

**GRANT**  
Impulse Space, Inc.  
ICFS File Nos. SAT-LOA-20251230-00409, SAT-AMD-20260530-00221

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| <b>ICFS File No(s):</b>                                                                                                                                                                                                                                                                                            | SAT-LOA-20251230-00409, SAT-AMD-20260530-00221 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <div>GRANTED –<br/>With Conditions</div> <div></div> <div>Space Bureau<br/>Satellite Programs and<br/>Policy Division</div> |
| <b>Licensee/Grantee:</b>                                                                                                                                                                                                                                                                                           | Impulse Space, Inc. (Impulse)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                |
| <b>Call Sign:</b>                                                                                                                                                                                                                                                                                                  | S00824                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                |
| <b>Satellite Name:</b>                                                                                                                                                                                                                                                                                             | Impulse-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                |
| <b>Orbital Location:<br/>(required station-keeping tolerance)</b>                                                                                                                                                                                                                                                  | One non-geostationary orbit (NGSO) satellite (Impulse-4) will deploy into a circular orbit with an apogee of 610 km, perigee of 570 km, and inclination of 52.9 to 53.1 degrees. The spacecraft then will maneuver between a series of orbits at an inclination of 52 to 56 degrees with apogees between 350 km (+/- 25 km) and 1450 km (+/- 150 km) and perigees between 200 km (+/- 25 km) and 800 km (+/- 50 km). <sup>2</sup>                                                                                                              |                                                                                                                                                                                                                |
| <b>Administration:</b>                                                                                                                                                                                                                                                                                             | United States of America                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                |
| <b>Nature of Service:</b>                                                                                                                                                                                                                                                                                          | Space Research Service (SRS), Space Operation Service (SOS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                |
| <b>Scope of Grant:</b>                                                                                                                                                                                                                                                                                             | Authority to deploy and operate one NGSO satellite (Impulse-4).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                |
| <b>Service Area(s):</b>                                                                                                                                                                                                                                                                                            | See Condition 2 and Appendix.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                |
| <b>Frequencies:</b>                                                                                                                                                                                                                                                                                                | <u>SRS, SOS, Telemetry, Tracking, and Command (TT&amp;C):</u> <sup>3</sup><br><br>2025-2110 MHz (Earth-to-space) (center frequencies 2055.0 MHz, 2099.0 MHz; bandwidths 0.0675 MHz, 0.27 MHz, 0.675 MHz)<br><br>8450-8500 MHz (space-to-Earth) (center frequencies 8493.0 MHz, 8495.0 MHz, bandwidths 5.4 MHz, 2.7 MHz, 1.35 MHz, 0.675 MHz, 0.135 MHz, 0.0135 MHz)<br><br><u>Reception from Global Positioning System (GPS):</u> <sup>4</sup><br><br>GPS L1 (center frequency of 1575.42 MHz)<br><br>GPS L2 (center frequency of 1227.60 MHz) |                                                                                                                                                                                                                |
| Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications and commitments set forth by the applicant or petitioner and with the Federal Communications Commission’s rules not waived herein. This grant is also subject to the following conditions: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                |

<sup>1</sup> See Impulse Space Inc., SAT-LOA-20251230-00409 (filed Mar. 6, 2026) (Application); Impulse Space Inc., SAT-AMD-20260530-00221 (filed Jun. 2, 2026) (Amendment Application). The application, as amended, was placed on public notice on June 26, 2026. *Satellite Licensing Division and Satellite Programs and Policy Division Information, Space Station Applications Accepted for Filing*, Public Notice, Report No. SAT-02011 (rel. Jun. 26, 2026). No comments were filed.

<sup>2</sup> See Amendment Application, Narrative at 1; Attachment B at 1.

<sup>3</sup> See Application, Narrative at 4; Amendment Application, Schedule S at 2-3.

