

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

In the Matter of Application by)	
)	
SIRIUS XM RADIO INC.)	Call Sign S3034
)	
For Special Temporary Authority to Operate)	
SXM-8 Outside its Assigned Stationkeeping Box)	

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Sirius XM Radio Inc. (“Sirius XM”) respectfully requests space station special temporary authority (“STA”) through September 18, 2021, to permit operations of the SXM-8 space station outside its assigned stationkeeping volume at 85.15° W.L. +/- 0.1 degrees. As discussed below, this temporary excursion is inadvertent and will not cause interference nor present a physical risk to any other spacecraft nor will it adversely affect any authorized operations of Sirius XM. Granting the requested STA will serve the public interest by permitting Sirius XM a reasonable time in which to correct the excursion.

The SXM-8 replacement satellite digital audio radio service (“SDARS”) spacecraft was launched on June 6, 2021 and initially positioned at 120.5° W.L. for in-orbit testing (“IOT”) pursuant to Commission authority.¹ Following the successful completion of IOT, SXM-8 was drifted towards its assigned orbital location, 85.15° W.L. +/- 0.1 degrees.² That location is

¹ *Sirius XM Radio Inc.*, Call Sign S3034, File No. SAT-STA-20210419-00052, granted June 3, 2021.

² *Sirius XM Radio Inc.*, Call Sign S3034, File No. SAT-RPL-20180430-00034, granted Oct. 3, 2018, reissued June 11, 2021 (the “SXM-8 License”).

shared with two other SDARS satellites operated by Sirius XM's affiliate XM Radio LLC ("XM Radio"): XM-3,³ the spacecraft that SXM-8 is replacing, and XM-5,⁴ an in-orbit spare satellite.

After Intelsat S.A. ("Intelsat"), the third party under contract to perform stationkeeping for SXM-8, advised Sirius XM that SXM-8 had reached its licensed location, Sirius XM transferred traffic from XM-3 to SXM-8, and this past Wednesday, September 8, Sirius XM notified the Commission that SXM-8 had begun operations consistent with the SXM-8 License.⁵ Sirius XM made that notification in good faith based on the information available to it at the time. However, on Monday, September 13, Intelsat personnel advised Sirius XM that they had discovered errors in the ranging calculations and the corrected calculations showed that SXM-8 was outside its assigned stationkeeping volume. A corrective maneuver was started that same day, and SXM-8 is expected to return to its authorized stationkeeping box no later than September 18, 2021. The maximum amount of the excursion was 0.2636 degrees to the east. Sirius XM seeks STA to authorize operation of SXM-8 outside the box for this brief period.

Temporary operation of SXM-8 outside its assigned stationkeeping volume will not cause harmful interference to the operations of any other spacecraft. Sirius XM and XM Radio operate the only satellites authorized to use either S-band or X-band frequencies located within two degrees of 85.15° W.L. The SDARS downlink frequencies are not shared with other satellite systems and are not subject to two-degree spacing rules. Pending the return of SXM-8 to its

³ *XM Radio LLC*, Call Sign S2617, File No. SAT-MOD-20210226-00025, granted July 28, 2021.

⁴ *XM Radio LLC*, Call Sign S2786, File No. SAT-MOD-20180831-00065, granted Nov. 1, 2018.

⁵ *See* Letter of Karis A. Hastings, Counsel for Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, Call Sign S3034, File No. SAT-RPL-20180430-00034, filed Sept. 8, 2021.

assigned orbital location, SDARS traffic has been shifted to XM-5, so the excursion will not affect SDARS service to users.⁶

Nor will there be any impact on the physical operations of any other spacecraft. The closest satellite to the east of 85.15° W.L. appears to be Star One D1 at 84° W.L. Even at its maximum excursion, SXM-8 was separated from the stationkeeping volume of Star One D1 by nearly 0.7 degrees. Under these circumstances, grant of STA for this brief excursion is consistent with Commission precedent⁷ and will permit Sirius XM to return SXM-8 to its assigned position without expending an unnecessary amount of fuel.

Sirius XM hereby certifies that no party to this application is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

For the foregoing reasons, Sirius XM Radio respectfully requests authority for temporary operations of SXM-8 outside its assigned stationkeeping volume as described herein.

Respectfully submitted,

Sirius XM Radio Inc.

/s/ James S. Blitz

James S. Blitz
Vice President, Regulatory Counsel
1500 Eckington Place, N.E.
Washington, D.C. 20002
(202) 380-4000

Of Counsel

Karis A. Hastings
SatCom Law LLC
6930 Carroll Avenue, Suite 720
Takoma Park, MD 20912
(202) 599-0975

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⁶ XM Radio will file a separate notification with the Commission regarding the activation of XM-5.

⁷ See, e.g., *SES Americom, Inc. Application for Modification of Satcom SN-4 Fixed Satellite Space Station License*, 20 FCC Rcd 11542, 11545 (Sat. Div. 2005) (authorizing operations in an increased east-west stationkeeping volume based on a finding that there would be no adverse effect on adjacent satellite operations).