

# Sarah L. Boyle (née Jones)

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Ph. D. physicist with seven years of teaching experience, including one year teaching undergraduate physics as a teaching assistant, four years of private tutoring undergraduate mathematics and writing, and five years teaching the Catechism of the Catholic Church to adults as a prison ministry volunteer. Ten years of additional teaching-related experience includes mentoring high school, undergraduate, and graduate physics students and early career scientists and engineers. Formal education also included undergraduate studies of the works of Plato in the original Greek and classical studies coursework including assignments focusing on St. Augustine's meditation on the concept of time. Completed graduate studies of the works of Aristotle and St. Thomas Aquinas, including the ontological reality of natural law.

## EDUCATION

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**University of New Hampshire, Durham, NH**

**2004-2010**

*Doctor of Philosophy, Major in Physics (Awarded May 22, 2010)*

- Cumulative GPA: 3.62/4.0
- Completed doctoral dissertation focusing on the dynamics of the upper atmosphere and authored two peer reviewed journal articles.
- Co-taught two undergraduate physics courses with labs, totaling one year of teaching experience.
  - Provided one-on-one and small group instruction to students requiring additional support. Observed a rise in student participation in class discussion and activities, reflecting their enhanced engagement in the learning process.
  - Guided students in completing laboratory experiments, ensuring their understanding of experimental procedures, data analysis, and theoretical concepts.
  - Implemented fair grading practices and provided constructive feedback to help students improve their understanding and performance.
  - Achieved a high completion rate for lab experiments, demonstrating effective guidance and support for students.
- Mentored two undergraduate interns, both of whom continued their study at the graduate level, leading to one senior honors thesis and three peer reviewed journal articles.
- Completed two courses on evidence-based methods for teaching physics:
  - PHYS 901: Physics Teaching Seminar
  - PHYS 902: Issues in Teaching and Learning Physics

**Divine Mercy University, Sterling, MD**

**2020-2022**

*Master of Science, Major in Psychology (Awarded December 27, 2022)*

- Cumulative GPA: 3.98/4.0
- Completed Capstone project focusing on meaning-making approaches to prison ministry.
- Developed leadership skills through completing coursework, including
  - PSY 595: The Transformational Leader in the Helping Professions (DMU, 2022)
  - PSY 590: Leading People and Programs (DMU, 2022)
  - PSY 575: Social Psychology, Groups, and Diversity (DMU, 2022)
  - PSY 585: Evidence-based Practice and Program Evaluation (DMU, 2022)
  - PSY 555: Relationship and Intervention Skills Theory and Application (DMU, 2020)
- In PHT 507: The Catholic-Christian Vision of the Person, studied the Catholic realist, phenomenological, and Thomistic personalism, which affirms both the centrality of the person and the ontological reality of a natural law.
- In PHT 508: The Catholic-Christian Vision of Flourishing, continued studying the works of St. Thomas Aquinas, particularly as relates to charisms, forms, and states of life.

**Dartmouth College, Hanover, NH**

**2000-2004**

*Bachelor of Arts, Major in Physics, Minor in Ancient Greek Language & Literature (Awarded June 13, 2004)*

- Cumulative GPA: 3.36/4.0
- Completed honors physics courses and a senior honors thesis focusing on radio wave propagation and co-authored two peer reviewed journal articles.
- Completed a Research Experience for Undergraduates internship in physics.
- Interned for Women in Science Project, including one engineering and two physics internships.
- Read and studied several of Plato's works in the original Greek, including Apology, Crito, and Phaedo. Relevant courses include:
  - GRK 010: Readings of Greek Prose and Poetry
  - GRK 030: Courtroom Speech in Classical Athens
  - GRK 028: Philosophy

**PROFESSIONAL EXPERIENCE**

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**Collegium Sanctorum Angelorum**

*Adjunct Professor*

**Remote**

Aug 2024 - present

As adjunct professor of physics and the philosophy of mathematics, prepares and delivers lectures, leads class discussions, assigns and grades student work, and holds office hours for student support.

**BBC Entrepreneurial Training & Consulting (part-time contractor)**

**Remote**

*Independent Consultant - Small Business R&D Proposals*

Nov 2023 - present

Contracted to leverage in-depth knowledge of Small Business Innovation Research (SBIR) programs and agency priorities to train clients in proposal development, including acting as a mock reviewer to improve the quality and competitiveness of their proposals.