<sup>4</sup> Impulse-4 will have two GPS receivers. Application, Narrative at 4, n.11. The GPS payload will support on-orbit determination. *Id.* It will only passively monitor the readily accessible GPS L1 and L2 signals without decoding or decrypting any encrypted content within these waveform modulations. *Id.* Reception of the GPS L1 and L2 signals is with pre-existing signals that have not been altered to provide service to Impulse-4. *Id.*

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1. All space-to-Earth and Earth-to-space operations must be strictly limited to durations when Impulse-4 is visible to the corresponding earth station locations listed in the Appendix of this grant, noting any additional restrictions within this grant.
2. Transmissions in the 2025-2110 MHz (Earth-to-space) and 8025-8400 MHz (space-to-Earth) bands may only be made to/from earth stations coordinated with the National Aeronautics and Space Administration (NASA), the Air Force Spectrum Management Office (AFSMO), the Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA), and the Department of the Navy (DON). Any use of Federal ground stations must be coordinated by Impulse's federal government customers with AFSMO ([jimmy.nguyen@us.af.mil](mailto:jimmy.nguyen@us.af.mil)), NASA ([HQ-SatCoord@mail.nasa.gov](mailto:HQ-SatCoord@mail.nasa.gov)) and DOC/NOAA ([spectrum.coordinator@noaa.gov](mailto:spectrum.coordinator@noaa.gov)). A list of coordinated non-Federal earth stations is attached as the Appendix. Impulse must provide the FCC with an updated list of coordinated non-Federal earth stations within ten business days following any changes to this list.
3. Impulse's request for waiver of the U.S. Table of Frequency Allocations (U.S. Table), 47 CFR § 2.106(a), to allow non-conforming use of the 2025-2110 MHz (Earth-to-space) band for TT&C<sup>5</sup> IS GRANTED, subject to the condition that Impulse operates on an unprotected and non-interference basis, accepts any interference from authorized services, and complies with the other conditions herein regarding operations in this band. Impulse intends to operate in the SOS and SRS and for TT&C using this band.<sup>6</sup> The 2025-2110 MHz band is allocated on a secondary basis to SOS, subject to certain usage restrictions. Non-Federal SRS and Earth Exploration-Satellite Service (EESS) (Earth-to-space) transmissions may also be authorized in the band on a non-interference basis.<sup>7</sup> Impulse will not always operate in the SRS in the 2025-2110 MHz (Earth-to-space) band, and Impulse's proposed SOS operations will not comply with the restrictions in section 2.106(a), (c)(94) of the Commission's rules to limit secondary SOS operations in the 2025-2110 MHz (Earth-to-space) band to telecommand use for pre-launch testing and space launch operations.<sup>8</sup> In this instance, we find good cause to waive the U.S. Table to allow Impulse to operate command links only with its own satellites based on Impulse's coordination with Federal users in the band, which should ensure that any authorized Federal users are protected from harmful interference. Impulse must accept interference from and not cause harmful interference to any authorized users of the 2025-2110 MHz and adjacent bands that are operating in accordance with the U.S. Table. Upon receiving a documented report of harmful interference, Impulse must immediately cease the operations causing the harmful interference until the issue is resolved.
4. Earth station transmissions from the United States to the Impulse-4 spacecraft in the 2025-2110 MHz (Earth-to-space) band must be coordinated with fixed and mobile stations in the band (e.g., via the Society of Broadcast Engineers (SBE)).
5. Impulse must cease all uplink (Earth-to-space) transmissions centered at 2099.0 MHz when any of the following spacecraft are within 5 degrees of the respective earth station antenna boresight:
  - a. Landsat-8 (NORAD ID: 39084),
  - b. MMS (NORAD IDs: 40482-40485),
  - c. Landsat-9 (NORAD ID: 49260),
  - d. ICESat-2 (NORAD ID: 43613).

<sup>5</sup> See *id.* at 5-7.

<sup>6</sup> See, e.g., *id.* at 4.

<sup>7</sup> 47 CFR §§ 2.106(a), (c)(347). Non-Federal Earth-to-space and space-to-space transmissions may be authorized in the SRS and EESS subject to such conditions as may be applied on a case-by-case basis. Such transmissions must not cause harmful interference to Federal and non-Federal stations that are operating in accordance with the U.S. Table. *Id.*

<sup>8</sup> See Application, Narrative at 5-7; 47 CFR § 2.106(a), (c)(94).

