**Scientific publications**

1. Moen J, Spicher A, Takahashi T, Rowland DE, Kletzing C, LaBelle J, Larsen M, Conde M, Saito Y, Blix K (2020) Grand Challenge Initiative – Cusp: observational network for solar wind-driven dynamics of the top atmosphere (GCI-Cusp). <https://doi.org/10.5281/zenodo.4777783>
2. Moen J, Spicher A, Rowland DE, Kletzing C, LaBelle J (2019) Grand Challenge Initiative – Cusp: rockets to explore solar wind-driven dynamics of the top side polar atmosphere. <https://doi.org/10.5281/zenodo.4778500>
3. Sawyer, R. P., Fuselier, S. A., Kletzing, C. A., Bonnell, J. W., Roglans, R., Bounds, S. R., et al. (2021). TRICE 2 observations of low-energy magnetospheric ions within the cusp. Journal of Geophysical Research: Space Physics, 126, e2021JA029382. <https://doi.org/10.1029/2021JA029382>
4. Moser, C., LaBelle, J., Hatch, S., Moen, J. I., Spicher, A., Takahashi, T., et al. (2021). The cusp as a VLF saucer source: First rocket observations of long-duration VLF saucers on the dayside. Geophysical Research Letters, 48, e2020GL090747. https://doi.org/10.1029/2020GL090747
5. Moser, C., LaBelle, J., Roglans, R., Bonnell, J. W., Cairns, I. H., Feltman, C., et al. (2021). Modulated upper-hybrid waves coincident with lower-hybrid waves in the cusp. Journal of Geophysical Research: Space Physics, 126(9), e2021JA029590. <https://doi.org/10.1029/2021JA029590>
6. Joshua Guthrie et al 2021 Meas. Sci. Technol. **32** 095906. DOI 10.1088/1361-6501/abf804
7. Jao, Chun-Sung; Marholm, Sigvald; Spicher, Andres; Miloch, Wojciech Jacek.
Wake formation behind Langmuir probes in ionospheric plasmas. *Advances in Space Research* 2021 ;Volum 69.(2) s. 856-868
8. Takahashi, T., Spicher, A., Di Mare, F., Rowland, D. E., Pfaff, R. F., Collier, M. R., et al. (2022). Suppression of ionospheric irregularity due to auroral particle impact. Journal of Geophysical Research: Space Physics, 127, e2020JA028725. <https://doi.org/10.1029/2020JA028725>
9. Spicher, A., LaBelle, J., Bonnell, J. W., Roglans, R., Moser, C., Fuselier, S. A., et al. (2022). Interferometric study of ionospheric plasma irregularities in regions of phase scintillations and HF backscatter. Geophysical Research Letters, 49, e2021GL097013. <https://doi.org/10.1029/2021GL097013>
10. Fuselier, S. A., Kletzing, C. A., Petrinec, S. M., Trattner, K. J., George, D., Bounds, S. R., et al. (2022). Multiple reconnection X-lines at the magnetopause and overlapping cusp ion injections. Journal of Geophysical Research: Space Physics, 127, e2022JA030354. <https://doi.org/10.1029/2022JA030354>
11. Lisa M. Buschmann, John W. Bonnell, Scott Bounds, Lasse B.N. Clausen, Craig Kletzing, Sigvald Marholm, Wojciech J. Miloch, Roger Roglans, Andres Spicher, The role of particle precipitation on plasma structuring at different altitudes by in-situ measurements, Journal of Space Weather and Space Climate, 10.1051/swsc/2023012, 13, (13), (2023)
12. Petrinec, S. M., Kletzing, C. A., Bounds, S. R., Fuselier, S. A., Trattner, K. J., & Sawyer, R. P. (2023). TRICE-2 rocket observations in the low-altitude cusp: Boundaries and comparisons with models. Journal of Geophysical Research: Space Physics, 128, e2022JA030952. <https://doi.org/10.1029/2022JA030952>
13. Namekawa, T., Mitani, T., Asamura, K., Miyoshi, Y., Hosokawa, K., Ogawa, Y., et al. (2021). Rocket Observation of Sub‐Relativistic Electrons in the Quiet Dayside Auroral Ionosphere. Journal of Geophysical Research: Space Physics, [126(7), 1–13](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1029%2F2020JA028633&data=05%7C01%7Ckolbjoern.blix%40andoyaspace.no%7C8bad817f0b9344af352108db7d23cade%7Cb0bb820039a04042ab757b48f5267379%7C0%7C0%7C638241364912226167%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=KGApdccq1PKqZsPH5s6TKvquGBxs5yPrnQYS7HqNSro%3D&reserved=0).
