PART 334—DANGER ZONE AND RESTRICTED AREA REGULATIONS

■ 1. The authority citation for 33 CFR part 334 continues to read as follows:

Authority: 40 Stat. 266 (33 U.S.C. 1) and 40 Stat. 892 (33 U.S.C. 3).

■ 2. Revise § 334.1390 to read as follows:

§ 334.1390 Pacific Ocean off the Pacific Missile Range Facility at Barking Sands, Island of Kauai, Hawaii; danger zone.

(a) *The danger zone.* All navigable waters within an area beginning at a point on the shore at latitude 22°04′13.65″ N, longitude 159°46′30.76″ W; and continue south along the shoreline to latitude 21°58′42.77″ N, and longitude 159°45′26.35″ W. Thence extending southwest to latitude 21°56′6.00″ N, and longitude 159°46′55.91″ W extending northwest to latitude 21°58′59.81″ N and longitude 159°50′51.42″ W, continuing north to latitude 22°02′28.09″ N, and longitude 159°51′28.15″ W, and continuing northeast to latitude 22°06′30.71″ N, longitude 159°49′20.43″ W; and thence to point of beginning. All coordinates reference 1983 North American Datum (NAD 83).

(b) *The regulations.* (1) Dredging, dragging, seining, and other similar operations within the danger zone are prohibited.

(2) All persons, boats, vessels, or other craft are prohibited from entering, transiting, or remaining within the danger zone during range operations, test and training activities, or increases in force protection that pose a hazard to the general public, as determined by the enforcing agency. The enforcing agency's determination of the necessity of closing the danger zone due to increases in force protection will be based on the Department of Defense Force Protection Condition (FPCON) System. From the lowest security level to the highest, FPCON levels are titled Normal, Alpha, Bravo, Charlie and Delta.

(3) Closure of the danger zone will be indicated by Notice to Mariners, the presence of Pacific Missile Range Facility range boats, beach markings including beach signs along the north and south beach borders alerting shoreline foot traffic, security patrols, and radio transmissions on common ocean frequencies to include Marine band channel 6 (156.300 MHz), Marine band channel 16 (156.800 MHz), and CB channel 22. The enforcing agency will post the danger zone closure schedule on its official Navy Web site, *http://www.cnic.navy.mil/PMRF/,* and Facebook Web site, *http://www.facebook.com/PacificMissileRangeFacility.* The danger zone closure schedule may also be obtained by calling the following phone numbers: 808–335–4301, 808–335–4388, and 808–335–4523.

(4) The enforcing agency will authorize the use of some, or all, of the danger zone for civilian waterborne activities when mission-essential evolutions such as range operations, test and training operations, or increases in force protections levels permit it. Such activities include fishing, sightseeing, shelling, surfing, and transit.

(c) *The enforcing agency.* The regulations in this section shall be enforced by the Commanding Officer, Pacific Missile Range Facility, Hawaii and such agencies or persons as he or she may designate.

Dated: June 24, 2013.

Approved:

James R. Hannon,

Chief, Operations and Regulatory Directorate of Civil Works.

[FR Doc. 2013–15669 Filed 6–28–13; 8:45 am]

BILLING CODE 3720–58–P

LIBRARY OF CONGRESS

Copyright Office

37 CFR Part 201

[Docket No. 2013–5]

Authentication of Electronic Signatures on Electronically Filed Statements of Account

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Notice of proposed rulemaking; correction.

SUMMARY: The U.S. Copyright Office published a notice of proposed rulemaking in the **Federal Register** of June 26, 2013 (78 FR 38240). The document contained incorrect dates.

DATES: Comments must be received in the Copyright Office no later than 5 p.m. Eastern Standard Time (EST) on July 26, 2013. Reply comments must be received in the Copyright Office no later than 5 p.m. Eastern Standard Time (e.s.t.) on August 26, 2013.

FOR FURTHER INFORMATION CONTACT: Andrea Zizzi, Office of the General Counsel, Copyright GC/I&R, P.O. Box 70400, Washington, DC 20024. Telephone: (202) 707–8380. Telefax: (202) 707–8366.

SUPPLEMENTARY INFORMATION:

Correction

In the **Federal Register** of June 26, 2013 (78 FR 38240), on page 38241, in the first column, the **DATES** caption is corrected to read as set forth above.

Dated: June 26, 2013.

Maria Strong,

Acting General Counsel, U.S. Copyright Office.

[FR Doc. 2013–15699 Filed 6–28–13; 8:45 am]

BILLING CODE 1410–30–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 2

[ET Docket No. 13–115; RM–11341; FCC 13–65]

Federal Earth Stations—Non-Federal Fixed Satellite Service Space Stations; Spectrum for Non-Federal Space Launch Operations

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document proposes to make spectrum allocation proposals for three different space related purposes. The Commission makes two alternative proposals to modify the Allocation Table to provide interference protection for Fixed-Satellite Service (FSS) and Mobile-Satellite Service (MSS) earth stations operated by Federal agencies under authorizations granted by the National Telecommunications and Information Administration (NTIA) in certain frequency bands. The Commission also proposes to amend a footnote to the Allocation Table to permit a Federal MSS system to operate in the 399.9–400.05 MHz band; also makes alternative proposals to modify the Allocation Table to provide access to spectrum on an interference protected basis to Commission licensees for use during the launch of launch vehicles (i.e. rockets). The Commission also seeks comment broadly on the future spectrum needs of the commercial space sector. The Commission expects that, if adopted, these proposals would advance the commercial space industry and the important role it will play in our nation's economy and technological innovation now and in the future.

DATES: Comments must be filed on or before August 30, 2013, and reply comments must be filed on or before September 30, 2013.

FOR FURTHER INFORMATION CONTACT: Nicholas Oros, Office of Engineering and Technology, 202–418–0636,

Nicholas.oros@fcc.gov, TTY (202) 418–2989.

ADDRESSES: You may submit comments, identified by ET Docket No. 13–115, RM–11341, by any of the following methods:

▪ *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

▪ *Federal Communications Commission's Web site: http://www.fcc.gov/cgb/ecfs/.* Follow the instructions for submitting comments.

▪ *Email:* [Optional: Include the Email address only if you plan to accept comments from the general public]. Include the docket number(s) in the subject line of the message.

▪ *Mail:* [Optional: Include the mailing address for paper, disk or CD–ROM submissions needed/requested by your Bureau or Office. Do not include the Office of the Secretary's mailing address here.]

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Notice of Proposed Rule Making,* ET Docket No. 13–115, FCC 13–65, adopted May 9, 2013, and released May 9, 2013. The full text of this document is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–A257), 445 12th Street SW., Washington, DC 20554. The complete text of this document also may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc., 445 12th Street SW., Room, CY–B402, Washington, DC 20554. The full text may also be downloaded at: *www.fcc.gov.*

Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings,* 63 FR 24121 (1998).

▪ *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS: *http://fjallfoss.fcc.gov/ecfs2/.*

▪ *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

▪ All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St. SW., Room TW–A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of *before* entering the building.

▪ Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

▪ U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW., Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

Summary of the Notice of Proposed Rulemaking

1. The National Space Policy recognizes that ''[a] robust and competitive commercial space sector is vital to continued progress in space.'' In the Notice of Proposed Rulemaking (NPRM) the Commission addresses the spectrum needs of two separate, but closely related portions of the commercial space sector: the commercial communications satellite industry and the commercial space launch industry. It is our expectation that, if adopted, these proposals would advance the commercial space industry and the important role it will play in our nation's economy and technological innovation now and in the future.

2. To advance the goals of the National Space Policy, the Commission presents two alternative proposals in the NPRM to provide Federal earth stations that communicate with non-Federal Fixed-Satellite Service (FSS) and Mobile-Satellite Service (MSS) space stations interference protection identical to that afforded to non-Federal earth stations communicating with the same FSS and MSS space stations. Under the first proposal the Commission proposes to modify the Allocation Table in Section 2.106 of the rules to add a Federal allocation for the FSS bands, along with a footnote restricting Federal use to earth stations communicating with non-Federal space stations. In the second proposal it proposes to place a footnote in the Allocation Table in the FSS bands that provides that Federal earth stations that communicate with non-Federal FSS and MSS space stations would receive interference protection identical to that afforded to non-Federal earth stations communicating with the same FSS and MSS space stations.

3. The Commission also proposes in the NPRM to amend a footnote to the Allocation Table to permit a Federal MSS system to operate in the 399.9–400.05 MHz MSS band. This action would allow traffic to be migrated from Argos, the existing Federal MSS system, to a new Federal satellite system, thereby resulting in less interference and improved service and reliability for users of both the existing and new Federal MSS systems. No Federal or non-Federal MSS systems have been deployed in this band since it was allocated for MSS in 1993, and this proposed Federal allocation will permit long-vacant spectrum to be put to an important use.

4. Finally, in the NPRM the Commission proposes several alternatives for providing spectrum for use during commercial space launches, thereby providing launch vehicles with interference protection. During launches, spectrum in the 420–430 MHz, 2200–2290 MHz, and 5650–5925 MHz bands is typically used to send a self-destruct signal to the launch vehicle (if needed) and information from the launch vehicle to controllers on ground, as well as to track the launch vehicle by radar. Because these frequency bands are allocated only to Federal use for these purposes, the Commission may not issue licenses for these bands that provide interference protection to commercial space launch operators. The Commission seeks comment on two possible options to support commercial space launches by either adding a co-primary non-Federal allocation to these bands or by providing an Allocation Table footnote to allow non-Federal use of these bands to provide commercial entities access to these important spectrum resources. The Commission also seeks comment on ways to ensure the long term sustainability of the commercial launch industry by exploring other alternatives to use of these bands as more commercial

launches are conducted and more private spaceports are established.

A. Expanded Federal Use of the Non-Federal FSS and MSS Bands

5. In August 2006, the National Telecommunications and Information Administration (NTIA) filed a petition requesting that the Commission initiate a rulemaking to permit Federal earth stations that are authorized by NTIA and that operate with non-Federal satellites to have primary status in a number of frequency bands currently allocated for non-Federal FSS and non-Federal MSS on a primary basis. Earth stations authorized by NTIA must now operate on a non-interference basis. Alternatively, Federal agencies may lease services from a licensee of an FCC-authorized earth station to operate with interference protection. NTIA requests that the Federal Table be modified to add a primary FSS allocation along with a footnote that would restrict primary Federal use of these bands to Federal earth stations accessing non-Federal satellites. The NTIA petition outlines a means for Federal agencies to deploy their own earth stations to overcome the uncertainties associated with operating on a non-interference basis and the limitations of leasing services through a third party operator. Such a modification would turn certain exclusive non-Federal use frequency bands into shared Federal/non-Federal spectrum, although use of these bands by Federal agencies would be limited by the terms of the footnote. The allocation and footnote that NTIA requests would mirror an existing Federal allocation for a number of MSS bands. These MSS bands have co-primary Federal and non-Federal allocations along with footnote US319, which restricts Federal MSS earth stations in the bands to operating with non-Federal space stations.