**Cornell Technical Services (part-time contractor)**

**Remote**

*Independent Consultant - Subject Matter Expert, Scientific Instrumentation*

Oct 2023 - present

Serves as a Subject Matter Expert (SME) on review teams, leveraging extensive technical knowledge and risk assessment skills to provide nuanced insights on proposal feasibility and potential outcomes. Conducts in-depth technical, management and cost assessments of NASA proposals and Phase A concept studies.

**NASA Goddard Space Flight Center**

**Greenbelt, MD**

*Research Astrophysicist*

Aug 2010 - Oct 2021

During 11 years working as a NASA scientist, performed scientific, technical, and service (public communications and education and public outreach) roles at Goddard Space Flight Center. Specific roles and responsibilities, with approximate percentage of time spent in each role, are described below.

**Scientific Research (50%)**

- Professional scientific work involving systematic, critical, intensive investigation directed toward discovering, disseminating, and applying new or expanded knowledge in the area of atmospheric science. Specific applications included:
  - Variations in solar radiation and its influence on the Earth's magnetic field and atmosphere.
  - Signatures of space weather events as observed in aurora and airglow, as a means of remote sensing the dynamics of the Earth's magnetic field and atmosphere.
  - Variations in atmospheric neutral density, composition, and winds that complicate satellite drag calculations and debris tracking.

- Performed research applying scientific methods, including exploring and defining problems, planning the approach for study, analyzing data, interpreting results, and documenting or reporting findings.
- Published 15 articles in peer-reviewed journals, resulting in 339 citations. Presented results at national and international scientific conferences and workshops and seminars (including 26 invited talks). Chaired several conference sessions.

**Service–Mentoring, Communications, Education and Public Outreach, Etc. (25%)**

- Extensively mentored nine high school, undergraduate, and graduate student interns and early career engineers and scientists over the course of ten years and served on one graduate student’s dissertation committee.
  - Provided guidance and feedback on assigned tasks and projects, helping mentees develop technical, analytical, and problem-solving skills.
  - Provided encouragement, positive reinforcement, and opportunities to showcase mentees’ abilities, developing their confidence and self-esteem and increasing participation, initiative-taking, and sense of belonging within the team.
  - Facilitated introductions and networking opportunities within my professional network, exposing mentees to diverse individuals and career paths and providing valuable insights into potential future opportunities.
  - Provided guidance on career planning, resume writing, and interview skills, helping mentees refine their career aspirations and develop a roadmap for success.
- Frequently delivered science seminars at colleges and universities throughout the United States and internationally.
  - Tailored the topic to be relevant to students' interests and coursework to spark curiosity and connect with their learning goals.
  - Structured presentations clearly and logically, with a strong introduction, engaging body, and concise conclusion. Used visuals like slides, diagrams, and videos to enhance key messages and keep the audience engaged.
  - Avoided jargon and technical terms that the students may not understand and explained complex concepts in a way that is easy to follow and relatable to their prior knowledge.
  - Met with students afterwards in a less formal setting to create a more comfortable learning environment, encouraging students to ask follow up questions and participate more actively in class.
- Presented public lectures at libraries and local schools and participated in other education and public outreach events such as science panels, science fair

reviewing, and NASA exhibits at science and engineering festivals. Regularly served as student proposal reviewer and poster judge.

- Contributed to several communications and educational products including press releases and online articles, scientific videos, social media posts and events, flyers and posters, science curricula, and other informative materials. Provided several live TV media interviews and participated in two live shows on NASA TV.

### **Technology Development (25%)**

- Identified instrumentation needs through participation in community conferences and workshops and by serving on appropriate scientific committees.
- Guided the development, fabrication, testing, and operations of such instruments, to derive maximum scientific return from flight opportunities. Specific instruments included:
  - Electron Solid State Telescope designed to measure signatures of space weather events to advance space weather forecasting to help prevent damage due to induced currents in power lines.
  - Ion Neutral Mass Spectrometer designed to measure the response of the upper atmosphere to the flow of solar energy to help improve satellite drag calculations.
  - Energetic Neutral Atom Instrument designed to measure particles in the Earth's magnetic field better to enable more accurate predictions of space weather events.
- Co-authored five New Technology Reports and co-invented a technology that was awarded a U.S. patent.

