

GRAPE-LIST OF PUBLICATIONS 2012-2016

2012

- Deshpande, K. B., G. S. Bust, C. R. Clauer, H. Kim, J. E. Macon, T. E. Humphreys, J. A. Bhatti, S. B. Musko, G. Crowley, and A. T. Weatherwax (2012), Initial GPS scintillation results from CASES receiver at South Pole, Antarctica, *Radio Sci.*, 47, RS5009, doi:10.1029/2012RS005061.
- Moro, J., Denardini, C.M., Abdu, M.A., Correia, E., Schuch, N.J., MAKITA, K. Correlation between the cosmic noise absorption calculated from the SARINET data and the energetic particles measured by MEPED: Simultaneous observations over SAMA region. *Advances in Space Research.* , v.51, p.1692 - 1700, 2012.
- Moro, J., Denardini, C.M., Correia, E., Abdu, M.A., Schuch, N.J., MAKITA, K. A comparison of two different techniques for deriving the quiet day curve from SARINET riometer data. *Annales Geophysicae (Berlin).* , v.30, p.1159 - 1168, 2012.
- Moro, J., C. M. Denardini, M. A. Abdu, E. Correia, N. J. Schuch, and K. Makita (2012), Latitudinal dependence of cosmic noise absorption in the ionosphere over the SAMA region during the September 2008 magnetic storm, *J. Geophys. Res.*, 117, A06311, doi:10.1029/2011JA017405.
- Jayachandran, P. T., K. Hosokawa, K. Shiokawa, Y. Otsuka, C. J. Watson, S. C. Mushini, J. W. MacDougall, P. Prikryl, R. Chadwick, and T. D. Kelly (2012), GPS Total Electron Content Variations Associated with Poleward Moving Sun Aligned Arcs, *J. Geophys. Res.*, doi:10.1029/2011JA017423
- Kinrade, J., C. N. Mitchell, P. Yin, N. Smith, M. J. Jarvis, D. J. Maxfield, M. C. Rose, G. S. Bust, and A. T. Weatherwax (2012), Ionospheric scintillation over Antarctica during the storm of 5–6 April 2010, *J. Geophys. Res.*, 117, A05304, doi:10.1029/2011JA017073.
- Prikryl, P., P. T. Jayachandran, S. C. Mushini, and I. G. Richardson (2012), Toward the probabilistic forecasting of high-latitude GPS phase scintillation, *Space Weather*, 10, S08005, doi:10.1029/2012SW000800.

2013

- De Franceschi Giorgiana and Candidi Maurizio, GRAPE, GNSS Research and Application for Polar Environment, Expert Group of SCAR. *Annals of Geophysics, Special Issue, Vol. 56, No2 (2013), ISSN 2037-416X.* <http://www.annalsofgeophysics.eu/index.php/annals/issue/view/488>.
- Prikryl, P., Ghoddousi-Fard, R., Kunduri, B. S. R., Thomas, E. G., Coster, A. J., Jayachandran, P. T., Spanswick, E., and Danskin, D. W.: GPS phase scintillation and proxy

index at high latitudes during a moderate geomagnetic storm, *Ann. Geophys.*, 31, 805-816, doi:10.5194/angeo-31-805-2013, 2013.

