

August 30, 2013

Via FCC eRulemaking Portal (<http://www.fcc.gov/cgb/ecfs>)

Federal Communications Commission
445 12 Street SW., Room TW-A325
Washington, DC 20554



Re: Federal Earth Stations – Non-Federal Fixed Satellite Service Stations; Spectrum for Non-Federal Space Launch Operations

ET Docket No. 13-115, RM - 11341

The Commercial Spaceflight Federation (CSF) is the industry association of leading businesses and organizations working to make commercial spaceflight a reality. Our mission is to promote the development of commercial spaceflight, pursue ever higher levels of safety, and share best practices and expertise throughout the industry. On behalf of the CSF, I respectfully submit these comments on the Notice of Proposed Rule-Making and Notice of Inquiry regarding spectrum for Non-Federal Space Launch Operations as issued by the Federal Communications Commission (Commission) and published in the Federal Register on July 1st, 2013.

CSF commends the Commission for taking the first steps to plan for a growing commercial space industry and for recognizing the important role this sector will play in our nation's economy. By taking the initiative now to allocate spectrum for future commercial space launches and emerging suborbital vehicles, the Commission is proactively engaging to ensure that this new sector will be able to grow without costly regulatory delays. In general, we support policies that ensure that spectrum is available for commercial space applications in appropriate bands with minimal regulatory burden and that policies be optimized for launches from commercial spaceports on or off Federal ranges. In that light, CSF respectfully makes the following comments for consideration:

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.

All non-Federal U.S. commercial space launches must be licensed by the Federal Aviation Administration's Office of Commercial Space (FAA AST) through application procedures as described in 14 CFR Part 413.

Therefore, to keep procedures as efficient and streamline as possible, the Commission should license spectrum for all launches that are subject to licensing procedures through FAA AST.

49-51. Comments on the 420-430 MHz band

So far there has not been a need for transmissions from commercial companies in the 420-430 MHz band since these companies have launched from facilities where the self-destruct signal has been transmitted from government owned facilities. However in the coming years, commercial space companies will be flying from non-Federal locations where private spaceports and operators will seek licenses for this band. For this reason, we recommend the Commission make co-primary non-Federal aeronautical mobile allocation for the 420-430 MHz band for use for self-destruct signals during both commercial launches and developmental testing of vehicles.

52. Limiting the non-Federal use of the 2200-2290 MHz band for space launches to pre-launch testing and for launches conducted at Federal ranges.

Since allocation to this band is currently only for Federal purposes, commercial companies have had to apply for Special Temporary Authority (STA) for access to this spectrum. STAs are evaluated on a case-by-case basis and the company has no insight into the process, creating costly uncertainties in their schedule. In addition, STA grantees are not allowed to cause interference with Federal users and must accept interference from Federal users of that band operating with authorizations. As noted in the NPRM, this is not an efficient or effective process and poses long-term risks to commercial and Federal users of this spectrum. As commercial launch companies begin to conduct launches more frequently, it is important that they have access on a co-primary basis to spectrum for launch telemetry. We have no preference between the two proposals the Commission has presented that will provide this necessary access to spectrum. However, identifying specific portions of the 2200-2290 MHz band for commercial space launch operations will help simplify coordination with the NTIA, minimizing any conflicts, and ensuring that the Department of Defense and other government agencies always have access to available spectrum.

However, restricting non-Federal access to this spectrum “to pre-launch testing and for launches conducted at Federal ranges” would overly limit the industry and unnecessarily restrict the launch sites from which these companies could launch with co-primary access to the spectrum. Commercial space companies plan to launch from sites other than Federal launch facilities, with many primarily planning to launch from privately operated spaceports that will have one or many users and one or many types of launch vehicles. In addition, by restricting only to pre-launch testing and launch, commercial space launch companies will not have access to spectrum for critical developmental testing activities.

For this reason, we recommend adding a footnote to the Allocation Table to allow co-primary access to the 2200-2290 MHz band, but striking the restriction that limits the access for launches “conducted at Federal Ranges” and replacing with “conducted at Federal ranges or FAA licensed spaceports.” Furthermore, to enable continued launch vehicle innovation, we recommend adding access to the spectrum for developmental testing in addition to launch operations.

56. The Commission seeks comment generally on the use of the previously allocated 2360-2395 MHz band as an alternative to the heavily used 2200-2290 MHz band for communications during launches.

Keeping spectrum allocations consistent between Federal and non-Federal launches would be cost-effective for commercial companies by minimizing the communication equipment needed for their vehicles. However, the previously allocated frequencies in the 2360-2395 MHz for both Federal and non-Federal use of the band for the telemetry and telecommand of launch and reentry vehicles should be allocated in addition to the 2200-2290 MHz band, rather than as an alternative. With a growing commercial space industry, and the 2200-2290 MHz band already in heavy use, keeping this band open for launch companies would help accommodate growth and the many platforms under development.

58. Comments on the 5650-5925 MHz band

Federal radar facilities are able to track launches from government owned launch facilities under current NTIA authorization. For consistency on and off Federal ranges, and to avoid creating varying equipment requirements for public and private customers of commercial launch services, the Commission should add non-Federal radiolocation allocation to the 5650-5925 MHz band rather than allocate frequencies in the already heavily used 2200-2290 MHz band.

In addition, the current practice for suborbital vehicles with aircraft-like qualities is to use aircraft band radar transponders so existing radar equipment in the National Airspace System (NAS) can track these vehicles as aircraft. We ask that the appropriate use of aircraft radar transponder frequencies also be allowed

by space launch vehicles with aircraft-like qualities, and that this practice be integrated into the spectrum allocation permissions as appropriate.

59. Broad comment on other future spectrum requirements of the commercial space industry.

As the NOI points out, there are other portions of commercial space missions such as the 'on-orbit' phase of reusable upper stages, and private spaceports that will not have Federal communications infrastructure in place that will also require access to spectrum. In addition, requirements might change depending on whether these Reusable Launch Vehicles (RLVs) are carrying spaceflight participants or cargo. We thank the Commission for thinking ahead to prepare for the growing commercial space industry. More flights and data will give us more insight on what the spectrum requirements in these situations should be. We ask that the Commission remain open to discussion and further action as the industry develops and operational norms arise.

60. Comments on the communication needs of suborbital spacecraft with aircraft-like qualities.

Currently both Virgin Galactic's SpaceShipTwo and XCOR Aerospace's Lynx are vehicles with aircraft-like qualities that require access to spectrum used by commercial aviation under 47 CFR Part 87, Aviation Services. Instead of adding excessive complication by setting aside additional spectrum, we recommend adding these vehicles as additional users to the aeronautical bands already in place, as this will make their transition into the NAS timely and efficient. This will include access to VHF bands for communication with air traffic control as well the radar transponder frequencies for tracking by air traffic control radar.

We appreciate the attention the commercial space industry is drawing across government agencies and at the Commission in particular. We commend the Commission for taking important steps to accommodate this diverse industry and its spectrum needs, and we look forward to working with the Commission as the industry continues to develop and grow.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Lopez-Alegria', written over a horizontal line.

Michael Lopez-Alegria

President