## **VOLUNTEER EXPERIENCE**

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### **Freelance Tutoring**

**Crofton, MD**

*Volunteer, Undergraduate Mathematics & Writing Tutor*

Nov 2018 - Oct 2022

Tutored two nursing students, helping them to complete required mathematics coursework and writing assignments. Boosted students' confidence in their abilities and improved their overall performance in courses.

### **Mathematics**

- Helped students develop a more structured and efficient approach to solving math problems, including breaking down complex concepts into smaller, more manageable chunks.

- Coached students in identifying specific areas where they needed extra help and provided targeted practice and support. Guided students through different problem-solving techniques and strategies to identify those that resonated most.

### **Writing**

- Helped students refine essay structure, ensuring logical flow and argument development, leading to clearer and more impactful writing.
- Provided guidance on effective research strategies, proper citation methods, and avoiding plagiarism.
- Guided students in building strong arguments, supporting their claims with evidence, and refining their thesis statements.

### **Chesapeake Detention Facility**

*Volunteer, Prison Ministry*

**Baltimore, MD**

Oct 2011 - Oct 2016

- Helped inmates gain a more profound understanding of Catholic doctrines, scripture, and theological concepts through dedicated study and discussion. Explored themes of forgiveness, redemption, and grace to foster resilience, optimism, and a desire for personal transformation.
- Prepared and presented teaching materials tailored to each individual, taking into account his/her abilities and interests to increase confidence and encourage individuals to pursue further studies. Authored and distributed an ecumenical newsletter, encouraging group prayer and intercession.
- Mentored onboarding volunteers, ensuring that they understood the policies and procedures of the ministry. Provided necessary training on safety, communication, and ethical boundaries within the prison environment. Arranged for new volunteers to shadow during interactions with inmates, experiencing different aspects of the ministry firsthand.
- Encouraged regular engagement with Catholic teachings, combined with prayer and spiritual reflection. Taught detainees how to practice Lectio Divina, to meditate on the mysteries of the rosary, and to perform an examination of conscience. Helped inmates to understand their individual call to holiness and to develop a sense of mission and purpose.
- Participated in debriefs with the prison chaplain, discussing each visit and reflecting on the challenges, successes, and lessons learned. Regularly reflected on personal motivation for serving, personal faith journey, and the personal impact of various prison ministry experiences.

## HONORS AND AWARDS

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- NASA, Agency Honor Award - Exceptional Technology Achievement Medal, 2021
- NASA GSFC, Robert H. Goddard Honor Award - Science, 2021
- NASA GSFC, Special Act - Individual, GOLD Mission Scientist, 2020
- NASA GSFC, Special Act - Individual, petitSat INMS Development Lead, 2019
- NASA GSFC, Internal Research and Development Team Award for the Dellinger Mission, 2018
- NASA, Agency Honor Award - Early Career Achievement Medal, 2017
- NASA Group Achievement, DELLINGR 6U SmallSat Team, 2017
- NASA GSFC, Special Act - 670 INMS Instrument, 2015
- NASA GSFC, Special Act - EXOS Instrument, 2014
- NASA Group Achievement, FASTSAT Instrument Development, 2011

## PROFESSIONAL ASSOCIATIONS

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- Society of Catholic Scientists (2017-present)
- American Geophysical Union (2007-present)

## PROFESSIONAL REFERENCES

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- Dr. Carrie Black-Khan, Program Officer  
National Science Foundation, 2415 Eisenhower Ave, Alexandria, VA 22314  
Phone: 703.292.2426 | Email: [cblack@nsf.gov](mailto:cblack@nsf.gov)
- Rev. Charles Canterna, Prison Chaplain  
St. Vincent de Paul Catholic Church, 120 N Front St., Baltimore, MD 21202  
Phone: 410.485.8864
- Dr. Douglas Rowland, Supervisor Research Astrophysicist  
NASA Goddard Space Flight Center, 8800 Greenbelt Rd., Greenbelt, MD 20771  
Phone: 301.286.6659 | Email: [douglas.e.rowland@nasa.gov](mailto:douglas.e.rowland@nasa.gov)

