

Dark and Quiet Skies

Updates from the American Astronomical Society

CORF Space Science Week
March 25, 2026

Dr. Sarah Marie Bruno and Dr. Josh Reding
Electromagnetic Interference Subcommittee Vice Chairs
AAS COMPASSE

Committee for the Protection of Astronomy and the Space Environment (COMPASSE)



About COMPASSE

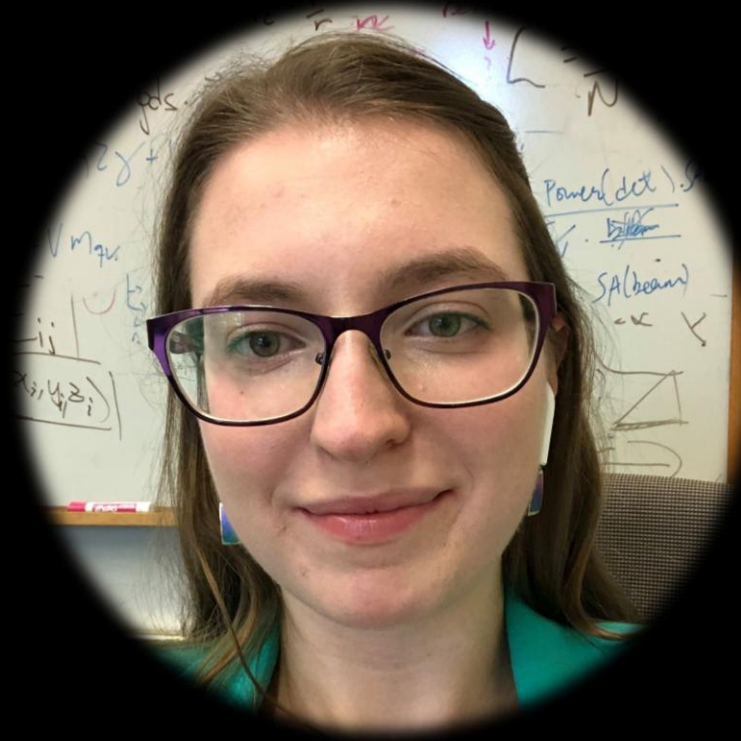
The Committee for the Protection of Astronomy and the Space Environment (COMPASSE) was established by AAS in 1988 and was previously known as the Committee on Light Pollution, Radio Interference, and Space Debris. COMPASSE represents the interests of AAS relating to the protection of dark and radio-quiet skies, the safe and sustainable use of outer space, and related issues, and empowers AAS members to be effective advocates for the protection of US astronomy. Its vision is a Society whose members constitute a visible presence and an effective voice in the effort to protect dark and quiet skies and the integrity of the space environment to secure the future of astronomy.

COMPASSE EMI Subcommittee Vice Chairs



Josh Reding

The Aerospace Corporation



Sarah Marie Bruno

Villanova University

Electromagnetic Interference Subcommittee

*The Electromagnetic Interference (EMI) Subcommittee is charged with **monitoring and responding to issues of interference across the electromagnetic spectrum that may impact astronomical research**. It keeps a close watch on U.S. national and international regulatory developments, particularly at the U.S. Federal Communications Commission (FCC), where policy decisions can have profound impacts on the ability of astronomers to access the spectrum for scientific discovery. It also coordinates with the Public Policy Subcommittee and AAS Policy staff to contribute toward AAS comments and statements on such actions.*

Responding to FCC Filings & Proceedings

- Scraper to monitor FCC Daily Digest
- Template for streamlined drafting (standard formatting and language)
- An active cohort of members volunteering their time to write submissions and conduct supporting technical assessments
- Coordination with other scientific professional societies



Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Satellite Spectrum Abundance) SB Docket No. 25-180
)
Expanding Use of the 12.7-13.25 GHz) GN Docket No. 22-352
Band for Mobile Broadband or Other)
Expanded Use)
) WT Docket No. 23-158
Shared Use of the 42-42.5 GHz Band)
) GN Docket No. 14-177
Use of Spectrum Bands Above 24 GHz For)
Mobile Radio Services)

Comments of the
American Astronomical Society
(AAS)

The American Astronomical Society (AAS) appreciates the opportunity to comment on this Further Notice of Proposed Rulemaking (FNPRM) and Notice of Proposed Rulemaking (NPRM) seeking to make additional spectrum resources available for satellite communications, including select frequency bands ranging from 12.7 to 114.25 GHz.

Expanded Use)
)
Shared Use of the 42-42.5 GHz Band) WT Docket No. 23-158
)
Use of Spectrum Bands Above 24 GHz For) GN Docket No. 14-177
Mobile Radio Services)

Reply Comments of the
American Astronomical Society

The American Astronomical Society (AAS) appreciates the opportunity to provide reply comments on the above proceedings seeking to make additional spectrum resources available for Fixed-Satellite Service (FSS) communications, including select frequency bands ranging from 12.7 to 114.25 GHz.

