

## CATEGORY DEFINITION

Categories
Launch
Vibration
Vacuum
Thermal
TVAC
Radiation
RF Test
EMI/EMC Test
Communications
Mission Operations
Power
Clean Room
Mission Design
PCB
Machining
Component
Data Provider

## ORGANIZATION DEFINITION

Org Type
University
Commercial
Federal
State

## MISSION PHASE DEFINITION

Purpose
Design Facility
Manufacturing Facility
Testing Facility
Operations Facility
Deployment Facility

**ON****Description**

Launch Service Providers

Vibration testing

Vacuum testing, distinct from TVAC capability as some chambers don't have thermal capability.

Thermal testing, distinct from TVAC as some chambers don't have vacuum capability.

Combined thermal vacuum test capability

Ionizing Radiation test facilities, simulates radiation experienced on orbit to characterize component susceptibility to Single Event Upsets (SEUs) and Total Ionizing Dose (TID).

Test facilities related to RF. Includes anechoic chambers for antenna pattern measurement. Also includes test capabilities for component level checkout, such as noise figure measurement, antenna return loss, response, etc. etc.

Test facilities related to Electromagnetic interference and Electromagnetic Compatibility.

Facilities that provide SmallSat Communications services.

Facilities that provide Mission Operations services.

Manufacturers of Electrical Power Supplies, DC/DC converters, etc.

Clean Room suitable for smallsat assembly

Facilities/capability for mission design, mission analysis, and mission simulation.

Facilities for custom PCB manufacturing, component potting, conformal coating, etc.

Capability to design and manufacture custom machined smallsat components. Includes metalwork and 3D printing capabilities.

Catchall category for smallsat component manufacturing capability if other category definitions aren't suitable.

Facility capable of supplying data relevant to VSDC objectives.

**INSTITUTION****Description**

Institution of higher learning, e.g. VT, UVA, ODU, GMU, Hampton, etc.

Commercial organizations such as for-profit companies, 501-C3s, etc.

Federal organizations, i.e. NASA Wallops, NASA Langley, NOAA, DoD, etc.

State run organizations, i.e. VSGC

**INSTITUTION****Description**

Contracts and Simulations

Suppliers, Other facilities that can manufacture hardware for missions

Facilities focused on providing test for mission hardware

Facilities focused on monitoring and operating missions

Launch sites for deploying missions

Org Type	Organization	Facility Name	Mission Phase	Category
Federal	NASA	Langley	Testing Facility	Radiation
Federal	NASA	Langley	Testing Facility	Thermal
Federal	NASA	Langley	Testing Facility	Vibration
Federal	NASA	Wallops Flight Facility	Operations Facility	Communications
Federal	Naval Research Lab	Blossom Point Tracking Station	Operations Facility	Communications
Commercial	Northrop Grumman	Launch Pad 0-A	Deployment Facility	Launch
Commercial	Rocket Labs	Rocket Lab Launch Complex 2	Deployment Facility	Launch
Commercial	Virginia Power Technologies	Virginia Power Technologies	Manufacturing Facility	Power
Commercial	Virginia Power Technologies	Virginia Power Technologies	Manufacturing Facility	Radiation
Commercial	Sedaro Technologies, LLC	Sedaro Technologies, LLC	Manufacturing Facility	Component
Commercial	Ibeos (formerly Cubic A Solers)	Ibeos Solers	Manufacturing Facility	Component
Commercial	Ibeos (formerly Cubic A Solers)	Ibeos Solers	Operations Facility	Communications
Commercial	Ingenicomm	Ingenicomm	Operations Facility	Communications
Commercial	Hawkeye 360	Hawkeye360	Operations Facility	Data Provider
Commercial	DeepSig	DeepSig	Operations Facility	Data Provider
Commercial	SpaceQuest Ltd.	SpaceQuest	Operations Facility	Data Provider

