  | 4 Nov.         | 94.5         | 82.06              | 503                 | 489                  |
| 1964-72D                  | Thor Agena     | D                  | 4 Nov.         | 94.5         | 82.02              | 503                 | 491                  |
| 1964-73A                  | Atlas Agena    | B                  | 5 Nov.         |              | Heliocentric Orbit |                     |                      |
| 1964-74A                  | Scout          | B                  | 6 Nov.         | 99.2         | 51.98              | 976                 | 465                  |
| 1964-76A                  | Scout          | B                  | 21 Nov.        | 115.8        | 81.38              | 2,434               | 540                  |
| 1964-76B                  | Scout          | B                  | 21 Nov.        | 116.2        | 81.35              | 2,493               | 530                  |
| 1964-76C                  | Scout          | D                  | 21 Nov.        | 116.2        | 81.35              | 2,492               | 534                  |
| 1964-76D                  | Scout          | D                  | 21 Nov.        | 116.1        | 81.35              | 2,482               | 530                  |
| 1964-76E                  | Scout          | D                  | 21 Nov.        | 116.3        | 81.36              | 2,491               | 537                  |
| 1964-76F                  | Scout          | D                  | 21 Nov.        | 115.8        | 81.28              | 2,444               | 547                  |
| 1964-76G                  | Scout          | D                  | 21 Nov.        | 116.4        | 81.35              | 2,496               | 540                  |
| 1964-76H                  | Scout          | D                  | 21 Nov.        | 115.4        | 81.29              | 2,404               | 545                  |
| 1964-76I                  | Scout          | D                  | 21 Nov.        | 116.1        | 81.36              | 2,481               | 531                  |
| 1964-76J                  | Scout          | D                  | 21 Nov.        | 116.3        | 81.36              | 2,490               | 538                  |
| 1964-76K                  | Scout          | D                  | 21 Nov.        | 116.4        | 81.37              | 2,474               | 544                  |
| 1964-77A                  | Atlas Agena    | B                  | 28 Nov.        |              | Heliocentric Orbit |                     |                      |
| 1964-77B                  | Atlas Agena    | D                  | 28 Nov.        |              | Heliocentric Orbit |                     |                      |
| 1964-83A                  | Thor Able Star | D                  | 13 Dec.        | 106.0        | 89.98              | 1,072               | 1,013                |
| 1964-83B                  | Thor Able Star | D                  | 13 Dec.        | 106.3        | 90.00              | 1,106               | 1,007                |
| 1964-83C                  | Thor Able Star | A                  | 13 Dec.        | 106.3        | 89.99              | 1,092               | 1,022                |
| 1964-83D                  | Thor Able Star | A                  | 13 Dec.        | 106.3        | 89.98              | 1,091               | 1,024                |
| 1964-83E                  | Thor Able Star | D                  | 13 Dec.        | 106.3        | 89.99              | 1,093               | 1,021                |
| 1964-83F                  | Thor Able Star | D                  | 13 Dec.        | 106.3        | 89.99              | 1,098               | 1,015                |
| 1964-83G                  | Thor Able Star | D                  | 13 Dec.        | 106.3        | 89.98              | 1,098               | 1,016                |
| 1964-86A                  | Thor Delta     | B                  | 21 Dec.        | 455.1        | 20.17              | 26,181              | 256                  |
| 1965-3A                   | Thor Altair    | A                  | 19 Jan.        | 97.6         | 98.75              | 835                 | 458                  |
| 1965-3C                   | Thor Altair    | D                  | 19 Jan.        | 93.3         | 98.80              | 462                 | 384                  |
| 1965-4A                   | Thor Delta     | C                  | 22 Jan.        | 119.2        | 96.40              | 2,584               | 705                  |
| 1965-4B                   | Thor Delta     | D                  | 22 Jan.        | 119.3        | 96.42              | 2,590               | 710                  |
| 1965-4C                   | Thor Delta     | D                  | 22 Jan.        | 118.0        | 96.32              | 2,510               | 678                  |
| 1965-4D                   | Thor Delta     | D                  | 22 Jan.        | 120.4        | 96.50              | 2,654               | 743                  |
| 1965-7A                   | Thor Delta     | B                  | 3 Feb.         | 96.5         | 32.84              | 627                 | 548                  |
| 1965-7B                   | Thor Delta     | D                  | 3 Feb.         | 96.6         | 32.85              | 634                 | 550                  |
| 1965-8A                   | Titan III      | A                  | 11 Feb.        | 145.6        | 32.13              | 2,800               | 2,778                |
| 1965-8B                   | Titan III      | D                  | 11 Feb.        | 145.4        | 32.14              | 2,795               | 2,762                |

