***CHRISTIANO GARNETT MARQUES BRUM* (*PhD*)**

Research Professor.

Florida Space Institute (FSI) - University Of Central Florida (UCF).

12354 Research Pkwy, Orlando, FL (407) 823-6351

E-mail: christiano.brum@ucf.edu; ch719041@ucf.edu, cgmbscience@gmail.com

ORCID: 0000-0001-6515-7621

**Biography:**

Dr. Christiano Brum started his science career as part of the Brazilian Antarctic Program. For 10 years he participated in several Antarctic expeditions collecting data on the upper atmosphere and thermosphere. His PhD thesis was focused on high-and-mid latitudes cosmic noise absorption by the ionospheric D-region. He was a National Institute of Space Research (INPE), Utah State University, and Cornell University postdoctoral fellow. Upon completing his last post-doctoral fellowship, Dr. Brum assumed the Arecibo Observatory’s Space and Atmospheric Science department leadership (2011). Dr. Brum’s relationship with FSI-UCF started in 2017 when he was part of the FSI-UAGM-YEN team that won the NSF cooperative agreement to manage Arecibo Observatory, where he became the Deputy Director of Science Operations until the closeout of the site. Currently, Dr. Brum is based in Orlando and is part of the Florida Space Institute team as a research professor. Dr. Brum’s current work is on studies of the ionosphere, thermosphere, and magnetosphere (ITM) regions by combining information from different probing instruments (optical and radio) which allow unique insights into fundamental plasma processes and incredible diagnoses of the upper atmospheric conditions during different geophysical conditions and also for climate changes.

**Research interest:**

Dr. C. Brum field of research is general upper atmosphere research (aeronomy) and space sciences based on radio and optical instrumentation (satellite and ground-based systems), which includes 1) Analysis of the long-term trends of geophysical and atmospheric parameters and their impacts on the Earth's climate; 2) Evaluation and parametrization of the alternative hypothesis for the O-O+ cross-section adjustment; 3) Evaluation of the trans-hemispheric exchange of mass of the convection cells for the American Sector; 4) Impacts of geomagnetic and solar storms on the thermosphere low-to-middle latitudes; 5) Coupling of the troposphere to the thermosphere wind field through gravity waves and severe weather (hurricanes), and; 6) Mesosphere-Lower Thermosphere (MLT) gravity wave propagation.

**1) *PEER-REVIEWED PUBLICATIONS.***

Sukanta Sau, Pedrina Terra, ***Christiano G. M. Brum***, Fabio A. Vargas, Robert B. Kerr, and Jens Lautenbach (**2024**) "Retrieval of rotational temperatures from the Arecibo Observatory Ebert-Fastie spectrometer and their inter-comparison with Lidar and SABER measurements". Earth and Space Science. doi: 10.1029/2023EA003323.

Santos AM, Yang G, Pimenta AA, ***Brum CGM***, Batista IS, Sobral JHA, Andrioli VF, Batista PP, Abdu MA, Souza JR, Manoharan PK, Wang C, Li H and Liu Z (**2024**) Climatology of atmospheric solar tidal mode effects on ionospheric F2 parameters over the American sector during solar minimum between cycles #23 and #24. Front. Astron. Space Sci. 11:1325218. doi: 10.3389/fspas.2024.1325218

Periasamy K. Manoharan, Christopher J. Salter, Stephen M. White, Phil Perillat, Felix Fernandez, Ben Perera, Arun Venkataraman and ***Christiano M. Brum*** (**2023**) "*Solar X-Band Imaging with the Arecibo 12-m Telescope: The Brightness Temperature and Magnetic Field of Active Regions*". Solar Physics, 298:124. https://doi.org/10.1007/s11207-023-02217-3.

G. Wright, Fabiano Rodrigues, J. Gomez Socola, A. O. Moraes, J. F. G. Monico, J. Sojka, L. Scherliess, D. Layne, I. Paulino, R. A. Buriti, ***C. G. M. Brum***, P. Terra, K. Deshpande, P. R. Vaggu, P. J. Erickson, N. A. Frissell, J. Makela and D. Scipion (**2023**) “*On the detection of a solar radio burst event occurred on 28 August 2022 and its effect on GNSS signals as observed by ionospheric scintillation monitors distributed over the American sector*”. J. Space Weather Space Clim. https://doi.org/10.1051/swsc/2023027.

J. Gomez. Socola; J. Sousasantos; F. S. Rodrigues; ***C.G.M. Brum***; Pedrina Terra A.O. Moraes; R. Eastes (**2023**) *"On the quiet-time occurrence rates, severity, and origin of L-Band ionospheric scintillations observed from low-to-mid latitude sites located in Puerto Rico"*. Journal of Atmospheric and Solar-Terrestrial Physics, V.250, ISSN 1364-6826, https://doi.org/10.1016/j.jastp.2023.106123.

Isham B, Bullett T, Gustavsson B, Polisensky E, ***Brum C***, Fallen C, Belyey V, Parra-Rojas F, Norouzi L, Stramkals A and Ökten MB (**2023**) “*Science goals for a high-frequency radar and radio imaging array*”. Front. Astron. Space Sci. 10:1064368. doi: 10.3389/fspas.2023.1064368.

Jonas Sousa Santos, Josemaria Gomez Socola, Fabiano S. Rodrigues, ***Christiano G. M. Brum*** and Pedrina Terra (**2023**) "*Severe L-band scintillation over low-to-mid latitudes caused by an extreme equatorial plasma bubble: joint observations from ground-based monitors and GOLD*". Earth, Planets and Space (EPS). https://doi.org/10.1186/s40623-023-01797-5.

Selvaraj, D., Sulzer, M. P., Zhang, S.-R., & **Brum, C. G. M**. (**2023**). “*Long-term Trends in the Upper Atmosphere using the Incoherent Scatter Radar Observations over Arecibo*”. Journal of Geophysical Research: Space Physics, 128, e2022JA031049. https://doi.org/10.1029/2022JA031049.

Santos, Ângela M., **Christiano G. M. Brum**, Inez S. Batista, José H. A. Sobral, Mangalathayil A. Abdu, Jonas R. Souza, Rodolfo de Jesus, Periasamy K. Manoharan, and Pedrina Terra. (**2023**). "*Ionospheric Variability over the Brazilian Equatorial Region during the Minima Solar Cycles 1996 and 2009: Comparison between Observational Data and the IRI Model*". Atmosphere 14, no. 1: 87. https://doi.org/10.3390/atmos14010087.

P K Manoharan, Phil Perillat, C J, Salter, Tapasi Ghosh, Shikha Raizada, Ryan S Lynch, Amber Bonsall-Pisano, B C Joshi, Anish Roshi, ***Christiano Brum***, and Arun Venkataraman (**2022**) “*Probing the Plasma Tail of Interstellar Comet 2I/Borisov*” Planetary Science Journal. https://doi.org/10.48550/arXiv.2210.16633.

Santos, A. M., ***Brum, C. G. M.***, Batista, I. S., Sobral, J. H. A., Abdu, M. A., Souza, J. R., et al. (**2022**) “*Anomalous responses of the F2 layer over the Brazilian equatorial sector during a counter electrojet event: A CASE STUDY*”. Journal of Geophysical Research: Space Physics, 127, e2022JA030584. https://doi.org/10.1029/2022JA030584.

Dale C. Ferguson, James K. Breakall, Paul A. Bernhardt, Felix Fernandez, Christiano Brum, Alfredo III Santoni-Ruiz, Robert B. Kerr and Robert L. Williams II (**2022**) "*A Preliminary Plan to Quickly Restore Utility to the Arecibo 305m Telescope*". Journal of Astronomical Instrumentation. doi:10.1142/S225117172250012X.

Ângela Santos, **Christiano *Brum***, Inez Batista, José Sobral, Mangalathayil Abdu, and Jonas Souza (**2022**) “*Responses of intermediate layers to geomagnetic activity during the 2009 deep solar minimum over the Brazilian low-latitude sector*”. Annales Geophysicae, 40, 259–269 doi:10.5194/angeo-40-259-2022.

da Silva, C.L., Salazar, S.D., ***Brum, C.G.M.***, Terra, P. (**2021**). *“Survey of electron density changes in the daytime ionosphere over the Arecibo observatory due to lightning and solar flares”*. Nature – Scientific Reports 11, 10250. doi:10.1038/s41598-021-89662-x.

Santos, A. M., Batista, I. S., ***Brum, C. G. M.***, Sobral, J.H.A., Abdu, M. A., & Souza, J. R. (**2021**). “*F region electric field effects on the intermediate layer dynamics during the evening prereversal enhancement at equatorial region over Brazil”*. Journal of Geophysical Research: Space Physics, 126, e2020JA028429. [doi:10.1029/2020JA028429](https://doi.org/10.1029/2020JA028429).

Angela Santos, Inez Batista, **C. G.M Brum**, Jose Sobral, Mangalathayil Abdu and Jonas Souza (**2020**). “*Some differences in the dynamics of the intermediate descending layers observed during periods of maximum and minimum solar flux*”. Journal of Geophysical Research: Space Physics, Journal of Geophysical Research: Space Physics V.125, I.10. doi: 10.1029/2019JA027682.

Junior, W. A.; **Brum, C.**; Fernandez, J. & Guedes, A. **(2020).** “*Modelo Semi-Empirico Medio Longitudinal de Ventos Termosfericos a 250 km para Periodos de Baixa Atividade Solar e Geomagnetica*”, Revista Brasileira de Geografia Fisica, 13. doi: 10.26848/rbgf.v13.4.p1442-1462.

Terra, P.; Vargas, F.; **Brum, C. G. M.** and Miller, E. S. **(2020)**. “*Geomagnetic and Solar dependency of MSTIDs occurrence rate: A climatology based on airglow observations from the Arecibo Observatory Remote Optical Facility (ROF)*”. Journal of Geophysical Research: Space Physics, 125, e2019JA027770. doi:10.1029/2019JA027770.

Fabio Vargas, ***Christiano Brum***, Pedrina Terra & Delano Gobbi (**2020**). "*Mean Zonal Drift Velocities of Plasma Bubbles Estimated from Keograms of Nightglow All-Sky Images from the Brazilian Sector*". Multidisciplinary Digital Publishing Institute (MDPI)-Atmosphere. doi:10.3390/atmos11010069.

dos Santos, Â. M., Batista, I. S., Abdu, M. A., Sobral, J. H. A., de Souza, J. R., and **Brum, C. G. M.** (**2019**) “*Climatology of intermediate descending layers (or 150 km echoes) over the equatorial and low-latitude regions of Brazil during the deep solar minimum of 2009*”. Annales Geophysicae., 37, 1005–1024. doi:10.5194/angeo-37-1005-2019.

P. P. Joshi, L. S. Waldrop and **C. G. M. Brum** (**2018**). “*Ionospheric O+ Momentum Balance Through Charge Exchange With Thermospheric O Atoms*”. Journal of Geophysical Research-Space Physics, 123, 9743-9761. doi:10.1029/2018JA025821.

Raizada, S.; ***C.G.M. Brum***; Mathews, J. D.; Gonzalez, C. and Franco, E. (**2018**). “*Characteristics of nighttime E-region over Arecibo: Dependence on solar flux and geomagnetic variations*”. Advances in Space Research, V.61, Issue 7, p.1850 – 1857. doi:10.1016/j.asr.2017.07.006.

Hajra, R.; Tsurutani, B. T.; ***C.G.M. Brum*** and Echer, E. (**2017**). “*High-speed solar wind stream effects on the topside ionosphere over Arecibo: A case study during solar minimum*”. Geophysical Research Letters. doi:10.1002/2017GL073805.

Rajkumar Hajra; Shyamal Kumar Chakraborty; Bruce T. Tsurutani; Ashish DasGupta; Ezequiel Echer; ***C.G.M. Brum***; Walter D. Gonzalez and José Humberto Andrade Sobral (**2016**) “*An empirical model of ionospheric total electron content (TEC) near the crest of the equatorial ionization anomaly (EIA)*”. Journal of Space Weather and Space Climate, May. doi:10.1051/swsc/2016023.

S. Raizada; ***C.G.M. Brum***; C. A. Tepley; J. S. Friedman; John. D. Mathews; F.T. Djuth and Caitlin Kerr (**2015**). “*First simultaneous measurements of Na and K thermospheric layers along with TILs from Arecibo*”. Geophysical Research Letters. doi:10.1002/2015GL066714.

Abdu, M.A.; ***Brum, C.G.M.***; Batista, P.P.; Gurubaran, S.; Pancheva, D.; Bageston, J. V.; Batista, I.S. and Takahashi, H. (**2015**). “*Fast and ultrafast Kelvin wave modulations of the equatorial evening F region vertical drift and spread F development*”. Earth, Planets and Space, 67. doi:10.1186/s40623-014-0143-5.

Rajkumar Hajra; Bruce T. Tsurutani; Ezequiel Echer; Walter D. Gonzalez; ***C.G.M. Brum***; Luis Eduardo A. Vieira and Ondrej Santolik (**2015**). “*Relativistic electron acceleration during HILDCAA events: are precursor CIR magnetic storms important?*” Earth, Planets and Space, 67:109. doi:10.1186/s40623-015-0280-5.

Aponte, N.; ***C.G.M. Brum***; M. P. Sulzer and S. A. Gonzalez **(2013)**. “Measurements of the O+ to H+ transition height and ion temperatures in the lower topside ionosphere over Arecibo for equinox conditions during the 2008–2009 extreme solar minimum”. Journal of Geophysical Research-Space Physics, 118. doi:10.1002/jgra.50416.

C. Martinis; D. Hickey; W. Oliver; N. Aponte; **C.G.M. Brum**; R. Akmaev; A. Wright and C. Miller **(2013)**. “The midnight temperature maximum from Arecibo incoherent scatter radar ion temperature measurements”. Journal of Atmospheric and Solar-Terrestrial Physics, v.103, p.129-137. doi:10.1016/j.jastp.2013.04.014.

Jonathan S. Friedman; Xinzhao Chu; **C.G.M. Brum** and Xian Lu **(2013)**. “Observation of a thermospheric descending layer of neutral K over Arecibo”. Journal of Atmospheric and Solar-Terrestrial Physics, v.104, p. 253-259. doi:10.1016/j.jastp.2013.03.002.

Goncharenko, L. P., V.W. Hsu, **C.G.M. Brum**, S.-R. Zhang, and J. T. Fentzke **(2013)**. “Wave signatures in the midlatitude ionosphere during a sudden stratospheric warming of January 2010”. Journal of Geophysical Research-Space Physics, 118. doi:10.1029/2012JA018251.

Fentzke, J. T.; Hsu, V.; **Brum, C.G.M.**; Strelnikova, I.; Rapp, M. and Nicolls, M. J. **(2012)**. “D Region meteoric smoke and neutral temperature retrieval using the poker flat incoherent scatter radar”. Geophysical Research Letters. v. 39, L21102. doi:10.1029/2012GL053841.

**Brum, C.G.M.**; Tepley, C.A.; Fentzke, J.T.; Robles, E.; dos Santos, P.T. and Gonzalez, S.A. **(2012)**. “Long-term changes in the thermospheric neutral winds over Arecibo: Climatology based on over three decades of Fabry-Perot observations”. Journal of Geophysical Research, 117. doi:10.1029/2011ja016458.

