Before the
Federal Communications Commission
Washington, DC 20554

Application of *Capella Space Corp.* For Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Exploration Satellite Service	Call Sign: S3100 File No. SAT-LOA-20210824-00109

Supplement

On August 24, 2021, Capella filed a request for authority to launch and operate two small satellites in low-Earth, non-geostationary orbit ("NGSO") to provide Earth-Exploration Satellite Service ("EESS") (the "underlying application").[1] The Satellite Division of the FCC's International Bureau then, by a letter dated September 28, 2021, requested certain additional details relating to Capella's underlying application.[2] Capella provides this information below:

I. Authorization of Calibration Signals

As discussed in the legal and technical narratives included in the underlying application, Capella requests authorization for the Capella-7 and -8 satellites (the "Capella Satellites") to receive brief, infrequent transmissions from a ground-based transmitter for calibrating synthetic aperture radar systems on board the Capella Satellites. Technical details about these proposed temporary operations are provided in section XII of the Technical Attachment submitted with the underlying application.

Capella seeks authority for the Capella Satellites to receive this signal and use it to calibrate its radar systems under two circumstances: 1) initial calibration of the synthetic aperture radar systems within 30 days of the satellites' initial deployment and 2) infrequent maintenance

[1] *See Application of Capella Space Corp. for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Exploration Satellite Service*, File No. SAT-LOA-20210824-00109 (filed Aug. 24, 2021).

[2] *See* Letter from Karl Kensinger, FCC, to Paul Caritj, Harris, Wiltshire & Grannis LLP, Counsel to Capella Space Corp, File No. SAT-LOA-20210824-00109 (rel. Sep. 28, 2021).

calibrations during the satellites' missions. In the latter case, these operations may occur at any point during the satellites' missions but will be tightly restricted and will only occur at the times and for the duration necessary to perform the recalibration. These operations, in the unusual event that they are required, would be further limited in duration to less than 10 minutes per spacecraft per month and no more than four minutes per day. Moreover, as detailed in the underlying application, the ground station will follow the spacecraft as the spacecraft traverses the sky and will transmit only when the target spacecraft is more than 10 degrees above the horizon.

A separate application is currently pending for authorization to operate the ground segment of this calibration system for infrequent maintenance calibrations of all currently licensed Capella satellites during their missions and those Capella synthetic aperture radar satellites authorized by the FCC in the future under IBFS File No. SES-STA-20210909-01612.

II. DAS Logs

The logs generated by DAS in preparing the ODAR and other information included in the underlying application are attached hereto. The analysis log information was generated on September 28 2021 by re-running DAS in the same configuration as used for the ODAR attached to the underlying application.

III. Risk of Large Object Collision

Capella hereby clarifies that the correct probability of large object collision computed by DAS for Capella-7 and -8 is 7.8117E-05 for each individual spacecraft and 0.00016 in total. This is stated correctly in the ODAR report but incorrectly in the Technical Attachment due to a clerical error.

IV. DAS Worst-Case Initial Orbit

Section 5 of the Capella ODAR incorrectly states a worst-case initial altitude of 475 km under the discussion related to requirement 4.5-1. This was a clerical error. The correct value should read 575 km. The worst-case initial orbit used for all ODAR calculations was 575 km. This is reflected in the ODAR output file and is correctly noted throughout the remainder of the ODAR report.

V. Quantity of Xenon propellant

Capella hereby clarifies that the Capella-7 and -8 spacecraft will carry 1.1 kg of Xenon propellant. Appendix A of the technical volume incorrectly states 1.0 kg which is a holdover from Capella-5. Capella-7 and -8 carry a slightly higher fuel load than previous spacecraft.

VI. Operational Altitude

As specified in the underlying application, the anticipated deployment altitude for Capella-7 and -8 is 525 ± 50 km. Capella intends to use the propulsive capabilities of the Capella-7 and -

8 spacecraft to maintain operational altitudes within 10 km of each satellite's actual deployment altitude during its operational lifetime. Capella will notify the Commission of the actual deployment altitude of each satellite and the corresponding range of operational altitudes when these values become known after launch.

Respectfully submitted,

CAPELLA SPACE CORP.

By: */s/ Dan Connors*
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October 5, 2021

ENGINEERING CERTIFICATION

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in the underlying application and this supplement, that I am familiar with Part 25 of the Commission's rules, that I have either prepared or reviewed the engineering information submitted in both the underlying application and this supplement, and that it is complete and accurate to the best of my knowledge and belief.

/s/ *Christian Lenz*

Christian Lenz
Chief Technology Officer
CAPELLA SPACE CORP.

October 5, 2021

Date