Sentinel-6 GNSS-RO POD Antenna Calibrations
Point of Contact: Shailen Desai
NASA Jet Propulsion Laboratory, California Institute of Technology
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Each of the Sentinel-6 satellites carry a GNSS-RO receiver payload that is connected to radio-occultation (RO) antennas on each of the fore and aft sides of the spacecraft, and to a RUAG precise orbit determination (POD) antenna on the top of the spacecraft. This POD antenna is referred to here as the GNSS-RO POD antenna. For clarity, note that the GNSS-RO POD antenna is distinct from the two RUAG antennas that are connected to the primary and redundant RUAG GNSS receivers that are also onboard each of the Sentinel-6 satellites. These are sometimes referred to as the primary and redundant GNSS POD antennas, respectively. This document summarizes the antenna calibration files that have been generated by RUAG for the GNSS-RO POD antenna.

The GNSS-RO POD antennas onboard Sentinel-6 Michael Freilich (S6-MF) and Sentinel-6B (S6B) are identified by serial numbers as indicated in Table 1 below. The antenna calibrations for each of the two antennas are provided in compressed folders also noted in Table 1 below. Each of the two folders identified in Table 1 contain:

1. A file named "Grasp_format.txt" that describes the format of the antenna calibration files.
2. A file named Readme_SSS.txt (SSS = 047 or 048 for S6-MF and S6B, respectively) that provides the location that was used to measure the antenna calibration relative to the antenna reference point (ARP) and in the antenna reference frame. For both antennas this location is (0,0,87) mm.
3. A folder named GraspFiles_RF containing the antenna calibrations at 36 different frequencies as a function of elevation and azimuth. A complete listing of these 36 files is provided in Table 2.

Table 1. Serial numbers and Name of Compressed Calibration File Folders for GNSS-RO POD antennas onboard each of the Sentinel-6 satellites.

Satellite	GNSS-RO POD Antenna Serial Number	Name of Compressed Calibration Files Folders Containing Antenna Calibrations in GRASP "cut" format.
Sentinel-6 Michael Freilich	SN0047	9_P-1259680-RSE_1_PFM_047.zip
Sentinel-6B	SN0048	9_P-1259681-RSE_1_PFM_048.zip

Table 2. Listing of GRASP cut files containing calibrations of the Sentinel-6 GNSS-RO POD antennas.

Sentinel-6 Michael Freilich (SN0047)	Sentinel-6B (SN0048)
JBBA_047_1.1615GHz.cut	JBBA_048_1.1615GHz.cut
JBBA_047_1.1665GHz.cut	JBBA_048_1.1665GHz.cut
JBBA_047_1.1715GHz.cut	JBBA_048_1.1715GHz.cut
JBBA_047_1.1765GHz.cut	JBBA_048_1.1765GHz.cut
JBBA_047_1.1815GHz.cut	JBBA_048_1.1815GHz.cut
JBBA_047_1.1865GHz.cut	JBBA_048_1.1865GHz.cut
JBBA_047_1.1914GHz.cut	JBBA_048_1.1914GHz.cut
JBBA_047_1.1921GHz.cut	JBBA_048_1.1921GHz.cut
JBBA_047_1.1971GHz.cut	JBBA_048_1.1971GHz.cut
JBBA_047_1.2021GHz.cut	JBBA_048_1.2021GHz.cut
JBBA_047_1.2071GHz.cut	JBBA_048_1.2071GHz.cut
JBBA_047_1.2121GHz.cut	JBBA_048_1.2121GHz.cut
JBBA_047_1.2171GHz.cut	JBBA_048_1.2171GHz.cut
JBBA_047_1.2221GHz.cut	JBBA_048_1.2221GHz.cut
JBBA_047_1.2226GHz.cut	JBBA_048_1.2226GHz.cut
JBBA_047_1.2276GHz.cut	JBBA_048_1.2276GHz.cut
JBBA_047_1.2326GHz.cut	JBBA_048_1.2326GHz.cut
JBBA_047_1.2376GHz.cut	JBBA_048_1.2376GHz.cut
JBBA_047_1.2426GHz.cut	JBBA_048_1.2426GHz.cut
JBBA_047_1.245GHz.cut	JBBA_048_1.245GHz.cut
JBBA_047_1.255GHz.cut	JBBA_048_1.255GHz.cut
JBBA_047_1.25GHz.cut	JBBA_048_1.25GHz.cut
JBBA_047_1.26GHz.cut	JBBA_048_1.26GHz.cut
JBBA_047_1.5604GHz.cut	JBBA_048_1.5604GHz.cut
JBBA_047_1.5654GHz.cut	JBBA_048_1.5654GHz.cut
JBBA_047_1.5704GHz.cut	JBBA_048_1.5704GHz.cut
JBBA_047_1.5754GHz.cut	JBBA_048_1.5754GHz.cut
JBBA_047_1.5804GHz.cut	JBBA_048_1.5804GHz.cut
JBBA_047_1.5854GHz.cut	JBBA_048_1.5854GHz.cut
JBBA_047_1.5904GHz.cut	JBBA_048_1.5904GHz.cut
JBBA_047_1.592GHz.cut	JBBA_048_1.592GHz.cut
JBBA_047_1.597GHz.cut	JBBA_048_1.597GHz.cut
JBBA_047_1.602GHz.cut	JBBA_048_1.602GHz.cut
JBBA_047_1.607GHz.cut	JBBA_048_1.607GHz.cut
JBBA_047_1.612GHz.cut	JBBA_048_1.612GHz.cut
JBBA_047_1.617GHz.cut	JBBA_048_1.617GHz.cut