Souza Echer, M.P.; Echer, E.; Rigozo, N.R.; **Brum, C.G.M.;** Nordemann, D.J.R. and Gonzalez, W.D. **(2012)**. “On the relationship between global, hemispheric and latitudinal averaged air surface temperature (GISS time series) and solar activity”. Journal of Atmospheric and Solar-Terrestrial Physics, v. 74, p. 87-93. doi:10.1016/j.jastp.2011.10.002.

Santos, P.M.T.; **Brum, C.G.M.**; Tepley, C.; Aponte, N.A.; González, S.A. and Robles, E. **(2011)**. “Using Incoherent Scatter Radar to Investigate the Neutral Wind Long-Term Trend over Arecibo”. Journal of Geophysical Research, v. 116, A00H13. doi:10.1029/2011JA016514.

Tepley, C.A.; Robles, E.; García, R.; Santos, P.M.T.; **Brum, C.G.M.** and Burnside, R. **(2011)**. “Directional trends in thermospheric neutral winds observed at Arecibo during the past three solar cycles”. Journal of Geophysical Research, v.116, p.A00H06. doi:10.1029/2010JA016172.

**Brum, C.G.M.**; Rodrigues, F.S.; Santos, P.M.T.; Carrion, A.; Aponte, N.A.; González, S.A. and Robles, E. **(2011)**. “A modeling study of and parameters measured by the Arecibo incoherent scatter radar and comparison with IRI model predictions for solar cycles 21, 22, and 23”. Journal of Geophysical Research, v.116, p.A03324. doi:10.1029/2010JA015727.

Garzón, D.P.; **Brum, C.G.M.**; Echer, E.; Aponte, N.A.; Sulzer, M.; González, S.A.; Kerr, R.B. and Waldrop, L. **(2011)** “Response of the topside ionosphere over Arecibo to a moderate geomagnetic storm”. Journal of Atmospheric and Solar-Terrestrial Physics.; p.1568 - 1574. doi:10.1016/j.jastp.2011.02.016.

Da Costa, A.M.; Domingues, M.O.; Mendes, O. and **Brum, C.G.M. (2011)** “Interplanetary medium condition effects in the South Atlantic Magnetic Anomaly: A case study”. Journal of Atmospheric and Solar-Terrestrial Physics, p.1478 – 1491. doi:10.1016/j.jastp.2011.01.010.

Abdu, M.A.; Batista, I.S.; **Brum, C.G.M.**; Macdougall, J.W.; Santos A. M.; Souza, J.R. and Sobral, J.H.A. **(2010)** “Solar flux effects on the equatorial evening vertical drift and meridional winds over Brazil: A comparison between observational data and the IRI model and the HWM representations”. Advances in Space Research, v.46, p.1078 – 1085. doi:10.1016/j.asr.2010.06.009.

Souza, J.R.; **Brum, C.G.M.**; Abdu, M.A.; Batista, I.S.; Asevedo Jr.; W.D.; Bailey, G.J. and Bittencourt, J.A. **(2010)** “Parameterized Regional Ionospheric Model and a comparison of its results with experimental data and IRI representations”. Advances in Space Research, v. 46, p. 1032-1038. doi:10.1016/j.asr.2009.11.025.

Abdu, M.A. and **Brum, C.G.M. (2009)** “Electrodynamics of the vertical coupling processes in the atmosphere-ionosphere system of the low latitude region”. Earth, Planets and Space, v. 61, p. 385-395. doi:10.1186/BF03353156.

Abdu, M.A.; **Brum, C.G.M.**; Batista, I.S.; Sobral, J.H.A.; de Paula, E. and Souza, J. **(2008)** “Solar flux effects on equatorial ionization anomaly and total electron content over Brazil: Observational results versus IRI representations”. Advances in Space Research, v. 42, p. 617-625, 2008. doi:10.1016/j.asr.2007.09.043.

**Brum, C.G.M.**; Abdu, M.A.; Batista, I.S.; Carrasco, A.J. and Santos, P.M.T. **(2006)** “Numerical Simulation of Nighttime Electron Precipitation in the Lower Ionosphere over a Sub-Auroral Region”. Advances in Space Research, v.37, p.1051 – 1057. doi:10.1016/j.asr.2006.02.003.

Abdu, M.A.; Ramkumar, T.K.; Batista, I.S.; **Brum, C.G.M.**; Takahashi, H.; Reinisch, B. and Sobral, J.H.A. **(2006)**. “Planetary wave signatures in the equatorial atmosphere ionosphere system, and mesosphere- E- and F region coupling”. Journal of Atmospheric and Solar-Terrestrial Physics, v.68, p.509 - 522. doi:10.1016/j.jastp.2005.03.019.

Abdu, M.A.; Batista, P.P.; Batista, I.S.; ***Brum, C.G.M.***; Carrasco, A.J. and Reinisch, B.W. (**2006**) “Planetary Wave Oscillations in Mesospheric Winds, Equatorial Evening Prereversal Electric Field and Spread F”. Geophysical Research Letters, v. 33, n. L07107, p. 1-4. doi:10.1029/2005GL024837.

Abdu, M.A.; Batista, I.S.; Carrasco, A.J. and ***Brum, C.G.M.*** (**2005**) “South Atlantic magnetic anomaly ionization: A review and a new focus on electrodynamic effects in the equatorial ionosphere”. Journal of Atmospheric and Solar-Terrestrial Physics, v.67, p.1643 – 1657. doi:10.1016/j.jastp.2005.01.014.

Contreira, D.B.; Rodrigues, F.S.; Makita, K.; ***Brum, C.G.M.***; Gonzales, W.D.; Trived, N.B.; Silva, M.R. and Schuch, N.J. (**2005**) “An experiment to study solar flare effects on radio-communication signals”. Advances in Space Research, v. 36, n. 12, p. 2455-2459. doi:10.1016/j.asr.2004.03.019.

Rodrigues, F.S.; ***Brum, C.G.M.***; Makita, K.; Nishino, M.; de Paula, E.R.; Abdu, M.A.; Nozaki, K.; Contreira, D.B.; Silva, M.R. and Schuch, N.J. (**2004**) “A commercial radio receiver for lower ionosphere monitoring: Initial results”. Geofísica Internacional, México, v. 43, n. 2, p. 193-198. https://doi.org/10.22201/igeof.00167169p.2004.43.2.363

**2) NON-REFEREED PUBLICATIONS.**

Periasamy K. Manoharan, Christopher J. Salter, ***Christiano M. Brum***, Stephen M. White, Phil Perillat, Alfredo Santoni, Felix Fernandez, Tapasi Ghosh, Benetge Perera, Arun Venkataraman (**2022**) *"Regular Solar Radio Imaging at Arecibo: Space Weather Perspective of Evolution of Active Regions".* Astrophysics - Instrumentation and Methods for Astrophysics. https://doi.org/10.48550/arXiv.2211.04472

S. Raizada; ***C. G. M. Brum***; J. Urbina; B. Isham; J. D. Mathews; M. Sulzer; J. Lautenbach; E. Nossa ; J. Selvaraj; P. Santos; S. Sau; and J. Breakall (**2023**) "*Characterizing the variability and structures in the coupled/complex ionosphere-atmosphere system*". *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.a310db59

Brett Isham, ***Christiano Brum***, Jason Kooi (**2023**) *"Design Concepts For a New Arecibo Radar And Radio Telescope"*. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.772b2522

Periasamy K. Manoharan; Christopher J. Salter; ***Christiano M. Brum***; Stephen M. White; Phil Perillat; Alfredo Santoni; Felix Fernandez; Tapasi Ghosh; Benetge Perera; and Arun Venkataraman (**2023**) *"Regular Solar Radio Imaging at Arecibo: Space Weather Perspective of Evolution of Active Regions"*. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.537ba515

Isham, B., Bullett, T., Gustavsson, B., Polisensky, E., & ***Brum, C***. (**2023**). “Science Goals for a High-Frequency Radar and Radio Imaging Array”. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.4811ab46

Brett Isham, ***Christiano Brum***, Jason Kooi (**2023**) *"Science Goals For a New Arecibo Observatory"*. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.6e8d2e0f

Isham, B., Bullett, T., Gustavsson, B., Polisensky, E., & ***Brum, C.*** (**2023**). “Technical Design of a High-Frequency Antenna Array for Radar and Radio Imaging of the Ionosphere”. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.61dff268

Anish Roshi, N. Aponte, E. Araya, H. Arce, L. A. Baker, W. Baan, T. M. Becker, J. K. Breakall, R. G. Brown, ***C. G. M. Brum***, et al. (**2023**) *“The Next Generation Arecibo Telescope (NGAT)”*. *Bulletin of the AAS*, *55*(3). https://doi.org/10.3847/25c2cfeb.d6cc0b85

***G. M. Brum, Christiano***; Aponte, Nestor; M. Santos, Angela; Sulzer, Michael (**2021**) *“Responses of the topside ion fractions concentration over the Arecibo Observatory to solar and geomagnetic activity for the summer period”*. Published in: 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS). Th-FIP-G10-20. doi:10.23919/URSIGASS51995.2021.9560602 ([URL](https://ieeexplore.ieee.org/document/9560602))

Santos, Angela; ***G. M. Brum, Christiano***; Batista, Inez; Andrade Sobral, José Humberto; Ali Abdu, Mangalathayil; R. Souza, Jonas (**2021**) *“Response of the Intermediate Layers at Brazilian low latitude to geomagnetic activity during the solar minimum of 2009”*. Published in: 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS). Th-FIP-G10-1. doi:10.23919/URSIGASS51995.2021.9560520 ([URL](https://ieeexplore.ieee.org/document/9560520))

***G. M. Brum, Christiano*** (**2021**) *“The impacts of particle precipitation spectrum on the 30MHz cosmic noise absorption under the South Atlantic Anomaly Region”*. Published in: 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS). Th-FIP-BK1-5. doi:10.23919/URSIGASS51995.2021.9560414 ([URL](https://ieeexplore.ieee.org/document/9560414))

Dharmalingam, Selvaraj; P. Sulzer, Michael; Aponte, Nestor; ***Brum, Christiano*** (**2021**) *“Long-term Trends in the Upper atmosphere using the observations of Incoherent Scatter Radar at Arecibo Observatory”*. Published in: 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS). Tu-G12-AM2-2. doi:10.23919/URSIGASS51995.2021.9560306 ([URL](https://www.ursi2021.org/wordpress/wp-content/uploads/ursi-gass2021_finalprogramme3.pdf))

D. Anish Roshi , N. Aponte, E. Araya,H. Arce, L. A. Baker, W. Baan,T. M. Becker, J. K. Breakall, R. G. Brown, ***C. G. M. Brum***, et al. (**2021**) *“The Future Of The Arecibo Observatory: The Next Generation Arecibo Telescope”*. arXiv preprint arXiv:2103.01367. ([URL](https://arxiv.org/abs/2103.01367))

Caitano L. da Silva; Sophia Salazar; ***Christiano G.M. Brum*** and Pedrina Terra **(2020)** *“Lightning Effects in the Ionosphere Over the Arecibo Observatory”*. Published in: 2020 XXXIIIrd General Assembly and Scientific Symposium of the International Union of Radio Science. doi:10.23919/URSIGASS49373.2020.9232366 ([URL](https://ieeexplore.ieee.org/document/9232366))

D. Anish Roshi, L.D.Anderson, E.Araya, D.Balser, W.Brisken, ***C.Brum***, et al. **(2019)** *“Astro2020 Activities and Projects White Paper: Arecibo Observatory in the Next Decade”*. Submitted as an Activities and Projects White Paper for the Astro2020 decadal survey. ([URL](https://arxiv.org/ftp/arxiv/papers/1907/1907.06052.pdf))

B.T. Tsurutani, G.S. Lakhina, A. Sen, P.K. Kaw, E. Echer, M.V. Alves, E. da Costa Jr., R. Hajra, W.D. Gonzalez, J.H.A. Sobral, M.A. Abdu, L.E. Vieira, and ***C.G.M. Brum*** **(2015)** *“Interplanetary Alfvén Waves, HILDCAAs, Acceleration of Magnetospheric Relativistic “Killer” Electrons and Auroral Zone Heating”*. 14th International Congress of the Brazilian Geophysical Society & EXPOGEF, Rio de Janeiro, Brazil, 3-6 August 2015. August 2015, 1503-1508. https://doi.org/10.1190/sbgf2015-301

Suman Ganguly; ***C.G.M. Brum***; Nestor Aponte; Eframir Franco and Sixto Gonzalez **(2014)**. *“Role of conjugate and local terminator for ionospheric dynamics at Arecibo”*. Published in: 2014 XXXIth URSI General Assembly and Scientific Symposium (URSI GASS). doi:10.1109/URSIGASS.2014.6929832

**3) OTHER PUBLICATIONS.**

Roberta de Cássia Ferreira, Inez Staciarini Batista, Vivian Moreira de Castilho Batista and ***Christiano Garnett Marques Brum* (2008)** *“Estudo das tendências de longo prazo dos parametros ionosfericos sobre a região Brasileira: Fortaleza” (Ionospheric parameters long term trends over the Brazilian Sector: Fortaleza)”*. Final report of science initiation project (PIBIC/INPE – CNPq/MCT). ([URL](http://mtc-m16c.sid.inpe.br/rep/sid.inpe.br/mtc-m18%4080/2008/12.08.22.01?metadatarepository=sid.inpe.br/mtc-m18@80/2008/12.08.22.01.45&ibiurl.backgroundlanguage=pt&ibiurl.requiredsite=mtc-m16c.sid.inpe.br+804&requiredmirror=sid.inpe.br/mtc-m18@80/2008/03.17.15.17.24&searchsite=bibdigital.sid.inpe.br:80&searchmirror=sid.inpe.br/bibdigital@80/2006/11.11.23.17&choice=briefTitleAuthorMisc))

***BRUM, C.G.M. (2004)*** “*Variabilidade da absorção de ruído cósmico via riômetro e modelagem numérica dos processos associados”* (*Variability of cosmic noise absorption by riometer and modeling of associated processess*). *São José dos Campos: Instituto Nacional de Pesquisas Espaciais (INPE), 2004 (PhD Thesis).* ([URL](http://mtc-m16.sid.inpe.br/rep/sid.inpe.br/jeferson/2004/08.04.16.30?metadatarepository=sid.inpe.br/jeferson/2004/08.04.16.30.54&ibiurl.backgroundlanguage=pt&ibiurl.requiredsite=mtc-m16.sid.inpe.br+800&requiredmirror=sid.inpe.br/banon/2003/08.15.17.40.18&searchsite=bibdigital.sid.inpe.br:80&searchmirror=sid.inpe.br/bibdigital@80/2006/11.11.23.17&choice=briefTitleAuthorMisc))

***BRUM, C.G.M. (2004);*** Echer, E. ; Santos, P. M. T. “*Métodos de redução e correção de dados de riômetros* (*Methods of reducing and correcting data from riometers*)”*.*São José dos Campos: publicação interna - Instituto Nacional de Pesquisas Espaciais, 2004. ([URL](http://mtc-m16.sid.inpe.br/rep/sid.inpe.br/marciana/2004/07.12.16.13?mirror=sid.inpe.br/banon/2003/08.15.17.40.18&metadatarepository=sid.inpe.br/marciana/2004/07.12.16.13.35))

