Publications

My name is written in bold font (e.g., **Phipps, Phillip H.**).

1. Schmidt, Carl, Sharov, Mikhail, de Kleer, Katherine, Schneider, Nick, de Pater, Imke, **Phipps, Phillip H.,** Conrad, Al, Moore, Luke, Spencer, John, Morgenthaler, Jeff, Ilyin, Ilya, Strassmeier, Klaus, Veillet, Christian, Hill, John, and Brown, Michael (2023) Io's Optical Aurorae in Jupiter's Shadow, The Planetary Science Journal, 4, 36, doi: 10.3847/PSJ/ac85b0
2. **Phipps, Phillip H.**, Withers, Paul, Buccino, Dustin R., Yang, Yu-Ming, and Parisi, Marzia (2021), Two years of observations of the Io plasma torus by Juno radio occultations: Results from Perijoves 1 to 15, J. Geophys. Res Space Physics, 126, e2020JA028710
3. **Phipps, Phillip H.**, and Bagenal, Frances (2021), Centrifugal Equator in Jupiter's Plasma Sheet, J. Geophys. Res Space Physics, 126, e2020JA028713
4. **Phipps, Phillip H.**, Withers, Paul, Vogt, Marissa, Buccino, Dustin R., Yang, Yu-Ming, Parisi, Marzia, Ranquist, Drake, Kollmann, Peter, and Bolton, Scott (2020), Where is the Io plasma torus? A comparison of observations by Juno radio occultations to predictions from Jovian Magnetic field models, J. Geophys. Res. Space Physics, DOI: 10.1029/2019JA027633
5. **Phipps, Phillip H.**, Withers, Paul, Buccino, Dustin R., Yang, Yu-Ming, and Parisi, Marzia (2019), Variations in the density distribution of the Io plasma torus as seen by radio occultations on Juno Perijoves 3, 6, and 8, J. Geophys. Res. Space Physics, 124, DOI: 10.1029/2018JA026297
6. **Phipps, Phillip H.**, Withers, Paul, Buccino, Dustin R., and Yang, Yu-Ming (2018), Distribution of plasma in the Io plasma torus during *Juno* Perijove 1, J. Geophys. Res. Space Physics, 123, DOI:10.1029/2017JA025113
7. **Phipps, Phillip H.** and Withers, Paul (2017), Radio occultations of the Io plasma torus by *Juno* are feasible, J. Geophys. Res. Space Physics, 122, DOI: 10.1002/2016JA023447

White Paper Participation

My name is written in bold font (e.g., **Phipps, P. H.**).

1. Killen, R. M., Yeo, L-H., Zheng, Y., McLain, J., Marshall, J., Morrissey, L., Ahrens, C, **Phipps, P. H.**, Graham, Heather, and Stubbs, T. J. (2024), Moon: Handle With Care, Bulletin of the AAS, vol. 56(1), doi:10.3847/25c2cfeb.917b6d52
2. Ahrens, Caitlin, Fagan, A., Petro, N., **Phipps, P. H**., Stubbs, T., Saxena, P., and Waller, D., (2022), Space Weathering at the Moon: Priorities for Interdisciplinary Heliophysical and Planetary Science, Bulletin of the AAS, vol. 55(3), doi:10.3847/25c2cfeb.4de28fb2
3. Kollman, Peter, Allegini, F., Allen, R. C., Andre, N., Azari, A. R., Bagenal, F., Beddingfield, C. B, …, **Phipps, P. H.,** et al. (2021), Magnetospheric Studies: A requirement for addressing interdisciplinary mysteries in the Ice Giant systems, Bulletin of the American Astronomical Society, vol. 53, doi:10.3847/25c2cfeb.d955f654

Abstracts

My name is written in bold font (e.g., **Phipps, P. H.**). *Future meetings in red.*