14. Sugo, S., Kawashima, O., Kasahara, S., Asamura, K., Nomura, R., Miyoshi, Y., et al. (2021). Energy-resolved detection of precipitating electrons of 30–100 keV by a sounding rocket associated with dayside chorus waves. Journal of Geophysical Research: Space Physics/, [126, e2020JA028477](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1029%2F2020JA028477&data=05%7C01%7Ckolbjoern.blix%40andoyaspace.no%7C8bad817f0b9344af352108db7d23cade%7Cb0bb820039a04042ab757b48f5267379%7C0%7C0%7C638241364912226167%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=TqvN2nfzn0ZfwZhKqlMBVm8hk2Jop%2F%2BlscDZNy0wtN0%3D&reserved=0).

**PhD Thesis**

1. Moser, C., Plasma Wave Generation and Interactions in the Auroral Ionosphere, PhD dissertation, Dartmouth College, 2021.

**Talks and presentations.**

1. Spicher, Andres. Characterizing high-latitude ionospheric turbulence. Mathematics for Signal processing and Applications in Geophysics and other fields (MaSAG); 2023-05-15 - 2023-05-20
2. Buschmann, Lisa Marie; Spicher, Andres; Clausen, Lasse; Marholm, Sigvald; Miloch, Wojciech Jacek.
Role of particle precipitation on plasma structuring at different altitudes by in-situ measurements. Living Planet Sympostium 2022; 2022-05-23 - 2022-06-27
3. Spicher, Andres. High-latitude ionospheric density turbulence. Norwegian physical society meeting; 2022-03-10 - 2022-03-11
4. Spicher, Andres; LaBelle, James William; Bonnell, John W.; Roglans, Roger; Moser, Chrystal; Fuselier, Stephen A.; Bounds, Scott R.; Clausen, Lasse; Di Mare, Francesca; Feltman, C.; Jin, Yaqi; Kletzing, Craig A.; Miloch, Wojciech Jacek; Moen, Jøran Idar; Oksavik, Kjellmar; Sawyer, Rhyan; Takahashi, Toru; Yeoman, Timothy K.. Sounding rocket investigation of multi-scale (density) irregularities in the cusp region. 25th ESA PAC Symposium; 2022-05-01 - 2022-05-05
5. Spicher, Andres; Moen, Jøran Idar; LaBelle, James William; Bonnell, John W; Roglans, Roger; Moser, Chrystal; Bounds, Scott; Clausen, Lasse; Di Mare, Francesca; Feltman, C.; Fuselier, Stephen A.; Jin, Yaqi; Kletzing, Craig A.; Miloch, Wojciech Jacek; Oksavik, Kjellmar; Sawyer, Rhyan; Takahashi, Toru; Yeoman, Timothy K. Sounding rocket studies of ionospheric turbulence above Svalbard. Svalbard Science Conference; 2021-11-02 - 2021-11-03
6. Spicher, Andres; Kletzing, Craig A.; Bounds, Scott; Bonnell, John W.; Roglans, Roger; Fuselier, Stephen A.; Sawyer, Rhyan; Rowland, Douglas E.; Pfaff, Robert F.; Clemmons, James H.; Collier, Michael R.; Akbari, Hassanali; LaBelle, James William; Hatch, Spencer Mark; Oksavik, Kjellmar; Takahashi, Toru; Moen, Jøran Idar; Miloch, Wojciech Jacek; Zettergren, Matthew D.; Deshpande, Kshitija; Jin, Yaqi. Cusp rocket experiment of density structures. CEDAR 2020; 2020-06-22 - 2020-06-26
7. Spicher, Andres; LaBelle, James William; Bonnell, John W; Bounds, Scott; Clausen, Lasse Boy Novock; Di Mare, Francesca; Fuselier, Stephen A.; Jin, Yaqi; Kletzing, Craig A.; Oksavik, Kjellmar; Miloch, Wojciech Jacek; Moen, Jøran Idar; Moser, Chrystal; Roglans, Roger; Sawyer, Rhyan; Takahashi, Toru. On multi-scale density irregularities observed by sounding rockets within regions of enhanced scintillations in the cusp ionosphere. AGU Fall Meeting; 2020-12-01 - 2020-12-17