***BRUM, C.G.M. (1999)*** *“A importância do Dia Quieto na absorção ionosférica da camada D da ionosfera e sua aplicação para os dados de riômetros da Estação Antártica Comandante Ferraz” (The importance of “quiet day” in the D-level ionospheric absorption of ionosphere and your application to Brazilian Antarctic Station’s data)*. São José dos Campos: Instituto Nacional de Pesquisas Espaciais, 1999(Masters Dissertation)***.*** ([URL](http://mtc-m16.sid.inpe.br/rep/sid.inpe.br/jeferson/2004/06.08.11.17?metadatarepository=sid.inpe.br/jeferson/2004/06.08.11.17.51&ibiurl.backgroundlanguage=pt&ibiurl.requiredsite=mtc-m16.sid.inpe.br+800&requiredmirror=sid.inpe.br/banon/2003/08.15.17.40.18&searchsite=bibdigital.sid.inpe.br:80&searchmirror=sid.inpe.br/bibdigital@80/2006/11.11.23.17&choice=briefTitleAuthorMisc))

**4) *PAPERS IN CONFERENCES*.**

|  |  |
| --- | --- |
| ***270.*** | Pedrina T Terra, ***Christiano Garnett Marques Brum*** (**2023**) *“Response of the OI 630.00nm airglow emission to extreme weather systems based on a decade of observations from the Arecibo Observatory, Puerto Rico”*. AGU Fall Meeting, San Francisco, CA, December 11-15. SA13B-2491 |
| ***269.*** | ***Christiano G. M. Brum***, Â.M. Santos and Giana Pérez (**2023**) “***Latitudinal variation of atmospheric solar tides modes of the ionospheric peak parameters over the American sector during the deep solar minimum of the transition between solar cycles #23 and #24***”. AGU Fall Meeting, San Francisco, CA, December 11-15. SA31A-04 |
| ***268.*** | Giana Pérez, ***Christiano G. M. Brum***, Periasamy K. Manoharan, Isaiah. Escapa, Pedrina Terra, Â.M. Santos, Paulo Prado Batista and Vania Andrioli (**2023**) “*The Mesospheric and Thermospheric Neutral Wind Components Response to the April 23rd, 2023, Geomagnetic Storm.*”. AGU Fall Meeting, San Francisco, CA, December 11-15. SA31C-2873 |
| ***267.*** | Isaiah Escapa; Periasamy K Manoharan; ***Christiano Garnett Marques Brum***; Giana Perez (**2023**) “*A Study of Two Intense Geomagnetic Storms and Their Associated Solar Events During The Current Solar Cycle*”. AGU Fall Meeting, San Francisco, CA, December 11-15. SH21C-2875 |
| ***266.*** | A. M. Santos; G. Yang; A. A. Pimenta; ***C. G. M. Brum***; I. S. Batista; J.H.A. Sobral; M. A. Abdu; H. Li; C. Wang1; Z. Liu (**2023**) “*Nocturnal intermediate layers over the Brazilian region during the spread-f development*”. Congress of the Brazilian Society of Space Geophysics and Aeronomy (IX SBGEA). |
| ***265.*** | Robert B. Kerr, Michael A. Migliozzi, Juanita Riccobono, Sudha Kapali, Jonas R. Souza, *Pedrina T. Terra*, ***Christiano Garnett Marques Brum***, *Christian Cortes*, *Carlos Perez*, Jeffrey Baumgardner, and John Noto (**2023**) *“A New Meridional Chain of Fabry-Perot Interferometers for Measurements of Thermospheric winds and Temperatures”*. The 103rd AMS Annual Meeting, 8 to 12 January, 2023 (Denver, Colorado) |
| ***264.*** | Angela Santos, ***Christiano Garnett Marques Brum***, Inez Staciarini Batista, Jose H A Sobral, Mangalathayil Ali Abdu, Jonas Rodrigues de Souza, Rodolfo de Jesus (**2022**) "*Behavior of foF2 and hmF2 parameters over São Luís, a Brazilian equatorial station during the minimum solar cycles 22/23 and 23/24*". AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***263.*** | ***Christiano Garnett Marques Brum***, Pedrina T Terra, Robert Kerr, Angela Santos, *Juanita Riccobono*, Michael A Migliozzi, Sudha Kapali, *Raul Garcia*, *Carlos Perez*, *Christian Cortes* and *Sukanta Sau* (**2022**) "*Impacts of Tropospheric Extreme Weather Systems on The Upper Atmosphere Based on Red Line Airglow Emission Data*". AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***262.*** | Morris Cohen, Pedrina T Terra, ***Christiano Garnett Marques Brum***, Jens Lautenbach and Julio V Urbina (**2022**) *“Detecting Hurricane-Driven Disturbances to the D-Region at Arecibo, PR*”. AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***261.*** | Robert B Kerr, Sudha Kapali, Juanita Riccobono, Michael A Migliozzi, Jonas Rodrigues de Souza, ***Christiano Garnett Marques Brum***, ***Pedrina Terra, Christian Cortes, Carlos Perez and Raul Garcia*** (**2022**) "*Vertical Winds in the Midlatitude F-region Ionosphere: Measurement Technique, Validation, Seasonal and Solar cycle variability*". AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***260.*** | Selvaraj Dharmalingam, Christopher Gary Kruse, ***Christiano Garnett Marques Brum***, Shashwat Sourav (**2022**) "*The Impact of Hurricane-Maria Generated Gravity Waves on Structure and Dynamics of the UTLS*". AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***259.*** | Sukanta Sau, Pedrina T Terra and ***Christiano Garnett Marques Brum*** (**2022**) "*Climatology and Long Term Trends in the MLT Region Rotational Temperatures Obtained by the Arecibo Observatory Ebert-Fastie Spectrometer*". AGU Fall Meeting, Chicago, IL, December 12-16. |
| ***258.*** | Emilia Correia, Eduardo Perez Macho, Juliano Moro, ***Christiano Brum***, José Henrique Fernandez, José Valentin Bageston and Adriana Gulisano (**2022**) "*Characterization of the ionosphere response in the South America sector to the 30 March 2022 solar event*". 10th SCAR Open Science Conference, 1 to 10 September, virtual. |
| ***257.*** | Emilia Correia, Eduardo Perez Macho, Juliano Moro, ***Christiano Brum***, José Henrique Fernandez and José Valentin Bageston (**2022**) “*Ionosphere response to the solar event of 30 March 2022*” 21st International Beacon Satellite Symposium Boston College, USA, 1-5 August 2022. |
| ***256.*** | ***Christiano Garnett Marques Brum***; Pedrina Terra dos Santos; Angela Machado dos Santos; Robert B Kerr; Sudha Kapali; Juanita Riccobono; Michael A Migliozzi; Carlos Perez; Christian Cortes; and Raul Garcia (**2022**) "*Impacts of Tropospheric Extreme Weather Systems on The Upper Atmosphere Based on Fabry-Perot Interferometer Red Line Airglow Emission Data*". 44th Scientific Assembly, COSPAR 2022, 16-24 July, Athens, Greece, virtual and in-person. |
| ***255.*** | A. M. Santos; **C. G. M. Brum**; I. S. Batista; J.H.A. Sobral; M. A. Abdu; J. R. Souza and R. de Jesus (**2022**) "*Climatology of the Brazilian equatorial ionosphere during the solar minimums of 1996 and 2009*". 44th Scientific Assembly, COSPAR 2022, 16-24 July, Athens, Greece, virtual and in-person. |
| ***254.*** | Pedrina Terra, ***Christiano Brum*** and Morris Cohen (**2022**). "*Variability of the Atmosphere-Ionosphere observed at Arecibo during the passage of the major Hurricane Maria* ". 44th Scientific Assembly, COSPAR 2022, 16-24 July, Athens, Greece, virtual and in-person. |
| ***253.*** | Brett Isham, ***Christiano Brum***, Jan Bergman, Vasyl Belyey, Bjorn Gustavsson, Emil Polisensky, Gebreab Zewdie, Arturs Stramkals, Terence Bullett (**2022**) "*An HF Receiving Array for Radio Imaging of Stimulated Electromagnetic Emissions and Radar Imaging of the Ionosphere*". 44th Scientific Assembly, COSPAR 2022, 16-24 July, Athens, Greece, virtual and in-person. |
| ***252.*** | **Angela M Santos, Inez s Batista, José H. A. Sobral, *Christiano G M Brum*, Mangalathayil A Abdu, Jonas R Souza (2022) “*Dynamics of the intermediate descending layers over the Brazilian sector during periods of maximum and minimum solar activity*”.8th IAGA/ICMA/SCOSTEP Workshop on Vertical Coupling in the Atmosphere-Ionosphere, Hungary on July 11-15.**  |
| ***251.*** | **Sukanta Sau, Pedrina Terra, *Christiano G. M. Brum*, Fabio A. Vargas, Jens Lautenbach (2022) “*Retrieval of rotational temperatures using the Arecibo Observatory Ebert-Fastie spectrometer and their comparison with multiple instruments and theoretical calculation*” Poster session 1.** Coupling, Energetics and Dynamics of Atmospheric Regions Program (CEDAR 2022). |
| ***250.*** | Manoharan, Periasamy K. ; Perillat, Phil ; Salter, C. J. ; Ghosh, Tapasi ; Raizada, Shikha ; Lynch, Ryan S. ; Bonsall, Amber ; Roshi, Anish ; ***Brum, Christiano*** ; Venkataraman, Arun ; Joshi, B. C. (**2022**) *“Probing the Plasma Tail of Interstellar Comet 2I/Borisov”*. American Astronomical Society Meeting #240, id. 227.01. Bulletin of the American Astronomical Society, Vol. 54, No. 6 e-id 2022n6i227p01 |
| ***249.*** | **J. G. Socola; F. S. Rodrigues; *C. G. M. Brum*; P. T. dos Santos (2022) *"On distributed observations of ionospheric irregularities and L-Band scintillation from Puerto Rico".* Poster session 2.** Coupling, Energetics and Dynamics of Atmospheric Regions Program (CEDAR 2022). |
| ***247.*** | Pedrina Terra,***Christiano Brum****,* Fabio Vargas*,*Morris Cohen*,* Julio Urbina **(2022)** “***A multi-instrumental diagnosis of the Hurricane Maria Category IV signatures over the Caribbean sector*”*.* Session: Advances in atmosphere vertical coupling and its relationship with ionosphere-thermosphere oscillatory phenomena (TAD/TID/MSTIDs). Coupling, Energetics and Dynamics of Atmospheric Regions Program (CEDAR 2022).** |
| ***246.*** | **Shikha Raizada, C. Martinis, *C.G.M. Brum*, M. Sulzer, J.D. Matthews** (**2022**) “*Significance of a low-latitude and tropical site like Arecibo for Mesosphere-thermosphere-ionosphere investigations*”. Session: Low- and Mid-Latitude Ionosphere-Thermosphere-Mesosphere (ITM). Coupling, Energetics and Dynamics of Atmospheric Regions Program (CEDAR 2022). |
| ***245.*** | Manoharan, Periasamy K. ; Perillat, Phil ; Salter, C. J. ; Ghosh, Tapasi ; Raizada, Shikha ; Lynch, Ryan S. ; Bonsall, Amber ; Roshi, Anish ; Brum, Christiano ; Venkataraman, Arun ; Joshi, B. C. (**2022**) “*Probing the Plasma Tail of Interstellar Comet 2I/Borisov*” .American Astronomical Society Meeting #240, id. 227.01. Bulletin of the American Astronomical Society, Vol. 54, No. 6 e-id 2022n6i227p01. |
| ***244.*** | Brett Isham, ***Christiano Brum***, ***Francisco Cordova***, Juha Vierinen, Michael Nolan, Anne Virkki, Marco Milla (**2022**) “*Towards a New Arecibo Telescope for All Radar Science*”. National Radio Science Meeting, January 4-8, Boulder, CO. |
| ***243.*** | Pedrina T Terra, Fabio Vargas, ***Christiano Garnett Marques Brum*** and Morris Cohen (**2021**) “*Anomalous Behavior of the Thermosphere Triggered by the Category 4 Hurricane Maria*” (SA15A-1910) AGU Fall Meeting, New Orleans, LA, December 13-17. |
| ***242.*** | Robert B Kerr, Sudha Kapali, Juanita Riccobono, Michael A Migliozzi, ***Christiano Garnett Marques Brum***, Pedrina T Terra, Terence W Bullett, Ethan Miller, Christian Cortes and Raul Garcia (**2021**) “*Bistatic measurements of vertical winds in the F-region thermosphere above Puerto Rico*” AGU Fall Meeting, New Orleans, LA, December 13-17. (SA54A-06). |
| ***241.*** | Selvaraj Dharmalingam, Michael P Sulzer, Shunrong Zhang, ***Christiano Garnett Marques Brum*** and Nestor Aponte(**2021**) “*Long-Term Trends in the Upper atmosphere using the observations of Incoherent Scatter Radar over Arecibo*” AGU Fall Meeting, New Orleans, LA, December 13-17. (SA55B-1748). |
| ***240.*** | ***Christiano Garnett Marques Brum***, Michael P Sulzer, Pedrina T Terra, Sukanta Sau and Selvaraj Dharmalingam (**2021**) “*Molecular Nitrogen (N2) Density Derived from Optical Measurements During Ionospheric Heating Experiment (or an Alternative Hypothesis for the O(1D) Quenching Coefficient Adjustment)*” AGU Fall Meeting, New Orleans, LA, December 13-17. (SA25F-1999). |
| ***239.*** | Sukanta Sau, Pedrina T Terra, Fabio Vargas, ***Christiano Garnett Marques Brum***, Robert Kerr and Jens Lautenbach (**2021**) “*Validation of rotational temperature derived from the Arecibo Observatory Ebert-Fastie spectrometer with a co-located Potassium Temperature Lidar*”. (SA52A-07) AGU Fall Meeting, New Orleans, LA, December 13-17. |
| ***238.*** | ***Christiano Garnett Marques Brum***, Ângela M. S. Valentim, Pedrina Moraes Terra dos Santos, Michel Sulzer1, Sukanta Sau, Selvaraj Dharmaligam, Jose Humberto Sobral (**2021**) “*an alternative hypothesis for the O(1D) quenching coefficient adjustment derived from simultaneous optical and incoherent scatter radar measurements during ionospheric modification experiments.*” XII Latin American Conference on Space Geophysics (Colage 2021), Online (in Chile), from 22 to 26 of November. |
| ***237.*** | A. M. Santos, I. S. Batista, ***C. G. M. Brum***, J.H.A. Sobral, M. A. Abdu1, and J. R. Souza (**2021**) “*Impacts of the evening prereversal electric field enhancemet in ascending movement of the intermediate layers over Brazil*”. XII Latin American Conference on Space Geophysics (Colage 2021), Online (in Chile), from 22 to 26 of November. |
| ***236.*** | Pedrina Terra, ***Christiano Brum***, Fabio Vargas and Morris Cohen (**2021**) “*Response of the Caribbean upper atmosphere to the Category IV Hurricane Maria*”. XII Latin American Conference on Space Geophysics (Colage 2021), Online (in Chile), from 22 to 26 of November. |