1. **Phipps, P.H.,** Withers, P., Buccino, D.R., Parisi, M., Park, R.S., and Bolton, S. J. (2024), Io Plasma Torus Variability Through Perijove 49, MOP 2024, Minneapolis, MN, Jul 8 – Jul 12
2. Stubbs, T. J., Cascioli, G., Withers, P., Mazarico, E., Mao, D., **Phipps, P. H.**, and Gray, C. (2024) LRO Radio Occultation Observations of a Temporally Variable Dense Lunar Ionosphere, European Lunar Symposium, Scotland, UK, Jun. 16-21

3. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2024), Mapping Radiation Exposure around the South Pole of the Moon, European Lunar Symposium, Scotland, UK, Jun. 16-21
4. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2024), Maps of Primary Radiation Dose Around the Lunar South Pole: Preliminary Assessment of Artemis Landing Sites, 55th Lunar and Planetary Science Conference (LPSC), Houston, TX, Mar. 11-16
5. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2023), Mapping Primary Radiation Dose for an Astronaut in the Lunar South Pole Region during an Extreme Solar Energetic Particle (SEP) Event, AGU Fall meeting 2023, San Francisco, CA, Dec 11-16
6. Stubbs, T. J., Cascioli, G., Withers, P., Mazarico, E., Mao, D., **Phipps, P. H.**, and Gray, C. (2023) Radio Occultation Observations of a Variable Dense Lunar Ionosphere, AGU Fall meeting 2023, San Francisco, CA, Dec 11-16
7. Khaksarighiri, S., Wimmer-Schweingruber, R. F., Stubbs, T. J., Guo, J., Looper, M. D., **Phipps, P. H.**, Ehresmann, B., Zeitlin, C., Hassler, D., Matthiae, D., Berger, T., Reitz, G., Loeffler, S., and Loewe, J. L. (2023), Radiation transport through the Martian atmosphere as a function of the zenith angle - Implications for local shielding on Mars, AGU Fall meeting 2023, San Francisco, CA, Dec 11-16
8. Looper, M.D., Mazur, J., Blake, J, Spence, H., Schwadron, N. Wilson, J., Jordan, A., Zeitlin, C., Case, A., Kasper, J., Townsend, L., Stubbs, T., **Phipps, P.H.**, (2023), GLACE (Geant4 Lunar Albedo Computed Environment): A Freely-Available Model of Lunar Energetic-Particle Secondary Radiation and Its Variation with Regolith Hydrogen, AGU Fall meeting 2023, San Francisco, CA, Dec 11-16
9. Looper, M.D., Mazur, J., Blake, J, Spence, H., Schwadron, N. Wilson, J., Jordan, A., Zeitlin, C., Case, A., Kasper, J., Townsend, L., Stubbs, T., **Phipps, P.H.**, (2023), GLACE (Geant4 Lunar Albedo Computed Environment): A Freely-Available Model of Lunar Energetic-Particle Secondary Radiation and Its Variation with Regolith Hydrogen, ASEC 2023, Huntsville, AL, Oct. 9-13
10. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2023), Primary Radiation Dose Around the Artemis III Candidate Landing Sites, Lunar Exploration Analysis Group, JHU-APL, Laurel, MD, Sept 20-22
11. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2023), Radiation Dose around the 13 Candidate Artemis III Landing Sites, NESF 2023, College Park, MD, Jul. 18-20
12. Nerney, E., Bagenal, F., Wilson, R., and **Phipps, P.H.** (2023), Model Comparisons with Juno Observations of the Io Plasma Torus, EGU General Assembly 2023, Vienna, Austria, Apr. 24–28
13. Ahrens, C., **Phipps P.H.**, and Petro, N. (2023), Lunar Science Opportunities and Challenges at the Faustini Rim A Candidate Landing Site, The First Steps in a Bold New Era of Human Discovery: Candidate Artemis III Landing Sites, A Lunar Surface Science Workshop, Virtual, Apr. 4-5
14. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2023), Radiation Dose Around the Lunar South Pole Near the Candidate Landing Sites for the Artemis III Mission, 54th Lunar and Planetary Science Conference (LPSC), Houston, TX, Mar. 13-17
15. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2022), Solar Energetic Radiation Dose Around the Lunar South Pole, Fall meeting American Geophysical Union, Chicago, IL, Dec. 12-16
16. Looper, M., Mazur, J., Blake, B., Spence, H., Schwadron, N., Wilson, J., Jordan, A., Zeitlin, C., Case, A., Kasper, J., Townsend, L., Stubbs, T., and **Phipps, P. H.**, GLACE (Geant4 Lunar Albedo Computed Environment): A Model of Lunar Energetic-Particle Secondary Radiation and its Variation with Regolith Hydrogen, Fall meeting American Geophysical Union, Chicago, IL, Dec. 12-16
17. Yang, Y.-M., Buccino, D., Parisi, M., Oudrhiri, K., Park, R. **Phipps, P. H.** , and Withers, P. (2022) , Radio Occultations of the Io Plasma Torus and Gravity Science Calibrations for the Juno Prime Mission's 35 Orbits of Jupiter, Fall meeting American Geophysical Union, Chicago, IL, Dec. 12-16

18. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2022), Mapping Biologically Relevant Radiation Dose Around the Lunar South Pole, Lunar Exploration Analysis Group, JHU-APL, Laurel, MD, Aug 23-25
19. **Phipps, P.H.,** Withers, P., Buccino, D.R., Parisi, M., Park, R.S., and Bolton, S. J. (2022), Juno Radio Occultations of the Io Plasma Torus through Perijove 25, COSPAR 2022, Athens, Greece, Jul 16 – Jul 24
20. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2022), Solar Energetic Particle Radiation Dosage Around a Simple Lunar Crater, COSPAR 2022, Athens, Greece, Jul 16 – Jun 24
21. **Phipps, P.H.,** Withers, P., Buccino, D.R., Parisi, M., Park, R.S., and Bolton, S. J. (2022), Io Plasma Torus Properties Through Perijove 25 from Juno Radio Occultations, MOP 2022, Liege, Belgium, Jul 10 – Jul 15
22. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2021), Solar Energetic Particle Radiation Dosage in Biological Systems Around a Lunar Crater, AGU Fall Meeting 2021, New Orleans, Dec 13 – Dec 17
23. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2021), Radiation Dosage from Solar Energetic Particles Around a Lunar Crater , LEAG 2021, Virtual, Aug 31 – Sept. 2
24. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., Spence, H.E., and Townsend, L. W. (2021), Solar Energetic Particle Radiation Dosage Near a Simple Lunar Crater, NESF 2021, Virtual, Jul 20-23
25. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., and Spence, H.E. (2021), Galactic Cosmic Ray Proton Radiation Dosage Near a Simple Lunar Crater, LPSC 2021, Virtual, Mar 15-19
26. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., and Spence, H.E. (2020), Radiation Exposure in the Vicinity of a Simple Crater on the Moon, 2020 AGU Fall Meeting, Virtual, Dec 1-17
27. Yang, Y-M, Buccino, D., Parisi, M., **Phipps, P. H.**, Folkner, W. M., Kahan, D. S., Withers, P., & Oudrhiri, K., (2020) Recent Advances in the Io Plasma Torus Calibrations for Galileo, Juno, and Europa Clipper Radio Science Measurements, 2020 AGU Fall meeting, Virtual, Dec. 1-17
28. **Phipps, P.H.,** Stubbs, T. J., Looper, M. D., and Spense, H.E. (2020), Variations in Radiation Exposure Near a Simple Lunar Crater, Annual Meeting of the Lunar Exploration and Analysis Group 2020 Meeting, Virtual, Sept. 14-16
29. **Phipps, P.H.,** Withers, P., Buccino, D. R., Yang, Y-M., Parisi, M., Hinton, P. C., & Bagenal, F. (2019), Io Plasma Torus Variability During the Juno Mission, 2019 AGU Fall meeting abstracts, San Francisco, CA, Dec. 9 - 13
30. Yang, Y-M, Buccino, D., Parisi, M., Folkner, W. M., **Phipps, P. H.**, Kahan, D. S., Withers, P., & Oudrhiri, K., (2019) Juno Radio Science Observations and Gravity Science Calibrations of Io plasma torus: IPT impacts to Europa Gravity Science, 2019 AGU Fall meeting abstracts, San Francisco, CA, Dec. 9 - 13
31. **Phipps, P.H.,** Withers, P., Buccino, D. R., Yang, Y-M., Parisi, M., Hinton, P. C., & Bagenal, F. (2019), Juno Radio Occultations of the Io Plasma Torus, NEROC Symposium, MIT Haystack Observatory, Westford, MA, Nov 1
32. Molrano, A., Zannoni, M., Gomez Casajus, L., Tortora, P., Withers, P., **Phipps, P. H.**, Buccino, D., & Oudrhiri, K. Morphology of the Io Plasma Torus inferred from Dual Uplink-Dual Downlink calibration during Juno Mission, EPSC-DPS Joint Meeting 2019, Geneva, Switzerland, 15-20 Sept.
33. **Phipps, P.H.,** Withers, P., Hinton, P. C., Bagenal, F., Buccino, D. R., Yang, Y-M., & Parisi, M. (2019), The Centrifugal Equator as Seen by Juno Radio Occultations of the Io Plasma Torus, Magnetospheres of the Outer Planets meeting, Sendai, Japan, 3-7 June.
34. Zannoni, M., Gomez Casajus, L., Molrano, A., Tortora, P., **Phipps, P. H.**, Withers, P., Buccino, D., Oudrhiri, K., Durante, D., & Iess, L., (2019), Observations of the Io Plasma Torus with Juno radio science experiment, 21st EGU General Assembly, Vienna, Austria, 7-12 Apr.