| International Designation | Launch Vehicle         | Satellite Category | Date of Launch | Nodal Period | Inclination                     | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|------------------------|--------------------|----------------|--------------|---------------------------------|---------------------|----------------------|
| 1965-8C                   | Titan III              | A                  | 11 Feb.        | 145.7        | 32.11                           | 2,806               | 2,779                |
| 1965-9A                   | Saturn                 | B                  | 16 Feb.        | 97.0         | 31.75                           | 726                 | 502                  |
| 1965-9B                   | Saturn                 | D                  | 16 Feb.        | 97.1         | 31.74                           | 733                 | 500                  |
| 1965-10B                  | Atlas Agena            | D                  | 17 Feb.        |              | Barycentric Orbit               |                     |                      |
| 1965-16A                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 942                 | 908                  |
| 1965-16B                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.08                           | 940                 | 910                  |
| 1965-16C                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 940                 | 910                  |
| 1965-16D                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 940                 | 910                  |
| 1965-16E                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 938                 | 911                  |
| 1965-16F                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 939                 | 910                  |
| 1965-16G                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.10                           | 938                 | 910                  |
| 1965-16H                  | Thor Agena             | A                  | 9 Mar.         | 103.5        | 70.09                           | 939                 | 910                  |
| 1965-16J                  | Thor Agena             | D                  | 9 Mar.         | 103.5        | 70.11                           | 934                 | 912                  |
| 1965-17B                  | Thor Able Star         | A                  | 11 Mar.        | 97.7         | 89.98                           | 1,015               | 289                  |
| 1965-17C                  | Thor Able Star         | A                  | 11 Mar.        | 97.6         | 89.98                           | 1,005               | 283                  |
| 1965-17D                  | Thor Able Star         | D                  | 11 Mar.        | 97.6         | 90.00                           | 1,004               | 287                  |
| 1965-17E                  | Thor Able Star         | D                  | 11 Mar.        | 95.7         | 90.00                           | 853                 | 172                  |
| 1965-17F                  | Thor Able Star         | D                  | 11 Mar.        | 94.2         | 90.00                           | 797                 | 258                  |
| 1965-17H                  | Thor Able Star         | D                  | 11 Mar.        | 96.6         | 89.89                           | 719                 | 197                  |
| 1965-21A                  | Thor Altair            | A                  | 18 Mar.        | 97.5         | 99.02                           | 753                 | 532                  |
| 1965-21B                  | Thor Altair            | D                  | 18 Mar.        | 96.3         | 99.18                           | 649                 | 510                  |
| 1965-21C                  | Thor Altair            | D                  | 18 Mar.        | 97.6         | 99.02                           | 759                 | 527                  |
| 1965-21D                  | Thor Altair            | D                  | 18 Mar.        | 96.3         | 99.04                           | 653                 | 496                  |
| 1965-21E                  | Thor Altair            | D                  | 18 Mar.        | 96.4         | 98.98                           | 651                 | 529                  |
| 1965-23B                  | Atlas Agena            | D                  | 21 Mar.        |              | Barycentric Orbit               |                     |                      |
| 1965-27A                  | Atlas Agena            | A                  | 3 Apr.         | 111.5        | 90.19                           | 1,323               | 1,272                |
| 1965-27B                  | Atlas Agena            | A                  | 3 Apr.         | 111.4        | 90.20                           | 1,319               | 1,271                |
| 1965-27C                  | Atlas Agena            | D                  | 3 Apr.         | 111.5        | 90.20                           | 1,324               | 1,270                |
| 1965-27D                  | Atlas Agena            | D                  | 3 Apr.         | 111.5        | 90.21                           | 1,319               | 1,276                |
| 1965-27E                  | Atlas Agena            | D                  | 3 Apr.         | 111.5        | 90.19                           | 1,315               | 1,280                |
| 1965-28A                  | Thrust-Augmented Delta | C                  | 6 Apr.         | 1437.3       | .13                             | 36,596              | 35,025               |
| 1965-28B                  | Thrust-Augmented Delta | D                  | 6 Apr.         |              | Current Elements not Maintained |                     |                      |
| 1965-31B                  | Atlas Agena            | A                  | 28 Apr.        | 95.1         | 95.22                           | 550                 | 502                  |
| 1965-31G                  | Atlas Agena            | D                  | 28 Apr.        | 95.0         | 95.22                           | 532                 | 507                  |
| 1965-32A                  | Scout                  | B                  | 29 Apr.        | 107.8        | 41.17                           | 1,315               | 936                  |
| 1965-32B                  | Scout                  | D                  | 29 Apr.        | 107.8        | 41.17                           | 1,316               | 935                  |