- Prikryl, P., Y. Zhang, Y. Ebihara, R. Ghoddousi-Fard, P. T. Jayachandran, J. Kinrade, C. N. Mitchell, A. T. Weatherwax, G. Bust, P. J. Cilliers, L. Spogli, L. Alfonsi, G. De Franceschi, V. Romano, B. Ning, G. Li, M. J. Jarvis, D. W. Danskin, E. Spanswick, E. Donovan and M. Terkildsen, An interhemispheric comparison of GPS phase scintillation with auroral emission observed at South Pole and from DMSP satellite, Special Issue of *Annals of Geophysics*, 56, 2, 2013, R0216; doi:10.4401/ag-6227.
- Prikryl, P. V. Sreeja, M. Aquino, and P. T. Jayachandran, Probabilistic forecasting of ionospheric scintillation and GNSS receiver signal tracking performance at high latitudes, Special Issue of *Annals of Geophysics*, 56, 2, 2013, R0222; doi:10.4401/ag-6219.
- Sarti P., Negusini M., Tomasi C., Petkov B., Capra A. (2013). Thirteen years of integrated precipitable water derived by GPS at Mario Zucchelli Station, Antarctica. *Annals of Geophysics*, Special Issue, 56, 2, 2013. ISSN: 2037-416X. doi: 10.4401/ag-6228
- Correia, E., Paz, A. J., Gende, M.A. Characterization of GPS-TEC in Antarctica from 2004 to 2011. *Annals of Geophysics.* , v.56, p.R0217-1 - R0217-5, 2013.
- Fernandez, José Henrique, Correia, E. Electron precipitation events in the lower ionosphere and the geospace conditions. *Annals of Geophysics.* , v.56, p.R0218-1 - R0218-10, 2013.
- Spogli, L., Alfonsi, L., Cilliers, P., Correia, E., De Franceschi, G., Mitchell, C.N., Romano, V., Kinrade, J., Cabrera, M. A. GPS scintillations and TEC climatology in the southern low, middle and high 2 latitude regions. *Annals of Geophysics.* , v.56, p.R0220-1 - R0220-12, 2013.
- Correia, E., Raulin, J. P., Kaufmann, P., Bertoni, F. C., Quevedo, M.T. Inter-hemispheric analysis of daytime low ionosphere behavior from 2007 to 2011. *Journal of Atmospheric and Solar-Terrestrial Physics.* , v.92, p.51 - 58, 2013.
- Correia, E., Raulin, J. P., Kaufmann, P., Gavilán, H. R. Atmospheric changes observed in antarctica related to the sun-earth interactions. *Annual Activity Report - INCT-APA.* , v.3, p.20 - 25, 2013.
- Correia, E., Makhmutov, Vladimir S, Raulin, Jean Pierre, Makita, K. Mid- and low-latitude response of the lower ionosphere to solar proton events on January 2012. *IOP Conference Series. Earth and Environmental Science (Online).* , v.409, p.1/012186 - 4, 2013.

2014

- Koustov, A. V., P. V. Ponomarenko, M. Ghezelbash, D. R. Themens, and P. T. Jayachandran (2014), Electron density and electric field over Resolute Bay and F region ionospheric echo detection with the Rankin Inlet and Inuvik SuperDARN radars, *Radio Sci.*, 49, doi:10.1002/2014RS005579.

- Prikryl P., Jayachandran P. T., Mushini S. C., Richardson I. G., High-latitude GPS phase scintillation and cycle slips during high speed solar wind streams and interplanetary coronal mass ejections: A superposed epoch analysis, *Earth, Planets and Space*, **66** :62, 2014.
- Raulin, Jean Pierre, Trottet, Gerard, Gimenez de Castro, C. G., Correia, E., Macotela, E. L. Nighttime Sensitivity of Ionospheric VLF Measurements to X-ray Bursts From a Remote Cosmic Source. *Journal of Geophysical Research: Space Physics.*, 2014. DOI:10.1002/2013JA019670
- Ghezlbash, M., A. Koustov, D.R. Themens, and P.T. Jayachandran (2014). Seasonal and diurnal variations of PolarDARN F region echo occurrence in the polar cap and their causes, *J. Geophys. Res. Space Physics*, 119, 10,426–10,439, doi:10.1002/2014JA020726.
- Themens, D. R., P. T. Jayachandran, M. J. Nicolls, and J. W. MacDougall (2014), A top to bottom evaluation of IRI 2007 within the polar cap, *J. Geophys. Res. Space Physics*, 119, 6689–6703, doi:10.1002/2014JA020052.