8. Clemmons, J.; Rowland, Douglas E.; Pfaff, Robert F.; Hecht, J; Collier, M; Moen, Jøran Idar; Keller, J; McLain, J; Burchill, Jonathan; Klenzing, J.; Kepko, L.; Lester, Mark; Oksavik, Kjellmar; Sigernes, Fred; Zettergren, M.; Michell, R.; Paschalidis, N; Jones, S; Spicher, Andres; Di Mare, Francesca; Moore, T; Giles, Barbara; Grubbs, G; Yeoman, Timothy K; Herlingshaw, Katie. Results from a Grand Challenge Initiative-Cusp Mission: VISIONS-2. 27th IUGG General Assembly; 2019-07-08 - 2019-07-18
9. Clemmons, J.H.; Rowland, Douglas E.; Hecht, J. H.; Pfaff, Robert F.; Michell, Robert; Moen, Jøran Idar; Oksavik, Kjellmar; Sigernes, Fred; Lester, Mark; Spicher, Andres. VISIONS-2 Observations of Electron Dynamics and Alfvén Waves. AGU Fall Meeting; 2019-12-09 - 2019-12-13
10. Moser, Chrystal; LaBelle, James William; Kletzing, Craig A.; Bounds, Scott; Hatch, Spencer Mark; Oksavik, Kjellmar; Bonnell, John W; Fuselier, Stephen A.; Moen, Jøran Idar; Spicher, Andres; Sigernes, Fred; Cairns, Iver. CAPER-2 and TRICE-2 Sounding Rocket Investigations: Whistler and Upper-Hybrid Waves in the Polar Cusp. AGU Fall Meeting; 2019-12-09 - 2019-12-13
11. Pfaff, Robert F.; Rowland, Douglas E.; Freudenreich, H.; Clemmons, J.H.; Moen, Jøran Idar; Oksavik, Kjellmar; Spicher, Andres; Martin, Steven C. Dual Sounding Rocket Observations of Plasma Convection and Shear, Field-aligned Currents, and Alfven waves and Irregularities in the Cusp during IMF Bz Negative Conditions. AGU Fall Meeting; 2019-12-09 - 2019-12-13¨
12. Rowland, Douglas E.; Burchill, Jonathan; Clemmons, J.; Collier, M; Di Mare, Francesca; Hecht, J; Jones, S; Keller, J; Kepko, L.; Klenzing, J.; Lester, Mark; McLain, J; Michell, R.; Moen, Jøran Idar; Oksavik, Kjellmar; Paschalidis, N; Pfaff, R.; Sigernes, Fred; Spicher, Andres; Zettergren, M.. VISIONS-2: Imaging ion energization in the cusp. 24th ESA Symposium on European Rocket & Balloon programmes and related research; 2019-06-16 - 2019-06-20
13. Rowland, Douglas E.; Moen, Jøran Idar; Pfaff, Robert F.; Clemmons, J.H.; Spicher, Andres; Freudenreich, H.; Sigernes, Fred; Oksavik, Kjellmar; Hecht, J. H.; Collier, M; Keller, J; McLain, J; Zettergren, Matthew D.; Klenzing, J.; Kepko, L.; Lester, Mark. VISIONS-2 observations of ion heating and energization near the exobase, and the role of wave-particle interactions. AGU Fall Meeting; 2019-12-09 - 2019-12-13
14. Rowland, Douglas E.; Moen, Jøran Idar; Pfaff, Robert F.; Clemmons, J.H.; Spicher, Andres; Freudenreich, H.; Sigernes, Fred; Oksavik, Kjellmar; Hecht, J. H.; Collier, M; Keller, J; McLain, J; Zettergren, Matthew D.; Klenzing, J.; Kepko, L.; Lester, Mark. VISIONS-2 observations of the electrodynamics of magnetosphere-ionosphere coupling. AGU Fall Meeting; 2019-12-09 - 2019-12-13
15. Spicher, Andres; Moen, Jøran Idar; Hoang, Huy Minh; Røed, Ketil; Trondsen, Espen; Miloch, Wojciech Jacek; Blix, Kolbjørn. The Investigation of Cusp irregularities 5 sounding rocket: multi-point measurement of turbulence. 45 Optical meeting; 2018-10-01 - 2018-10-01 (Invited, oral)
16. C. Moser, {\it J.\ LaBelle}, C.\ Kletzing, S.R.\ Bounds, S.\ Hatch, K.\ Oksavik, J.W.\ Bonnell, S.A.\ Fuselier, J.\ Moen, A.\ Spicher, F.\ Sigernes, and I.H.\ Cairns, CAPER-2 and TRICE-2 Sounding Rocket Investigations: Whistler and Upper-Hybrid Waves in the Polar Cusp, Abstract SM51D-3228, presented at the 2019 Fall Meeting, AGU, San Francisco, Dec.\ 9, 2019.