| ***235.*** | Sukanta Sau, Pedrina Terra, Fabio A Vargas, ***Christiano G. M. Brum*** and Jens Lautenbach (**2021**) “*Validation of rotational temperature derived from the Arecibo Observatory Ebert-Fastie spectrometer with a co-located Potassium Temperature Lidar*”. XII Latin American Conference on Space Geophysics (Colage 2021), Online (in Chile), from 22 to 26 of November. |
| ***234.*** | Isham, Brett; ***Brum, C. G. M.***; Córdova, Francisco; Vierinen, Juha; Virkki, Anne; Milla, Marco (**2021**) “*Towards a New Arecibo Radar Telescope for Incoherent Scatter and All Radar Science*”. URSI GASS 2021, Rome, Italy, Aug.28 Sep.4, Th-G06-PM2-2. |
| ***233.*** | Roshi, Anish; Olmi, Luca; Santos, Pedrina; Smith, Allison; Vaddi, Sravani; Perera, B. B. P.; Manoharan, P. K.; ***Brum, C. G. M.*** (**2021**) “*Next Generation Arecibo Telescope: A powerful instrument for redshifted molecular line surveys*”. URSI GASS 2021, Rome, Italy, Aug.28 Sep.4, We-J03-AM2-1. |
| ***232.*** | Isham, Brett; Breakall, James; Whitlow, Dana; ***Brum, C. G. M.***; Córdova, Francisco; Bernhardt, Paul; Bergman, Jan (**2021**) “*Plans for a Restored HF Heating Facility at the Arecibo Observatory*”. URSI GASS 2021, Rome, Italy, Aug.28 Sep.4, Mo-G13-AM2-3. |
| ***231.*** | R.B. Kerr, S. Kapali, P.T. dos Santos, ***C.G.M. Brum***, B. Harding (**2021**) *"Comparison of Arecibo vector neutral wind products in the F-region with ICON MIGHTI data in 2020"*. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2021, 20-25 June, virtual. |
| ***230.*** | S. Raizada, Eframir Franco, ***C. Brum***, P. Panka (**2021**) "*A new methodology to infer peak volume emission rate of the green line using sodium resonance lidar*". Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2021, 20-25 June, virtual. (Invited talk). |
| ***229.*** | Sukanta Sau, Fabio Vargas, Pedrina Santos, ***Christiano Brum***, Robert Kerr (**2021**), "*Preliminary analysis of Ebert-Fastie spectrometer data recorded from the Arecibo Observatory*". Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2021, 20-25 June, virtual. |
| ***228.*** | D. Selvaraj, Michael P. Sulzer, S.-R. Zhang, ***Christiano M. G. Brum***, and Nestor Aponte (**2021**) “*Long-term Trends in the Upper atmosphere using the observations of Incoherent Scatter Radar at Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2021, 20-25 June, virtual. |
| ***227.*** | ***C. G.M. Brum***, P.Terra, F Vargas (**2021**) "*Characterization of TIDs in the lower ionosphere of sub-auroral and medium latitudes and their modulation by geomagnetic activity*". Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2021, 20-25 June, virtual. |
| ***226.*** | ***C. Garnett Marques Brum***, F. Venditti, and Mike Sulzer **(2021**) "*Next-generation capabilities for Planetary and Space and Atmospheric Sciences at AO*". Splinter session, American Astronomical Society 238th Meeting. June 8. Virtual Talk. |
| ***225.*** | A. M. Santos, I. S. Batista, M. A. Abdu, J. .H. A. Sobral, J. R. Souza, ***C. G. M.Brum*** **(2021)** “*Climatology of intermediate descending layers over the equatorial and lowlatitude regions of Brazil during a solar minimum period*”. Brazilian Symposium on Space Geophysics and Aeronomy (VIII SBGEA) & Symposium on Physics and Astronomy (VIII SimFAST), March 22-26 (Virtual poster) Pag.142. |
| ***224.*** | W. D. A. Junior, ***C. G. M. Brum***, J. H. Fernandez, A. G. Guedes **(2021)**“*Modelo semiempırico medio longitudinal de ventos termosfericos a 250 kmpara perıodos de baixa atividade solar e geomagnetica*”. Brazilian Symposium on Space Geophysics and Aeronomy (VIII SBGEA) & Symposium on Physics and Astronomy (VIII SimFAST), March 22-26 (Virtual poster) Pag. 211. |
| ***223.*** | P. Terra, F. Vargas, ***C. Brum*** and E. Miller **(2021)** “*Geomagnetic and solar dependency of MSTIDs occurrence rate: A climatology based on airglow observations from ROF*”. Brazilian Symposium on Space Geophysics and Aeronomy (VIII SBGEA) & Symposium on Physics and Astronomy (VIII SimFAST), March 22-26(Virtual talk) Pag. 78. |
| ***222.*** | F. Vargas, G. Swenson, P. Terra and ***C. Brum*** **(2021)** “*Vertical Scales of gravity-waves origin TIDs detectable by imagery of the red line airglow*”. Brazilian Symposium on Space Geophysics and Aeronomy (VIII SBGEA) & Symposium on Physics and Astronomy (VIII SimFAST), March 22-26 (Virtual talk) PAg.62. |
| ***221.*** | ***Christiano Garnett Marques Brum***, Jens Lautenbach, Nestor Aponte, Michael Sulzer **(2021)** “*Topside-protonosphere ion fractions responses to solar and geomagnetic activity over the Arecibo Observatory*”. 43rd COSPAR Scientific Assembly, Jan.28-Feb.4 (Virtual Poster). |
| ***220*** | ***Christiano Garnett Marques Brum***, Jens Lautenbach, Michael Sulzer, Pedrina Santos, Nestor Aponte, Shikha Raizada, Raul Garcia, Gabriel Altuz **(2021)** . “*Arecibo Observatory current capability for Mesosphere, Thermosphere and Ionosphere Studies*”. 43rd COSPAR Scientific Assembly, Jan.28-Feb.4 (Virtual Poster). |
| ***219.*** | Sukanta Sau, *P Terra* and ***C.G.M. Brum*** **(2021)** “*Airglow Remote sensing of the Upper Atmosphere*” Center for Lunar & Asteroid Surface Science Capstone Graduate Seminar Series, Arecibo Observatory: Unparalleled Science and Discovery, March 1, 2021 (virtual presentation). |
| ***218.*** | ***C.G.M. Brum*** **(2021)** “*Space and Atmospheric Sciences at Arecibo*”. 237th meeting of the American Astronomical Society, January 15. (Virtual presentation). |
| ***217.*** | ***C.G.M. Brum*** **(2020)** “*Space and Atmospheric Sciences at Arecibo*”. Arecibo Observer Training Workshop 2020, October 16. (Virtual presentation). |
| ***216.*** | **Christiano Brum** (**2020**) “*Arecibo HF Facility and ISR Update*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2020, 22-26 June. (Virtual presentation). |
| ***215.*** | Stanley J Briczinski, Paul A Bernhardt, Carl L Siefring, Eliana Nossa, Tali Whittemore, Elliot R Mueller, ***Christiano Garnett Marques Brum***, Vladimir I Sotnikov, Andrew Hamilton, Eugene V Dao and Evgeny V Mishin **(2019)**, “*Stimulated Electromagnetic Emission Measurements Using the Arecibo HF System and Multiple Ground Receiver Stations*”, AGU fall meeting 2019, 9-13 December, San Francisco, CA. SA33C-3160. |
| ***214.*** | Sophia Salazar, ***C. G. Brum***, Pedrina T Santos and Caitano L. da Silva **(2019)** “*First Survey of Lightning Effects in the Lower Ionosphere Over Arecibo, Puerto Rico*”. AGU fall meeting 2019, 9-13 December, San Francisco, CA. AE31B-3111. |
| ***213.*** | Christopher T Fallen, Eugene V Dao, Richard Todd Parris, Zsolt Balint, Kris Robinson, Jack Hines, Eliana Nossa and ***Christiano Garnett Marques Brum* (2019)** “*Deployment of diagnostic instruments and detection of artificial ionosphere irregularities during Arecibo HF campaigns*”. AGU fall meeting 2019, 9-13 December, San Francisco, CA. SA33C-3161. |
| ***212.*** | ***Christiano Garnett Marques Brum***, Pedrina T Santos, Robert Kerr, John Noto, Juanita Riccobono, Sudha Kapali, Michael A Migliozzi and Craig A Tepley\* **(2019)** “*Long-term changes in the thermospheric neutral winds over Arecibo: Climatology based on over four decades of Fabry-Perot observations*”. AGU fall meeting 2019, 9-13 December, San Francisco, CA. SA13B-3241. |
| ***211.*** | Pedrina T Santos, Fabio Vargas and ***Christiano Garnett Marques Brum* (2019)** “*A detailed study of the MSTIDs observed over Puerto Rico during minimum solar activity*”. AGU fall meeting 2019, 9-13 December, San Francisco, CA. SA23C-3137. |
| ***210.*** | Sophia Salazar, Caitano da Silva, ***Christiano Brum*** and Pedrina Santos **(2019)** *"Survey of Lightning Impacts in the Lower Ionosphere Over Arecibo"*, New Mexico AMP – Undergraduate Student Research Conference 2019, October 10-12, Las Cruces, NM. |
| ***209.*** | Ethan Miller, Pedrina Santos and ***Christiano Brum*** **(2019)** *“Passive HF and Optical Observations of F-region Dynamics from Culebra, PR”*. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2019, 16-21 June, Santa Fe, NM. |
| ***208.*** | Ethan Miller, Pedrina Santos, ***Christiano Brum*** and Paul Bernhardt **(2019)** “*Partially-Cooperative Observations of Arecibo HF Heating Campaigns 2015-2017*”*.* Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2019, 16-21 June, Santa Fe, NM. |
| ***207.*** | Pratik P. Joshi, Lara Waldrop and ***Christiano Garnett Marques*** ***Brum* (2019)** “*Estimation of O-O+ charge exchange cross-section using O+ momentum balance*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2019, 16-21 June, Santa Fe, NM. |
| ***206.*** | ***Christiano Garnett Marques*** ***Brum***, Pedrina Santos, Fabio Vargas, Julio Urbina and Morris Cohen**(2019)** “*On search of tropospheric extreme weather signatures on mesosphere and above or What did we learn from Hurricane Maria…”.* Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2019, 16-21 June, Santa Fe, NM. |
| ***205.*** | ***Christiano Garnett Marques*** ***Brum*** and *Luis Quintero***(2019)** *“Current State of the Arecibo Observatory, Science Operations and Technical Perspective”*, Arecibo Observatory Futures Workshop, Pathways to the Future of the AO, Feb. 17-20, Sheraton Hotel, Old San Juan, PR. |
| ***204.*** | B. Smith,*S. Raizada* and ***C.G.M. Brum*** (**2019**), “*Correlating Trapped waves in electron density profiles to a geomagnetic storm in the F-region of the ionosphere*”. *AGU Chapman conference* on scientific challenges pertaining to space weather forecasting including extremes, 11 - 15 Feb 2019, Pasadena, CA, USA. |
| ***203.*** | E. S. Miller, G. S. Bust, G. W. Perry, S. R. Kaeppler, J. Vierinen, N. A. Frissell, A. A. Knuth, P. J. Erickson, R. Nikoukar, A. T. Chartier, P. Santos, ***C. Brum***, J. T. Fentzke, T.R. Hanley, A. J. Gerrard (**2019**) *"Sounding the Ionosphere with Signals of Opportunity in the High-Frequency (HF) Band"*. USNC-URSI National Radio Science Meeting, 9-12 January, Boulder, Colorado, USA. |
| ***202.*** | John Noto, Robert Kerr, Sudha Kapali, Juanita Riccobono, Michael A Migliozzi, Jonas Rodrigues de Souza and ***Christiano Garnett Marques Brum*** **(2018)** “*Recent observations of neutral winds in Brazil”*. AGU Fall Meeting 2018, Walter E Washington Convention Center-202B. (SA52A-01). |
| ***201.*** | Shikha Raizada, Brandon P Smith, ***C. G. Brum***, Nestor Aponte, Mike Sulzer and Phil Perillat **(2018)** “*An investigation of E and F-region changes over Arecibo induced by a geomagnetic storm”*. AGU Fall Meeting 2018, Walter E Washington Convention Center - Hall A-C (Poster Hall). (SA31C-3444). |
| ***200.*** | Pedrina T Santos, Fabio Vargas and ***C. G. Brum* (2018)** “*Climatology of the MSTIDs observed during Solar Minimum at the Remote Optical Facility (ROF)”*. AGU Fall Meeting 2018, Walter E Washington Convention Center - Hall A-C (Poster Hall). (SA33C-3494). |
| ***199.*** | Jens Lautenbach, ***C. G. Brum***, Michael P Sulzer, Pedrina T Santos, Nestor Aponte **(2018)** “*Observation of a Wavelike Event over the Arecibo Observatory”*. AGU Fall Meeting 2018, Walter E Washington Convention Center - Hall A-C (Poster Hall). (SA43B-3508). |
| ***198.*** | *Lautenbach, J.*, ***Brum, C. G.***, *Raizada, S* **(2018)** “*Capabilities and Future of the Arecibo Observatory Lidar Facility*”. FORWARD Research & Innovation Summit of the PR Science Trust, Nov.10, Sheraton Convention Center, San Juan, PR. |
| ***197.*** | Eframir Franco Diaz, Shikha Raizada and ***Christiano Garnett Marques Brum*** **(2018)** *“Determination of Mesospheric Green Line Emission Peak Altitude over Arecibo, Puerto Rico”*. Asia Oceania Geosciences Society (AGOS) 15th Annual Meeting, 03-08 June. (AS16-53-D2-AM1-303A-001 | AS16-53-A013) (page 257). |
| ***196.*** | Shikha Raizada, D. V. Phanikumar; Niranjan Kumar Kondapalli, Alessandra Abe Pacini, ***Christiano Garnett Marques Brum*** and Som Kumar Sharma **(2018)** “*Do Frequent Hurricanes Trigger Earthquakes over Caribbean and South American Regions?*”. Asia Oceania Geosciences Society (AGOS) 15th Annual Meeting, 03-08 June. (AS16-53-D2-AM1-303A-001 | AS16-53-A013) (page 122). |
| ***195*** | Suman Ganguly, ***Christiano Brum***, Nestor Aponte and Mike Sulzer **(2018)** *“Heater Enhanced Plasma Line Observations with New Heater at Arecibo*”. **Triennial Earth-Sun Summit (TESS 2018), Leesburg, Virginia. May 20-24. (112.06).** |
| ***194.*** | Robert Kerr, Juanita Riccobono, Michael A Migliozzi, Sudha Kapali, John Noto, ***Christiano Garnett Marques Brum***, Raul Garcia, Eva Robles and Eframir Franco **(2018)** “*Vertical Neutral Wind Measurements in the Midlatitude Thermosphere*”. **Triennial Earth-Sun Summit (TESS 2018), Leesburg, Virginia. May 20-24. (418.03).** |
| ***193.*** | Eliana Nossa, ***Christiano Garnett Marques Brum***, Michael P Sulzer, Alfredo Santoni, Phil Perillat, Luis Quintero and Felix Fernandez **(2018)** “*Arecibo Observatory – HF Facility*”. **Triennial Earth-Sun Summit (TESS 2018), Leesburg, Virginia. May 20-24. (112.01).** |
| ***192.*** | Alessandra Abe Pacini, ***Christiano Garnett Marques Brum*** and Jonas Rodrigues de Souza **(2018)**. “*Using the Arecibo ISR data to understand the role of the secular variations on the topside ionosphere*”. **Triennial Earth-Sun Summit (TESS 2018), Leesburg, Virginia. May 20-24. (201.031).** |