## PEER REVIEWED ARTICLES

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- Troyer, R. N., A. N. Jaynes, S. R. Kaeppler, R. H. Varney, A. S. Reimer, and **S. L. Jones**. 2022. "Substorm activity as a driver of energetic pulsating aurora." *Frontiers in Astronomy and Space Sciences* 9 [doi:10.3389/fspas.2022.1032552].
- Troyer, R. N., A. N. Jaynes, **S. L. Jones**, D. J. Knudsen, and T. S. Trondsen. 2021. "The Diffuse Auroral Eraser." *Journal of Geophysical Research: Space Physics* 126 (3): [doi: 10.1029/2020JA028805].
- Miyoshi, Y., S. Saito, S. Kurita, K. Asamura, K. Hosokawa, T. Sakanoi, T. Mitani, Y. Ogawa, S. Oyama, F. Tsuchiya, **S. L. Jones**, A. N. Jaynes, and J. B. Blake. 2020. "Relativistic Electron Microbursts as high-energy tail of pulsating aurora electrons." *Geophysical Research Letters* 47 (21): [doi: 10.1029/2020gl090360].
- Klenzing, J., R.L. Davidson, **S.L. Jones**, et al. 2020. "The petitSat mission – Science goals and instrumentation." *Advances in Space Research* 66 (1): 107-115.
- Kim, H., M. R. Lessard, **S. L. Jones**, et al. 2017. "Simultaneous Observations of Traveling Convection Vortices: Ionosphere-Thermosphere Coupling." *Journal of Geophysical Research: Space Physics* [10.1002/2017ja023904].
- Krainak, M. A., A. W. Yu, D. Janches, **S. L. Jones**, et al. 2014. "Self-Raman Nd:YVO4 laser and electro-optic technology for space-based sodium lidar instrument." *Proc. SPIE 8959, Solid State Lasers XXIII: Technology and Devices* 8959 [10.1117/12.2041453].
- Cohen, I. J., M. R. Lessard, S. R. Kaeppler, S. R. Bounds, C. A. Kletzing, A. V. Streltsov, J. W. LaBelle, M. P. Dombrowski, **S. L. Jones**, et al. 2013. "Auroral Current and Electrodynamics Structure (ACES) observations of ionospheric feedback in the Alfvén resonator and model responses." *Journal of Geophysical Research: Space Physics* 118 3288-3296 [10.1002/jgra.50348].
- Jones, S. L.**, M. R. Lessard, K. Rychert, et al. 2013. "Persistent, widespread pulsating aurora: A case study." *Journal of Geophysical Research: Space Physics* 118 (6): 2998-3006 [10.1002/jgra.50301].
- Kaeppler, S. R., C. A. Kletzing, S. R. Bounds, J. W. Gjerloev, B. J. Anderson, H. Korth, J. W. LaBelle, M. P. Dombrowski, M. Lessard, R. F. Pfaff, D. E. Rowland, **S. Jones**, et al. 2012. "Current Closure in the Auroral Ionosphere: Results from the Auroral Current and Electrodynamics Structure Rocket Mission." *Geophysical Monograph Series* 183-192 [10.1029/2011gm001177].
- Rowland, D. E., M. R. Collier, J. B. Sigwarth, and **S. L. Jones**, et al. 2011. "Science of opportunity: Heliophysics on the FASTSAT mission and STP-S26." 2011 Aerospace Conference [10.1109/aero.2011.5747235].
- Jones, S. L.**, M. R. Lessard, K. Rychert, E. Spanswick, and E. Donovan. 2011. "Large-scale aspects and temporal evolution of pulsating aurora." *Journal of Geophysical Research: Space Physics* 116 (A3): [10.1029/2010ja015840].

- Jones, S.**, M. Lessard, P. Fernandes, et al. 2009. "PFISR and ROPA observations of pulsating aurora." *Journal of Atmospheric and Solar-Terrestrial Physics* 71 (6-7): 708-716 [10.1016/j.jastp.2008.10.004].
- Jones, S. L.**, M. R. Lessard, P. W. Riley, and A. T. Ellis. "Development of the De-spun Rocket Borne Imager 2 in support of Rocket Observations of Pulsating Aurora." IRF Scientific Reports: Proceedings of the 33rd Annual European Meeting on Atmospheric Studies by Optical Methods, 292 67-71, 2008.
- Lessard, M. R., E. J. Lund, **S. L. Jones**, et al. 2006. "Nature of Pi1B pulsations as inferred from ground and satellite observations." *Geophysical Research Letters* 33 (14): L14108 [10.1029/2006gl026411].
- Jones, S. L.**, Space- and ground-based observations of pulsating aurora. Doctoral dissertation. University of New Hampshire, Durham NH, May 2010.
- Leamon, R., R. Canfield, **S. Jones**, et al. 2004. "Helicity of magnetic clouds and their associated active regions." *Journal of Geophysical Research: Space Physics* 109 A05106 [10.1029/2003JA010324].
- Jones, S. L.**, Spaced antenna measurements of AM radio stations to measure the Earth's ionosphere, Senior Honors Thesis. Dartmouth College, Hanover NH, June 2004.

