Anthony J. Colucci
General Manager
Space Communications

July 28, 2020

Via IBFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-A325
Washington, DC 20554
Attention: International Bureau

Subject: EOS Defense Systems USA, Inc.,
IBFS File No.: SAT-MOD-20200526-00057; Call Sign: S2982

Dear Ms. Dortch:

EOS Defense Systems USA, Inc. ("EOS") herein responds to the Federal Communications Commission's ("Commission") June 30, 2010 letter requesting supplemental information concerning the above-referenced application seeking a modification to EOS's existing authority to operate a non-geostationary ("NGSO") satellite system. Below please find the Commission's individual questions followed by EOS responses. Should the Commission staff have further questions or require clarification on any response below, please let me know.

Sincerely,

/s/

Anthony J. Colucci
General Manager, Space Communications
+1.650.255.5207 / acolucci@eosdsusa.com

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FCC Question 1

Section 25.114(c)(4)(vi)(B) of the Commission's rules requires that applicants for space stations in non-geostationary orbits specify for each unique orbital plane the predicted antenna gain contour(s) for each transmit and receive antenna beam for one space station if all space stations are identical in the constellation. In the Schedule S provided by EOS, six transmitting beams and

four receiving beams are included, for a total of ten beams. However, there are just four antenna gain contour diagrams attached to the Schedule S, apparently representing only the new feeder link beams. Please provide the required beam diagrams for the remaining six service beams, i.e., SUR1, SUL1, SDR1, SDL1, SDR2 and SDL2. Also, although not strictly required, we would greatly appreciate if you would provide these diagrams in the GIMS readable format as specified in Section 25.114(c)(vi)(A).

EOS Response 1

Below please find antenna gain contour diagrams for all relevant beams. Diagrams in the GIMS readable format as specified in Section 25.114(c)(vi)(A) have been burned to compact discs and filed concurrently under a separate cover letter.

