

Application Narrative

The EMC test and RF capabilities of the vehicle testing will demonstrate, amongst other, that electromagnetic interference characteristics of the subsystem, under normal operating conditions, do not result in malfunction of the subsystem. It also demonstrates that the subsystem does not emit, radiate, or conduct interference, which could result in malfunction of other subsystems. Sierra spaces point-of-contact information to permit the prompt delivery at all times of notices of harmful interference includes Mr. Ronak Shah, Test Engineer (Director of Testing), Ronak.Shah@sierraspace.com, 303-542-7828 He is the initial point of contact for all matters involving interference resolution and has authority to discontinue all experiments being conducted under an STA grant, if necessary.

Please note that this testing is underway per STA grant call sign WX9XNT which expires on December 1, 2024. Due to unforeseen circumstances, there has been a delay in the DCC-1 mission, compounded with the need for additional testing to ensure mission safety. The current request is like the request which was the basis of the grant call sign WX9XNT and includes 3 additional locations where testing is expected to occur, hence the reference to the call sign WX9XNT in this application. The full list of test locations is provided in the table below for reference.

The testing is expected to last no more than 3 months, though the current request is for a 6-month STA to account for further contingencies. Additionally, functional testing of the RALT and S-band antennas on the vehicle will or may be conducted at any of these additional locations (PHSF, VIF, Astrotech).

	Location	Latitude	Longitude	Frequencies
(4)	PHSF	28°30'36.0"N	80°38'49.8"W	2203.2 MHz 2287.5 MHz 4300 MHz
(5)	VIF	28°34'41.7	80°35'00.4"W	2203.2 MHz 2287.5 MHz 4300 MHz
(6)	SSPF (VTT ^[1])	28°31'24.0"N	80°38'33"W	2203.2 MHz 2287.5 MHz 4300 MHz
(1)	Astrotech (Titusville)	28°31'22.8"N	80°48'58.7"W	2203.2 MHz 2287.5 MHz 4300 MHz
(2)	SSPF High Bay	28°31'24.0"N	80°38'33"W	2028.78 MHz 2106.40625 MHz
(3)	Airlock	28°31'24.0"N	80°38'34"W	4300 MHz

^[1] Vehicle Transmitters Testing Location