Satellite
Spectrum
Abundance
NPRM/FNPRM
(SB 25-180)

Modernizing Spectrum Sharing NPRM (SB 25-157)



AMERICAN ASTRONOMICAL SOCIETY

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of	)	
	)	
Modernizing Spectrum Sharing for Satellite Broadband	)	SB Docket No. 25-157
	)	
Revision of the Commission's Rules to Establish More Efficient Spectrum Sharing between NGSO and GSO Satellite Systems	)	RM-11990 (Terminated)
	)	

**Reply Comments of the
American Astronomical Society**

The American Astronomical Society (AAS) appreciates the opportunity to provide reply comments on this Federal Communications Commission (FCC) Notice of Proposed Rulemaking (NPRM), which seeks to revise equivalent power flux density (EPFD) limits and other elements of the spectrum sharing framework between non-geostationary orbit (NGSO) and geostationary orbit (GSO) satellite systems in the 10.7-12.7 GHz, 17.3-18.6 GHz, and 19.7-20.2 GHz bands, and in other frequency bands more generally.



AMERICAN
ASTRONOMICAL
SOCIETY



SpaceX Orbital Data Center (1M satellites)



AMERICAN ASTRONOMICAL SOCIETY

March 6, 2026

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of
Space Bureau Accepts for Filing SpaceX's
Application for Orbital Data Centers

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)
)
)

ICFS File No.:
SAT-LOA-20260108-00016

PETITION TO DENY OF THE AMERICAN ASTRONOMICAL SOCIETY

The American Astronomical Society¹ (AAS), the major organization of professional astronomers in the United States, submits this Petition to deny the request by Space Exploration Technologies Corp. (SpaceX, "The Applicant") for authority to operate a new non-geostationary orbit (NGSO) satellite constellation of one million data centers.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of
Space Bureau Accepts for Filing SpaceX's
Application for Orbital Data Centers

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ICFS File No.:
SAT-LOA-20260108-00016

REPLY COMMENTS OF THE AMERICAN ASTRONOMICAL SOCIETY

The American Astronomical Society¹ (AAS), the major organization of professional astronomers in the United States, respectfully submits this reply in response to the consolidated opposition to petitions and response to comments (the "Opposition") filed by Space Exploration Holdings, LLC (SpaceX)² regarding its application to launch and operate one million orbital data centers (the "Application").

Reflect Orbital (sunlight as a service)



AMERICAN ASTRONOMICAL SOCIETY

March 9, 2026

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of
Reflect Orbital Application to construct
and launch an NGSO Satellite.

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ICFS File No.:
SAT-LOA-20250701-00129

PETITION TO DENY OF THE AMERICAN ASTRONOMICAL SOCIETY

The American Astronomical Society¹ (AAS), the major organization of professional astronomers in the United States, submits this Petition to deny the request by Reflect Orbital (RO) for authority to construct and launch a new non-geostationary orbit (NGSO) satellite “EARENDIL-1.”

AAS Action Alert

Action Alert: Provide Input to the FCC on Proposed Satellite Systems

The Federal Communications Commission (FCC) has recently opened comment periods for two satellite systems of interest to the astronomical community: (i) a filing for a single demonstration satellite from [Reflect Orbital](#), which aims to sell sunlight at night, and (ii) a filing for one million orbital data centers by [SpaceX](#). Any member of the public has the right to weigh in as the FCC considers whether to grant these and other applications (note that the FCC must consider whether a given proposed system is in the public interest). We have provided additional details about these satellite systems below; you can submit comments to the FCC following our [step-by-step guide](#).

Over 1500 comments on SpaceX
Orbital Data Center

Over 1800 comments on Reflect Orbital

AAS 2025-2026 Actions – FCC Proceedings

Satellite Spectrum Abundance (SB 25-180)

- Jul 2025: Comment; Aug 2025: Reply Comment

Modernizing Spectrum Sharing (SB 25-157)

- Aug 2025: Reply Comment

Modernizing the Commission's NEPA Rules (WT 25-217)

- Sep 2025: Comment

Space Modernization for the 21st Century (SB 25-306)

- Jan 2026: Comment; Feb 2026: Reply Comment

Upper C-band (GN 25-59)

- Feb 2026: Reply Comment

Facilitating More Intensive Use of Upper Microwave Spectrum (SB 25-305)

- Feb 2026: Reply Comment

Recommendations Approved by WRC Advisory Committee (OIA 24-30)

- Mar 2026: Comment



AAS 2025-2026 Actions – Satellite Filings

SpaceX MSS/SCS Constellation (SAT-LOA-20250916-00282; GN 25-340)

- Jan 2026: Comment

SpaceX Orbital Data Center (SAT-LOA-20260108-00016)