6. NTIA's petition identifies 13.275 gigahertz of spectrum in ten frequency bands for which it seeks primary status. As background, spectrum used for satellite communications is divided into different frequency bands which are referred to with letter designations, such as the C-band, Ku-band, or Ka-band. The spectrum which the NTIA petition identifies falls into parts of four of these lettered satellite bands: 3.6–4.2 GHz and 5.85–6.725 GHz (in the C-band); 10.7–12.2 GHz, 12.7–13.25 GHz, and 13.75–14.5 GHz (in the Ku-band); 18.3–19.3 GHz, 19.7–20.2 GHz, and 27.5–30 GHz (in the Ka-band); and 37.5–39.5 GHz and 47.2–50.2 GHz (in the V-band). The Commission notes that all of the bands addressed in the NTIA petition are allocated for the FSS. In the FSS, earth stations in stationary locations communicate with space stations (*i.e.* satellites). In addition, a portion of the Ka-band from 19.7–20.2 GHz and 29.5–30.0 GHz is also allocated on a primary basis to the MSS with MSS use for most of this spectrum restricted to satellite systems that are also in the FSS. In the MSS mobile earth stations communicate with space stations.

7. Comments received in response to NTIA's petition were generally supportive but did express a number of specific reservations. For example, the Satellite Industry Association (SIA) stated that non-Federal commercial and experimental license applicants should not face delays because of the need for the Commission to coordinate applications with NTIA. The Fixed Wireless Communications Coalition commented that Federal earth stations should be required to conduct coordination with terrestrial stations sharing the same band prior to applying for a license as is required for non-Federal earth station applicants. SIA, Hispasat, and Lockheed Martin believe that Federal earth stations should be subject to the Commission's technical and enforcement rules, which is not normally the case for Federal agencies.

8. The Commission seeks comments generally on the benefits of greater Federal use of commercial satellite networks. For example, would Federal agencies increase their use of commercial satellite networks to accomplish their missions with greater efficiency and reduced costs while meeting the national policy objective requiring the use of commercial satellite systems? Would increased Federal use of commercial satellites serve to strengthen the commercial satellite industry—a vital component of the economy and an important driver of United States productivity?

9. The FSS has operated under a regulatory framework in which the Commission establishes the technical and licensing rules for space stations and earth stations operating as integrated systems, thereby enabling many earth stations to be authorized and operate independently of each other with little risk of interference even if they communicate with the same space station. NTIA requests that Federal earth stations it authorizes be allowed to operate with the same regulatory status as non-Federal earth stations in the same frequency band. In order to accomplish this objective, it requests a modification of the Federal Table to include a co-primary FSS allocation in certain frequency bands for Federal earth stations communicating with commercial satellites. This allocation approach would increase uncertainty over who is the regulator of the satellite systems that operate in these bands. NTIA states that the Commission would not be required to consult with NTIA or other Federal agencies regarding these bands any more than they currently coordinate, NTIA would utilize the current FCC processes as much as possible, and the current FCC process would remain as it is today for non-Federal earth station applications.

10. Based on the Commission's experience in spectrum management in conjunction with NTIA, and in consideration of the goals of the National Space Policy as well as the comments it received in response to the Public Notice that the Commission issued subsequent to receiving NTIA's petition, the Commission recognizes that a policy guiding Federal use of commercial satellite networks can be successful only if it provides a clear method for establishing and enforcing operational rights and responsibilities that can be applied consistently regardless of whether the user is licensed by the Commission or authorized by NTIA. The Commission has identified and seeks comment on the following four key objectives, which it believe best express this intent:

- To ensure parity between Federal and non-Federal earth stations;
- To provide certainty that the Commission retains regulatory oversight of the satellite network and the FSS even though the Commission would license non-Federal earth stations, and NTIA would authorize Federal earth stations;
- To ensure that the rules and procedures do not hinder the Commission's rulemaking processes or delay the issuance of Commission licenses and coordination in the affected bands; and
- To establish procedures to ensure that both Federal and non-Federal earth stations comply with the Commission's rules for operating in the frequency bands.

11. The Commission seeks comment on the means by which it can provide interference protection to Federal earth stations used to access commercial satellite networks. First, the Commission addressed the commercial satellite frequency bands where NTIA has requested that it should place Federal earth stations on an equal footing with non-Federal earth stations. The Commission then outlined two proposals for providing Federal agencies with interference-protected access to these frequency bands. The first proposal follows NTIA's suggested approach by adding a co-primary Federal FSS and MSS allocation to the

Federal Table as well as a footnote that limits primary Federal use of the bands to earth stations communicating with non-Federal satellites. The second approach retains the existing non-Federal allocation structure in those satellite bands, but adds a footnote to the U.S. Table that recognizes the interference protection status for certain Federal earth stations in communication with non-Federal space stations

12. The Commission proposes to modify the U.S. Table using one of the approaches discussed to provide Federal earth stations interference protection in the frequency bands proposed by NTIA, with the exception of 3600–3700 MHz Band for which it tentatively concluded not to change the Allocation Table because the Commission has recently initiated a proceeding to make the band available for wireless broadband. The Commission seeks comment generally on this proposal. It recognizes that use of some of these bands for commercial satellite services has evolved since the NTIA petition was filed, that Federal agency use of the commercial satellite services may vary among the different frequency bands, and that in some bands Federal access may not be needed at all. The Commission thus seeks comment on whether Federal access should be added for those frequency bands discussed that are most likely to meet the needs of Federal earth station users.

13. In a number of the NTIA requested bands, the FSS shares spectrum with terrestrial services. These include the C-band and the extended Ku-band. In bands shared between terrestrial and satellite users, coordination between terrestrial licensees and earth stations is required to prevent interference. Should the complexity that this coordination adds to licensing of earth stations in these bands affect our decision to add a co-primary Federal allocation to these bands? In addition, portions of the Ka-band and V-band have been designated for terrestrial use. Should the Commission consider modifying the Allocation Table to provide protection to Federal earth stations in the portions of these bands designated for terrestrial services?

14. *Allocation Approach:* The Commission seeks comment on whether it should amend the Federal Table to add a co-primary Federal FSS or MSS allocation to the selected bands. Under this proposal (the ''allocation approach''), the Commission would also add a footnote to the Federal Table restricting primary use of Federal earth stations in these bands to communication with non-Federal space stations. Under the allocation approach, Federal agencies authorized by NTIA to operate earth stations in these bands would have co-primary status with Commission-licensed non-Federal earth stations. The allocation approach mirrors NTIA's request.

15. Successful implementation of the allocation approach will require agreement by NTIA and the Commission on coordination procedures that Federal agencies would follow for authorizing Federal earth stations. The Commission proposes that Federal users would follow a process similar to that used by Commission applicants to obtain approval to use earth stations in the FSS bands. This process is especially important for preventing interference where the FSS shares the band with terrestrial services, such as the C-band and extended Ku-band. Interference between earth stations communicating with different space stations is largely avoided because the Commission's rules require that earth stations use directional antennas and that space stations are separated by 2 degrees in the orbital arc. To avoid interference between terrestrial stations and earth stations sharing the same band, the Commission's rules rely on coordination between operators of these stations prior to issuance of a license. The Commission's rules require an applicant for an FSS earth station license in bands shared with terrestrial services to conduct a frequency coordination analysis prior to filing an application. This frequency coordination analysis requires the applicant to perform an interference analysis for each ''close by'' terrestrial station for which a license or construction permit has been granted or an application has been filed. The applicant must provide the interference analysis and technical information about the earth station to each of these terrestrial station licensees, permittees, or applicants. The terrestrial station licensee, permittee, or applicant then responds to the earth station applicant if it has an interference concern. The parties may resolve potential interference by an agreement that is filed with the application. Applicants for fixed point-to-point microwave licenses in bands shared with the FSS must coordinate their proposed links with nearby earth stations prior to filing their applications using a similar process. In addition to the coordination requirements for terrestrial stations, the Commission's rules also impose coordination requirements on earth stations with antennas that do not meet specified off-axis EIRP envelopes. These earth stations, called non-conforming earth stations, must be coordinated with satellites within a 6 degree orbital separation of the satellite the earth station will be communicating with. A statement that this coordination has been conducted must be included in the application for the earth station.

16. The Commission proposes the following procedures to be agreed iupon and followed by the Commission and NTIA to ensure parity between Federal and non-Federal earth stations. The Federal agency would request approval from NTIA to deploy and operate an earth station. In bands shared with terrestrial users such as the C-band and extended Ku-band, either NTIA or the Federal agency would coordinate with terrestrial stations as required by the Commission's rules. For non-conforming earth stations in any satellite band, either NTIA or the Federal agency would coordinate the proposed earth stations with other satellites as required by the Commission's rules. After such coordination, NTIA would send the request to the Commission, providing all technical information that would be provided by a non-Federal applicant, such as station location and basic technical characteristics. The Commission would process the request in the same way as it would process applications for Commission licenses. The Commission would place the request on public notice. Following the public notice period, if the Commission determines that the request meets all technical criteria for licensing (*i.e.,* that the application would be granted if it were submitted by a non-Federal entity), the Commission would notify NTIA and make an entry in the Commission's database indicating the technical characteristics of the station and its protected status. The Commission's database entries will facilitate future coordination with terrestrial operations sharing the satellite bands. In bands where there are no terrestrial stations or where the earth stations are conforming, there will be no need to coordinate the earth station application prior to NTIA filing a request with the FCC. In that case, NTIA would file a request with the FCC providing all technical information that would be provided by a non-Federal applicant, such as station location and basic technical characteristics. The Commission would place the request on public notice. Following the public notice period, if the Commission determines that the request meets all technical criteria, the Commission would notify NTIA and make an entry in the Commission's database indicating the technical

characteristics of the station and its protected status. The Commission seeks comment on these coordination procedures. Because it is proposing that Federal agencies would follow the same technical requirements and procedures as Commission licensees in obtaining authorization to operate earth stations, the Commission believes there would be no negative effect on emergency response communications. The Commission seeks comment on this proposal.