35. **Phipps, P.H.,** Withers, P., Buccino, D. R., Yang, Y-M., Hinton, P. C., & Bagenal, F. (2018), Variability in the Io Plasma Torus as Seen by Juno Radio Occultations, Abstract 438966 presented at 2018 Fall Meeting, AGU, Washington, DC, 10-14 Dec.
36. Yang, Y-M, Buccino, D., Parisi, M., Folkner, W. M., **Phipps, P. H.**, Withers, P., Kahan, D. S., & Oudrhiri, K., (2018) Juno Radio Science Observations and Gravity Science Calibrations of Io Plasma Torus and its Impact on Telecommunications Links for Future Missions, 2018 AGU Fall meeting abstracts, Washington, DC, 10-14 Dec.
37. **Phipps, P.H.,** Withers, P., Buccino, D. R., Yang, Y-M., Hinton, P. C., & Bagenal, F. (2018), Io plasma torus geometry from *Juno* radio occultations, Magnetospheres of Outer Planets meeting, Boulder, CO, 9-13 Jul
38. **Phipps, P. H.**, Withers, P., Buccino, D. R., Yang, Y-M., & Hinton, P. C. (2017). Juno Perijove 1 radio occultation of the Io plasma torus, Abstract 279802 presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.
39. Yang, Y-M, Buccino, D., Folkner, W. M., Oudrhiri, K., **Phipps, P. H.**, Parisi, M., & Kahan, D. S. (2017), Juno Radio Science Observations and Gravity Science Calibrations of Plasma Electron Content in Io Plasma Torus, 2017 AGU Fall Meeting Abstracts, New Orleans, LA, 11-15 Dec.
40. **Phipps, P.H.** & Withers, P. (2017), Radio occultations of the Io plasma torus with the *Juno* Spacecraft: A study of feasibility, Magnetospheres of Outer Planets meeting, Uppsala, Sweden, 12-16 June
41. **Phipps, P.H.** & Withers, P. (2016). Feasibility of Juno radio occultations of the Io plasma torus, Abstract 178300 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
42. **Phipps, P.H.** & Clarke, J.T. (2015). Calculation of the Auroral Color Ratio of the Gas Giants Using Images, IAU General Assembly, Meeting #29, #2258018