17. C. Moser, {\it J.\ LaBelle}, J.W.\ Bonnell, R.\ Roglans, I.H.\ Cairns, C.\ Kletzing, S.R.\ Bounds, S.A.\ Fuselier, and R.\ Sawyer, Coincident Lower-Hybrid and Modulated Upper-Hybrid Waves. Observed with TRICE-2 Sounding Rockets in Earth's Cusp, Abstract SA034-05, American Geophysical Union 2020 Fall Meeting (held on-line due to COVID-19 restrictions), Dec. 15, 2020
18. C. Moser, {\it J.\ LaBelle}, and I.H.\ Cairns, High Bandwidth Measurements of Auroral Langmuir Waves with Multiple Antennas, Abstract SM25D-2039, American Geophysical Union 2021 Fall Meeting, New Orleans, Dec.\ 14, 2021.
19. LaBelle, J., Linear and nonlinear processes leading to structured auroral Langmuir and upper hybrid waves, {\it Dynamical Processes in Space Plasmas (IsraDynamics)}, Ein Bokek, Israel, March 8, 2023.
20. {K. Blix}\ J. Moen\ D. Rowland, The Grand Challenge Initiative – CUSP and M/LT projects
2023 Next-generation Suborbital Researchers Conference (NSRC-2023), happening February 27 to March 1 in Broomfield, Colorado
21. {K. Blix}\ J. Moen\ D. Rowland\ C. Koehler, The Grand Challenge Initiative – CUSP and M/LT projects, 15th International Workshop on Layered Phenomena in the Mesopause Region, Eskilstuna, Sweden, August 15-19, 2022.
22. {K. Blix}\ J. Moen\ D. Rowland\ C. Koehler, The Grand Challenge Initiative – CUSP and M/LT projects, 25th ESA Symposium on European Rocket and Balloon programmes and related research, 1th to 5th May 2022, Biarritz, France
23. {K. Blix}\ J. Moen\ D. Rowland\ C. Kletzing\ C. Koehler, The Grand Challenge Initiative – CUSP and M/LT projects and status at Andøya Spaceport.
24. {K. Blix}\ J. Moen\ D. Rowland\ C. Kletzing\ C. Koehler, Grand Challenge Initiative – CUSP and M/LT projects, Fall Meeting 2019, 9-13 December 2029, San Francisco, USA
25. {K. Blix}\ J. Moen\ D. Rowland\ C. Koehler, Grand Challenge Initiative – CUSP and Mesosphere projects, 24th ESA Symposium on European Rocket and Balloon programmes and related research, 16-20 June 2019 - Essen, Germany.
26. {J. Moen}\ K. Blix, Grand Challenge Initiative – Cusp multi-mission rocket program, Birkeland 150 year Anniversary Symposium : The Heritage of Kristian Birkeland and beyond, 6.4 – 7.4 2017, Tokyo, Japan.
27. {J. Moen}\ K. Blix, Cusp multi-mission rocket program, Birkeland 150 year Anniversary Symposium: Norsk Fysikermøte 2017, 7.8 – 9.8 2017, Oslo, Norway
28. {J. Moen}\ K. Blix, The Grand Challenge Initiative – Cusp project 2018/19: CEDAR GEM 2016 21.6 2016, Santa Fe, NM, USA.
29. {A. Spicher}\ J. Moen\ H. Minh Hoang\ K. Røed\ E. Trondsen\ W. Miloch\ K. Blix, The Investigation of Cusp irregularities 5 sounding rocket: multi-point measurement of turbulence: 45 Optical meeting, Kiruna, Sweden.
30. {A. Spicher}\ J. Moen\ D. Rowland\ J. LaBelle\ C. Kletzing\ K. Blix\ W. Miloch, Sounding rocket studies above Svalbard: the grand challenge initiative cusp: SIOS Online Conference on "Earth Observation (EO) and Remote Sensing (RS) applications in Svalbard", 8.6 – 10.6 2021.

*Composed of contributions from the consortium and online databases (e.g., CRISTIN).*