17. Under the proposed allocation approach, these FSS bands would be shared Federal/non-Federal FSS bands. Under existing coordination procedures the Commission routinely coordinates license applications for bands shared with Federal stations with NTIA. The Commission believes that the addition of the Federal earth stations should not require any additional coordination procedures for non-Federal applicants. Accordingly, the Commission proposes that applications for Commission licenses using frequencies currently allocated for exclusive non-Federal use not be coordinated with NTIA. To enable protection of government FSS earth station operations in these new bands, the Commission proposes that the Federal agencies or NTIA monitor Commission public notices regarding filed earth station applications to determine whether proposed non-Federal terrestrial stations raise any interference concerns to existing Federal earth stations. If a proposed non-Federal station will cause interference to an existing Federal earth station, NTIA could file an opposition to the earth station application in accordance with established Commission procedure. The Commission will consider any such opposition in the same manner as oppositions filed by other parties. The Commission seeks comment on these proposals, as well as any other considerations that may impact the process currently used by FCC and NTIA for frequency coordination. For parties proposing additional coordination approaches, the Commission ask that they also include an analysis on timing and cost of such an approach.

18. Under our existing procedures under the MOU, the Commission and NTIA coordinate proposed actions that could potentially cause interference to Federal operations, including changes to our technical or service rules in shared Federal/non-Federal bands. The Commission's *ex parte* rules generally exempt presentations by NTIA in matters over which NTIA and the Commission share jurisdiction. Thus, Federal agencies may be afforded an opportunity to participate, through NTIA, in rulemakings in a manner unavailable to non-Federal licensees. The Commission invites comment on how it might continue to protect against harmful interference to or from Federal earth station operations in a manner that is consistent with the coordination practice as set forth in the MOU, while at the same time ensuring transparency, fairness, and integrity in the Commission's decision making process.

19. The Commission believes that under an allocation approach, it would need to include in the footnote that we propose to add to the Federal Table a requirement that Federal earth stations in these bands comply with part 25 of the Commission's rules. Are there other ways that the Commission could ensure that Federal agencies exercise only the same rights and obligations that are afforded similarly situated non-Federal entities? For example, if Federal agencies are not required to follow the Commission's technical rules, including coordination procedures, what rules should they follow? The Commission also seeks comment on how to treat Federal agencies operating under a direct allocation but that are not in compliance with the footnote. If interference occurs between Federal earth stations and non-Federal stations, how should it be resolved?

20. The Commission's part 25 rules permit operation of Vehicle Mounted Earth Stations (VMES), Earth Stations on Vessels (ESV), and Earth Stations Aboard Aircraft (ESAA) in a number of FSS bands. VMES, ESV, and ESAA may have either primary or secondary status depending on the particular FSS band or on whether the ESV or VMES is in motion. The Commission notes that under the allocation approach NTIA would be able to authorize Federal agencies to operate VMES, ESV, and ESAA in the bands to which we are adding a Federal FSS allocation to the same extent and with the same restrictions as Commission licensees. Federal agencies would be expected to comply with all of the part 25 rules pertaining to VMES, ESV, and ESAA and with the footnotes to the Allocation Table regarding VMES, ESV, and ESAA. The Commission seeks comment on this proposal.

21. Under the allocation approach, the Commission proposes to amend the Federal Table by adding the following primary allocations: (1) ''FIXED–SATELLITE (space-to-Earth)'' to the 3700–4200 MHz, 10.7–12.2 GHz, and 37.5–39.5 GHz bands; (2) ''FIXED–SATELLITE (Earth-to-space)'' to the 5850–6725 MHz, 12.7–13.25 GHz, 13.75–14.5 GHz, 27.5–30 GHz, and 47.2–48.2 GHz bands; (3) ''MOBILE–SATELLITE (space-to-Earth)'' to the 19.7–20.2 GHz band; and (4) ''MOBILE–SATELLITE (Earth-to-space)'' to the 29.5–30 GHz band. It also proposes to add new footnote US107 to the Allocation Table that would restrict Federal stations in the FSS to earth stations operating with non-Federal space stations in these ten frequency bands, with the exception of Federal earth stations in three locations that operate in the 18.3–19.3 GHz and 19.7–20.2 GHz bands. In addition, the Commission proposes to amend US319 by adding the 19.7–20.2 GHz (space-to-Earth) and 29.5–30 GHz (Earth-to-space) bands, thereby restricting Federal MSS stations in those bands to earth stations operating with non-Federal space stations. It also takes this opportunity to propose to revise the text of US319 so that it parallels the text of proposed footnote US107 and to renumber footnote US319 in frequency order as footnote US46. The Commission seeks comment on these proposals.

22. Further, if the Commission adopts the allocation approach, it proposes to reclassify all non-Federal footnotes that apply to the non-Federal FSS allocations in the proposed frequency bands (NG52, NG53, NG54, NG55, NG143, NG164, NG165, NG166, NG180, NG181, NG183, NG185, NG187) as U.S. footnotes. In particular, the Commission notes that seven of these non-Federal footnotes (NG52, NG54, NG55, NG180, NG181, NG183, NG187) authorize mobile applications (*i.e.,* ESV, VMES, and ESAA) in the fixed-satellite service. The Commission seeks comment on this proposal.

23. Finally, the Commission proposes to add all international and U.S. footnotes that apply to the non-Federal FSS and MSS allocations in the requested bands to the Federal Table. It request comment on this proposal.

24. In seeking comment on our proposal to add a primary Federal allocation to the Allocation Table for these satellite bands, the Commission urges commenters to discuss how implementation of the allocation approach can satisfy the four key objectives that it has defined. The Commission likewise seeks comment on the process it proposes for Federal users to obtain approval to operate earth stations in these satellite bands. Can the allocation approach sufficiently protect the interests of non-Federal licensees in both the FSS and other services operating in these bands? Would the approach provide the flexibility needed for Federal users to effectively make use of the commercial satellite services? Are there additional steps we should take to

ensure that non-Federal users are protected from harmful interference from Federal earth stations? How could NTIA's ''treat the same'' request be most effectively realized and how could the concerns that commenters have raised regarding NTIA's petition be addressed? The Commission also seeks comment on the costs and benefits of the allocation approach.

25. *Interference Protection Approach:* Under our second proposal the Commission would add the following U.S. footnote to both the Federal Table and non-Federal Table for each of the FSS bands included in NTIA's petition:

USxxx The following provisions shall apply to Federal earth stations that operate with non-Federal space stations in the fixed-satellite service (FSS), and in the bands 19.7–20.2 GHz and 29.5–30 GHz, the mobile-satellite service (MSS), in accordance with the Commission's rules and regulations (see in particular the technical requirements of 47 CFR part 25) and that are authorized by NTIA:

(a) Federal earth stations that receive signals in the bands 3700–4200 MHz, 10.7–12.2 GHz, and 37.5–39.5 GHz can claim protection from harmful interference from non-Federal stations to which these frequencies are assigned at a later date even though there are no Federal FSS or MSS allocations in these bands.

(b) Federal earth stations that receive signals in the bands 18.3–19.3 GHz and 19.7–20.2 GHz from non-Federal space stations in the FSS can claim protection from harmful interference from non-Federal stations to which these frequencies are assigned at a later date.

(c) Non-Federal stations cannot claim protection from harmful interference from Federal earth stations to which frequencies in the bands 5850–6725 MHz, 12.7–13.25 GHz, 13.75–14.5 GHz, 27.5–30 GHz, and 47.2–48.2 GHz have previously been assigned even though there are no Federal FSS or MSS allocations in these bands.

(d) *Mobile applications in the non-Federal FSS.* Federal Earth Stations on Vessels (ESVs), Vehicle Mounted Earth Stations (VMES), and Earth Stations Aboard Aircraft (ESAA) may also operate in accordance with footnotes NG52, NG54, NG55, NG180, NG181, NG183, NG187, and US133.

26. Under this proposal the Commission would not place Federal FSS and MSS allocations in the Federal Table as shown in Appendix A of the NPRM. The footnote it proposes to add to the Table of Allocations under this approach (the ''interference protection approach'') would permit Federal earth stations in communication with non-Federal space stations to receive interference protection equivalent to that afforded non-Federal earth stations in the commercial satellite bands requested by NTIA. In addition to restricting Federal earth stations to operating with non-Federal satellites as the allocation approach does, this footnote would provide interference protection to the Federal earth stations under the condition that they comply with the Commission's technical rules. Under the interference protection approach the bands will not contain a Federal FSS or MSS allocation in the Federal Table and would not be considered shared Federal/non-Federal bands. Federal agencies authorized by NTIA to operate earth stations in these bands would operate on the same basis as Commission-licensed non-Federal earth stations, so long as the Federal agency's operations are consistent with part 25 of the Commission's rules. Federal agencies would, for example, have interference protection against later-entering FCC licensees that they do not currently enjoy. The interference protection approach would entail coordination procedures similar to those proposed under the allocation approach but, under either approach, the Commission seeks to ensure parity in the context of future rulemaking proceedings affecting these bands. It seeks comment on those aspects of the proposed approaches.

27. As with the allocation approach described, successful implementation of the interference protection approach will require agreement by NTIA and the Commission on coordination procedures that Federal agencies would follow for authorizing Federal earth stations. The Commission seeks comment on whether the process described with regard to the allocation approach should be followed for Federal agencies to obtain approval to use an earth station in these bands. This process would require Federal agencies to request approval from NTIA to set up an earth station, NTIA or the Federal agency to coordinate the earth station in bands shared with terrestrial users and for non-conforming earth stations, NTIA to send the request to the Commission, and the Commission to place the request on public notice. The Commission seeks comment on the use of these procedures in association with the interference protection approach.

28. While the Commission recognizes that the interference protection approach differs from the plan suggested in the NTIA petition, it also believes that it will meet the objective of the NTIA petition—to provide interference protection to Federal earth stations and to place Federal earth stations on an equal footing with earth stations licensed by the Commission. Moreover, the Commission believes that the interference protection approach is well suited to meeting the four objectives it believes are necessary for the success of any policy guiding Federal use of commercial satellite networks and we seek comment on this tentative conclusion.

29. Because Federal and non-Federal earth station operators will be communicating with the same Commission-approved space stations, the Commission seeks to ensure parity between Federal and non-Federal earth stations. The technical and coordination requirements contained in part 25 of the Commission's rules are designed to prevent interference between users of the satellite bands and should apply to all earth station users, both Federal and non-Federal. To facilitate the harmonious sharing of the bands among all users, the proposed footnote explicitly conditions protected operation of Federal earth stations in these bands on the earth stations complying with part 25 of the Commission's rules. The Commission seeks comment on this approach.