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6. Impulse's request for waiver of the U.S. Table, 47 CFR § 2.106(a), to operate SOS and SRS in the 8450-8500 MHz (space-to-Earth) band is GRANTED.<sup>9</sup> In the U.S. Table, the 8450-8500 MHz band is allocated to the SRS (space-to-Earth) on a primary basis for non-Federal use, 47 CFR § 2.106(a), and internationally, the 8450-8500 MHz band is allocated to the SRS (space-to-Earth), Fixed, and Mobile (except Aeronautical Mobile) services on a primary basis. All Impulse operations in the 8450-8500 MHz band under this authorization must be on an unprotected and non-interference basis, i.e., Impulse must not cause interference to, and must not claim protection from interference caused to it by, any other lawfully operating station that is operating in accordance with the U.S. Table. In the event of any harmful interference, Impulse must cease operations immediately upon notification of such interference until the interference is resolved, and must inform the Commission, in writing, of such an event.
7. Impulse must ensure that Impulse-4 downlink (space-to-Earth) transmissions at a center frequency of 8493 MHz are ceased and no earth station receive operations are permitted when the conjunction angle formed by the location 64° 53' 00" N 147° 30' 00" W (angle vertex), the Impulse-4 spacecraft, and the IRIS (NORAD ID: 39197) is less than or equal to 5 degrees.
8. Impulse (space-to-Earth) operations in the 8450-8500 MHz band must be conducted such that operation across the entire range of permissible altitudes complies with the following:
  - a. The power flux-density level at the surface of the Earth does not exceed the limits specified in ITU Radio Regulations Table 21-4; and
  - b. The unwanted power flux-density level at SRS (deep space) earth stations in the 8400-8450 MHz band does not exceed the interference protection criteria set forth in ITU-R Recommendation SA.1157.
9. Impulse's request for a waiver of the requirement to submit certain information on the Commission's Form 312 - Schedule S<sup>10</sup> is GRANTED. As required by the Commission's rules, Impulse submitted a Form 312 - Schedule S as part of its application, which contains certain technical information. Impulse found that it could not accurately describe its system in certain respects due to limitations in Schedule S itself.<sup>11</sup> In view of the fact that Impulse has provided clarifications elsewhere in the Application, we find that a waiver of the requirement to complete certain aspects or fields of Schedule S is warranted.
10. Impulse's request for a waiver of the application processing requirements in section 25.112 of the Commission's rules,<sup>12</sup> 47 CFR § 25.112, is DISMISSED as moot. Section 25.112 requires that we find unacceptable for filing applications that are defective or do not comply with the Commission's rules. Although we requested that Impulse supplement its Application with additional information,<sup>13</sup> we find that the Application is complete and in compliance with the Commission's application processing requirements.

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<sup>9</sup> See Application, Narrative at 5-7.

<sup>10</sup> *Id.* at 9-10.

<sup>11</sup> *Id.* at 9.

<sup>12</sup> *Id.* at 10.

<sup>13</sup> See generally Letter from Jonathan R. Markman, Acting Division Chief, Satellite Programs and Policy Division, Space Bureau, FCC, to George V. John, Hogan Lovells US LLP, Counsel for Impulse Space, Inc (dated Apr. 7, 2026); Letter from Nicholas Simon, Senior Mission Manager, Impulse Space, Inc. to Jonathon R. Markman, Acting Division Chief, Satellite Programs and Policy Division, Space Bureau, FCC (dated Apr. 23, 2026). Under the Commission's rules, the Satellite Programs and Policy Division may seek additional information from applicants to render an application suitable for further processing, and applicants are permitted to supplement their application to provide additional information or updates. See 47 CFR §§ 1.65, 25.111(a).

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11. Impulse's request for a waiver of the modified processing round requirements of 47 CFR §§ 25.156 and 25.157<sup>14</sup> is GRANTED. Because Impulse demonstrates that it will share spectrum effectively and not preclude further entry into its bands of operation,<sup>15</sup> we find that granting waiver in this instance does not undermine the purpose of the processing round rules.
12. Impulse's requests for waiver of the bond and milestone requirements of sections 25.164 and 25.165 of the Commission's rules, 47 CFR §§ 25.164 and 25.165,<sup>16</sup> are GRANTED IN PART. The requirement for Impulse to post a surety bond in accordance with 47 CFR §§ 25.165(a)(1), (b) is deferred by 150 days, making the bond due a total of 180 days from the date of grant.<sup>17</sup> Section 25.165 requires that space station licensees post a bond within 30 days of grant of license. Impulse-4 is expected to launch in 2026, and Impulse's proposed spectrum use would not be mutually exclusive and would not preclude other parties from seeking authorization for similar bands.<sup>18</sup> These factors provide safeguards against warehousing and speculation in orbit and spectrum resources in much the same way a bond would.
  - a. In the event that Impulse-4 has not launched and begun operations in accordance with this grant by **January 9, 2027**, Impulse must post a surety bond in satisfaction of 47 CFR §§ 165(a)(1) & (b) no later than **February 8, 2027**, and thereafter maintain on file a surety bond requiring payment in the event of a default in an amount, at minimum, determined according to the formula set forth in 47 CFR § 165(a)(1). We therefore find that this partial grant will not undermine the purpose of the rule.
  - b. Impulse must launch the Impulse-4 space station, place it into the assigned orbit, and operate the space station in accordance with this grant no later than **August 12, 2032**. 47 CFR § 25.164(b).
13. Because Impulse must comply with technical requirements of the Commission's rules and power flux density limits, which should prevent harmful interference to other operations in the requested bands, we GRANT the request for waiver of the default service rules in 47 CFR § 25.217(b).<sup>19</sup>
14. Impulse must provide the FCC and other Federal agencies the initial orbital parameters (e.g., operating altitudes, inclination angle) within 30 days following launch. Notification must be provided to AFSSMO (jimmy.nguyen@us.af.mil), NASA (HQ-SatCoord@mail.nasa.gov) and DOC/NOAA (spectrum.coordinator@noaa.gov). In the event changes to orbital parameters are required, Impulse must complete coordination in advance of any such changes with AFSSMO, NASA, and DOC/NOAA, and upon successful completion of coordination notify the FCC of the update within five (5) business days.
15. Upon commencement of operations, Impulse must file a notification within five (5) days certifying to the Commission that the spacecraft has been placed in orbit and indicating whether the operations fully