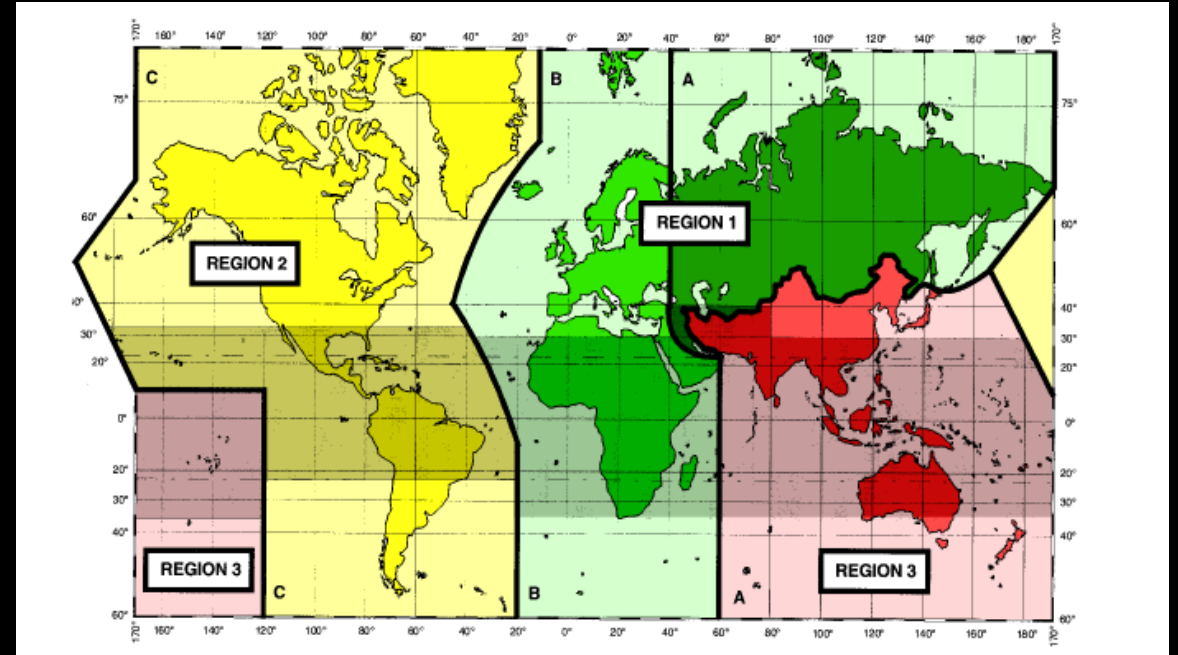
- Mar 2026: Petition to Deny, Reply Comment
- Public comment campaign with over 1500 submissions

Reflect Orbital (SAT-LOA-20250701-00129)

- Mar 2026: Petition to Deny [Reply Comment pending Reflect Orbital response]
- Public comment campaign with over 1800 submissions

Looking Forward

- AAS to join the Inter-American Telecommunication Commission (CITEL) of the Organization of American States (OAS) as an Associate Member
- Expanding astronomy presence in ITU-R Working Party 7D (radio astronomy)
- Continuing to monitor and respond to relevant FCC filings
- Broader engagement with partner societies with shared interests



OAS|CITEL

Want to help? Contact us!

Washington, D.C., August 27, 2025

[Read more >](#)

Public C

Space E

AAS O
FCC R
Opera
Review

Published

Tags:

FCC Radio astronomy

Tags: Radio Frequency Interference Regulation

RFI Satellites

Public Comment

Satellites

AAS Comments on SpaceX FCC
filing for 15,000 additional
satellites

Published: January 20, 2026

Tags: FCC Regulation Satellites United States

Washington, D.C., January 5, 2026 Before the Federal
Communications Commission, Washington, D.C. 20554 In RE:
Space...