30. Under the interference protection approach, no Federal allocation would be added to the satellite bands, and thus those satellite frequency bands that are currently exclusively non-Federal would not become shared Federal/non-Federal spectrum. Because the Federal and non-Federal earth stations both communicate with the same commercial satellites, it is important that the satellite network as a whole remain under the Commission's oversight, even when the authority to operate the Federal and non-Federal earth stations is granted by different entities. This approach would continue to ensure the effective regulation by the Commission of the space and earth segments provided by commercial space stations. The Commission seeks comment on this view.

31. As discussed, under our *ex parte* rules, presentations by NTIA are normally exempt from *ex parte* restrictions in matters involving shared jurisdiction. Unlike other parties, NTIA is able to make presentations to the Commission in its role as a co-regulator without disclosing the content of the presentations on the record at the time it makes each presentation. Even when the Commission makes NTIA materials public, other parties may not have the opportunity to respond to the presentation's content prior to adoption of the Commission's rulemaking action unless NTIA submits the information into the record beforehand. If the Commission adopts the interference protection approach it would not add a Federal allocation to these bands, but Federal agencies would be on an equal footing with non-Federal users. To ensure this parity in the context of

rulemaking proceedings affecting these bands, the Commission seeks comment on whether the exemption from *ex parte* disclosure requirements should apply to any presentations made by NTIA on behalf of Federal agencies using or seeking to use earth stations under our proposed rules herein.

32. The interference protection approach would avoid subjecting non-Federal earth station applicants to new licensing procedures, such as additional approval and coordination requirements. As discussed, license applications in bands shared with Federal users are, in general, coordinated with NTIA. Under the interference protection approach, the satellite bands that are exclusively non-Federal would not acquire a Federal allocation and therefore will not become shared Federal/non-Federal bands. As a result, the Commission proposes not to coordinate license applications with NTIA in these bands. Rather, it proposes that Federal earth stations listed in the Commission's publicly-available database will be protected from interference in the same manner as non-Federal stations. The Commission seeks comment on this approach.

33. There are a number of bands allocated for the FSS included in the NTIA petition that have Federal allocations. For example, the 13.75–14 GHz portion of the extended Ku-band is shared with Federal radars and NASA's Tracking and Data Relay Satellite System. The Ka-band downlink has a Federal co-primary FSS allocation that is restricted to use at three earth station locations. The 48.2–50.2 GHz portion of the V-band has a primary Federal FSS allocation. The Commission is not proposing under the interference protection approach to change the application of the coordination process with NTIA with regard to these and other shared bands with Federal and non-Federal allocations.

34. The Commission believes that the interference protection approach can provide assurance that the Commission's rules and practices will be applied in a consistent manner regardless of whether the applicant is a Federal agency or a non-Federal entity that owns and operates the earth station communicating with a non-Federal space station. Our proposed footnote would condition protected operation of Federal earth stations in these bands on conformance with part 25 of the Commission's rules. If a Federal agency obtains approval from NTIA to operate an earth station in these bands and the earth station does not operate in conformance with our rules, the Commission would remove it from our database. These non-compliant stations would operate on a non-interference basis and would have to accept any interference from non-Federal stations—just as is the case today. This will provide an incentive for Federal earth stations to comply with the Commission's rules to mitigate the interference potential to both Federal and non-Federal stations. The Commission seeks comment on additional actions the Commission can take to provide assurance that Federal agencies will comply with the Commission's rules when using earth stations in these bands.

35. As mentioned, the Commission's part 25 rules permit operation of VMES, ESV, and ESAA in a number of FSS bands. The footnote it proposes under the interference protection approach would allow Federal agencies to operate VMES, ESV, and ESAA on an interference protected basis to the same extent as non-Federal licensees. Federal agencies would be expected to comply with all of the part 25 rules pertaining to VMES, ESV and ESAA and with the footnotes to the Allocation Table regarding VMES, ESV, and ESAA. The Commission seeks comment on this proposal.

36. The Commission seeks comment on the costs and benefits of the interference protection approach. Do commenters agree with our observation that this interference protection approach would satisfy the four key objectives we believe are necessary to the establishment of a successful policy guiding Federal use of commercial satellite networks? Would this approach meet the needs of Federal users for protected access to the commercial satellite bands? The Commission likewise seeks comment on the process it proposes for Federal users to obtain approval to operate earth stations in these satellite bands. Would the process sufficiently protect the interest of non-Federal licensees in both the FSS and other services operating in these bands? Would the process provide the flexibility needed for Federal users to effectively make use of the commercial satellite services? Should the Commission take additional steps to ensure that non-Federal users are protected from harmful interference from Federal earth stations? Are there economic costs associated with the interference protection approach which should be considered?

B. Federal Space Stations in 399.9–400.05 MHz MSS Band

37. NTIA has requested that the Commission modify footnote US319 of the Allocation Table to allow Federal space stations (*i.e.* satellites) to operate in the 399.9–400.05 MHz band. This band is allocated to the MSS and the Radionavigation-Satellite Service on a primary basis in both the Federal and non-Federal Table. US319 prevents Federal space stations from operating in this band even though there is a co-primary Federal MSS allocation. NTIA requests that the footnote be modified to delete the 399.9–400.05 MHz band thereby allowing Federal satellites to operate in this band. According to NTIA, the allocation change will allow some applications to be shifted from the Argos satellite system operated by the National Oceanic and Atmospheric Administration (NOAA) to the 399.9–400.05 MHz band. NTIA claims that this will result in lower interference, higher capacity, and improved reliability and service for both the applications that continue to use Argos as well as the applications on the new satellite network to be deployed in the 399.9–400.05 MHz spectrum. There currently are no Commission licensees or applicants for this band.

38. The Commission proposes to modify US319 and to renumber this footnote in frequency order as US46. No MSS systems have been deployed or authorized in the 399.9–400.05 MHz band since the allocation was made almost twenty years ago and there are no pending applications or other proposed uses for this band. Given that the band has only a 150 kilohertz bandwidth, the band is not suitable for mobile broadband or most other applications. Rather than have the band lie fallow, the Commission tentatively concludes that the public interest is best served by allowing a Federal satellite system to be operated in this band so that the spectrum does not lay fallow. The Commission seeks comment on this proposal.

39. The Commission seeks comment on the cost and benefits of making this amendment to US319. While no MSS systems currently operate in the 399.9–400.05 MHz band, other parties may have interest in operating satellite systems in this band in the future. Given this possibility, the Commission seeks comment on whether operation of a Federal MSS system in this band would preclude operation of non-Federal MSS systems in the band in the future. It also recognizes that interference may occur from a Federal MSS system operating in 399.9–400.05 MHz to other nearby frequency bands. The 400.15–401 MHz band is also allocated for MSS while the 335.4–399.9 MHz band has a Federal fixed and mobile allocation. NTIA would be responsible for ensuring that any new Federal space stations

authorized in the 399.9–400.05 MHz band will not cause harmful interference to Federal systems operating in Federal allocations. The Commission seeks comment on whether a Federal MSS system operating in the 399.9–400.05 MHz band would cause harmful interference to systems operating in frequency bands allocated for use by non-Federal systems and, if so, what mitigation techniques are possible.

C. Spectrum Access for Commercial Space Operators

40. Three frequency bands are commonly used by Federal agencies for communications with and tracking of space launch vehicles: 420–430 MHz, 2200–2290 MHz, and 5650–5925 MHz. These bands currently have Federal, but no non-Federal, allocations supporting launches. Non-Federal use of these bands has been possible by granting Special Temporary Authorizations (STAs) for use of these bands when launches occur at Federal facilities. In this NPRM the Commission broadly seeks comment on the spectrum requirements to support development of the commercial launch sector. It is noted that the Commission has long regulated communication involving satellites. For purposes of this portion of the NPRM, however, our scope is limited to spectrum used during launches.

41. The Commission could take a number of different regulatory approaches to address the spectrum requirements of the commercial space sector. For example, it could modify the Allocation Table to include a non-Federal co-primary allocation for the 2200–2290 MHz and 5650–5925 MHz bands with a footnote providing for coordination with Federal operations in these bands for communications and tracking during launches. Alternatively, it could add a footnote to the Allocation Table to allow non-Federal use of certain Federal bands when supporting Federal launch missions or when conducting launches from Federal facilities. The Commission could also look to the 2360–2395 MHz band to satisfy the commercial launch sector spectrum requirements as this spectrum is currently shared on a co-equal basis for Federal and non-Federal aeronautical mobile telemetry uses. It seeks comment on the relative merits of each of these approaches. It also seeks comment on whether a non-Federal allocation in the 420–430 MHz band is necessary to support commercial launches. The Commission believes this action is necessary to support the forecasted increase in the number of commercial launches in the future. It seeks comment on these views.

42. Anticipating the need for non-Federal spectrum for communications for commercial launches, the Commission in 1990 set aside spectrum in the 2310–2390 MHz band for telemetry and telecommand use during commercial launches. In the intervening years the Commission has not authorized use of this spectrum for launches. Instead, commercial launches in the United States have continued to rely on Federal spectrum authorized by NTIA.

43. Recently, two launch vehicle manufacturers have applied to the Commission for access to Federal spectrum during commercial launches. The Commission is able to grant special temporary authority (STA) under the part 5 experimental licensing rules to commercial entities to operate in these Federal bands on a non-interference basis for a maximum of six months. This means that the experimental STA grantees are not allowed to cause interference to and must accept interference from Federal users of the band that are operating with authorizations. Because these bands have a Federal allocation, the Commission coordinates these experimental STAs with NTIA. Once these STAs have been coordinated with NTIA, the potential for interference to or from Federal systems to commercial launch operations is minimized.

44. Given the expected increase in commercial space flights, the continued use of experimental STAs for the radio spectrum needed for launches may create uncertainty. Because there is no non-Federal allocation allowing the use of these frequencies, each request to operate on these frequencies must be evaluated on a case-by-case basis, with no guarantee that one can be granted for any given launch. Given that a single launch can cost millions of dollars, commercial launch providers should not have to assume the risk that launches may have to be postponed or cancelled if an experimental STA is not timely granted. Even if an experimental STA is granted, the grantee must contend with the uncertainty of non-interference status. Communications links that operate on a non-interference basis are not likely to be acceptable from a safety standpoint for future manned spaceflights. The experimental STA process also increases the burden on commercial launch providers' time and expense, since each is evaluated on a case by case basis. Allocation status for commercial launch providers would enable the Commission to develop service rules for issuing authorizations using well-defined application and coordination processes. The Commission seeks comment on these tentative conclusions as well as the cost to the space launch industry of not having a non-Federal allocation in these bands. Consequently, it is proposing, and seeking comment, on adding non-Federal allocations to these three bands to allow Commission licensees to operate in these bands on an interference protected basis. The Commission seeks comment on possible approaches it could take to provide non-Federal entities with interference protection in these bands, such as adding a non-Federal allocation to the bands or the addition of a footnote to the Allocation Table that provides non-Federal entities with interference protection. The Commission notes that even these approaches require coordination with the Federal incumbents in the band.

