

Daniel da Silva

mail@danieldasilva.org

240-678-4686

WORK EXPERIENCE

Current 2017	<p>NASA Goddard Geospace Physics Laboratory (Heliophysics) <i>Contractor: Trident Vantage Systems</i></p> <ul style="list-style-type: none">• Flight Calibration of Micro-Channel Plate Based Particle Instruments for MMS Mission / Fast Plasma Investigation• Working between science and ground systems teams, developed refactored calibration system, responsible for flat-fielding, photo-electron removal, ion/electron balancing, and inter-spacecraft sensitivity• Development of housekeeping dashboard and automated anomaly detection for MMS Mission / Fast Plasma Investigation, which became a staple of the operational team's daily procedures• Revived ground system for Polar / Thermal Ion Dynamics Experiment (TIDE) instrument• Mentored other engineers regarding new technologies as they adopted a SQL architecture and Python, while serving as the go-to guy for Python questions
2015	<p>NASA Goddard Cryospheric Sciences Laboratory (Earth Science) <i>Contractor: Trident Vantage Systems</i></p> <ul style="list-style-type: none">• ICESat-2 is a NASA Lidar Satellite for building a time-dependent topographic map of the polar ice caps and Greenland• Pre-launch calibration engineer for photon counting instrument ATLAS, responsible for dead time, quantum efficiency, optical misalignment, and thermal biases• Performance and accuracy verification for ATLAS, pertaining to the Transmit Echo Path timing reference subsystem• Integration and Test Engineer during ATLAS thermal vacuum testing, operating the Integrated Science Analysis Workstation
2014	<p>NASA Goddard Global Change Data Center (Earth Science) <i>Contractor: Telophase</i></p> <ul style="list-style-type: none">• Science data center providing access to NASA datasets for the earth science atmospheric science community (multiple missions).• Developed visualization and data distribution websites for the data, both backend and frontend
2008-2013 <i>School Year Internship</i>	<p>NASA Goddard Global Change Data Center (Earth Science) <i>NASA Pathways Internship Program, Work-while-study</i></p> <ul style="list-style-type: none">• Domain-specific web-based services for the visualization of remote sensing data from NASA earth science missions such as Terra, Aqua, and SeaWiFS.
2009, 2010 <i>Summer Internship</i>	<p>Google, Inc</p> <ul style="list-style-type: none">• Software engineering and spatial database design for Google Maps prototype application to explore interiors and floor plans of office buildings

EDUCATION

- Bachelors of Science in MATHEMATICS (2014), **University of Maryland, College Park**
4.0 GPA in last 26 credits, including courses at other institutions. Computer Science supporting track. Mechanics and EM for Physics majors.
- Boulder Space Weather Summer School (2018, expected), **NCAR**
A summer school program coordinated by several research centers and universities to provide students a comprehensive introduction to the science of space weather.

SKILLS AND INTERESTS

Skills: Space Instrumentation, Ground Systems, Software Design, Data Analysis, Basic Plasma Physics
Computing: Linux, Python, IDL, C, SQL, GUI Development (JavaScript, HTML, CSS, Qt), HDF5, CDF

AWARDS

- JUN 2015 **SESDA3, NASA/GSFC** Technical Excellence Peer Award
- JUN 2012 **Code 610.2, NASA/GSFC** Performance Award
- JUN 2010 **Code 610.2, NASA/GSFC** Performance Award
- DEC 2009 **Google** Student Scholarship (\$10,000)

OPEN SOURCE

- Author of high-performance Python library for parsing CCSDS Data. The CCSDS format is used for many NASA and ESA missions for low-level telemetry, and often contains tightly packed bits to reduce downlink requirements.
- Provided 11+ C and Python bug fixes and contributions to the NumPy project

CONFERENCE POSTERS

- FPI Dashboard: An Inside Look into Operational Ion and Electron Spectrometers
SciPy, 2017
da Silva D., Barrie A.
- Giovanni Aerostat: Multi-sensors inter-comparisons and bias adjustment for aerosols
Aerocenter Annual Meeting, 2013
Wei, J., Lynnes, C., Albayrak, A., Petrenko, M., Hegde, M., Petrov, L., da Silva, D., Ichoku, C., and Leptoukh, G.
- AeroStat: NASA Giovanni Tool for Statistical Intercomparison of Aerosols
AGU Annual Fall Meeting, 2011
Wei J., Petrenko M., Leptoukh G., Lynnes C., da Silva D., Hegde M., and Ichoku C.
- HTAP in GIOVANNI (Hemispheric Transport of Air Pollution)
8th Annual AeroCom Workshop, 2009
Leptoukh, G., Kurkowski, N., Mehta, A., Bryant, K., Pan, J., Rui, H., da Silva, D.
- NASA GIOVANNI Support for HTAP (Hemispheric Transport of Air Pollution)
AGU Annual Fall Meeting, 2009
Kurkowski, N., Leptoukh, G., Mehta, A., Bryant, K., Pan, J., Rui, H., da Silva, D., Husar, R.;