## **NEW TECHNOLOGY REPORTS**

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- Jones, S. L.**, N. Paschalidis, et al. 2017. "Mass spectrometer with 360 deg FOV and keV energy range project." NASA GSFC New Technology Report. [GSC-17994-1].
- Sittler, E., N. Paschalidis, M. Rodriguez, **S. Jones**, et al. 2016. "Electrostatic einzel lens using hyperbolically shaped wire mesh." NASA GSFC New Technology Report. [GSC-17684-1].
- Janches, D., **S. Jones**, et al. 2014. "Development of a sodium LiDAR for spaceborne missions." NASA GSFC New Technology Report. [GSC-17235-1].
- Janches, D., **S. Jones**, et al. 2014. "Laser architecture and atomic filter for daytime measurements using a spaceborne sodium LiDAR." NASA GSFC New Technology Report. [GSC-17231-1].
- Yankielun, N., C. Ryerson, and **S. Jones**. 2002. "Wide-area ice detection using time domain reflectometry." US Army Corps of Engineers. Cold Regions Research And Engineering Laboratory. [ERDC/CRREL TR-02-15].

## **U.S. PATENT**

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Yu, A. W., M. A. Krainak, D. Janches, **S. L. Jones** and B. Blagojevic, 2019. "Space-based sodium LiDAR instrument and method of operation." U.S. Patent No. 10,429,243.

## **INVITED SEMINARS AND PROFESSIONAL MEETING PRESENTATIONS**

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- Jones, S.L. "A tiny time of flight mass spectrometer for CubeSats." Embry-Riddle Aeronautical University (virtual). Apr 21, 2020.
- Jones, S.L. "The LAMP sounding rocket: identifying the role of aurora in emptying the radiation belts." Mini-Geospace Environment Modeling (GEM) Workshop. San Francisco CA. Dec 8, 2019.
- Jones, S.L. "Observing weather at the boundary between Earth and space with NASA's GOLD and ICON missions." APL Space Science Colloquium. Johns Hopkins University Applied Physics Laboratory. Laurel MD. Aug 28, 2019.
- Jones, S.L. "The LAMP sounding rocket: identifying the role of aurora in emptying the radiation belts." Physics & Astronomy Colloquium. Clemson University. Clemson SC. Aug 22, 2019.
- Jones, S.L. "Remote sensing and in situ measurements of the weather at the boundary between Earth and space." Atmospheric Science Seminar. Clemson University. Clemson SC. Aug 21, 2019.
- Jones, S.L. "INMS: A tiny time of flight mass spectrometer for CubeSats." Department of Physics Colloquium Series. New Jersey Institute of Technology. Newark NJ. Apr 8, 2019.
- Jones, S.L. "Pulsating aurora, the celestial lava lamp." Special Seminar. University Centre in Svalbard (UNIS). Longyearbyen Norway. Nov 30, 2018.
- Jones, S.L. "Exploring the Upper Atmosphere with NASA's GOLD and ICON Missions." NASA Engage presentation. Goddard Space Flight Center. Greenbelt MD. Oct 30, 2018.
- Jones, S.L. "Pulsating aurora, the celestial lava lamp: ongoing efforts to illuminate our understanding of this far-reaching phenomenon." Space Plasma Physics Seminar Series, University of Iowa. Iowa City IA. Sept 25, 2018.
- Jones, S.L. "Where Space Weather Meets Earth Weather: Exploring the Upper Atmosphere with NASA's GOLD and ICON Missions." Department of Physics Colloquium Series, University of Iowa. Iowa City IA. Sept 24, 2018.
- Jones, S.L. "ExoCube and beyond: using CubeSats to measure the global ion and neutral densities in Earth's upper atmosphere." Department of Physics Colloquium Series. American University. Washington DC. Sept 5, 2018.
- Jones, S.L. "Ion Neutral Mass Spectrometer (INMS): Feeding Data-Hungry Scientists." Scientific and Engineering Student Internship program seminar series. Goddard Space Flight Center. Greenbelt MD. Jun 13, 2018.
- Jones, S.L. "The Upper Atmosphere: Where Space Weather Meets Earth Weather." Earth and Space Science Lecture Series. Library of Congress. Washington DC. Jun 7, 2018.