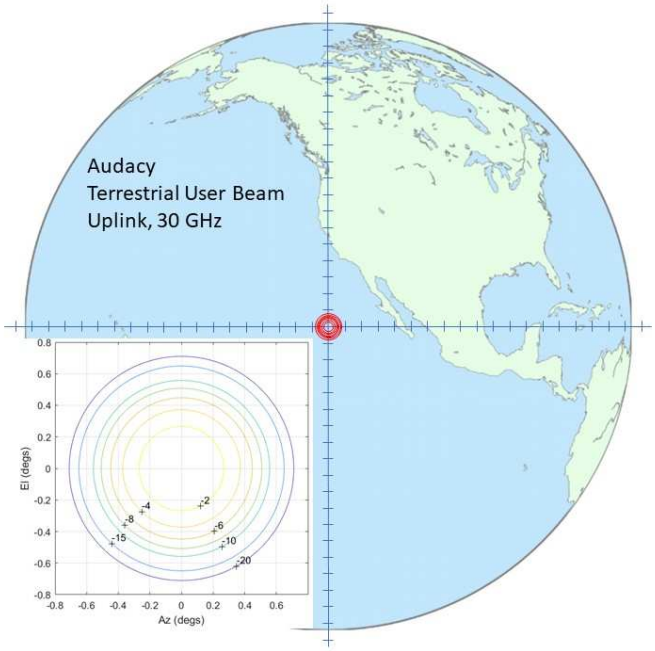

Figure II-1. SUR1 Receiving beam, 27.5 – 29.5 GHz, RHCP

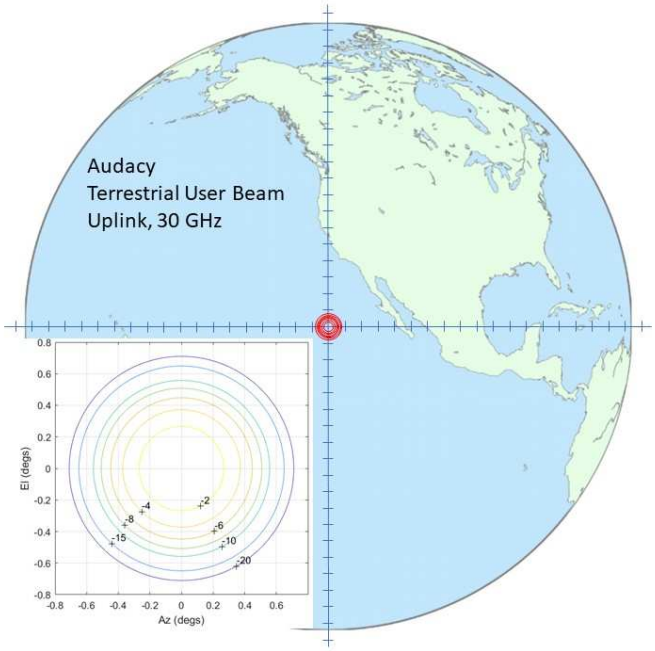

Figure II-2. SUL1 Receiving beam, 27.5 – 29.5 GHz, LHCP

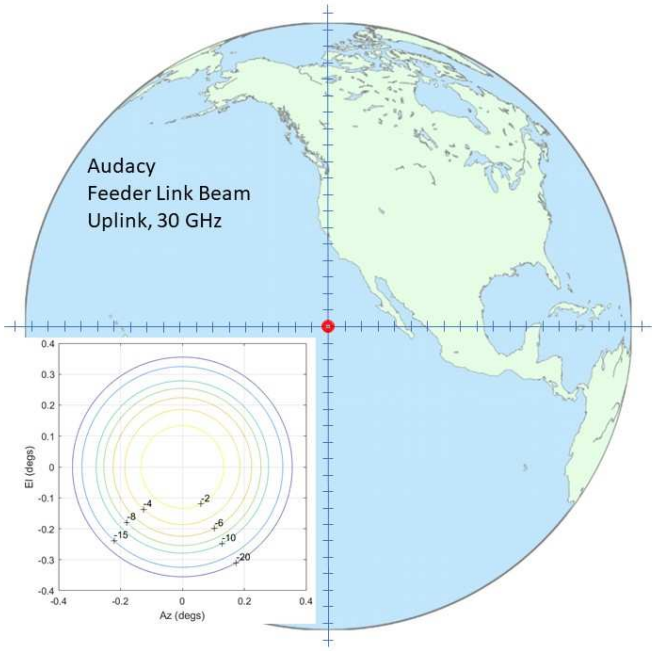

Figure II-3. FUR1 Receiving beam, 29.5 – 30.0 GHz, RHCP

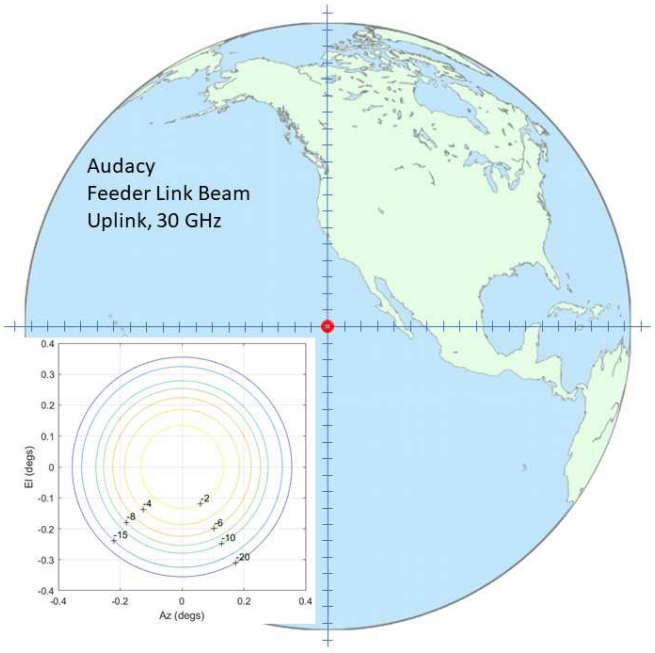

Figure II-4. FUL1 Receiving beam, 29.5 – 30.0 GHz, LHCP

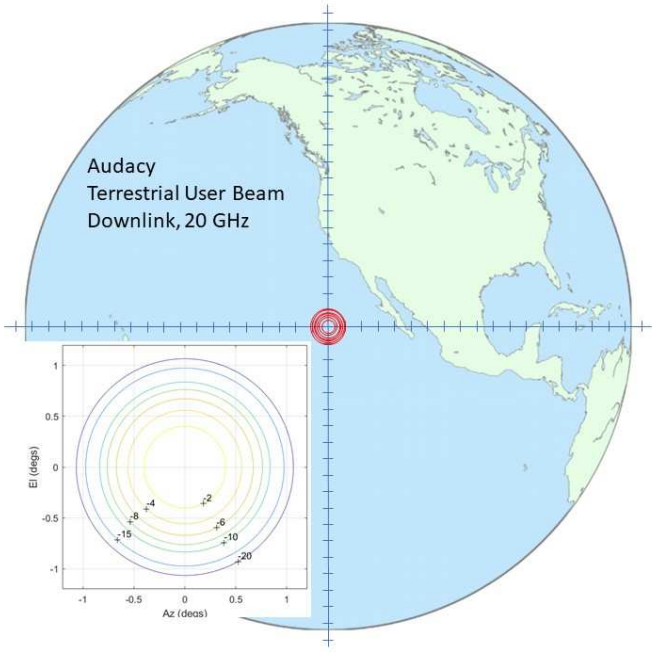

Figure II-5. SDR1 Transmitting beam, 17.8 – 18.6 GHz, RHCP

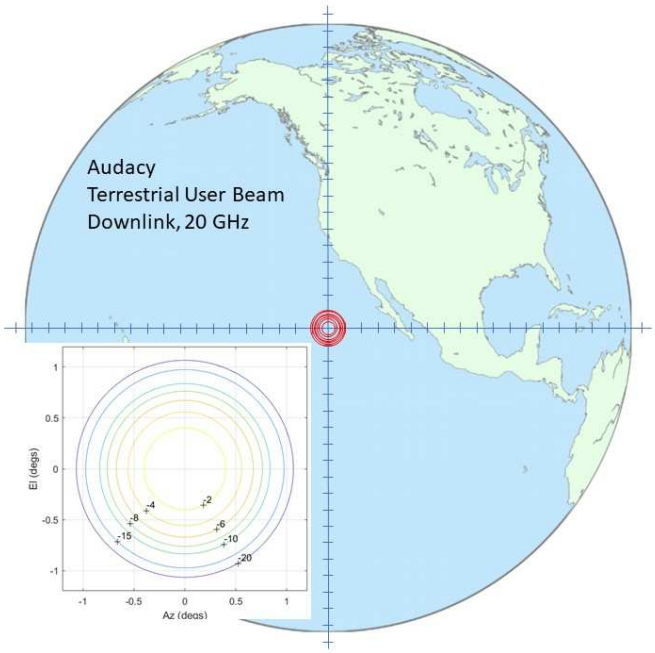

Figure II-6. SDL1 Transmitting beam, 17.8 – 18.6 GHz, LHCP

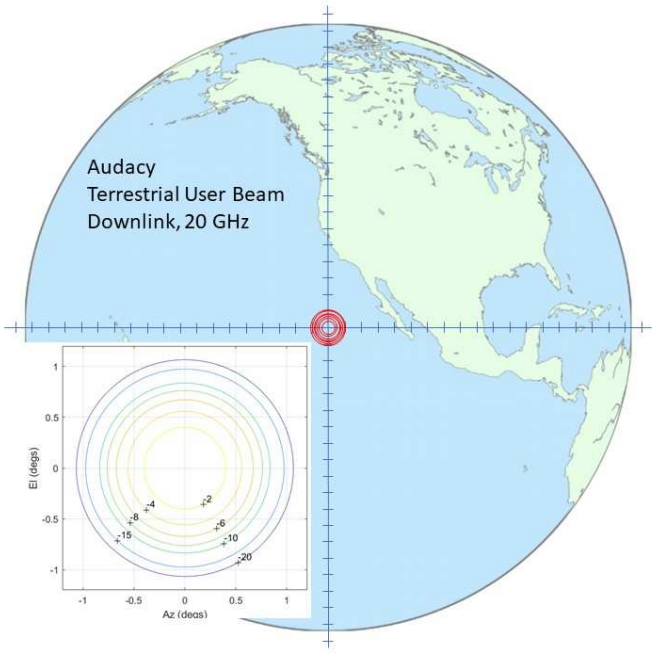

Figure II-7. SDR2 Transmitting beam, 18.8 – 19.7 GHz, RHCP

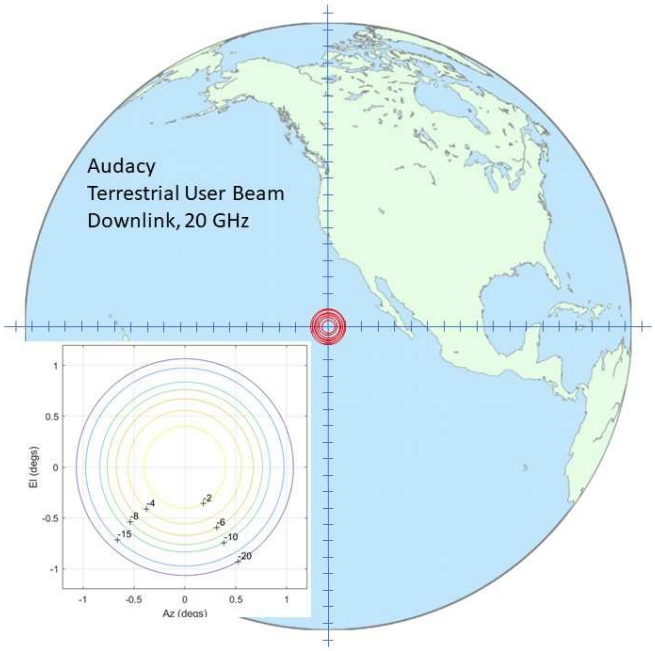

Figure II-8. SDL2 Transmitting beam, 18.8 – 19.7 GHz, LHCP

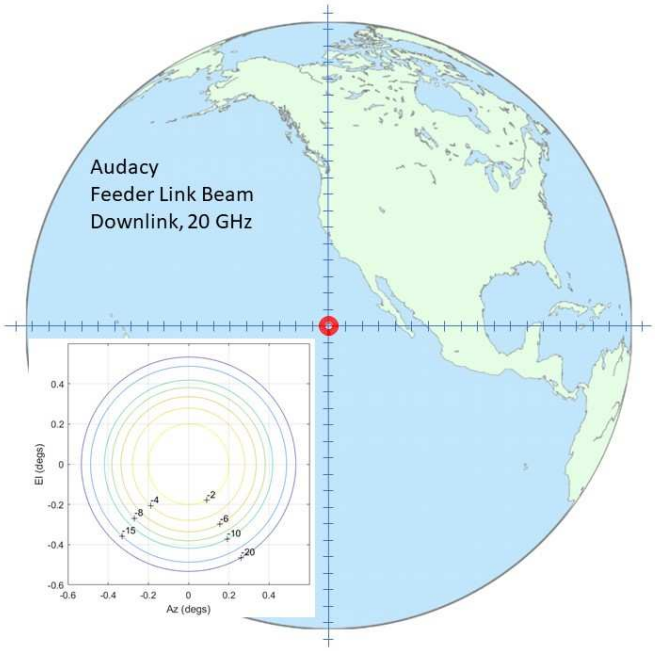

Figure II-9. FDR1 Transmitting beam, 19.7 – 20.2 GHz, RHCP

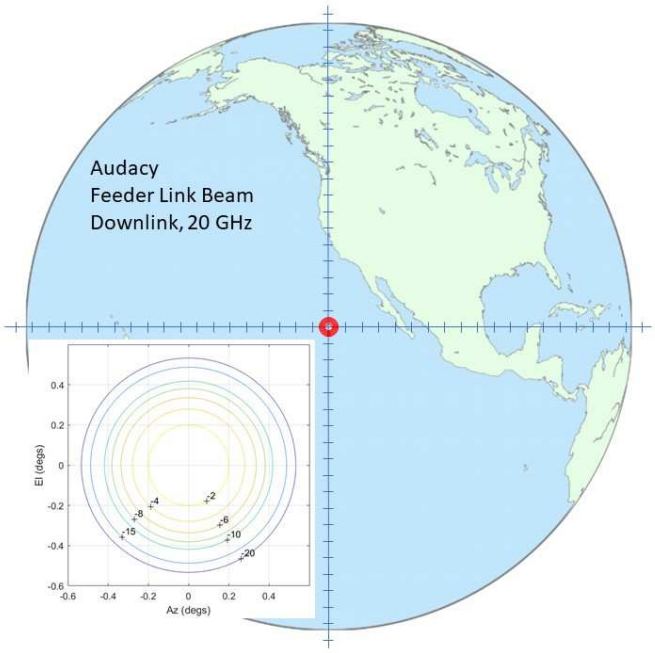

Figure II-10. FDL1 Transmitting beam, 19.7 – 20.2 GHz, LHCP

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FCC Question 2