45. The Commission recognizes that identifying the non-Federal spectrum needs associated with launch of a launch vehicle necessarily raises larger questions about the respective roles of the FCC and NTIA in future launch scenarios. At the most basic level, whether access to spectrum for use during a launch requires authorization from NTIA or a license from the Commission will depend on whether the radio transmitters belong to and are operated by the U.S. government. Making this determination is not always straightforward. As a practical matter, all launch vehicles launched in the past several decades have been built with substantial private company involvement. All regular commercial launches within the United States have been conducted from launch facilities owned by the Federal Government. Payloads launched from Federal launch facilities have included commercial communications satellites and satellites owned and operated by Federal agencies such as the Department of Defense and NOAA. Because multiple satellites can be launched into space on a single launch vehicle, both government and non-government payloads have been included on the same launch. There have also been several instances of Federal Government-owned equipment or sensors on commercial communications satellites. Given that Federal agencies are required to use commercial space services where possible, the Commission believes that there will be increasing Federal reliance on non-Federal operations.

46. The Commission seeks comment on how to determine whether a given launch is non-Federal or Federal for purposes of licensing spectrum for use

during a launch. According to the Communications Act, the Commission has authority to license radio stations except those ''belonging to and operated by the United States.'' Spectrum use by radio equipment belonging to or operated by Federal agencies is authorized by NTIA instead of licensed by the Commission. How easy or difficult has it been in practice to determine whether use of spectrum during launches should be licensed by the Commission or authorized by NTIA? How should factors such as the nature of the payload, the location of the launch, the provider of the launch vehicle, and whether the FAA classifies the launch as commercial be taken into account in making this determination?

47. Making non-governmental allocations within the 420–430 MHz, 2200–2290 MHz, and 5650–5925 MHz bands would be a first step to issuing licenses to commercial operators for use during launches. After the allocations are adopted, the Commission would have to open a proceeding to create service rules for non-Federal launches. It recognizes the critical nature of some of the Federal operations performed using these frequency bands, and realized that service rules would have to be carefully crafted to ensure that the commercial space launch operations do not interfere with the important Federal operations in these bands, particularly as the commercial launch sector expands. Accordingly, any service rules would be developed in close coordination with NTIA and the Department of Defense to assure the continued certainty that this spectrum remains available for priority use by critical systems. The FCC is committed to ensuring that our rules would require technical specifications, eligibility requirements, and coordination procedures necessary to preserve the nation's defense capabilities. Adoption of these service rules will allow the Commission to issue licenses to commercial launch operators for spectrum for use during launches without the uncertainty of operating on a non-interference basis. Because the bands would be shared Federal/non-Federal bands, use of spectrum for commercial space launches would be coordinated with the NTIA. In the short term, because the commercial launches will occur at relatively few locations and will not be an everyday occurrence, we believe that service rules and coordination procedures can be adopted that will prevent harmful interference from occurring to the Federal services in these bands or the commercial launch operators. In adopting service and licensing rules for these bands we must make sure that Federal operations are protected. The Commission seeks comment on these assumptions. Furthermore, it seeks comment on whether the existing Federal bands are able to sustain the anticipated growth of the commercial launch sector. Are there alternatives to use of these bands that may satisfy the commercial launch requirements?

48. What would be the costs and benefits of providing non-governmental access within the 420–430 MHz, 2200–2290 MHz, and 5650–5925 MHz bands? Would having access to portions of these bands meet the needs of commercial launch operators? What costs would be imposed on Federal agencies to coordinate use of the spectrum with commercial launch operators? Would having access to portions of these bands allow commercial launch operators to incur lower development costs because they will be able to use the same communications systems for both Federal and non-Federal launches? How would the costs and benefits of having access to portions of these bands compare with other spectrum bands that could be used instead of these bands? How can we best ensure that the anticipated growth of the commercial launch industry is sustained in the longer term?

49. The 420–430 MHz band is used to transmit a self-destruct signal from ground controllers to a launch vehicle during launch. This signal causes the launch vehicle to self-destruct if it goes off course and would pose a danger to a populated area. For safety reasons this communications link must be extremely reliable. NTIA has authorized a number of frequencies throughout the 420–430 MHz band for self-destruct signals at different Federal launch facilities.

50. Because the only non-Federal allocation for the 420–430 MHz band is for secondary amateur operations, the Commission cannot issue licenses that provide interference protection to commercial entities to use this band for self-destruct signals during launches. Commercial entities have not requested experimental STAs or licenses from the Commission for self-destruct signals in the 420–430 MHz band to date. In this regard, the Commission seeks comment on the requirements associated with command and destruct communications for commercial launch vehicles and whether access to the 420–430 MHz band is necessary. The commercial launch vehicle has only a receiver for the self-destruct signal and therefore does not require a license to transmit. If the self-destruct signal is being transmitted from a government owned facility using equipment under the control of Federal Government employees, no license from the Commission would be required. Instead, an authorization from NTIA would be needed.

51. The Commission seeks comment on whether it should make a co-primary non-Federal aeronautical mobile allocation for the 420–430 MHz band for use for self-destruct signals during commercial launches. In addition, it seeks comment on whether we should add a footnote to the Allocation Table restricting use of this non-Federal allocation to self-destruct signals during launches. Given that no one has requested an experimental STA from the Commission for this band for self-destruct signals, is there a need for access to the 420–430 MHz band for self-destruct signals and would the current STA process be sufficient to satisfy this need? As private spaceports are developed, use of Federal authorizations for this purpose may no longer be sufficient. Even when launches are conducted from Federal facilities, commercial entities conducting launches may want to use their own equipment for the self-destruct communications link and therefore would need a license from the Commission. Given the necessity of a reliable self-destruct communications link for the safety of the public, the use of a non-interference basis experimental STA would be problematic. The Commission acknowledges that use of this band for non-Federal space activities will require coordination with NTIA and Federal users of the band. The Commission proposes that any non-Federal use of the allocation should be limited to commercial launch activities. It seeks comment on this proposal as well as alternative bands that may be used for this purpose by the commercial launch sector.

52. The 2200–2290 MHz band is used for launch telemetry—*i.e.* the sending of information from the launch vehicle to ground controllers during the launch. The Commission proposes two alternative approaches that would provide commercial launch operators access to spectrum in the 2200–2290 MHz band for launch telemetry. As a first alternative, it proposes to add a footnote to the Allocation Table providing primary non-Federal space operation service allocations to portions of the 2200–2290 MHz band for launch telemetry. This footnote would require successful coordination of the assignment and use of the band for space launches with NTIA, would restrict non-Federal use of the band to

pre-launch testing and to use at Federal ranges, would limit non-Federal use of the band to the 2207–2219 MHz, 2270.5–2274.5 MHz, and 2285–2290 MHz portions of the band, and would limit non-Federal use of the band to channels with bandwidth of less than 5 MHz based on our understanding of current usage. As a second alternative the Commission proposes to amend the Allocation Table to add a non-Federal Space Operations allocation to the 2200–2290 MHz band. This allocation would be accompanied by a footnote to the Allocation Table with the same restrictions specified in the footnote proposed in the first alternative. The Commission seeks comment on these two alternative proposals. Which alternative would be better suited to meeting our goal of providing access to spectrum during launches for launch telemetry?

53. Because the 2200–2290 MHz band has no non-Federal allocation, the Commission does not license frequencies except on a non-interference basis. The primary Federal space operation service allocation enables NTIA to assign frequencies in the 2200–2290 MHz band to Federal agencies for telemetry during launches.

54. The 2200–2290 MHz band is heavily used by Federal agencies. The Commission seeks comment on whether there is sufficient spectrum available in this band for use during commercial launches, and, in particular, whether the use of this band could sustain the anticipated growth of the commercial launch sector. Using the same frequencies for Federal and non-Federal launches has distinct advantages for the commercial space industry. The equipment used for communications during launches has been developed and is reliable. Launch communications have successfully shared this band with the other services present for numerous launches through coordination of the various operations. Many commercial launches will occur from facilities co-located with Federal launch sites such as Cape Canaveral or Vandenberg Air Force Base where this sharing has been accomplished. In the future, the same companies will likely conduct launches for both Federal agencies and private entities and eventually likely transition to commercial space ports that are completely independent of Federal operations. The Commission seeks comment on whether requiring industry to have the capability to conduct communications in different bands depending on whether the launch is considered Federal or non-Federal would place an expensive burden on these companies. Providing access to spectrum that can sustain the short and long term needs of the commercial launch industry is in accordance with the policy of the United States government to develop a vibrant commercial space industry.

55. In both of the alternative proposals the Commission proposes that non-Federal use of the bands for space launches be limited to the 2207–2219 MHz, 2270.5–2274.5 MHz, and 2285–2290 MHz portions of the band. It has proposed this limitation based on our understanding of current usage. The Commission seeks comment on limiting non-Federal use to these portions of the band for space launches. Can limiting non-Federal use to this portion of the band support the expected growth of the commercial launch industry? It has also proposed to limit non-Federal use of these bands to communication channels with bandwidths of less than 5 megahertz based on our understanding of current usage. The Commission seeks comment on this limitation. In addition, it has proposed to limit non-Federal use of this band for space launches to pre-launch testing and for launches conducted at Federal ranges. The Commission proposes this restriction to limit the potential for interference to Federal operations to a few locations. As the commercial space ports are established that are independent of Federal operations would this restriction unduly limit the future growth of the commercial space launch industry?

56. As mentioned, in 1990 the Commission made six frequencies in the 2310–2390 MHz band available for both Federal and non-Federal use for telemetry and telecommand of launch and reentry vehicles. The Commission later reduced these to three frequencies in the 2360–2395 MHz band. The 2360–2395 MHz band is primarily used for aeronautical telemetry and telecommand operations for flight testing of aircraft and missiles. The Commission seeks comment generally on the use of these frequencies as an alternative to the heavily used 2200–2290 MHz band for communications during launches. In the time since the Commission made this spectrum available for launch telemetry, the intensity of use of this band for aeronautical telemetry for flight testing may have significantly changed. Does the current and expected future use of the 2360–2395 MHz band for aeronautical telemetry for flight testing make it unsuitable for communications associated with launch activity? What are the impediments to use of this band for commercial launches in the future? What are the spectrum requirements of the commercial launch sector in the short and long term and are the available frequencies in this band sufficient to meet, at least in part, these requirements? Because the number of frequencies available for launch vehicle telemetry and telecommand has been halved, would the needed data capacity be available for telemetry and telecommand during commercial launches? Should the Commission make the entire 2360–2395 MHz band available for telemetry and telecommand during commercial launches? Will the development of communications equipment for use on launch vehicles for this band place a significant economic burden on the commercial space industry? Prior to the Commission making frequencies in the 2310–2395 MHz band available for space launch telemetry, several commenters stated that it would be more cost efficient to use the same frequencies for both Federal and non-Federal launches and that the band should not be used until all Federal launch facilities had transitioned to the band. The Commission seeks comment on whether these concerns are still valid. Are there other reasons why the 2360–2395 MHz band is not a viable alternative to the 2200–2290 MHz band for telemetry during launches?

