

ORS-5 Transmitter Information

1. The locations of the 5 S-Band telemetry transmitters, and the associated nominal ON/OFF times are provided along with additional related information in the following table.

Telemetry Designation	Frequency Band	Transmitter Location	Power Out	ERP	Emission Designator	Transmitter		Method Used for Determining OFF Times
						ON Time	OFF Time	
S4 Vehicle TLM	2239.386 – 2241.614 MHz	Stage 4	16.2W	11.9W	2M23F1D	T = L – 30 min.	T = L + 624.4 s.	command power OFF
						T = L + 901.5 s.	T = L + 1506.8 s.	command power OFF
GPB A TLM	2260.372 – 2260.628 MHz	Stage 4	6.3W	6.5W	0M26F1D	T = L – 30 min.	T = L + 257.2 s.	command power OFF
AFTS TLM	2269.34 – 2271.66 MHz	Stage 4	6.2W	6.6W	2M32F1D	T = L – 30 min.	T = L + 624.4 s.	command power OFF
Zodiac TLM	2284.062 – 2286.938 MHz	Stage 3	15.5W	5.2W	2M88F1D	T = L – 30 min.	T = L + 824.4 s.	antennas removed at S3 sep
Insertion Stage TLM	2226.92 – 2228.08 MHz	Stage 5	6.9W	9.1W	1M16F1D	T = L + 145.3 s.	T = L + 624.4 s.	command power OFF
						T = L + 901.5 s.	T = L + 1787.9 s.	command power OFF

L = launch time

2. Transmitter ON Times – Multiple checks requiring the turning ON/OFF of transmitters occur on the ground prior to launch. At T – 30 minutes, 4 of the 5 transmitters are turned ON and remain ON until turned OFF later in the mission. The remaining Insertion Stage transmitter is OFF at launch and remains so until commanded to turn ON later in the mission.

3. Transmitter OFF Times – 4 of the 5 transmitters are turned OFF by command. The exception is the Zodiac transmitter. It is ON at launch, and continues to transmit until Stage 3 separation, which breaks the connection between the Zodiac transmitter and its antenna system. The Zodiac transmitter continues to be powered ON, but is considered to be powered OFF since no radiation occurs once the connection to the antenna system is broken.