| ***191.*** | A.A. Pacini and ***C.G.M. Brum* (2018)**. “*Impacts of the Next Southern Total Solar Eclipses (2019 and 2020) on the Conjugate Point: Coordinated Scientific Efforts*”. COLAGE XI - Eleventh Latin American Conference on Space Geophysics, 16-20, Buenos Aires, Argentina, Page 52. |
| ***190.*** | Anthea Coster; P. J. Erickson, R. Varney, E. Kendall, D. L. Hysell, M. Milla, and ***C. Brum*** **(2018)**. “*Space Weather Resources Available through the American Chain of Incoherent Scatter Radars*”. 98th Annual Meeting, American Meteorological Society, Austin, Texas, Jan. 7-11. |
| ***189.*** | Eframir Franco, Shikha Raizada, Jens Lautenbach and ***Christiano Garnett Marques Brum*** **(2017)**. “*Estimation of 557.7 nm Emission Altitude using Co-located Lidars and Photometers over Arecibo*”. AGU Fall Meeting 2017, New Orleans, LA. (SA21A-2503). |
| ***188.*** | Khushboo Jain, Shikha Raizada and ***Christiano Garnett Marques Brum*** **(2017)**. “*Mesospheric Na Variability and Dependence on Geomagnetic and Solar Activity over Arecibo*”. AGU Fall Meeting 2017, New Orleans, LA. (SA11A-2247). |
| ***187.*** | Robert Kerr, Sudha Kapali, Juanita Riccobono, Michael A Migliozzi, John Noto, ***Christiano Garnett Marques Brum*** and ***Raul Garcia*** **(2017)**. “*Climatology of Neutral vertical winds in the midlatitude thermosphere*”. AGU Fall Meeting 2017, New Orleans, LA. (SA44A-06). |
| ***186.*** | Eliana Nossa, Michael Sulzer, Alfredo Santoni, Phil Perillat, Nestor Aponte and ***Christiano Brum*** **(2017)**. “*Arecibo - HF Facility*”. XXXIInd URSI General Assembly & Scientific Symposium, Montreal, Canada, Aug 19-26, page 102. |
| ***185.*** | Shikha Raizada; ***C.G.M. Brum***; Bela G. Fejer, Rajkumar Hajra and Ezequiel Echer **(2017)**. “*F-region Response to St. Patrick Storm (17 -19 March, 2015) Over Arecibo*”.14th Annual Meeting, Asia Oceania Geosciences Society – AOGS (AS41-A024). |
| ***184.*** | S. Raizada; J. Lautenbach; E. Franco and ***C.G.M. Brum*** **(2017)**. “*Study Of Middle And Upper Atmosphere Using Lidars and Incoherent Scatter Radar At Arecibo*”.14th Annual Meeting, Asia Oceania Geosciences Society – AOGS (AS41-A011). |
| ***183.*** | P. Joshi, L. Waldrop, ***C.G.M. Brum***, M. Sulzer, N. Aponte, S. Gonzalez, P. Santos and E. Robles **(2017)**. “*O-O+ momentum imbalance in the topside ionosphere: implications for bias in MSIS oxygen density specification*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2017, Keystone Resort, CO, Jun. 18-23, Page 17. |
| ***182.*** | Pedrina Santos, ***C.G.M. Brum*** and Eva Robles **(2017)**. “*The Arecibo Observatory Remote Optical Facility (AO-ROF) in Culebra Island, Puerto Rico: Current Status and Future Projects*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2017, Keystone Resort, CO, Jun. 18-23, Page 17. |
| ***181.*** | Eframir Franco-Diaz, ***C.G.M. Brum*** and Robert B. Kerr **(2017)**. “*Spectral Analysis of the Neutral Wind Components over Arecibo based on Five Consecutive Years (2012-2017) of Fabry-Perot Observations*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2017, Keystone Resort, CO, Jun. 18-23, (LTVI-03) page 15. |
| ***180.*** | Eliana Nossa, ***C.G.M. Brum***, Mike Sulzer, Alfredo Santoni, and Phil Perillat **(2017)**. “*Arecibo Observatory - HF facility and diagnostics*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2017, Keystone Resort, CO, Jun. 18-23, Page 16. |
| ***179.*** | Juha Vierinen, Michael P. Sulzer, Philip J. Erickson, Phil Perillat, Anja Strømme, Asti Bhatt, Björn Gustavsson and ***C.G.M. Brum* (2017)**. “*Recent advances is plasma-line observation techniques*”. 18th EISCAT symposium, Session E1: Radar and lidar techniques. May 29 (Mon), NIPR Auditorium, Tokyo, Japan, May 26-30. |
| ***178.*** | Bjoern Gustavsson, Juha Vierinen, Mike Sulzer, Phil Perillat and ***C.G.M. Brum* (2017)**. “*On HF-Radio-Wave Induced Density Structures at F-region Altitudes and Their Dynamics - Observations with a Large Aperture Radar*”. 18th EISCAT symposium, Session E5: Active experiments, May 26 (Fri), NIPR Auditorium, Tokyo, Japan, May 26-30. |
| ***177.*** | ***C.G.M.Brum***, Shikha Raizada, Rajkumar Hajra and Ezequiel Echer **(2016)**. “*Influence of the St. Patrick’s Day geomagnetic storm on the mid-latitude E and F regions*”. AGU Fall Meeting 2016, San Francisco, Dec. 12-16 (SA31A-2385). |
| ***176.*** | Raizada, S.; Friedman, J.S.; Brum, C.G.M.; Lautenbach, J. and Franco, E. **(2016)**. *“Comparison of mesospheric Na and K layers and tidal structures during the summer and winter over Arecibo*”. AGU Fall Meeting 2016, San Francisco, Dec. 12-16 (SA21A-2353). |
| ***175.*** | Eframir Franco-Diaz, ***C.G.M. Brum*** and Robert Kerr **(2016)**. “*Spectral Analysis of the Neutral Wind Components over Arecibo based on Five Consecutive Years (2012-2016) of Fabry-Perot Observations*”. AGU Fall Meeting 2016, San Francisco, Dec. 12-16 (SA21A-2347). |
| ***174.*** | Matthew Proctor and ***C.G.M. Brum*** **(2016)**. “*Retrieving the Real F Region Peak Parameters From Digisonde Data*”.SPA Aeronomy: General Contributions I (oral presentation); AGU Fall Meeting 2016, San Francisco, Dec. 12-16 (SA13B-06). |
| ***173.*** | Alessandra Abe Pacini and ***C.G.M. Brum*** **(2016)**. “*A new approach in the atmospheric studies using cosmogenic isotopes measured in the near ground air”.* Global Environmental Change: Techniques for Identifying Signals and Diagnosing Their Causes in Geophysical and Environmental Data Posters; AGU Fall Meeting 2016, San Francisco, Dec. 12-16 (GC13G-1264). |
| ***172.*** | ***C.G.M. Brum***, C. A. Tepley, P. Santos, E. Robles, and J. Lautenbach **(2016).** “*Long term changes in the thermospheric neutral winds over Arecibo: Climatology based on three decades of Fabry-Perot observations*”. 9th IAGA workshop on Long-Term Changes and Trends in the Atmosphere in Kühlungsborn, Germany, September 19-23. |
| ***171.*** | ***C.G.M. Brum***. **(2016).** “*The importance of Space Weather for the Caribbean region and Arecibo Observatory new initiatives*”. Invited talk at American Association for the Advancement of Science (AAAS) - Caribbean Division 2016 Annual conference, Museo de Vida Silvestre, San Juan, Sep. 10, 2016. |
| ***170.*** | Friedman, J.; Kerr, C.; Raizada, S.; ***C.G.M. Brum***. **(2016)**; Lautenbach, J.; Chu, X.; Djuth, F. and Mathews, J. (2016). “*Metal layers in the thermosphere at Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2016, Santa Fe, NM, Jun. 19-24, (MLTS-06) page24. |
| ***169.*** | S. Raizada and ***C.G.M. Brum***. **(2016)**. “*Ionospheric response at Arecibo during St. Patrick Storm*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2016, Santa Fe, NM, June 19-24. *Oral presentation.* |
| ***168.*** | Raizada, S.; Mathews, J. D.; Friedman, J. S.; Djuth, F.; **Brum, C.G.M.;** Tepley, C.A. **(2015)**. “*High altitude metal observations from Arecibo: Evidence of Sputtering?*”. Stanford Meteor Environment and Effects (SMEE) Workshop, Stanford University, Stanford, CA, Jul. 14-16. |
| ***167.*** | Christopher Keele; ***C.G.M. Brum***; Fabiano Rodrigues; Nestor Aponte and Michael Sulzer **(2015)**. “*A Comprehensive Assessment of Radio Occultation Ionospheric Measurements at Mid-Latitudes*”. Advances in Ionospheric Measurements and Modeling II Posters, SPA-Aeronomy; AGU Fall Meeting 2015, San Francisco, Dec. 14-18 (SA51A-2384). |
| ***166.*** | Friedman, J.S.; Raizada, S.; Brum, C.G.M.; Kerr, C.; Mathews, J.D.; Djuth, F. **(2015)**. “*Coincident lidar observations of thermosphere neutral metal layers in Na, K and electron density*”. 12th International Workshop on Layered Phenomena in the Mesopause Region (LPMR), Boulder, CO, Aug. 10-13. |
| ***165.*** | BT Tsurutani; GS Lakhina; A Sen; PK Kaw; E Echer; MV Alves; E da Costa Jr; R Hajra, WD Gonzalez; JHA Sobral; MA Abdu; LE Vieira and ***C.G.M. Brum*** **(2015)**. “*Interplanetary Alfvén Waves, HILDCAAs, Acceleration of Magnetospheric Relativistic “Killer” Electrons and Auroral Zone Heating*”. 14th International Congress of the Brazilian Geophysical Society & EXPOGEF, Rio de Janeiro, Brazil, August 3-6. doi:10.1190/sbgf2015-301. |
| ***164.*** | S. Raizada; ***C.G.M. Brum***; C. Gonzalez and Efmi Franco **(2015)**. “*Nighttime E region variability over Arecibo: Dependence on solar activity*”. 12th Asia Oceania Geosciences Society Annual Meeting (AOGS-2015), Singapore, Aug. 2 - 7. |
| ***163.*** | Santos, P.T.; Brum, C.G.M.; Kerr, R.B. and Noto, J. **(2014)**. “*Climatology of the O+ temperatures over Arecibo for the historical deep solar minimum using Incoherent Scatter Radar and airglow data*”. AGU Fall Meeting 2014, San Francisco, CA, Dec. 15-19. (SA51A-4076). |
| ***162.*** | Efmi Franco; ***C.G.M. Brum*** and S. Raizada **(2014)**. “*Morphology of the Sporadic E layers over Arecibo derived from Incoherent Scatter Radar (ISR) measurements*”. AGU Fall Meeting 2014, San Francisco, CA, Dec. 15-19. (SA51A-4077). |
| ***161.*** | Cristina Gonzalez Riviera; S. Raizada and ***C.G.M. Brum*** **(2014)**. “*Nocturnal E-region Climatology Studies using Incoherent Scatter Radar Observations from Arecibo Observatory*”. AGU Fall Meeting 2014, San Francisco, CA, Dec. 15-19. (SA51A-4075). |
| ***160.*** | Suman Ganguly; ***C.G.M. Brum***; Nestor Aponte; Eframir Franco and Sixto Gonzalez **(2014)**. “*Role Of Conjugate and Local Terminators On the Electric Fields at Arecibo*”. AGU Fall Meeting 2014, San Francisco, CA, Dec. 15-19. (SA23A-4056). |
| ***159.*** | ***C.G.M. Brum***; Mangalathayil Abdu; Paulo Batista; Subramanian Gurubaran; Dora Pancheva; Jose Bageston; Inez Batista and Hisao Takahashi **(2014)**. “*Fast and Ultra-fast Kelvin wave modulations of the equatorial evening F region vertical drift and spread F development*”. AGU Fall Meeting 2014, San Francisco, CA, Dec. 15-19. (SA31C-08). |
| ***158.*** | Andy Lopez; Eframir Franco; Edvier Cabassa and ***C.G.M. Brum* (2014)**. “*Relación entre el flujo de rayos cósmicos galácticos y la ocurrencia de Ciclones Tropicales en el Caribe*”. District and Regional Science Fair, Physics and Astronomy session, Puerto Rico, March 11. |
| ***157.*** | Jesper Gjerloev; Beate Humberset; Sixto Gonzalez; Michael Sulzer; ***C.G.M. Brum*** and Shin Ohtani **(2014)**. “*Temporal behavior of the ionospheric electron density over the Arecibo radar*”. European Geosciences Union General Assembly 2014 – Vienna, Austria, April 27 to May 02. (EGU2014-14710). |
| ***156.*** | P.T. Santos; ***C.G.M. Brum*** and R. Kerr **(2014)**. “*Climatology of the O+ temperature over Arecibo for the historical deep solar minimum using incoherent scatter radar and OII 7320 A twilight airglow data*”. The 14th Workshop on Technical and Scientific Aspects of MST Radar MST14/iMST1, São Jose dos Campos, SP, Brazil, May 25-31. Page 25. |
| ***155.*** | E. Cabassa-Miranda; ***C.G.M. Brum*** and S. Raizada **(2014)**. “*Solar and season variability of the nighttime H+, O+, and He+ ion fractions over Arecibo based on Rocsat satellite and incoherent scatter radar data*”. The 14th Workshop on Technical and Scientific Aspects of MST Radar MST14/iMST1, São Jose dos Campos, SP, Brazil, May 25-31. Page 25. |
| ***154.*** | Jesper Gjerloev; Beate Humberset; Shin Ohtani; Sixto Gonzalez; Michael Sulzer and ***C.G.M. Brum* (2014)**. “*Temporal behavior of the ionospheric electron density*”. Asian Oceania Geosciences Society Annual Meeting (AOGS2014), Sapporo, Japan, July 28 to Aug. 01. (ST30-A011). |
| ***153.*** | M.P. Souza Echer; N.R. Rigozo; E. Echer; ***C.G.M. Brum***; W. Gonzalez and D.J.R. Nordemann **(2014)**. “*Spectral analysis of stratospheric QBO and surface temperature*”. X Latin American Conference on Space Geophysics, Cusco, Peru, September 8-12. |
| ***152.*** | Cristina S. Yamashita; Ezequiel Echer; ***C.G.M. Brum*** and Mariza P. S. Echer **(2014)**. “*Study of the long term variability in geomagnetic activity*”. X Latin American Conference on Space Geophysics, Cusco, Peru, September 8-12. |
| ***151.*** | Hickey, D.; Martinis, C.; Wright, A.; Oliver, W.; Erickson, P.; Goncharenko, L.P.; Aponte, N.; ***C.G.M. Brum*** and Condori, L. **(2013)**. “*Midnight temperature maximum observations using incoherent scatter radars: climatology and dual site comparisons*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2013, Boulder, CO, Jun. 22-28, page 25. |
| ***150.*** | Cabassa, E.M. and ***C.G.M. Brum*** **(2013)**. “*Long-term trends on the F2 peak parameters over Arecibo based on over four decades of incoherent scatter radar and ionosonde measurements*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2013, Boulder, CO, Jun. 22-28, page 29. |
| ***149.*** | Pacini, A.A.; ***C.G.M. Brum***; Makita, K.; Selhorst, C. L.; Fernandes, F. C. R. and Cunha-Silva, R. **(2013)**. “*The role of the transient solar radio emission on the estimation of 30 MHz D-region absorption using riometers*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2013 Boulder, CO, Jun. 22-28, page 4. |