- Jones, S. L. "Pulsating aurora, the celestial lava lamp: ongoing efforts to illuminate our understanding of this far-reaching phenomenon." Space Plasma Seminar Series. Dartmouth College. Hanover, NH. Apr 17, 2018.
- Jones, S. L. and M. Lessard. "Energetic Electron Precipitation produces NOx." 2016 GEM Workshop, Santa Fe, NM. Jun 20, 2016.
- Jones, S. L. et al. "ExoCube INMS with Neutral Hydrogen Mode." AGU Fall Meeting. San Francisco, CA. Dec 16, 2015.
- Jones, S. L. "ExoCube: A CubeSat mission to measure and study the global ion and neutral densities in Earth's exosphere." NASA GSFC SmallSat Brownbag Lunch Series. Greenbelt, MD. Sept 16, 2015.
- Jones, S. L. et al. "Small-scale secondary electron features and FACs in diffuse and pulsating aurora." Joint Assembly. Montreal, Canada. May, 2015.
- Jones, S. L. et al. "Mini Ion Neutral Mass Spectrometer for Measuring Ionospheric Composition on EXOCUBE." CEDAR Workshop. Seattle, WA. Jun 23, 2014.
- Jones, S. L. et al. "Ground-Based Observations of Recovery Phase Aurora." 11th International Conference on Substorms. Lueneberg, Germany. Sept 6, 2012.
- Jones, S. L. et al. "Large-scale Precipitation: Widespread, Persistent Pulsating Aurora." AGU Fall Meeting, San Francisco, CA. Dec 7, 2012.
- Jones, S. L. "Science can be fun: Inspiration for future education." Goddard Space Flight Center, Project ECHO. Sept 21, 2011.
- Jones, S. L. "Space and ground-based measurements of pulsating aurora." NASA/GSFC Heliophysics Science Division Seminar. Feb 25, 2010.
- Jones, S. L. "Space-based measurements of pulsating aurora." Dartmouth College Plasma Seminar Series. Hanover, NH. Apr 28, 2009.
- Jones, S. L. "Pulsating aurora and associated particle precipitation as observed by the Rocket Observations of Pulsating Aurora Mission." Univ. of New Hampshire Space Science Seminar. Jan 30, 2008.
- Jones, S. L. "Aurora and sounding rockets." Univ. of New Hampshire Project SMART. July 2008.

## **NASA TV LIVE SHOWS**

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- "Going for GOLD: Exploring the interface to space." NASA Goddard Space Flight Center. Greenbelt, MD. January 4, 2018.
- "GOLD Pre-Launch Broadcast: Ready, Set, GOLD!" NASA Goddard Space Flight Center. Greenbelt, MD. January 28, 2018.