57. Looking beyond the 2360–2395 MHz band, the Commission seeks comment on alternatives to the use of the 2200–2290 MHz band for launch communications. It realizes that as the demand for spectrum increases, finding spectrum for new applications has become more difficult. That is especially the case for an application such as the space operation service, which involves transmitting high powered signals from high altitudes that may result in interference over a large area. Because these communications will take place from space, must the spectrum used be internationally allocated to the space operation service (space-to-Earth)? There is meager spectrum allocated for this purpose. Assuming that another suitable frequency band could be identified, would obtaining an international space allocation be a long process with uncertain success?

58. The 5650–5925 MHz band is used for radar tracking of a launch vehicle during launch. Because the radiolocation allocation in the 5650–5925 MHz band is Federal, the Commission can only license commercial entities to use the band to track launch vehicles on a non-interference basis. Federal radar facilities are able to track launches from government owned launch facilities

under current NTIA authorizations even for commercial launches. However, NTIA may not authorize radar transponders on commercial launch vehicles. In the future private spaceports may need to establish non-Federal radar facilities to track commercial launch vehicles or spacecraft. Even for commercial launches from government run launch sites, the commercial space operator may want to develop and use its own radar facilities to track the launch vehicle. Given the need for radar transponders on commercial launch vehicles or for non-government radar tracking of launch vehicles, the Commission makes two alternative proposals for providing non-Federal access to the 5650–5925 MHz band for tracking of launch vehicles. As a first proposal it proposes to add a footnote to the Allocation Table providing primary non-Federal Radiolocation service allocations to portions of the 2200–2290 MHz band for launch telemetry. This footnote would require successful coordination of the assignment and use of the band for space launches with NTIA and would restrict non-Federal Radiolocation use of the band to the tracking of launch vehicles during launches and for pre-launch testing. The second alternative proposal would add a non-Federal radiolocation allocation to the 5650–5925 MHz band with footnote containing the same restrictions. Is only a portion of the band needed for the tracking during launches? What are the spectrum and operational requirements for radar tracking of commercial launch vehicles in the short and longer term? Could launch vehicles instead be tracked in other radiolocation bands, whether Federal, non-Federal, or shared? Would the addition of a non-Federal radiolocation allocation introduce any compatibility issues with Intelligent Transportation Systems that are significantly different than compatibility with the existing Federal radiolocation allocation? The Commission also proposes to restrict non-Federal use of this band to use for launch activities. It seeks comment on these proposals.

Summary of the Notice of Inquiry

59. While the commercial space operations portion of the NPRM has focused on use of the 420–430 MHz, 2200–2290 MHz, and 5650–5925 MHz bands during launches, the Commission understands that the commercial space industry may have additional needs for spectrum in the future. In this *Notice of Inquiry,* the Commission launches an inquiry into the future spectrum requirements of the commercial space industry. It seeks comment broadly on what other spectrum needs may be important as the commercial space sector continues to develop. What spectrum will be required as commercial spaceports are developed where the established communications infrastructure that is in place at the government-owned launch facilities is not present? Are there communications needs during other portions of space missions after the launch such as during re-entry or the ''on orbit'' phase of a mission that require changes in allocations? Are there any other frequency bands, whether Federal, non-Federal, or shared that the commercial space industry will need access to? Can some of the spectrum needs of the commercial space industry be satisfied by purchasing or leasing spectrum from other licensees? Are there any portions of the Commission's rules that will need to be amended to keep pace with this rapidly changing industry?

60. While previous commercial launches have been conventional rockets, several companies plan to take passengers on suborbital spaceflights using spacecraft that have more in common with planes than rockets. For example, Virgin Galactic's spacecraft will be carried aloft suspended from a plane. The spacecraft will then be released by the plane and a rocket engine will be fired to propel it into space. The spacecraft will then glide back to earth for an unpowered landing in the same manner as NASA's space shuttle. XCOR Aerospace's spacecraft will take off on a horizontal runway like a plane, fire a rocket engine to propel it into space, and then glide back to earth for a horizontal landing. The spacecraft are only expected to reach altitudes of 100 km as compared to orbits of over 300 km for low earth orbit satellites and space stations. Given the airplane-like qualities of these spacecraft and their lower maximum altitudes, they may have different communications needs than conventional launches. Because the spacecraft will glide back to earth will their frequency use have to be coordinated over a much larger area than conventional launches and reentries? Will access to the spectrum used by commercial aviation under the part 87 Aviation Services be more appropriate for all or part of the spacecraft's flight? Would the Commission need to initiate a proceeding to modify part 87 to meet the needs of these commercial spacecraft? The Commission seeks comment generally on the communication needs of these spacecraft.

61. Bigelow Aerospace has announced plans to have a commercial space station in orbit as early as 2016. Presumably, a space station with human habitation will need reliable communications with earth based ground stations. The Commission seeks comment generally on the communications needs of such a space station. Will additional allocations of spectrum be necessary to support a commercial space station? What modifications to the Commission's rules will be needed to support the communication needs of the space station?

Procedural Matters

Initial Regulatory Flexibility Analysis

62. As required by the Regulatory Flexibility Act (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rule Making (NPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided on the first page of this NPRM. The Commission will send a copy of this NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the NPRM and IRFA (or summaries thereof) will be published in the **Federal Register**.[3]

A. Need for, and Objectives of, the Proposed Rules

63. The United States government and commercial entities have filled distinct roles in regard to activities in space. However, in recent years the roles of the Federal Government and private sector have become blurred. Federal policy directs agencies to use commercial satellite services unless specific mission requirements cannot be met, and many Federal agencies now rely on commercial communication satellites for service. NASA has contracted with commercial entities to carry cargo to the International Space Station (ISS), and in the future commercial spacecraft are expected to carry crew members to the ISS. Also, several privately owned spaceports have been licensed for future

[1] *See* 5 U.S.C. 603. The RFA, *see* 5 U.S.C. 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Public Law 104–121, Title II, 110 Stat. 857 (1996).

[2] *See* 5 U.S.C. 603(a).

[3] *See id.*

launches. As a result, the Commission's rules must evolve to reflect the increased reliance of Federal agencies on commercial space services and the continued development of the commercial space sector. The Notice of Proposed Rulemaking (NPRM), proposes several modifications to the Table of Frequency Allocations in Section 2.106 of our rules (Allocation Table) to reflect this new reality.

64. The NPRM makes two alternative proposals to modify the Allocation Table to provide interference protection for Fixed-Satellite Service (FSS) and Mobile-Satellite Service (MSS) earth stations operated by Federal agencies under authorizations granted by the National Telecommunications and Information Administration (NTIA) in certain frequency bands. These frequency bands which are used to provide commercial satellite service are: 3.6–4.2 GHz, 5.85–6.725 GHz, 10.7–12.2 GHz, 12.7–13.25 GHz, 13.75–14.5 GHz, 18.3–19.3 GHz, 19.7–20.2 GHz, 27.5–30.0 GHz, 37.5–39.5 GHz and 47.2–50.2 GHz. Federal agencies are not, for the most part, currently able to operate their own earth stations on an interference-protected basis in these bands to use commercial satellite services. Under a first proposal, the Commission would add a co-primary Federal FSS or Federal MSS allocation in the Allocation Table for these frequency bands. In conjunction with this modification of the Allocation Table, we would add a footnote to the Allocation Table restricting primary use of Federal earth stations in these bands to communication with non-Federal satellites. A second alternative proposal would modify the Allocation Table by adding a footnote that gives Federal earth stations communicating with non-Federal satellites in these frequency bands interference protection equivalent to that afforded to non-Federal earth stations. The Federal earth stations will receive interference protection only if they operate in accordance with the Commission's rules. Either of these proposals would allow Federal agencies to obtain the same rights to interference protection accorded to Commission licensees when using earth stations to communicate with commercial satellite networks.

65. The NPRM also proposes to amend a footnote to the Allocation Table to permit a Federal MSS system to operate in the 399.9–400.05 MHz band. Deployment of this Federal system will allow traffic to be migrated from the existing Argos Federal MSS system, thereby resulting in less interference and improved service and reliability for users of both the existing Argos and the new Federal MSS systems. No Federal or non-Federal MSS systems have been deployed in this band since it was allocated in 1993. This proposed allocation will permit long vacant spectrum to be put to an important use.

66. The NPRM also makes alternative proposals to modify the Allocation Table to provide access to spectrum on an interference protected basis to Commission licensees for use during the launch of launch vehicles (*i.e.* rockets).[4] During launches, spectrum in three frequency bands is typically used to send information from the launch vehicle to controllers on ground (2200–2290 MHz), send a self-destruct signal to the launch vehicle if needed (420–430 MHz), and to track the launch vehicle by radar (5650–5925 MHz). Because all of these frequency bands have only Federal allocations for these purposes, the Commission can not issue licenses for these bands except on a non-interference basis. As a result, commercial space launch operators are not allowed to cause interference to and must accept interference from Federal users in these bands. Under a first proposal, the Commission would add a footnote to the Allocation Table providing primary non-Federal allocations to the 2200–2290 MHz and 5650–5925 MHz bands. The footnote would restrict the allocations to use during space launches and pre-launch testing at Federal ranges and would require successful coordination of the assignment and use of the band for space launches with NTIA. Under a second proposal the Commission would add a non-Federal allocation to the Allocation Table along with a footnote with the same restrictions as the first proposal. In addition, the NPRM seeks comment on whether to make a non-Federal allocation for the 420–430 MHz band. Co-primary non-Federal allocations for these bands would allow the Commission to later adopt service and technical rules that facilitate the issuance of licenses to commercial entities for these bands that provide them with interference protection. This will provide commercial entities access to these important spectrum resources as more commercial launches are conducted and private spaceports are established.