| ***148.*** | Kerr, C.; Friedman, J.S.; ***C.G.M. Brum*** and Fentzke, J.T **(2013)**. “*Thermospheric K layer observed over Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2013, Boulder, CO, Jun. 22-28, page 19. |
| ***147.*** | Sulzer, Michael P.; ***C.G.M. Brum***; Echer, E.; Aponte, N. and Cabassa, E.M. **(2013)**. “*Response of the Arecibo Ionosphere to the April 11, 2013 Coronal Mass Ejection*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SM41A-2220). |
| ***146.*** | S. Raizada; Erick Garcia; ***C.G.M. Brum***; Sumanta Sarkhel; Edvier Cabassa-Miranda; Qihou Zhou and Craig A. Tepley **(2013)**. “*Characteristics of Mesospheric Na Distribution over Arecibo, Puerto Rico*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SA11B-1927). |
| ***145.*** | Alessandra A. Pacini and ***C.G.M. Brum* (2013)**. “*Polar low ionospheric responses to the most energetic SPE of the solar cycle #23 based on cosmic noise absorption*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SA31A-1958). |
| ***144.*** | Caitlin Kerr; Jonathan S. Friedman; ***C.G.M. Brum***; Jonathan Fentzke and Xinzhao Chu **(2013)**. “*Seasonal and magnetic variability in thermospheric neutral potassium layers over Arecibo*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SA33B-1996). |
| ***143.*** | Jonathan S. Friedman; Xinzhao Chu; ***C.G.M. Brum***; Xian Lu; Caitlin Kerr and Jonathan Fentzke **(2013)**. “*Observation of a thermospheric descending layer of neutral K over Arecibo*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SA33B-1997). |
| ***142.*** | Jesper W. Gjerloev; Beate K. Humberset; Sixto A. Gonzalez; ***C.G.M. Brum* (2013)**. “*Temporal Behavior of the Ionospheric Electron Density at Low Latitudes: First Glimpse*”. AGU Fall Meeting 2013, San Francisco, CA, Dec. 9-13 (SA43C-04). |
| ***141.*** | Edvier Cabassa-Miranda and ***C.G.M. Brum* (2013)**. “*Noontime Latitudinal Behavior of the Ionospheric Peak Parameters (foF2 and hmF2) to the Variation of Solar Energy Input for the American Sector*”. AGU Fall Meeting, San Francisco 2013, CA, Dec. 9-13 (SA51A-2058). |
| ***140.*** | ***C.G.M. Brum.* (2013)**. “*Enhanced Composition Studies of the MLT Using Model, Ground-Based and In-Situ Measurements*”. The End of the Ignorosphere: An Aeronomy Researchers Conference on Commercial Suborbital Access to Space, 2013, Annapolis, MD, Apr. 28-30. |
| ***139.*** | Batista, I.; Candido, C.M.N.; Abdu, M.A. and ***C.G.M. Brum.*** **(2012)**. “*Ionosphere and thermosphere under extremely prolongedlow solar activity of solar cycle 23/24*”. International Symposium on Atmospheres of Terrestrial Planets: Observations & Modeling, 2012, Ahmedabad, India.  |
| ***138.*** | Abdu, M.A.; ***Brum, C.G.M.***; Batista, P.P.; Gurubaran, S.; Bageston, J.V.; Batista, I.S. and Sobral, J.H.A. **(2012)**. “*Planetary/Kelvin wave modulation of the equatorial ionospheric evening vertical plasma drift and the post sunset spread F developments*”. 39th COSPAR Scientific Assembly, Mysore, India, Jul. 14-22. |
| ***137.*** | Acevedo, I.; Pupo, J.; ***Brum, C.G.M.***; Cabassa, E.M.; González, S.A. and González Aponte, J.D. **(2012)**. “*Comparing the F-region (O+) and plasmasphere (H++He+) contributions to the VTEC (Vertical Total Electron Content) during the anomalous solar minimum*”. Spring 2012 Pre-College Research Symposium, San Juan, PR, May 12. Page 149. |
| ***136.*** | Aponte, L.; Torres, Y.; ***Brum, C.G.M.***; Cabassa, E.M.; González, S.A. and González Aponte, J.D. **(2012)**. “*Geomagnetic storms prediction for the increasing portion of solar cycle 24*”. Spring 2012 Pre-College Research Symposium, San Juan, PR, May 12. Page 151. |
| ***135.*** | Diaz, Y.; Nieves, T.; ***Brum, C.G.M.***; Cabassa, E.M.; González, S.A. and González Aponte, J.D. **(2012)**. “*Morphology of the E-region over Arecibo Observatory based on ISR radar data*”. Spring 2012 Pre-College Research Symposium, San Juan, PR, May 12. Page 152. |
| ***134.*** | Gomez, L. R.; Serrano, A.; Amador, G.; ***Brum, C.G.M.***; Cabassa, E.M.; González, S.A. and González Aponte, J.D. **(2012)**. “*Determination of the thermospheric atomic oxygen over the Arecibo Observatory region based on Fabry-Perot Interferometer and Incoherent Scatter Radar data*”. Spring 2012 Pre-College Research Symposium, San Juan, PR, May 12. Page 153. |
| ***133.*** | Toledo, F.P.; Pérez, N.M.; ***Brum, C.G.M.***; Cabassa, E.M.; González, S.A. and González Aponte, J.D. **(2012)**. “*Is the Ionosphere over Arecibo Observatory the same for the longest registered solar minimum (end and begin of solar cycles #23 and #24)?*”.Spring 2012 Pre-College Research Symposium, San Juan, PR, May 12.Page 154. |
| ***132.*** | Fujisama, M.Y.; Pacini, A.A. and ***Brum, C.G.M.* (2012)**. “*Estudo do papel da atividade solar na ionização da baixa ionosfera polar*”. IV Simpósio Brasileiro de Geofísica Espacial e Aeronomia, 2012, São Paulo, Brazil, Sep. 10-14.  |
| ***131.*** | Pacini, A.A.; ***Brum, C.G.M.*** and Fujisama, M. Y **(2012)**. “*Response of the polar low ionosphere to precipitation events along the solar cycle*”. AGU Fall Meeting 2012, San Francisco, CA, Dec. 3-7 (SA24A-03). |
| ***130.*** | Abe, G.; Fentzke, J. T.; Hsu, V.W. and ***Brum, C.G.M.*** **(2012)**. “*Sensitivity Analysis of Meteor Smoke Size and Derived Daytime Temperature Structure derived from the Poker Flat Incoherent Scatter Radar (PFISR)*”. AGU Fall Meeting 2012, San Francisco, CA, Dec. 3-7 (SA21A-2108). |
| ***129.*** | Cabassa, E.M.; ***Brum, C.G.M.***; Franco, E. and Symons, T. **(2012)**. “*On the relationship between the noon F2-peak parameters and the solar ultraviolet irradiance variations over Arecibo*”. AGU Fall Meeting 2012, San Francisco, CA, Dec. 3-7 (SA23A-2148). |
| ***128.*** | Symons, T.; ***Brum, C.G.M.***; Cabassa, E.M.; Franco, E. and Aponte, N. **(2012)**. “*Solar activity effects on total electron content over Arecibo Observatory: Observational results versus IRI predictions*”. AGU Fall Meeting 2012, 2012, San Francisco, CA, Dec. 3-7 (SA23A-2149). |
| ***127.*** | Franco, E.; ***Brum, C.G.M.***; Symons, T. and Cabassa, E.M. **(2012)**. *Solar and season variability of the transition height over Arecibo Observatory*. AGU Fall Meeting 2012, San Francisco, CA, Dec. 3-7 (SA23A-2150). |
| ***126.*** | Martinis, C.; Wright, A.; Oliver, B.; Goncharenko, L. P.; Condori, L.; Chau, J.; Aponte, N. and ***Brum, C.G.M.*** **(2012)**. “*Inter-hemispheric and latitudinal comparisons of MTM characteristics*”. Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2012, Santa Fe, NM, Jun. 24-29 (MDIT-05), page25. |
| ***125.*** | Hsu, V.; Fentzke, J. T.; ***Brum, C.G.M.***; Strelnikova, I.; Rapp, M. and Nicolls, M. **(2012)**. “*First Detection of Meteoric Smoke using the Poker Flat Incoherent Scatter Radar*”. Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2012, Santa Fe, NM, Jun. 24-29 (METR-03), page 4. |
| ***124.*** | Gonzalez, S.A.; ***Brum, C.G.M.***; Hsu, V.W. and Goncharenko, L.P*.* **(2011)***. “Spectral analysis of the midlatitude ion temperature responses to the sudden stratospheric warming events*”. AGU Fall Meeting 2011, San Francisco, CA, Dec. 5-9 (SA41A-1851). |
| ***123.*** | Friedman, J.S.; Chu, X.; ***Brum, C.G.M.***; Smith, S.M.; Yue, J. **(2011)**. “*Metal atoms observed in the thermosphere over Arecibo*”. AGU Fall Meeting 2011, San Francisco, CA, Dec. 5-9 (SA41C-03). |
| ***122.*** | ***Brum, C.G.M.***; Tepley, C.A.; Fentzke, J.T.; Santos, P.T. and Gonzalez, S.A. **(2011)**. “*Climatology of the Thermospheric Neutral Wind over Arecibo Observatory based on over three decades of Fabry Perot observations and an Associated Empirical Model*”. AGU Fall Meeting 2011, San Francisco, CA, Dec. 5-9 (SA31B-1975). |
| ***121.*** | Hsu, V.W.; Fentzke, J.T.; ***Brum, C.G.M.***; Strelnikova, I. and Nicolls, M.J. **(2011)**. “*First Detection of Meteoric Smoke using the Poker Flat Incoherent Scatter Radar (PFISR)*”. AGU Fall Meeting 2011, San Francisco, CA, Dec. 5-9 (SA21A-1860). |
| ***120.*** | Santos, T.P.; Noto, J.; ***Brum, C.G.M.***; Riccobono, J.; Garcia, R. and Robles, E. **(2011)**. “*An overview of the recent results from the H-alpha and OII 7320A observations at Arecibo Observatory using the new low resolution Fabry-Perot Interferometer*”. AGU Fall Meeting 2011, San Francisco, CA, Dec. 5-9 (SA13B-1895). |
| ***119.*** | Batista, I.S.; Candido, C.M.N.; ***Brum, C.G.M.*** and Abdu, M.A. **(2011)**. “*Ionosphere and upper atmosphere under the extremely prolonged low solar activity of solar cycle 23/24*”. IAU Symposium 286, 2011, Mendoza, Argentina, Oct. 3-7. |
| ***118.*** | M.A. Abdu; ***Brum, C.G.M.***; P.P. Batista; S. Gurubaran; I.S. Batista; et al.**(2011)**. “*Equatorial Evening Prereversal Enhancement Electric Field and Spread F, and their day-to-day Variability due to Planetary/Kelvin Waves*”. International Union of Geodesy and Geophysics (IUGG-XXV) General Assembly, Melbourne, Australia, Jun.27 to Jul.8. |
| ***117.*** | ***Brum, C.G.M.***; Aponte, N.; Fentzke, J.T. and Gonzalez, S.A. **(2011)**. “*Solar and Seasonal Variability of Transition Height Over Arecibo Based on Incoherent Scatter Radar Data*”. IX Latin American Conference in Space Geophysics, Punta Leona, Costa Rica, Apr. 5-10. |
| ***116.*** | ***Brum, C.G.M.***; Alcantra, D.G.; Vargas, J.; and Gonzalez, S.A. **(2010).** “*Solar and season variability of the nighttime transition height over Arecibo based on Incoherent Scatter Radar data and EUV-UV fluxes*”. AGU Fall Meeting 2010, San Francisco, CA, Dec. 13-17 (SA33B-1777). |
| ***115.*** | Santos, P.T.; ***Brum, C.G.M.***; Tepley, C.A.; Aponte, N. and Gonzalez, S.A. **(2010)**. “*Using incoherent scatter radar to investigate possible causes of the neutral wind long-term trends over Arecibo*”. AGU Fall Meeting 2010, San Francisco, CA, Dec. 13-17 (SA11B-1582). |
| ***114.*** | Santos, P.T.; ***C.G.M Brum***; Kerr, R.; Noto, J.; Gonzalez, S. and Garcia, R. **(2010)**. “*H-alpha response to geomagnetic disturbed activity at Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2010, Boulder, CO, Jun. 20-25 (IT-MDIT-07), page 23. |
| ***113.*** | Vargas, F.; ***C.G.M Brum***; Abdu, M.A. and Batista, I.S. **(2010)**. “*Estimation of periods and occurrence rate of TIDs and their correlation with geomagnetic activity using riometer time series recorded in sub-auroral and medium latitude stations*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2010, Boulder, CO, Jun. 20-25 (IT-MDIT-15), pages 25-26. |
| ***112.*** | Robles, E.; ***Brum, C.G.M.;*** Tepley, C.; Santos, P.M. and Gonzales, S.A. **(2010)**. “*Climatology of the thermospheric neutral winds over Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2010, Boulder, CO, Jun. 20-25 (IT-LTRV-02), page 19. |
| ***111.*** | ***Brum, C.G.M.***; Santos, P.M. and Gonzales, S. A. **(2010)**. “*Long-term decrease of the height of the F-region peak in the ionosphere over Arecibo*”. 2010 Joint Assembly - Meeting of the Americas, Iguassu Falls, Brazil, Aug. 8-12 (SA33A-09). |
| ***110.*** | Santos, P.M.; Tepley, C. ***Brum, C.G.M.***; Gonzales, S.A.; Roble, E. and Garcia, R. **(2010)**. “*The* l*ong-term trend of the thermospheric neutral winds observed at Arecibo during the last 30 years*”. 2010 Joint Assembly - Meeting of the Americas, Iguassu Falls, Brazil, Aug. 8-12 (SA33A-10). |
| ***109.*** | Santos, P.M.; Kerr, R.; Noto, J. and ***Brum, C.G.M.*** **(2010)**. “*H-alpha and OII 732.0nm Observations using the Arecibo's new low resolution FPI*”. 2010 Joint Assembly - Meeting of the Americas, Iguassu Falls, Brazil, Aug. 8-12 (SA33A-11). |
| ***108.*** | Souza, J.R.; ***Brum, C.G.M.***; Batista, I.S.; Asevedo Jr., W.; Santos, P.M.T. and Bailey, G.J. **(2010)**. “*Modelo parametrizado do conteúdo eletrônico total ionosférico para o setor sul americano*”. III Simpósio Brasileiro de Geofísica Espacial e Aeronomia, Armação de Búzios, RJ, Brazil, Sep. 1-3. |
| ***107.*** | Abdu, M.A.; ***Brum, C.G.M.***; Kherani, E.A.; Batista, I.S.; Sobral, J.H.A. “*Equatorial Spread F development and day-to-day Variability due to Planetary Waves and Gravity Waves*”. SCOSTEP Symposium 2010, Berlin, Germany, STP12 Abstract, Jul.12-16. |
| ***106.*** | Santos, P.T.; Noto, J.; ***Brum, C.G.M.***; Migliozzi, M.; Riccobono, J.; Garcia, R. And Kerr, R.B. **(2010)**. “*H-alpha response to geomagnetic disturber activity at Arecibo Observatory*”. 38th COSPAR Scientific Assembly, Bremen, Germany, Jul.18-25. Page 131. |
| ***105.*** | ***Brum, C.G.M.***; Carrion Matta, Aleshka; Gonzalez, Sixto and Rodrigues De Souza, Jonas **(2010)**. “*Season and Solar Cycle responses of the ionospheric peak electron density over Arecibo based on incoherent scatter data: Comparison of measurement and models*”. 38th COSPAR Scientific Assembly, Bremen, Germany, Jul.18-25. Page 113. |
| ***104.*** | ***Brum, C.G.M.***; Carrion Matta, A.; Gonzalez, S. A. and Aponte, N. **(2009)**. “*Comparative study of the NmF2 and hmF2 registered by incoherent scatter radar with the AO and IRI models*”. AGU Fall Meeting 2009, San Francisco, CA, Dec. 14-18 (SA11A-1460). |