UNITED STATES FREQUENCY ALLOCATIONS

THE RADIO SPECTRUM

RADIO SERVICES COLOR LEGEND

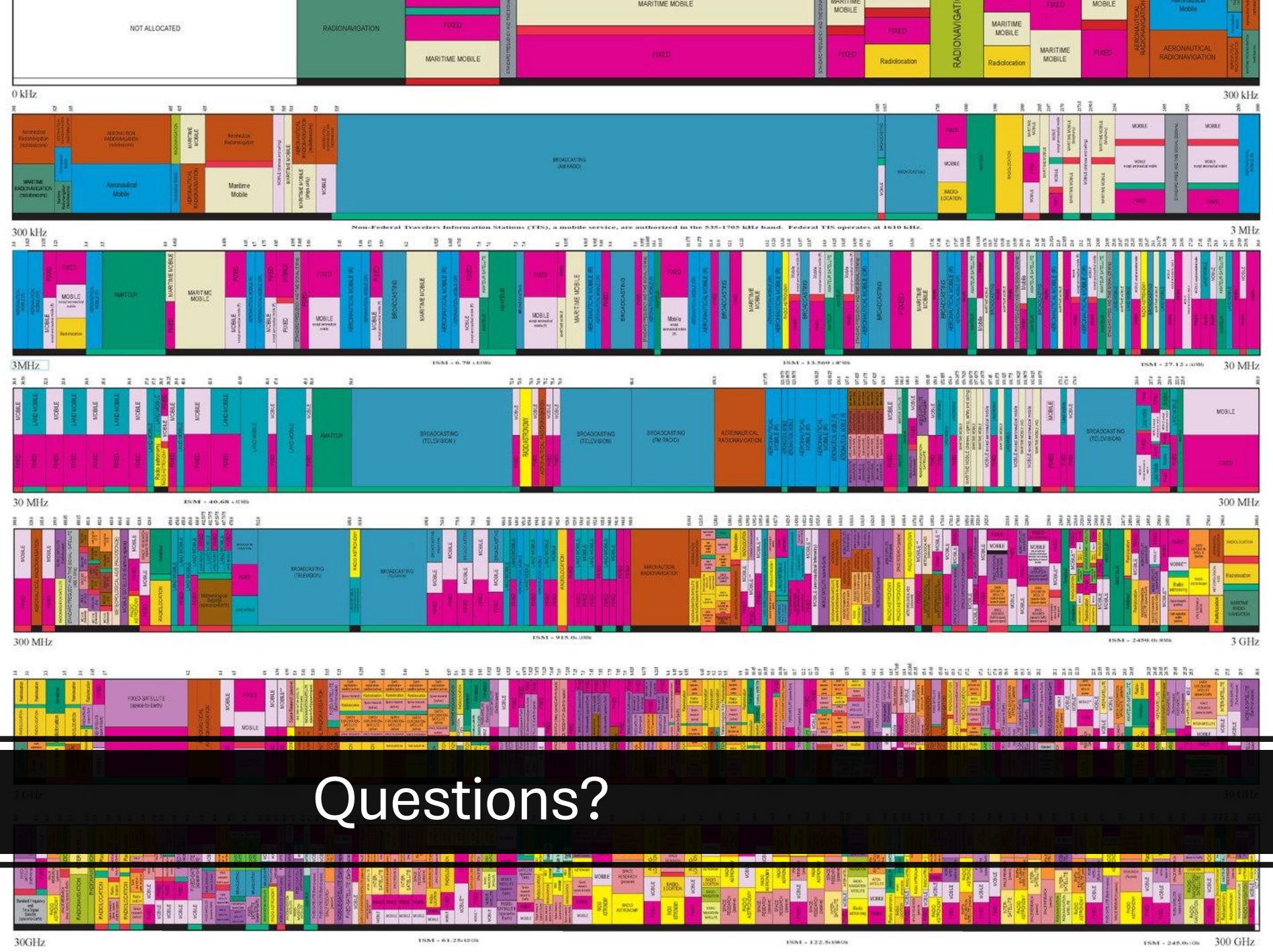
AERONAUTICAL MOBILE	INTER-SATELLITE	RADIO ASTRONOMY
AERONAUTICAL MOBILE SATELLITE	LAND MOBILE	RADIO DETERMINATION SATELLITE
AERONAUTICAL RADIONAVIGATION	LAND MOBILE SATELLITE	RADIO LOCATION
AMATEUR	MARITIME MOBILE	RADIO LOCATION SATELLITE
AMATEUR SATELLITE	MARITIME MOBILE SATELLITE	RADIONAVIGATION
BROADCASTING	MARITIME RADIONAVIGATION	RADIONAVIGATION SATELLITE
BROADCASTING SATELLITE	METEOROLOGICAL	SPACE OPERATION
EARTH EXPLORATION SATELLITE	METEOROLOGICAL SATELLITE	SPACE RESEARCH
FIXED	MOBILE	STANDARD FREQUENCY AND TIME SIGNAL
FIXED SATELLITE (SPACE TO EARTH)	MOBILE SATELLITE	STANDARD FREQUENCY AND TIME SIGNAL SATELLITE

ACTIVITY CODE

PRIMARY	SECONDARY	CO-CHANNEL INTERFERENCE
OUT-OF-BAND INTERFERENCE	ADJACENT CHANNEL INTERFERENCE	INTERMODULATION INTERFERENCE

Primary: FIXED, Mobile
 Secondary: Mobile, 1st Capital with lower case letters

This chart is a graphic representation of the Table of Frequency Allocations and is not to be used as a legal document. It is not a legal document. It is a graphic representation of the Table of Frequency Allocations. Therefore, for complete information, users should consult the Table to determine the current radio frequency allocations.



Questions?