<sup>14</sup> See Application, Narrative at 7-8.

<sup>15</sup> Impulse-4 does not require full-time system availability and will complete its mission in less than five years. *Id.* at 7. Impulse states that the satellite will transmit and receive only in short periods of time while visible to limited receiving/transmitting earth stations. *Id.* at 7-8. Also, for harmful interference to occur, Impulse states that both Impulse-4 and another satellite would have to be visible to the earth station and transmitting or receiving using the same frequencies at the exact same time. *Id.* at 8. In such an unlikely event, Impulse states any resulting inline interference could be avoided through coordination and that Impulse commits to such coordination. *Id.*

<sup>16</sup> See Application, Narrative at 8-9.

<sup>17</sup> We note that the Division has typically granted only 60-day extensions (for a total of 90 days) of the bond deadline in the past. Because licenses are being issued further in advance of launches, primarily due to the increased speed of processing satellite license applications, the Division is granting an extension length of 150 days (for a total of 180 days).

<sup>18</sup> See Application, Narrative at 8.

<sup>19</sup> See *id.* at 9.

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| <p>conform to the terms and conditions of this grant. The term of this authorization is for seven (7) years,<sup>20</sup> commencing at 3 a.m. Eastern Time on the date when Impulse notifies the Commission that operation of Impulse-4 is compliant with the license terms and conditions and that the space station has been placed in its authorized orbit and begun operating.</p>                                                                                                                                                            |                             |                           |
| <p>Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.</p> <p>This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 CFR § 0.261, and is effective upon release.</p> <p>Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).</p> |                             |                           |
| <b>Action Date:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>August 12, 2026</b>      |                           |
| <b>Term Dates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>From: See Conditions</b> | <b>To: See Conditions</b> |
| <p><b>Approved:</b></p> <p>Carolyn A. Mahoney<br/>Acting Division Chief, Satellite Programs and Policy Division<br/>Space Bureau</p>                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                           |

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<sup>20</sup> Although licenses for space stations are typically granted for a period of 15 years, the Commission reserves the right to grant station licenses for less than 15 years if, in its judgment, the public interest, convenience and necessity will be served by such action. 47 CFR § 25.121(a)(1), (b). In this case, we grant the license term for the Impulse-4 for a period of up to seven years, in view of the approximate 5-year planned duration of operations. *See* Application, Narrative at 8.

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**Appendix:**

**Earth Station Locations<sup>21</sup>  
Coordinated with Federal Agencies**

1. Kandi, Sri Lanka
2. Pretoria, South Africa
3. Blonduos, Iceland
4. Fairbanks, Alaska, USA
5. Awarua, New Zealand
6. Accra, Ghana
7. Bermuda
8. Cape Town, South Africa
9. Columbus, Ohio, USA
10. Dubbo, Australia
11. Hawaii, USA
12. Jeju, South Korea
13. Johannesburg, South Africa
14. Longovilo, Chile
15. Mingenew, Australia
16. Pitea, Sweden
17. Portland, Oregon, USA
18. Puertollano, Spain
19. Punta Arenas, Chile
20. Singapore
21. Zallaq, Bahrain

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<sup>21</sup> See Amendment Application, Narrative, Attachment A, at A-1.