| ***103.*** | Amirrezvani, A.S.; ***Brum, C.G.M.***; Gonzalez, S. and Aponte, N. **(2009)**. “*Climatology of the topside-protonosphere region over Arecibo Observatory based on Incoherent scatter radar data*”. AGU Fall Meeting 2009, San Francisco, CA, Dec. 14-18 (SA11A-1461). |
| ***102.*** | Gonzalez, S.A.; ***Brum, C.G.M.***; Centeno, D.; Padilla, C. and Aponte, N. **(2009)**. *Comparison of the Arecibo’s Incoherent Scatter Radar data with the IRI model for the weakest solar minimum since 1928*. AGU Fall Meeting 2009, San Francisco, CA, Dec. 14-18 (SA31B-1426). |
| ***101.*** | Santos, P. M.; Kerr, R. B.; Noto, J.; ***Brum, C.G.M.***; Gonzalez, S. A.; Migliozzi, M. and Garcia, R. **(2009)**. “*Simultaneous O+ temperatures derived from OII 7320A line width and incoherent scatter radar at Arecibo*”. AGU Fall Meeting 2009, San Francisco, CA, Dec. 14-18 (SA11A-1459). |
| ***100.*** | Cabassa, E.M.; Garzón, D.P.; Amirrezvani, A.; Centeno, D.; Franco, E.; Carrion, A.; Padilla, C.; Sulzer, M.; ***Brum, C.G.M.***; Aponte, N. and Gonzales, S. A. **(2009)**. “*Analysis of Arecibo dual beam world day data. Results from the weakest solar minimum since 1928*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2009, Santa Fe, NM, June 28 to July 2 (MDIT-04), page 27. |
| ***099.*** | Garzón, D.P.; ***Brum, C.G.M.***; Gonzales, S. A.; Aponte, N. and Echer, E. **(2009)**. “*Topside ionosphere responses to a moderate geomagnetic storm*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2009, Santa Fe, NM, June 28 to July 2 (MDIT-01), page 26. |
| ***098.*** | ***Brum, C.G.M.***; Robles, E.; Santos, P.M.; Gonzales, S. A.; Aponte, N.; Tepley, C. and Padilla, C. **(2009)**. “*Oxygen densities derived from Arecibo ISR (or MSIS vs. Burnsider Factor and alternative hypothesis for the O-O+ cross section adjustment)*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2009, Santa Fe, NM, June 28 to July 2 (MDIT-03). |
| ***097.*** | Santos, P.M.; Noto, J.; Migliozzi, M; Riccobono, J.; ***Brum, C.G.M.***; Garcia, R; Robles, E.; Kerr, R. **(2009)**. “*Simultaneous OII 7320 line width and Incoherent Scatter Radar O+ temperatures measured at Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2009, Santa Fe, NM, June 28 to July 2 (MLTS-02), page 19. |
| ***096.*** | Robles, E.; ***Brum, C.G.M.***; Santos, P.M.; Gonzales, S. A.; Aponte, N. and Tepley, C. **(2009)**. “*Climatology of the antiparallel plasma drift over Arecibo Observatory*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2009, Santa Fe, NM, June 28 to July 2 (LTRV-02), page 26. |
| ***095.*** | Padilla, C.; ***Brum, C.G.M.***; Carrion, A.; Gonzales, S.; Aponte, N. **(2009)**. “*Long term decrease of the height of the F-region peak in the ionosphere over Arecibo*”. 2009 Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, AZ, Nov 4-7. |
| ***094.*** | ***Brum, C.G.M.;*** Gonzales, S.; Aponte, N.; Tepley, C. and Santos, P.M. **(2009)**. “*Oxygen densities derived from Arecibo ISR (or MSIS vs Burnside factor and alternative hypothesis for the O-O+ cross section adjustment)*”. International Living With a Star (ILWS), Ubatuba, Brazil, Oct. 4-9. |
| ***093.*** | Garzón, D.P.; ***Brum, C.G.M.***; Gonzales, S.; Echer, E. and Aponte, N. **(2009)**. “*Topside ionosphere responses to a moderate geomagnetic storm during solar minimum*”. International Living With a Star (ILWS), Ubatuba, SP, Brazil, Oct. 4-9. |
| ***092.*** | Santos, P.M.; ***Brum, C.G.M.***; Gonzales, S. and Tepley, C. **(2009)**. “*In search of a long-trend neutral wind variations at Arecibo using incoherent scattering radar measurements*”. International Living With a Star (ILWS), Ubatuba, SP, Brazil, Oct. 4-9. |
| ***091.*** | Echer, M.P.S.; Echer, E.; ***Brum, C.G.M.***; Nordemman, D.J.R. and Rigozo, N.R. **(2009)**. “*Multi-resolution analysis of global hemispheric latitudinal averaged air surface temperature and solar activity relationship*”. International Living With a Star (ILWS), Ubatuba, SP, Brazil, Oct. 4-9. |
| ***090.*** | Abdu, M.A.; Kherani, E.A.; BRUM, C.G.M.; Batista, I.S. and Sobral, J.H.A.**(2009)**. “*The role of upward propagating waves in the equatorial spread F day-to-day variability*”. IAGA 11th Scientific Assembly, Sopron, Hungary, Aug.24-29. |
| ***089.*** | ***Brum, C.G.M.***; Gonzales, S.; Aponte, N. and Garzón, D.P. **(2008)**. “*Solar cycles and geomagnetic variability of nighttime topside hydrogen, oxygen and helium ion fractions over Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting, Midway, UT, Jun. 16-21 (LTRV-01), page 6. |
| ***088.*** | Engle, E.; ***Brum, C.G.M.***; Tepley, C.; Robles, E.; Gonzales, S. and Santos, P.M. **(2008)**. “*Solar, geomagnetic and seasonal variability of the NmF2 and foF2 over Arecibo Observatory*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting, Midway, UT, Jun. 16-21 (LTRV-02), page 6. |
| ***087.*** | Santos, P.M.; Noto, J.; Migliozzi, M.; Riccobono, J.; ***Brum, C.G.M.***; Garcia, R.; Robles, E. and Kerr, R. **(2008)**. “*Altitude variation of the OII 7320 spectral line width at Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting, Midway, UT, Jun. 16-21 (EQIT-14), page 26. |
| ***086.*** | Abdu, M.A.; Batista, I.S.; ***Brum, C.G.M.***; Sobral, J.H.A. and Souza, J.R. **(2008)**. “*Solar flux effects on the equatorial evening vertical drift and meridional winds over Brazil: A comparison between observational data and available IRI representations*”. 37th COSPAR Scientific Assembly, Montreal, Canada, Jul.13-20. |
| ***085.*** | ***Brum, C.G.M.***; Aponte, N.; Gonzales, S. and Santos, P.M. **(2008)**. “*H+ ion behavior over Arecibo during equinox*”. 37th COSPAR Scientific Assembly, 2008, Montreal, Canada, Jul.13-20. |
| ***084.*** | Mendes da Costa, A.; Domingues, O.D.; Mendes, O.Jr.and ***Brum, C.G.M.* (2008)**. “*Solar-proton event as seen through singularities detection in the magnetosphere ionosphere coupling at low Latitudes*”. 37th COSPAR Scientific Assembly, Montreal, Canada, Jul.13-20. |
| ***083.*** | Santos, P.M.; ***Brum, C.G.M.***; Gonzales, S.; Tepley, C. and Robles, E. **(2008)**. “*In search of the long-trend meridional neutral wind variations at Arecibo using FPI and ISR measurements*”. 37th COSPAR Scientific Assembly, Montreal, Canada, Jul.13-20. |
| ***082.*** | Souza, J.R.; ***Brum, C.G.M.***; Wivaldo Asevedo Junior; Abdu, M.A.; Bailey, J.P. and Bittencourt, J.A. **(2008)**. “*Parameterized regional ionospheric model and a comparison of its results with experimental data and IRI representations*”. 37th COSPAR Scientific Assembly, Montreal, Canada, Jul.13-20. |
| ***081.*** | Santos, P.M.; Noto, J.; Migliozzi, M.; ***Brum, C.G.M.***; Kerr, R.; Riccobono, J.; Garcia, R. and Robles, E. **(2008)**. “*Study of the OII 7320A spectral line width at Arecibo*”. AGU Fall Meeting 2008, San Francisco, CA, Dec. 15-19 (A51I-0217). |
| ***080.*** | ***Brum, C.G.M.***; Garzón, D.P.; Gonzales, S. and Aponte, N. **(2008)**. “*Signatures of wave propagation in the topside ionosphere*”. AGU Fall Meeting 2008, San Francisco, CA, Dec. 15-19 (SA53B-1583). |
| ***079.*** | Souza, J.R.; ***Brum, C.G.M.***; Batista, I.S.; Abdu, M.A. and Bailey, G.J. **(2008)**. “*Uma modelagem ionosférica e assimilação de dados para obter Conteúdo Eletrônico Total*”. II Simpósio Brasileiro de Geofísica Espacial e Aeronomia, 2008, Campina Grande, PB, Brazil. |
| ***078.*** | Costa, A.M.; Gonzalez-Alarcon, A.L.C.; Borgazzi, A.I.; ***Brum, C.G.M.***; Domingues, M.O.; Trivedi, N.B.; Gonzalez-Alarcon, W.D. **(2007)** “*Magnetospheric signals analysis using singularity detection: An overview of the activities developed by the Electrodynamical Phenomena Modelling group at INPE-Brazil*”. VIII Latin-American Conference on Space Geophysics (COLAGE), Merida, Mexico, Jul. 11-17. |
| ***077.*** | Mendes da Costa, A.; Mendes, O.Jr.; Domingues, O.D. and ***Brum, C.G.M.* (2007)**. “*Transient effects of solar- proton events in the magnetosphere ionosphere coupling in the South Atlantic Geomagnetic Anomaly*”. VIII Latin-American Conference on Space Geophysics (COLAGE), Merida, Mexico, Jul. 11-17. |
| ***076.*** | Santos, P.M.; Gonzales, S.; Aponte, N.; Tepley, C. and ***Brum, C.G.M.* (2007)**. “*Long-term meridional neutral wind study over Arecibo using Incoherent Scattering Radar*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2007, Santa Fe, NM, Jun. 24-29 (MLT-02), page 1. |
| ***075.*** | ***Brum, C.G.M.;*** Tepley, C. and Robles, E. **(2007)**. “*Behavior of the neutral wind components over Arecibo during geomagnetically quiet conditions*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2007, Santa Fe, NM, Jun. 24-29 (MLT-03) page 1. |
| ***074.*** | ***Brum, C.G.M.***; Abdu, M.A. and Batista, I.S. **(2006)**. “*Multi-scale analysis of the cosmic noise absorption by the geomagnetic activity and galactic cosmic ray precipitation*”. 11th Quadrennial Solar Terrestrial Physics Symposium “Sun, Space and Climate” (SCOSTEP), Rio de Janeiro, Brazil, Marc. 6-10. |
| ***073.*** | Abdu, M.A.; Batista, I.S.; ***Brum, C.G.M.*** and Sobral, J.H.A. **(2006)**. “*Equatorial ionospheric and thermospheric responses to storm time disturbance electric fields: Solar activity dependence*”. 11th Quadrennial Solar Terrestrial Physics Symposium “Sun, Space and Climate” (SCOSTEP), Rio de Janeiro, Brazil, Marc. 6-10. |
| ***072.*** | Correia, E.; Fernandez, J.H.; ***Brum, C.G.M.***; Raulin, J.P. and Aparecido, M. **(2006)**. “*Electron precipitation events in the low ionosphere at middle latitudes (L=2.25) and geomagnetic activity*”. 11th Quadrennial Solar Terrestrial Physics Symposium “Sun, Space and Climate” (SCOSTEP), Rio de Janeiro, Brazil, Marc. 6-10. |
| ***071.*** | ***Brum, C.G.M.***; Batista, I.S. and Abdu, M.A. **(2006)**. “*Quasi-Biennial periodicity detected in the cosmic noise absorption registers over Sub-Auroral region*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2006, Santa Fé, NM, Jun. 19-23 (LTRV-09), page 10. |
| ***070.*** | ***Brum, C.G.M.***; Robles, E. and Tepley, C. **(2006)**. “*Neutral winds velocity behavior with the solar cycle over Arecibo*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2006, Santa Fé, NM, Jun. 19-23 (LTRV-10), page 10. |
| ***069.*** | Santos, P.M.; Gonzales, S.; Aponte, N.; Tepley, C.; Robles, E. and ***Brum, C.G.M.* (2006)**. “*Study of the meridional neutral winds behavior by the Arecibo Incoherent Scattering Radar*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2006, Santa Fé, NM, Jun. 19-23 (LTRV-08), page 9. |
| ***068.*** | Abdu, M.A.; de Medeiros, R.T.; Batista, I.S.; ***Brum, C.G.M.*** and Carrasco, A.J. **(2006)**. “*Effects of planetary waves and thermospheric winds on Equatorial Spread F/plasma bubble irregularities*”. 36th COSPAR Scientific Assembly, Beijing, China, Jul. 16-23 (A-02370). |
| ***067.*** | Fernandez, J.H.; ***Brum, C.G.M.*** and Correia, E. **(2006)**. “*Trimpi events solar minimum incidence: the beginning of a model to re-evaluate the radiation belts equilibrium*”. 36th COSPAR Scientific Assembly, Beijing, China, Jul. 16-23 (A-02967). |
| ***066.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S. and Fernandez, J.H. **(2006)**. “*Multi-scale analysis of the cosmic noise absorption by the geomagnetic activity and galactic cosmic ray precipitation*”. 36th COSPAR Scientific Assembly, Beijing, China, Jul. 16-23 (A-03233). |
| ***065.*** | Abdu, M.A.; Batista, I.S.; ***Brum, C.G.M.***; Souza, J.R.; de Paula, E.R. and Sobral, J.H.A. **(2006)**. “*Solar flux effects on total electron content and equatorial ionization anomaly over Brazil: observational results versus IRI representations*”. URSI/COSPAR International Reference Ionosphere Workshop, Buenos Aires, Argentina, Oct. 16-20. |
| ***064.*** | Fernandez, J.H.; Raulin, J.P.; Correia, E. and ***Brum, C.G.M.* (2006)**. “*A South Hemisphere magnetic variations improved coverage and South Atlantic Magnetic Anomaly (SAMA) monitoring by the installation of a small magnetometer network on the Brazilian territory*”. Simpósio Brasileiro de Geofísica Espacial e Aeronomia SBGEA, São José dos Campos, SP, Brazil, Oct. 23-26. |
| ***063.*** | Reis, D.C.; Batista, I.S. and ***Brum, C.G.M.* (2006)**. “*Variabilidade da ionosfera brasileira e sua comparação com o modelo ionosférico IRI*”. Simpósio Brasileiro de Geofísica Espacial e Aeronomia SBGEA, São José dos Campos, SP,Brazil, Oct. 23-26. |
| ***062.*** | Fernandez, J.H.; Raulin, J.P.; Correia, E. and ***Brum, C.G.M.*** **(2006)**. “*Lightning-induced electron precipitation (LEP) events versus geomagnetic activity: A probe tool to re-evaluate the electron radiation belt loss mechanisms*”. Workshop on International Heliophysical Year and Basic Space Science, Bangalore, India, Nov. 27 to Dec. 1. |
| ***061.*** | Abdu, M.A.; Batista, I.S.; ***Brum, C.G.M.*** and Sobral, J.H.A. **(2006)**. “*Impact of some recent major magnetic storms on the equatorial/low latitude ionosphere-thermosphere system*”. The Solar Influence on the Heliosphere and Earth's Environment: Recent Progress and Prospects, Goa, India, Feb. 19-24. |