Commercial	SpaceQuest Ltd.	SpaceQuest	Manufacturing Facility	Component
Commercial	Fleming Technologies	Fleming Technologies	Operations Facility	Communications
University	Virginia Tech	Virginia Tech Ground Station	Operations Facility	Communications
University	Virginia Tech	Virginia Tech Ground Station	Operations Facility	Mission Operations
University	Virginia Tech	Center for Space Science and Engineering Research	Testing Facility	Vacuum
University	Virginia Tech	Center for Space Science and Engineering Research	Testing Facility	TVAC
University	Virginia Tech	The Hume Center for National Security and Technology	Testing Facility	Thermal
University	Virginia Tech	Center for Space Science and Engineering Research	Manufacturing	Clean Room
University	Virginia Tech	The Hume Center for National Security and Technology	Design Facility	Mission Design
University	Virginia Tech	Center for Space Science and Engineering Research	Design Facility	Mission Design
University	Virginia Tech	Center for Space Science and Engineering Research	Manufacturing Facility	PCB
University	Virginia Tech	The Hume Center for National Security and Technology	Manufacturing Facility	Machining
University	Virginia Tech	The Hume Center for National Security and Technology	Testing Facility	RF Test

University	Virginia Tech	Autonomous Mastery Prototyping Laboratory (AMP Lab)	Manufacturing Facility	PCB
University	Virginia Tech	Design, Research, and Education for Additive Manufacturing Systems Laboratory (DREAMS Lab)	Manufacturing Facility	Machining
University	Virginia Tech	Vibration, Adaptive Structures, and Testing Lab (VAST Lab)	Testing Facility	Vibration
University	University of Virginia	W4UVA Amateur Radio Club	Operations Facility	Communications
University	Old Dominion University	Electrical Engineering Department	Operations Facility	Communications
University	Hampton University	The Center for Atmospheric Sciences	Operations Facility	Communications

City	State	LINK	Previous Co- Use Experience	VSDC POC	Latitude [deg]
Hampton	VA	<a href="https://www.nasa.gov/langley">https://www.nasa.gov/langley</a>	No	Jonathan Black	37.0913
Hampton	VA	<a href="https://www.nasa.gov/langley">https://www.nasa.gov/langley</a>	No	Jonathan Black	37.0913
Hampton	VA	<a href="https://www.nasa.gov/langley">https://www.nasa.gov/langley</a>	Yes	Jonathan Black	37.0913
Wallops Isl	VA	<a href="https://www.nasa.gov/centers/w">https://www.nasa.gov/centers/w</a>	Yes	Zachary Leffke	37.8557
Wellcome	MD	<a href="https://www.nrl.navy.mil/">https://www.nrl.navy.mil/</a>	No	Zachary Leffke	38.4302
Hallwood	VA	<a href="https://www.northropgrumman.c">https://www.northropgrumman.c</a>	Yes	Jonathan Black	37.8340
Wallops Isl	VA	<a href="https://www.rocketlabusa.com/">https://www.rocketlabusa.com/</a>	No	Jonathan Black	37.8340
Blacksburg	VA	<a href="https://www.vptpower.com/">https://www.vptpower.com/</a>	No	Jonathan Black	37.2029
Blacksburg	VA	<a href="https://www.vptpower.com/">https://www.vptpower.com/</a>	No	Jonathan Black	37.2029
Arlington	VA	<a href="https://www.sedaro.com/">https://www.sedaro.com/</a>	No	Jonathan Black	
Reston	VA	<a href="https://ibeos.com/">https://ibeos.com/</a>	No	Jonathan Black	38.9576
Blacksburg	VA	<a href="https://www.peraton.com/">https://www.peraton.com/</a>	No	Jonathan Black	37.2004
Chantilly	VA	<a href="http://www.ingenicomm.net/">http://www.ingenicomm.net/</a>	No	Jonathan Black	38.8919
Herndon	VA	<a href="https://www.he360.com/">https://www.he360.com/</a>	No	Jonathan Black	38.9564
Arlington	VA	<a href="https://www.deepsig.io/">https://www.deepsig.io/</a>	No	Jonathan Black	38.8952
Fairfax	VA	<a href="http://www.spacequest.com/">http://www.spacequest.com/</a>	No	Zachary Leffke	38.8597