## **OTHER PROFESSIONAL MEETING PRESENTATIONS - PARTIAL (MOST RECENT)**

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- Paschalidis, N., **S. Jones**, D. Gershman, D., and E. Sittler. "Gated Time of Flight for Ionospheric Ion and Neutral Plasma Compositional Distribution Measurements." American Geophysical Union (AGU) Fall Meeting. Remote. 2021.
- Klenzing, J., A. Halford, R. Davidson, G. Earle, **S. Jones**, N. Paschalidis, C. Martinis, J. Smith, K. Zawdie, and R. Pfaff. "petitSat - a 6U CubeSat to examine plasma density enhancements in the ionosphere." AGU Fall Meeting. Remote. 2021.
- Troyer, R., A. Jaynes, **S. Jones**, S. Kaeppler, R. Varney, A. and Reimer. "Classifying the energy of pulsating aurora and its connection to substorms using the Poker Flat Incoherent Scatter Radar (PFISR)." AGU Fall Meeting. Remote. 2021.
- Troyer, R., A. Jaynes, **S. Jones**, S. Kaeppler, R. Varney, and A. Reimer. "Pulsating aurora: the possible connection between auroral substorms and climatological effects." AGU Fall Meeting. Remote. 2021.
- Troyer, R., A. N. Jaynes, **S. Jones**, S. R. Kaeppler, R. H. Varney, and C. Kletzing. "A Statistical Study of Pulsating Aurora and its Impact on M-I Coupling." AGU Fall Meeting. Remote. 2020.
- Connor, H. K., **S. Jones**, L. W. Blum, L. Kepko, D. Thorsen, D., C. Pollock and N. Paschalidis. "ISEND cubesat for studying the Earth's exospheric density and its response to space weather." AGU Fall Meeting. Remote. 2020.
- Troyer, R., A. N. Jaynes, S. R. Kaeppler and **S. Jones**. "In-situ observations of high-energy electrons in pulsating aurora using all-sky imagers, Van Allen Probes, and PFISR." AGU Fall Meeting. San Francisco, CA. Dec 13, 2019.
- Klenzing, J. H., R. L. Davidson, G. D. Earle, A. J. Halford, **S. Jones**, C. R. Martinis, N. Paschalidis, R. F. Pfaff, J. Smith and K. Zawdie. "petitSat - A 6U CubeSat to examine the link between MSTIDS and ionospheric plasma density enhancements." AGU Fall Meeting. San Francisco, CA. Dec 12, 2019.
- Jones, S.** and M. Nash. "Tracking Irregular Motion of Black Auroral Forms." AGU Fall Meeting. San Francisco, CA. Dec 9, 2019.
- Connor, H. K., **S. Jones**, L. Blum, N. Paschalidis, D. Thorsen and C. Pollock. "Exploring the Earth's outer atmosphere: an innovative approach to measure in-situ exospheric densities." AGU Fall Meeting. San Francisco, CA. Dec 9, 2019.
- Jones, S. L.**, N. Paschalidis, P. Uribe, T. Cameron, K. Santibanez-Rivera, E. Rossano and D. Chornay. "The enhanced Ion and Neutral Mass Spectrometer for the PetitSat CubeSat mission." Committee on Space Research, The 4th COSPAR Symposium. Herzliya, Israel. Nov 5, 2019.
- Paschalidis, N., **S. Jones**, P. Uribe, T. Cameron, K. Santibanez-Rivera, M. Rodriguez, D. Chornay, E. Sittler, A. Glocer and E. Rossano. "Initial Results from the mini Ion and Neutral Mass Spectrometer on the NSF Exocube and NASA Dellingr." European Planetary Science Congress. Geneva, Switzerland. Sept, 2019.

- Klenzing, J., R. Davidson, G. Earle, A. Halford, **S. Jones**, C. Martinis, N. Paschalidis, R. Pfaff and L. Santos. "PetitSat--A 6U CubeSat to examine the link between MSTIDs and ionospheric plasma density enhancements." Committee on Space Research, 42nd Assembly. Pasadena, CA. Jul 21, 2018.
- Paschalidis, N., A. Glocer, **S. Jones**, J. Park, E. Sittler, J. Cooper, D. Chornay and A. Szabo. "A compact ion and neutral gas spectrometer for the future Interstellar Probe Mission." Committee on Space Research, 42nd Assembly. Pasadena, CA. Jul 17, 2018.
- Eastes, R., W. McClintock, A. G. Burns, S. Solomon, D. Anderson, L. Andersson, M. Codrescu, R. Daniell, S. England, J. Evans, J. Lumpe, A. Richmond, D. Rusch, O. Siegmund, T. Woods, C. Martinis, S. Budzien, K. Dymond, F. Eparvier, J. Oberheide, J. Correira, **S. Jones**, E. Talaat. "Global-scale Observations of the Limb and Disk Mission -ultraviolet Imaging of Earth's Space Environment from Geostationary Orbit." 15th Annual Meeting AOGS. Jun 2018.
- Jones, S.**, N. Paschalidis, M. Rodriguez, E. Sittler, D. Chornay, P. Uribe, T. Cameron and K. Santibanez Rivera. "Atmospheric Composition Measurements from the Compact Ion and Neutral Mass Spectrometer on the Dellingr Mission." AGU Triennial Earth Sun Summit. May 5, 2018.