B. Legal Basis

67. The proposed action is authorized under Sections 4(i), 301, 303(c), 303(f), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 301, 303(c), 303(f), and 303(r).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

68. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.[5] The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.''[6] In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act.[7] A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.[8]

69. *Satellite Telecommunications and All Other Telecommunications.* Two economic census categories address the satellite industry. The first category has a small business size standard of $15 million or less in average annual receipts, under SBA rules.[9] The second has a size standard of $25 million or less in annual receipts.[10]

70. The category of Satellite Telecommunications ''comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.''[11] Census Bureau data for 2007 shows that 512 Satellite Telecommunications firms operated for the entire year.[12] Of this total, 464 firms had annual receipts of under $10 million, and 18 firms had receipts of

[4] A launch vehicle is a rocket used to launch a payload into space.

[5] 5 U.S.C. 603(b)(3).

[6] 5 U.S.C. 601(6).

[7] 5 U.S.C. 601(3) (incorporating by reference the definition of ''small business concern'' in 15 U.S.C. 632). Pursuant to the RFA, the statutory definition of a small business applies ''unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the **Federal Register**.'' 5 U.S.C. 601(3).

[8] Small Business Act, 15 U.S.C. 632 (1996).

[9] 13 CFR 121.201, NAICS code 517410.

[10] 13 CFR 121.201, NAICS code 517919.

[11] U.S. Census Bureau, 2007 NAICS Definitions, 517410 Satellite Telecommunications.

[12] See *http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.*

$10 million to $24,999,999.[13] Consequently, the Commission estimates that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

71. The second category, *i.e.* ''All Other Telecommunications'' comprises ''establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.'' [14] For this category, Census Bureau data for 2007 shows that there were a total of 2,383 firms that operated for the entire year.[15] Of this total, 2,347 firms had annual receipts of under $25 million and 12 firms had annual receipts of $25 million to $49, 999,999.[16] Consequently, the Commission estimates that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

72. *Commercial Space Transportation.* The North American Industry Classification System does not have a discrete code for commercial space transportation per se. However, it does have the following codes that collectively capture entities engaged in commercial space transportation: 336414, ''Guided Missile and Space Vehicle Manufacturing,'' 336415, ''Guided Missile and Space Vehicle Propulsion Unit and Parts Manufacturing,'' and 336419, ''Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing.'' The Small Business Administration (SBA) has defined small business entities engaged in the aforementioned activities as those employing no more than 1,000 employees.[17] Further, the SBA does not apply a size standard based on maximum annual receipts to define small business entities engaged in the above industries.

73. The FCC believes that the following business entities are the principle entities currently comprising the commercial space transportation launch operator industry in the United States: The Boeing Company, Lockheed Martin Corporation, Space Exploration Technologies, Orbital Sciences Corporation, and Sea Launch Company, L.L.C. In addition, Virgin Galactic and XCOR Aerospace have announced plans for suborbital manned space flights.[18] NASA has agreements with three companies to design and develop human space flight capabilities: Sierra Nevada Corporation, Space Exploration Technologies, and The Boeing Company.[19] Because the commercial space industry is a nascent industry, it is difficult to state whether additional entities will enter the industry and how many and which entities will succeed. We do not have data on the size of these entities, and consequently, cannot classify them as large or small entities. We therefore cannot reach definite conclusions as to the number of small entities that will be affected by the rules proposed in this NPRM and we shall assume that a significant number of small entities will be affected by these regulations. We request comment on this assumption.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

74. The NPRM proposes no reporting and recordkeeping requirements.

E. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

75. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[20]

76. In a first of two alternative proposals, the NPRM proposes to add a co-primary Federal FSS or Federal MSS allocation in the Table of Frequency Allocations in § 2.106 of our rules (Allocation Table) for a number of spectrum bands used for commercial satellite service. In conjunction with this modification of the Allocation Table, we will add a footnote to the Allocation Table restricting primary use of Federal earth stations in these bands to communication with non-Federal satellites. This will not directly change the regulatory burdens on Commission licensees. Commission licensees will continue to follow the same licensing procedures and be subject to the existing technical rules when operating in these bands. Because the bands will have a co-primary Federal allocation, under existing coordination procedures the Commission would be expected to coordinate license applications in these bands with NTIA. This will result in increased processing time for applications for Commission licenses for these bands. We are not able to quantify the economic impact this increased processing time will have on small entities applying for Commission licenses.

77. Alternatively, the NPRM proposes to modify the Allocation Table by adding a footnote that gives Federal earth stations communicating with non-Federal satellites in a number of bands used for commercial satellite service interference protection equivalent to that afforded to non-Federal earth stations. The Federal earth stations will receive interference protection only if they operate in accordance with the Commission's rules. This proposal does not change the regulatory burdens on Commission licensees. Commission licensees will continue to follow the same licensing procedures and be subject to the existing technical rules when operating in these bands. Unlike the first proposal, a Federal allocation will not be added to these bands and there will be no new requirement to coordinate Commission licenses with NTIA. This alternate proposal should have no significant economic impact on small entities.

78. The NPRM also proposes to amend a footnote to the Allocation Table to permit a Federal MSS system to operate in the 399.9–400.05 MHz band. Although this band currently has

[13] See *http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.*

[14] *http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517919&search=2007%20NAICS%20Search.*

[15] *http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.*

[16] *http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.*

[17] 13 CFR 121.201, NAICS codes 336414, 336415, 336419.

[18] *See* Virgin Galactic, *http://www.virgingalactic.com;* XCOR Aerospace: New Technology for Space, *http://www.xcor.com/.*

[19] Bob Granath, *NASA Takes Strides Forward to Launch Americans from U.S. Soil,* Jan. 25, 2013, available at *http://www.nasa.gov/exploration/commercial/crew/cpc_apollo_5_prt.htm.*

[20] *See* 5 U.S.C. 603(c).

a non-Federal MSS allocation and the Commission has adopted service and technical rules for the band, the Commission has issued no MSS licenses for the band and no one has applied to use this band. While it is possible that a small entity may apply for a license for this band in the future, considering that it has been allocated for the MSS since 1993 with no interest from satellite operators we believe it is unlikely. However, on the chance that a satellite operator may desire to deploy a system in the band in the future the NPRM does ask whether operation of a Federal MSS system in the band will preclude a non-Federal MSS system from also being licensed. There is a possibility that a Federal MSS system deployed in the band may cause harmful interference to Commission licensees in nearby spectrum. The NPRM asks whether such interference could be an issue. Given the lack of commercial interest in the band we expect that this proposal shall not have a significant economic impact on any small entity.

79. The final section of the NPRM makes several proposals to amend the Allocation Table to provide interference protected access to spectrum for Commission licensees for the launch of launch vehicles (*i.e.* rockets). These bands do not currently have a non-Federal allocation for this purpose. Consequently, the Commission may only issue licenses for these bands on a non-interference basis. A licensee with non-interference status may not cause interference and must accept interference from those using the band in accordance with the Allocation Table. Adopting any of these proposals would be only a first step toward the Commission issuing licenses for these bands because the Commission would later have to adopt service and technical rules for the bands. However, once the Commission is able to issue licenses for these bands, small entities who manufacture and/or develop launch vehicles and spacecraft will benefit because they will be able to obtain licenses for spectrum that provide them with interference protection during launches. Consequently, we expect that these proposals will provide only a benefit to small entities and will have no significant harmful economic impact on any small entity.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rule

80. None.

Ordering Clauses

81. Pursuant to Sections 4(i), 301, 303(c), 303(f), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 301, 303(c), 303(f), and 303(r), this Notice of Proposed Rulemaking and Notice of Inquiry *is adopted.*

82. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, *shall send* a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

83. The National Telecommunications and Infrastructure Administration's Petition for Rulemaking is *granted* to the extent described herein.

List of Subjects 47 CFR Parts 2

Communications equipment, Disaster assistance, Radio.

Federal Communications Commission.

Sheryl D. Todd,

Deputy Secretary.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 2 as follows:

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

■ 1. The authority citation for part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

■ 2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

■ a. Pages 21–22, 26, 33–34, 37–38, 40, 42–43, 47–49, 51–52, 54, 56, and 58 are revised.

■ b. In the list of United States (US) Footnotes, footnotes US46, US107, USyyy, and USzzz are added, and footnote US319 is removed.

§ 2.106 Table of Frequency Allocations.

The revisions and additions read as follows:

* * * * *

International Table			United States Table		FCC Rule Part(s)
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table	
137-137.025 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208			137-137.025 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) US46 US320 SPACE RESEARCH (space-to-Earth) 5.208		Satellite Communications (25)
137.025-137.175 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208			137.025-137.175 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-satellite (space-to-Earth) US46 US320 5.208		
137.175-137.825 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208			137.175-137.825 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) US46 US320 SPACE RESEARCH (space-to-Earth) 5.208		
137.825-138 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208			137.825-138 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-satellite (space-to-Earth) US46 US320 5.208		
138-143.6 AERONAUTICAL MOBILE (OR) 5.210 5.211 5.212 5.214	138-143.6 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	138-143.6 FIXED MOBILE Space research (space-to-Earth) 5.207 5.213	138-144 FIXED MOBILE	138-144	
143.6-143.65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (space-to-Earth) 5.211 5.212 5.214	143.6-143.65 FIXED MOBILE RADIOLOCATION SPACE RESEARCH (space-to-Earth)	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to-Earth) 5.207 5.213			
143.65-144 AERONAUTICAL MOBILE (OR) 5.210 5.211 5.212 5.214	143.65-144 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	143.65-144 FIXED MOBILE Space research (space-to-Earth) 5.207 5.213	G30		

144-146 AMATEUR AMATEUR-SATELLITE 5.216			144-148	144-146 AMATEUR AMATEUR-SATELLITE	Amateur Radio (97)
146-148 FIXED MOBILE except aeronautical mobile (R)	146-148 AMATEUR 5.217	146-148 AMATEUR FIXED MOBILE 5.217		146-148 AMATEUR	
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221		148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) US46 US320 US323 US325 5.218 5.219 G30	148-149.9 MOBILE-SATELLITE (Earth-to-space) US46 US320 US323 US325 5.218 5.219	Satellite Communications (25)
149.9-150.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.224B 5.220 5.222 5.223			149.9-150.05 MOBILE-SATELLITE (Earth-to-space) US46 US320 RADIONAVIGATION-SATELLITE 5.223		
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	150.05-156.4875 FIXED MOBILE		150.05-150.8 FIXED MOBILE US73 G30	150.05-150.8 US73	
			150.8-152.855 US73	150.8-152.855 FIXED LAND MOBILE NG4 NG51 NG112 US73 NG124	Public Mobile (22) Private Land Mobile (90) Personal Radio (95)
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological aids			152.855-156.2475	152.855-154 LAND MOBILE NG4 NG124	Remote Pickup (74D) Private Land Mobile (90)
154-156.4875 FIXED MOBILE except aeronautical mobile (R) 5.226	5.225 5.226			154-156.2475 FIXED LAND MOBILE NG112 5.226 NG117 NG124 NG148	Maritime (80) Private Land Mobile (90) Personal Radio (95)
156.4875-156.5625 MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227			156.2475-156.7625 US77 US106 US226 US266	156.2475-156.7625 MARITIME MOBILE US106 US226 NG117 US77 US266 NG124	Maritime (80) Aviation (87)
156.5625-156.7625 FIXED MOBILE except aeronautical mobile (R) 5.226	156.5625-156.7625 FIXED MOBILE 5.225 5.226				