Fairfax	VA	<a href="http://www.spacequest.com/">http://www.spacequest.com/</a>	No	Zachary Leffke	38.8597
Blacksburg	VA	<a href="https://flemingtechinc.com/">https://flemingtechinc.com/</a>	Yes	Sheyda Davaria	37.1993
Blacksburg	VA	<a href="https://www.hume.vt.edu/">https://www.hume.vt.edu/</a>	Yes	Zachary Leffke	37.2299
Blacksburg	VA	<a href="https://www.hume.vt.edu/">https://www.hume.vt.edu/</a>	Yes	Zachary Leffke	37.2069
Blacksburg	VA	<a href="https://www.space.vt.edu/">https://www.space.vt.edu/</a>	Yes	Zachary Leffke	37.2310
Blacksburg	VA	<a href="https://www.space.vt.edu/">https://www.space.vt.edu/</a>	Yes	Zachary Leffke	37.2310
Blacksburg	VA	<a href="https://www.hume.vt.edu/">https://www.hume.vt.edu/</a>	Yes	Zachary Leffke	37.2069
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Blacksburg	VA	<a href="https://www.space.vt.edu/">https://www.space.vt.edu/</a>	Yes	Jonathan Black	37.2310
Blacksburg	VA	<a href="https://www.space.vt.edu/">https://www.space.vt.edu/</a>	Yes	Zachary Leffke	37.2310
Blacksburg	VA	<a href="https://www.space.vt.edu/">https://www.space.vt.edu/</a>	Yes	Zachary Leffke	37.2069
Blacksburg	VA	<a href="https://www.hume.vt.edu/">https://www.hume.vt.edu/</a>	Yes	Zachary Leffke	37.2069

BlacksburgVA	<a href="https://sites.google.com/a/vt.edu/">https://sites.google.com/a/vt.edu/</a>	Yes	Gustavo Gargioni	37.2310
BlacksburgVA	<a href="https://dreams.mii.vt.edu/">https://dreams.mii.vt.edu/</a>	Yes	Sheyda Davaria	37.2324
BlacksburgVA	<a href="http://vastlab.weebly.com/">http://vastlab.weebly.com/</a>	Yes	Sheyda Davaria	37.2304
Charlottes\VA	<a href="https://www.w4uva.org/">https://www.w4uva.org/</a>	Yes	Zachary Leffke	38.0325
Norfolk VA	<a href="https://odu.edu/">https://odu.edu/</a>	Yes	Zachary Leffke	36.8859
Hampton VA	<a href="http://cas.hamptonu.edu/">http://cas.hamptonu.edu/</a>	No	Zachary Leffke	37.0259



Longitude [deg]	Altitude [m]	Full Address
-76.3797	6.0000	2 Langley Blvd, Hampton, VA 23681
-76.3797	6.0000	2 Langley Blvd, Hampton, VA 23681
-76.3797	6.0000	2 Langley Blvd, Hampton, VA 23681
-75.5120	1.0000	32400 Fulton St, Wallops Island, VA 23337
-77.0862	3.0000	Blossom Point Rd, Welcome, MD 20693
-75.4878	1.0000	Wallops Flight Facility (WFF) Launch Pad 0-A, Northrop Grumman Launchpad, Hallwood, VA 23359
-75.4878	1.0000	Wallops Flight Facility (WFF) - Rocket Lab Launch Complex 2, Wallops Island, VA 23337
-80.4094	623.0000	1971 Kraft Dr SW, Blacksburg, VA 24060
-80.4094	623.0000	1971 Kraft Dr SW, Blacksburg, VA 24060
		(not provided) Arlington, Virginia 22205
-77.3716	125.0000	12110 Sunset Hills Rd, Reston, VA 20190
-80.4093	623.0000	2000 Kraft Dr SW STE 2500, Blacksburg, VA 24060
-77.4349	94.0000	14120 Parke Long Ct Suit 210, Chantilly, VA 20151
-77.3883	114.0000	196 Van Buren St #450, Herndon, VA 20170
-77.070954	26.0000	1201 Wilson Blvd Floor 27, Arlington, VA 22209
-77.3111	447.0000	3554 Chain Bridge Rd, Ste 400, Fairfax, VA 22030