2015

- Athieno, R., P.T. Jayachandran, D.R. Themens, and D.W. Danskin (2015), Comparison of observed and predicted MUF(3000)F2 in the Polar cap region , *Radio Sci.*, 50, 509–517. doi:10.1002/2015RS005725.
- Prikryl, P., Ghoddousi-Fard, R., Spogli, L., Mitchell, C. N., Li, G., Ning, B., Cilliers, P. J., Sreeja, V., Aquino, M., Terkildsen, M., Jayachandran, P. T., Jiao, Y., Morton, Y. T., Ruohoniemi, J. M., Thomas, E. G., Zhang, Y., Weatherwax, A. T., Alfonsi, L., De Franceschi, G., and Romano, V.: GPS phase scintillation at high latitudes during geomagnetic storms of 7–17 March 2012 – Part 2: Interhemispheric comparison, *Ann. Geophys.*, 33, 657-670, doi:10.5194/angeo-33-657-2015, 2015.
- Linty, N., Romero, R., Dovis, F., & Alfonsi, L. (2015, May). Benefits of GNSS software receivers for ionospheric monitoring at high latitudes. In *Radio Science Conference (URSI AT-RASC), 2015 1st URSI Atlantic* (pp. 1-6). IEEE. doi: [10.1109/URSI-AT-RASC.2015.7303110](https://doi.org/10.1109/URSI-AT-RASC.2015.7303110)
- Cilliers, P., Alfonsi, L., & Spogli, L. (2015, May). GNSS scintillation climatology at SANAE-IV, Antarctica: 2006 to 2014. In *Radio Science Conference (URSI AT-RASC), 2015 1st URSI Atlantic* (pp. 1-1). IEEE. doi: 10.1109/URSI-AT-RASC.2015.7303100
- Terzo, O., Ruiu, P., Alfonsi, L., Romano, V., & Spogli, L. (2015, May). International cloud infrastructure for space weather data management: The DemoGRAPE challenge. In *Radio Science Conference (URSI AT-RASC), 2015 1st URSI Atlantic* (pp. 1-1). IEEE. doi: 10.1109/URSI-AT-RASC.2015.7303109
- Themens, D. R., P. T. Jayachandran, and R. B. Langley (2015), The nature of GPS differential receiver bias variability: An examination in the polar cap region, *J. Geophys. Res. Space Physics*, 120, 8155–8175, doi:10.1002/2015JA021639

2016

- Linty, N., DAVIS, F., Romero, R., Cristodaro, C., Alfonsi, L., Correia, E., "Monitoring Ionosphere Over Antarctica by Means of a GNSS Signal Acquisition System and a Software Radio Receiver," *Proceedings of the 2016 International Technical Meeting of The Institute of Navigation*, Monterey, California, January 2016, pp. 549-555.
- Themens, D.R., and P.T. Jayachandran (2016), Solar Activity Variability in the IRI at high latitudes: Comparisons with GPS Total Electron Content, *J. Geophys. Res. Space Physics*, 121, 3793–3807, doi:10.1002/2016JA022664.
- A. Favenza, N. Linty, F. Davis, "Exploiting Standardized Metadata For GNSS SDR Remote Processing: a Case Study.", *Proceedings of the 29th International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS+ 2016)*, Portland (Oregon), September 12-16, 2016, (in publication).
- Linty N., Romero R., Cristodaro C., Davis F., Bavaro M., Curran J., Fortuny-Guasch J., Ward J., Lamprecht G., Riley P., Cilliers P., Correia E. and L. Alfonsi (2016), Ionospheric scintillation threats to GNSS in polar regions: the DemoGRAPE case study in Antarctica, ENC 2016 IEEE Xplore Database and Conference Proceedings (in publication).
- Yamazaki, Y., M. J. Kosch, Y. Ogawa, and D. R. Themens (2016), High-latitude Ion Temperature Climatology during the International Polar Year 2007–2008, *Journal of Space Weather and Space Climate*. (Submitted March 4th, 2016)