

AMENDMENT

I. NARRATIVE INFORMATION REQUIRED BY FCC FORM 442

Question 7A. Description of the complete program of research and experimentation proposed including description of equipment and theory of operation.

5. V-band Payload Operations (AMENDED)

The Varuna satellite payload operations will communicate with a single primary earth station located outside the United States. The payload transmissions from the spacecraft are proposed within the following frequencies:

Parameter	V-Band Downlink
Max. Data Rate	Up to 384 Mbps
Modulation	Up to DVB-S2 8PSK
Frequency	37.5-42.0 GHz
Bandwidth	250 MHz (see Note)
Peak Transmit Power	0.4 W
ERP	71.6 W
Polarization	RHCP
Encryption	None; does not have command or telemetry
Duty Cycle	< 10%

Note: This is the instantaneous bandwidth. This bandwidth may be positioned anywhere in the 37.5 GHz to 42.0 GHz band.

To support the additional of these V-band frequencies, a supplement to the NTIA Space Record Data Form is being filed concurrently with this submission. As indicated previously, the V-Band frequencies identified above have already been notified by the FCC to the ITU as USASAT-NGSO-5 (PART II-S published in IFIC 2934, 24 Nov 2020).