

August 19, 2025

**International Telecommunication Union (ITU)**

Place des Nations  
CH-1211 Geneva 20  
Switzerland

Re: Letter of explanation to accompany Canadian NGSO filing "MARMOTSat"

To whom it may concern:

The University of Victoria Centre for Aerospace Research hereby submits this letter to accompany the API filing submitted for the NGSO satellite system known as MARMOTSat, with the intent to explain and clarify the warnings which are unresolved in the database files submitted for the ITU's considerations. The detailed explanations are as follows:

- For all warnings related to Valerr #695, it is noted that custom antenna patterns are submitted for antennas not in the ITU Antenna Pattern Library<sup>1</sup>, which have parameters which are not consistent with the internal consistency check employed by the ITU when validating filings.
- For all warnings related to Valerr #693, it is noted that system temperatures outside the range of 30 and 500 K are easily possible, especially on HF bands, and if human made noise is considered as part of the system temperature.
- For beam HFDOWN, it is noted that in some cases the system temperature is well in excess of the entered values. However, ITU software does not allow integers exceeding 32767 to be entered to the "6. System Receiving Noise Temperature" field, so this is simply set to the maximum values.
- For orbit, an estimate is provided. Launch for MARMOTSat is baselined for Transporter-17, to an SSO orbit. Thus, the middle of the possible 500-620km range is entered.

If you have any questions, please do not hesitate to contact the team at [spectrum.cfar@uvic.ca](mailto:spectrum.cfar@uvic.ca).

Sincerely,

Levente Buzas, PEng, MASc  
Manager, Space Division  
University of Victoria Centre for Aerospace Research

<sup>1</sup> <https://www.itu.int/en/ITU-R/software/Pages/ant-pattern.aspx>