-77.3111	447.0000 3554 Chain Bridge Rd, Ste 400, Fairfax, VA 22030
-80.4102	610.0000 2200 Kraft Dr., Suite 2100, Blacksburg, VA 24060
-80.4396	610.0000 Glade - Westover, Blacksburg, 24060
-80.4190	610.0000 1311 Research Center Drive, Blacksburg, VA 24061
-80.4266	610.0000 619B Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4266	610.0000 619B Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4190	610.0000 1311 Research Center Drive, Blacksburg, VA 24061
-80.4266	610.0000 619B Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4190	610.0000 1311 Research Center Drive, Blacksburg, VA 24061
-80.4266	610.0000 619 Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4266	610.0000 619 Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4190	610.0000 1311 Research Center Drive, Blacksburg, VA 24061
-80.4190	610.0000 1311 Research Center Drive, Blacksburg, VA 24061

-80.4332	610.0000 236 Whittemore Hall, 1185 Perry St., Blacksburg, VA 24061
-80.4279	610.0000 410 and 424 Goodwin Hall, 635 Prices Fork Road, Blacksburg, VA 24061
-80.4261	610.0000 181 Durham Hall, 1145 Perry St., Blacksburg, VA 24061
-78.5111	167.0000 UVA Nuclear Reactor Building, Room 128, Charlottesville, VA 22904
-76.3045	2.0000 231 Kaufman Hall, Norfolk, VA 23529
-76.3409	1.0000 Hampton University, Hampton, VA 23668

## Comment

18.0m Dish antenna for UHF smallsat communications, S-Band capability as well.

Command and control in UHF, L, S, C, X, USB, and SGLS bands

lat/lon/alt for launch pad, pretty sure this is the right pad for the antares

lat/lon/alt guess for launchpad for Rocket Lab's....not 100% sure this is the right pad.

Software tools for NewSpace design, analysis, and testing. Mechanical and Thermal, Electronics, Software and Firmware, Mission Modeling and Analysis

Startup from Space@VT PhD student

recently acquired by Peraton, multiple locations including chantilly...not sure where headquarters is

Ground system solutions.

Satellite based RF geolocation, RF survey, RF mapping, and associated data analytics.

RF Deep Learning (Machine Learning) and RF Data analytics. VRIF funded.

Provider of AIS data recorded from their orbital constellation

Manufacturers various smallsat components

Computer engineering firm specializing in aerospace applications

Current: Federal VHF/UHF/S-Band, Amateur Radio VHF/UHF/L-Band/S-Band.

Future: Federal X and Ka-Band, Amateur Radio K-Band

Space@VT Unrestricted Ops Center, Hume Center Restricted Access Ops Center.

5 Vacuum chambers of various size for component up to 6U cubesat size

Up to 6U sized Thermal/Vacuum chamber.

Hume has thermal/humidity chamber.

ISO 7, Class 10,000

Helmholz cage, air bearing table.

KiCAD/Eagle, Pick and Place, Vacuum Bake Out Chamber

Tormach PCNC1100, 3D printing, Space@VT machine shop

RF test equipment including multiple VNA, SpecAs, Noise Heads, Sig Gens, Etc.

Max test frequency 67 GHz. Future plans include Faraday cage (short term) and Antenna chambers for pattern measurement (currently have limited on campus capability)

Vibrations, Acoustics, and Structural Testing. Equipment: shakers, shake table, laser vibrometers, anechoic chambers.

Amateur Radio VHF/UHF Ground Station

Amateur Radio VHF/UHF Ground Station

Direct Broadcast Receive System. Receive only L/X band. Primarily weather science data (i.e. NOAA Imagery). Currently fully automated