399.9-400.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260 5.220	399.9-400.05 MOBILE-SATELLITE (Earth-to-space) US320 RADIONAVIGATION-SATELLITE 5.260		Satellite Communications (25)
400.05-400.15 STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261 5.262	400.05-400.15 STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261		
400.15-401 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.262 5.264	400.15-401 METEOROLOGICAL AIDS (radiosonde) US70 METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) US46 US320 US324 SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.264	400.15-401 METEOROLOGICAL AIDS (radiosonde) US70 MOBILE-SATELLITE (space-to-Earth) US46 US320 US324 SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.264	Satellite Communications (25)
401-402 METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile	401-402 METEOROLOGICAL AIDS (radiosonde) US70 SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) US64 US384	401-402 METEOROLOGICAL AIDS (radiosonde) US70 SPACE OPERATION (space-to-Earth) Earth exploration-satellite (Earth-to-space) Meteorological-satellite (Earth-to-space) US64 US384	MedRadio (95I)
402-403 METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile	402-403 METEOROLOGICAL AIDS (radiosonde) US70 EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) US64 US384	402-403 METEOROLOGICAL AIDS (radiosonde) US70 Earth exploration-satellite (Earth-to-space) Meteorological-satellite (Earth-to-space) US64 US384	
403-406 METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile	403-406 METEOROLOGICAL AIDS (radiosonde) US70 US64 G6	403-406 METEOROLOGICAL AIDS (radiosonde) US70 US64	
406-406.1 MOBILE-SATELLITE (Earth-to-space) 5.266 5.267	406-406.1 MOBILE-SATELLITE (Earth-to-space) 5.266 5.267		Maritime (EPIRBs) (80V) Aviation (ELTs) (87F) Personal Radio (95)
406.1-410 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	406.1-410 FIXED MOBILE RADIO ASTRONOMY US74 US13 US117 G5 G6	406.1-410 RADIO ASTRONOMY US74 US13 US117	Private Land Mobile (90)

International Table			United States Table		FCC Rule Part(s)
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table	
1492-1518 FIXED MOBILE except aeronautical mobile 5.341 5.342	1492-1518 FIXED MOBILE 5.343 5.341 5.344	1492-1518 FIXED MOBILE 5.341	(see previous page)		
1518-1525 FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.342	1518-1525 FIXED MOBILE 5.343 MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.344	1518-1525 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341			
1525-1530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile except aeronautical mobile 5.349 5.341 5.342 5.350 5.351 5.352A 5.354	1525-1530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354	1525-1530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile 5.349 5.341 5.351 5.352A 5.354	1525-1535 MOBILE-SATELLITE (space-to-Earth) US315 US380 5.341 5.351		Satellite Communications (25) Maritime (80)
1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.342 5.351 5.354	1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354				
1535-1559 MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A			1535-1559 MOBILE-SATELLITE (space-to-Earth) US308 US309 US315 US380 5.341 5.351 5.356		Satellite Communications (25) Maritime (80) Aviation (87)
1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341 5.362B 5.362C			1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.341 US208 US260 US343		Aviation (87)
1610-1610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) 5.341 5.364 5.366 5.367 5.368 5.370 5.372	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space) 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.372	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) US46 US380 AERONAUTICAL RADIONAVIGATION US260 RADIODETERMINATION-SATELLITE (Earth-to-space) 5.341 5.364 5.366 5.367 5.368 5.372 US208		Satellite Communications (25) Aviation (87)

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1626.5-1660 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376			1626.5-1660 MOBILE-SATELLITE (Earth-to-space) US308 US309 US315 US380 5.341 5.351 5.375	Satellite Communications (25) Maritime (80) Aviation (87)
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1668.4-1670 METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E			1668.4-1670 METEOROLOGICAL AIDS (radiosonde) RADIO ASTRONOMY US74 5.341 US99 US342	

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			2320-2345 Fixed Radiolocation G2 US327	2320-2345 BROADCASTING-SATELLITE 5.396 US327	Satellite Communications (25)
			2345-2360 Fixed Mobile US339 Radiolocation G2 US327	2345-2360 FIXED MOBILE US339 BROADCASTING-SATELLITE RADIOLOCATION 5.396 US327	Wireless Communications (27) Aviation (87)
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				2495-2500 FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) US46 US380 RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402 US41 US391 NG147	ISM Equipment (18) Satellite Communications (25) Wireless Communications (27)
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				6425-6525 FIXED-SATELLITE (Earth-to-space) US107 MOBILE 5.440 5.458	TV Broadcast Auxiliary (74F) Cable TV Relay (78) Fixed Microwave (101)
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United States (US) Footnotes

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US46 In the bands 137–138 MHz, 148–150.05 MHz, 400.15–401 MHz, 1610–1626.5 MHz, 2483.5–2500 MHz, 19.7–20.2 GHz, and 29.5–30 GHz, Federal stations in the mobile-satellite service shall be restricted to earth stations operating with non-Federal space stations and that comply with Part 25 of the Commission's rules.

* * * * *

US107 In the bands 3700–4200 MHz, 5850–6725 MHz, 10.7–12.2 GHz, 12.7–13.25 GHz, 13.75–14.5 GHz, 18.3–19.3 GHz (except as provided for in US334), 19.7–20.2 GHz (except as provided for in US334), 27.5–30 GHz, 37.5–39.5 GHz, and 47.2–48.2 GHz, Federal stations in the fixed-satellite service shall be restricted to earth stations operating with non-Federal space stations and that comply with Part 25 of the Commission's rules.

* * * * *

USyyy In the band 2200–2290 MHz, non-Federal stations in the space operation service may also be authorized on a primary basis and such use shall be:

(a) Restricted to transmissions in the sub-bands 2207–2219 MHz, 2270.5–2274.5 MHz, and 2285–2290 MHz (necessary bandwidth shall be contained within these ranges);

(b) limited to no greater than 5 MHz necessary bandwidth per channel by launch vehicles during pre-launch testing and launches at Federal ranges; and

(c) subject to successful coordination of the assignment and use with Federal operations through NTIA.

* * * * *

USzzz In the band 5650–5925 MHz, non-Federal stations operating in the radiolocation service may also be authorized on a primary basis and such use shall be:

(a) Restricted to use in the tracking of launch vehicles during launches and pre-launch testing of launch vehicles subject to; and

(b) subject to successful coordination of the assignment and use with federal operations through NTIA.

[FR Doc. 2013–15592 Filed 6–28–13; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 2 and 5

[ET Docket Nos. 10–236 and 06–155; Report No. 2982]

Petition for Reconsideration of Action in Rulemaking Proceeding

AGENCY: Federal Communications Commission.

ACTION: Petition for reconsideration.

SUMMARY: In this document, Petitions for Reconsideration have been filed in the Commission's Rulemaking proceeding by Michael J. Marcus on behalf of Marcus Spectrum Solutions LLC, by Charles S. Farlow on behalf of Medtronic, Inc., and by James S. Blitz on behalf Sirius XM Radio Inc., and EchoStar Technologies Inc.

DATES: Oppositions to the Petitions must be filed on or before July 16, 2013. Replies to an opposition must be filed on or before July 26, 2013.

ADDRESSES: Federal Communications Commission, 445 12th Street SW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Rodney Small, Office of Engineering and Technology, 202–418–2452, *Rodney.Small@fcc.gov (mailto: Rodney.Small@fcc.gov).*

SUPPLEMENTARY INFORMATION: This is a summary of Commission's document, Report No. 2982, released June 7, 2013. The full text of Report No. 2982 is available for viewing and copying in Room CY–B402, 445 12th Street SW., Washington, DC or may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI) (1–800–378–3160). The Commission will not send a copy of this *Notice* pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A), because this *Notice* does not have an impact on any rules of particular applicability.

Subjects: Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules; 2006 Biennial Review of Telecommunications Regulations—Part 2 Administered by the Office of Engineering and Technology, FCC 13–15, published at 78 FR 25138, April 29, 2013, in ET Docket No. 10–236 and ET Docket No. 06–155, published pursuant to 47 CFR 1.429(e). *See also* 47 CFR 1.4(b)(1) of the Commission's rules.

Number of Petitions Filed: 3.

Federal Communications Commission.

Marlene H. Dortch,

Secretary, Office of the Secretary, Office of Managing Director.

[FR Doc. 2013–15684 Filed 6–28–13; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 43

[IB Docket No. 04–112; Report No. 2981]

Petition for Reconsideration of Action in Rulemaking Proceeding

AGENCY: Federal Communications Commission.

ACTION: Petition for reconsideration.

SUMMARY: In this document, a Petition for Reconsideration (Petition) has been filed in the Commission's Rulemaking proceeding by Glenn S. Richards, on behalf of the Voice on the Net (VON) Coalition.

DATES: Oppositions to the Petition must be filed on or before July 16, 2013. Replies to an opposition must be filed on or before July 26, 2013.

ADDRESSES: Federal Communications Commission, 445 12th Street SW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: David Krech (202) 418–7443 or John Copes (202) 418–1478, Policy Division, International Bureau.

SUPPLEMENTARY INFORMATION: This is a summary of Commission's document, Report No. 2981, released June 5, 2013. The full text of Report No. 2981 is available for viewing and copying in Room CY–B402, 445 12th Street SW., Washington, DC or may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI) (1–800–378–3160). The Commission will not send a copy of this Notice pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A), because this Notice does not have an impact on any rules of particular applicability.

Subject: Reporting Requirements for U.S. Providers of International Telecommunications Services; Amendment of Part 43 of the Commission's Rules, Second Report and Order, FCC 13–6, published at 78 FR 15615, March 12, 2013, in IB Docket No. 04–112, and published pursuant to 47 CFR 1.429(e). *See also* 1.4(b)(1) of the Commission's rules.

Number of Petitions Filed: 1.