Section 25.114(c)(4)(vi)(D) of the Commission's rules requires that applicants for space stations with steerable beams that are not shapeable, specify the applicable contours, as defined in paragraph (c)(4)(vi)(A) or (c)(4)(vi)(B) of this rule section, with a description of a proposed coverage area for each steerable beam, or provide the contour information described in paragraph (c)(4)(vi)(C) of this section for each steerable beam. For the various service link beams, EOS indicates that the service area will be "global." For the feeder link beams however, EOS entered only "See Gateway Service Area PDF." In examining the associated PDF files, it appears that EOS is planning only a single feeder link site at location along the California coast. Please verify that this interpretation is in fact correct. Otherwise, kindly provide more detailed service area information for these beams. Additionally, if the beams are shapeable, please provide the information required by section 25.114(c)(4)(iv)(C).

EOS Response 2

EOS contemplates a single feeder link site in the conterminous United States, and the footprint previously provided accurately represents the entire service area. Final site selection for EOS's U.S. gateway ground station facility has not concluded. EOS acknowledges that separate authority must be obtained from the FCC for the operation of its U.S. gateway ground station, and will seek appropriate approval prior to transmitting from any such future ground station facility.

No beams are shapeable, but all beams are steerable.

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FCC Question 3

Transmitting beams SDR1 and SDL1 include the frequency band 17.7-17.8 GHz, and Schedule S describes the service area for these beams as "global." We note however, that the United States Table of Frequency Allocations does not include a space-to-Earth allocation for the FSS in this band. We ask that EOS clarify how it intends to use this frequency band and whether it seeks to use this band only outside of the United States and its Territories. If, instead, EOS seeks a waiver of our rules so that it may operate in this band in the United States and its Territories, please provide appropriate justification for grant of such a waiver. Additionally, in its Technical Narrative EOS states its approach to avoiding interference with GSO systems in the 17.8-18.6 GHz, 19.7-20.2 GHz and 27.5-28.6 GHz bands, but does not discuss GSO networks in the 17.7-17.8 GHz band. We ask that EOS address how it will avoid interference to other authorized U.S.-licensed satellite operators in this band, including DBS space stations and 17/24 GHz BSS operations.

EOS Response 3

EOS appreciates that the United States Table of Frequency Allocations does not include a space-to-Earth allocation for FSS in the frequency band 17.7-17.8 GHz, and confirms that any EOS use of the band for space-to-Earth FSS communications will involve only points of communications outside of the United States and its Territories. Accordingly, with respect to the instant application, EOS requests no waiver of the Commission's rules concerning use of the frequency band 17.7-17.8 GHz.