| International Designation | Launch Vehicle | Satellite Category | Date of Launch | Nodal Period | Inclination | Apogee (Kilometres) | Perigee (Kilometres) |
|---------------------------|----------------|--------------------|----------------|--------------|-------------|---------------------|----------------------|
| 1965-34A                  | Titan III      | A                  | 6 May          | 157.0        | 32.09       | 3,744               | 2,780                |
| 1965-34B                  | Titan III      | A                  | 6 May          | 309.9        | 32.10       | 4,797               | 2,785                |
| 1965-34C                  | Titan III      | A                  | 6 May          | 145.6        | 32.10       | 2,798               | 2,776                |
| 1965-38A                  | Thor Altair    | A                  | 20 May         | 100.0        | 98.63       | 964                 | 556                  |
| 1965-38B                  | Thor Altair    | D                  | 20 May         | 100.0        | 98.62       | 967                 | 554                  |
| 1965-38C                  | Thor Altair    | D                  | 20 May         | 100.0        | 98.64       | 956                 | 560                  |
| 1965-38D                  | Thor Altair    | D                  | 20 May         | 99.6         | 98.72       | 942                 | 543                  |
| 1965-39A                  | Saturn         | B                  | 25 May         | 97.2         | 31.75       | 733                 | 510                  |
| 1965-39B                  | Saturn         | D                  | 25 May         | 97.2         | 31.74       | 738                 | 509                  |
| 1965-42A                  | Delta          | B                  | 29 May         | 8558.8       | 33.86       | 264,247             | 196                  |
| 1965-48A                  | Thor Able Star | A                  | 24 Jun.        | 106.9        | 90.00       | 1,135               | 1,033                |
| 1965-48B                  | Thor Able Star | D                  | 24 Jun.        | 106.9        | 90.00       | 1,111               | 1,030                |
| 1965-48C                  | Thor Able Star | D                  | 24 Jun.        | 106.9        | 90.00       | 1,142               | 1,029                |
| 1965-50A                  | Atlas Agena    | A                  | 25 Jun.        | 94.7         | 107.65      | 508                 | 498                  |
| 1965-50D                  | Atlas Agena    | D                  | 25 Jun.        | 94.7         | 107.68      | 518                 | 495                  |

Supplemental Information:

The following object was launched by the Government of Italy from United States territory with the use of United States facilities:

|          |       |   |         |      |       |     |     |
|----------|-------|---|---------|------|-------|-----|-----|
| 1964-84A | Scout | B | 15 Dec. | 91.8 | 37.77 | 519 | 191 |
|----------|-------|---|---------|------|-------|-----|-----|