

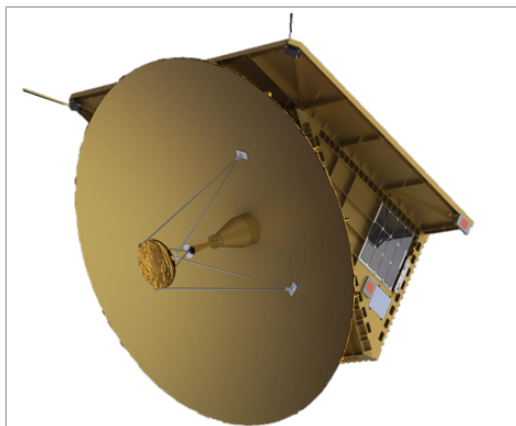
## Exhibit 1: Description of the Tomorrow.io Radar Transceiver

### Description of the Radar Transceiver.

The Tomorrow.io Radar Transceiver is a Ka-band (35.75 GHz) weather radar and is the subject of this STA request. The Radar Transceiver will operate between 35.5 and 36.0 GHz in a monostatic configuration in which both the transmitter and receiver are co-located on the radar system; there is no separate receiving station. The radar utilizes a 1.2 m fixed parabolic Cassegrain antenna with approximately 51 dB of gain and is capable of transmitting at Ka-band with an Effective Isotropic Radiated Power (EIRP) of 58.2 dBW. An image the operational configuration for ground testing of the radar system is provided in Figure 1.

### Technical Specifications:

- Radar Parameters:
  - Transmitter: Tomorrow.io Radar Transceiver
  - Output Power: Peak 17.3 W, Average 5.2 W
  - Frequency Range: 35.5-36.0 GHz
  - Maximum sweep bandwidth for FM modulated pulse: 500 MHz
  - Maximum range of carrier frequency shift for frequency hopping radar: 100 MHz
  - Polarization: Linear
  - Maximum antenna gain: 51 dB
  - EIRP: 58.2 dBW (includes transmitter, cable, and filter loss + antenna gain)
  - Maximum spectral power density: 13 dBW/Hz (for precipitation mode)
  - Emission Designation: 500MM8N



*Figure 1. Solid model showing the Ka-band Cassegrain antenna mounted on satellite bus.*