| ***060.*** | Setzer, A. and ***Brum, C.G.M.*** **(2006*)****. “Análise espectral da pressão, temperatura e vento em relação à atividade solar na EACF. XIV Seminário Sobre Pesquisa Antártica*”. Universidade de São Paulo, São Paulo, Brazil, Oct. 4-6. |
| ***059.*** | ***Brum, C.G.M.***; Echer, E.; Guarnieri, F.; Abdu, M.A. and Batista, I.S. **(2005)**. “*South Atlantic Magnetic Anomaly Ionosphere Response to the Corotating Stream Periods*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, Feb. 6-12. |
| ***058.*** | Pacini, A.A.; ***Brum, C.G.M.*** and Bertoni, F. **(2005)**. “*Cosmic Noise Absorption Events Behavior under Magnetic Storm Conditions in the Sub-Auroral Lower Ionosphere Region*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, Feb. 6-12. |
| ***057.*** | Vargas, F.A.; ***Brum, C.G.M.;*** Echer, E. and Guarnieri, F. **(2005)**. “*A Study of the Cosmic Noise Absorption Events in the South Atlantic Magnetic Anomaly Region Associated with Geomagnetic Activity During Corotating and Transient Streams*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, February 6-12. |
| ***056.*** | Correia, E.; ***Brum, C.G.M.***; Fernandez, J.H.; Raulin, J.P. and Piazza, L.R. **(2005)**. “*Study of how the solar wind streams affects the electron precipitation events in the low ionosphere*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, Feb. 6-12. |
| ***055.*** | Bertoni, F.; Batista, I.S.; Abdu, M.A.; Souza, J.R.and ***Brum, C.G.M.* (2005)**. “*Ionospheric Effects of Severe Magnetic Storm over the Brazilian Sector: A Comparative Study*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, Feb. 6-12. |
| ***054.*** | Santos, P.M.; Sobral, J.H.A.; ***Brum, C.G.M.;*** Abdu, M.A. **(2005)**. “*A statistical study of the occurrence and zonal drift velocity variations of the plasma Bubbles with geomagnetic activity during episodes of Corotating and Transient Solar Wind Streams*”. Chapman Conference on Corotating Solar Wind Streams and Recurrent Geomagnetic Activity, Manaus, Brazil, Feb. 6-12. |
| ***053.*** | Abdu, M.A.; Batista, I.S.; Souza, J.R.; ***Brum, C.G.M.*** and Sobral, J.H.A. **(2005)**. “*Equatorial ionosphere-thermosphere responses to moderate and intense magnetic storms*”. 11th International Symposium on Equatorial Aeronomy (ISEA-11), Taipei, Taiwan, May 9-14. |
| ***052.*** | ***Brum, C.G.M.***; Vargas, F.A.; Echer, E.; Rodrigues, F.S. and Fernandez, J.H. **(2005)**. “*Numerical simulation of cosmic noise absorption in the SAMA region: Its response to electron flux and energy spectrum*”. European Geosciences Union, General Assembly, Vienna, Austria, Apr. 24-29. |
| ***051.*** | Vargas, F.A.; Gobbi, D.; Takahashi, H. and ***Brum, C.G.M.* (2005)**. “*A study of the gravity wave horizontal wavenumber spectra and the spectral slope variation inferred from airglow image data at Cachoeira Paulista (22.7ºS) and São João do Cariri (7.4ºS), Brazil*”. European Geosciences Union, General Assembly, Vienna, Austria, Apr. 24-29. |
| ***050.*** | ***Brum, C.G.M.***; Santos, P.M.; Souza, J.R.; Abdu, M.A.; Batista, I.S. and Bailey, J.P. **(2005)**. “*Lower ionosphere numerical simulations for the South Atlantic Anomaly region*”. The International Association of Geomagnetism and Aeronomy Scientific Assembly (Xth IAGA), Toulouse, France, Jul. 18-28.  |
| ***049.*** | Santos, P.M.; Souza, J.R.; Sobral, J.H.A.; Bailey, J.P. and ***Brum, C.G.M.* (2005)**. “*Development of the Sheffield University Plasmasphere-Ionosphere Model-Supim new version and its validation for the Brazilian Sector*”. The International Association of Geomagnetism and Aeronomy Scientific Assembly (Xth IAGA), Toulouse, France, Jul. 18-28.  |
| ***048.*** | Vargas, F.A.; Gobbi, D.; Takahashi, H.; ***Brum, C.G.M.*** and Sobral, J.H.A. **(2005)**. “*The mean velocity of ionospheric plasma bubbles in the Brazilian region computed by keograms*”. The International Association of Geomagnetism and Aeronomy Scientific Assembly (Xth IAGA), Toulouse, France, Jul. 18-28.  |
| ***047.*** | Abdu, M.A.; Batista, P.P.; Batista, I.S.; ***Brum, C.G.M.*** and Reinisch, B.W. **(2005)**. “*Planetary wave effects in mesospheric winds, equatorial evening pre-reversal vertical drift, and Spread- F*”. The International Association of Geomagnetism and Aeronomy Scientific Assembly (Xth IAGA), Toulouse, France, Jul. 18-28.  |
| ***046.*** | Fernandez, J.H.; ***Brum, C.G.M.***; Raulin, J.P.; Correia, E. and da Costa, J.M. **(2005)**. “*TRIMPI events like a diagnostic tool to evaluate the Van Allen radiation belts equilibrium mechanisms*”. The International Association of Geomagnetism and Aeronomy Scientific Assembly (Xth IAGA), Toulouse, France, Jul. 18-28. |
| ***045.*** | Santos, P.M.; ***Brum, C.G.M.***; Sobral, J.H.A.; Abdu, M.A.; Souza, J.R. and Takahashi, H. **(2005)**. “*A statistical study of plasma bubble zonal drift velocity variations with geomagnetic activity and events of corotating a transient streams*”. Ninth International Congress of the Brazilian Geophysical Society, Salvador, BA, Brazil, Sep. 11-14. doi: 10.1190/sbgf2005-397. |
| ***044.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S.; Fernandez, J.H. and Santos, P. M. T. **(2005)**. “*Modelo numérico da baixa ionosfera*”. Ninth International Congress of the Brazilian Geophysical Society, Salvador, BA, Brazil, Sep. 11-14. doi:10.1190/sbgf2005-445. |
| ***043.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S. and Vargas, F.A. **(2005)**. “*Detecção de TIDs nas regiões sub-auroral e da Anomalia Magnética do Atlântico Sul*”. Ninth International Congress of the Brazilian Geophysical Society, Salvador, BA, Brazil, Sep. 11-14. doi: 10.1190/sbgf2005-444.  |
| ***042.*** | Vargas, F.A.; B., C.T.; Gobbi, D; Takahashi, H.; ***Brum, C.G.M.* (2005)**. “*Análise do espectro temporal de ondas de gravidade por meio de keogramas*”. Ninth International Congress of the Brazilian Geophysical Society, Salvador, BA, Brazil, Sep. 11-14. doi:10.1190/sbgf2005-404. |
| ***041.*** | ***Brum, C.G.M.*** and Fernandez, J.H. **(2005)**. “*Modelo empírico do registro de ruído cósmico para períodos "calmos"*”. XIII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 28-30. |
| ***040.*** | ***Brum, C.G.M.*** and Fernandez, J.H.; Abdu, M.A. and Batista, I.S. **(2005)**. “*Análise comparativa da decomposição espectral da variação da absorção ionosférica do ruído cósmico, precipitação de raios cósmicos galácticos e atividade geomagnética utilizando a transformada wavelet*”. XIII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 28-30. |
| ***039.*** | Correia, E.; Fernandez, J.H.;***Brum, C.G.M.****; Raulin, J.P. and Aparecido, M.* ***(2005)****. “Estudo de eventos de precipitação de elétrons na baixa ionosfera e sua associação com fenômenos solares”.* XIII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 28-30. |
| ***038.*** | Fernandez, J.H.; Raulin, J.P.; Correia, E.; ***Brum, C.G.M.***; Trived, N. B.; Dutra, S.L.G.; da Costa, J.M.; Barreto, L.M. and Russel, C.T. **(2005)**. “*A south hemisphere magnetic variation improved coverage and South Atlantic Magnetic Anomaly (SAMA) monitoring by the installation of a small magnetometer Network on the Brazilian territory*”. UN/ESA/NASA/UAE Workshop on the International Heliophysical Year (IHY), Abu Dhabi and Al-Ain, United Arab Emirates, Nov. 20-23. |
| ***037.*** | Abdu, M.A.; Batista, I.S.; Reinisch, B.W.; Sobral, J.H.A. and ***Brum, C.G.M.* (2005)**. “*Disturbance equatorial electric fields and ionospheric responses during some recent intense magnetic storms*”. AGU Fall Meeting 2005, San Francisco, CA, Dec. 5-9 (SA13B-04). |
| ***036.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S.; Alves, M.V.; Fernandez, J.H and Muralikrishna, A. **(2005)**. “*Numerical simulation of the lower ionosphere over South Atlantic Magnetic Anomaly*”. 8º Encontro Brasileiro de Física dos Plasmas, Niterói, RJ, Brazil, Nov. 27-30. |
| ***035.*** | Muralikrishna, A.; Santos, R.D.C. and ***Brum, C.G.M.*** **(2005)**. “*Search for rules of behavior of terrestrial atmosphere with solar activity using data mining techniques*”. 8º Encontro Brasileiro de Física dos Plasmas, Niterói, RJ, Brazil, Nov. 27-30. |
| ***034.*** | Bertoni, F.C.P.; Batista, I.S.; Abdu, M.A. and ***Brum, C.G.M.* (2004)**. *Thermosphere magnetic meridional wind, drift velocities and density isolines inferred from computational model SUPIM*”. VII COLAGE - Latin-American Conference on Space Geophysics, Atibaia, SP, Brazil, Mar. 29 to Apr. 2. |
| ***033.*** | Santos, P.M.T.; Sobral, J.H.A.; Abdu, M.A.; Souza, J.R.; Takahashi, H. and ***Brum, C.G.M.* (2004)**. “*Geomagnetic activity effects on plasma bubble zonal drift velocities at low latitude in Brazil*”. VII COLAGE - Latin-American Conference on Space Geophysics, Atibaia, SP, Brazil, Mar. 29 to Apr. 2. |
| ***032.*** | ***Brum, C.G.M.***; Fedrizzi, M.; Santos, P.M.T.; Bertoni, F.C.P.; Fernandez, J.H. and Barros, L.P. **(2004)**. “*Resposta da baixa ionosfera da Anomalia Magnética do Atlântico Sul e da região sub-polar ao campo magnético interplanetário*”. VII COLAGE - Latin-American Conference on Space Geophysics, Atibaia, SP, Brazil, Mar. 29 to Apr. 2.  |
| ***031.*** | ***Brum, C.G.M.***; Santos, P.M.T.; Fedrizzi, M.; Bertoni, F.C.P.; Fernandez, J.H. and Barros, L.P. **(2004)**. “*Study of simultaneous detection of the ionospheric cosmic noise absorption transient events over sub-polar and South Atlantic Geomagnetic Anomaly region from 1989 to 1996*”. VII COLAGE - Latin-American Conference on Space Geophysics, Atibaia, SP, Brazil, Mar. 29 to Apr. 2.  |
| ***030.*** | ***Brum, C.G.M.***; Santos, P.M.T.; Fedrizzi, M.; Bertoni, F.C.P.; Fernandez, J.H. and Barros, L.P. **(2004)**. “*Travelling ionospheric disturbances detected by riometers in the sub-polar and the South Atlantic Magnetic Anomaly regions*”. VII COLAGE - Latin-American Conference on Space Geophysics, Atibaia, SP, Brazil, Mar. 29 to Apr. 2. |
| ***029.*** | ***Brum, C.G.M.***; Carrasco, A.J.; Abdu, M.A.; Batista, I.S. and Santos, P.M.T. **(2004)**. “*Model of the lower ionosphere ionization by electron precipitation*”. 35th COSPAR Scientific Assembly, Paris, France, Jul. 18-25.  |
| ***028.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S.; Santos, P.M.T. and Barros, L.P. **(2004)**. “*Travelling ionospheric disturbances detected by riometers in the sub-polar and the South Atlantic Magnetic Anomaly regions*”. 35th COSPAR Scientific Assembly, Paris, France, Jul. 18-25. |
| ***027.*** | ***Brum, C.G.M.***; Abdu, M.A.; Santos, P.M.T. and Barros, L.P. **(2004)**. “*Study of simultaneous detection of the ionospheric cosmic noise absorption transient events over sub-auroral and South Atlantic Geomagnetic Anomaly region from 1989 to 1996*”. 35th COSPAR Scientific Assembly, Paris, France, Jul. 18-25. |
| ***026.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S.; Santos, P.M.T.; Barros, L.P. **(2004)**. “*Lower ionosphere cosmic noise absorption responses to the interplanetary magnetic field behavior in the South Atlantic Magnetic Anomaly and sub-auroral regions*”. 35th COSPAR Scientific Assembly, Paris, France, Jul. 18-25. |
| ***025.*** | Santos, P.M.T.; Sobral, J.H.A.; Abdu, M.A.; Souza, J.R.; Takahashi, H. and ***Brum, C.G.M.* (2004)**. *Plasma bubble zonal velocity variations with solar activity over the Brazilian region*. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting, Santa Fé, NM, Jul. 18-25. |
| ***024.*** | Fernandez, J.H.; ***Brum, C.G.M.***; Rizzo, L.; Raulin, J-P and Correia, E. **(2004)**. “*The coupling between the geospace environment and the high Earth atmosphere: A study to re-evaluate the Van Allen radiation belts equilibrium mechanisms*”. XII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 29 to Oct. 1. |
| ***023.*** | ***Brum, C.G.M.***; Abdu, M.A. and Batista, I.S. **(2004)**. “*Variabilidade da baixa ionosfera da região sub-auroral ao campo magnético interplanetário*”. XII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 29 to Oct. 1. |
| ***022.*** | ***Brum, C.G.M.***; Abdu, M.A. and Batista, I.S. **(2004)**. “*Simulação numérica de precipitação de elétrons na baixa ionosfera durante o período noturno na região da Estação Antártica Comandante Ferraz*”. XII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 29 to Oct. 1. |
| ***021.*** | ***Brum, C.G.M.***; Fernandez, J.H.; Abdu, M.A. and Batista, I.S. **(2004)**. “*Análise do comportamento de eventos de absorção ionosférica do ruído cósmico de curta duração registrados na Estação Antártica Comandante Ferraz*”. XII Seminário Sobre Pesquisa Antártica, Universidade de São Paulo, São Paulo, Brazil, Sep. 29 to Oct. 1. |
| ***020.*** | Santos, P.M.T.; Souza, J.R.; Bailey, G.J.; Sobral, J.H.A. and ***Brum, C.G.M.* (2003)**. “*Implementation of the Ionosphere E-Region in the Sheffield University Plasmasphere-ionosphere Model*”. Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) meeting 2003, Longmont, CO, Jun. 15-20. |
| ***019.*** | ***Brum, C.G.M.***; Abdu, M.A.; Santos, P.M.T.; Bertoni, F.C.P. and Barros, L.P. **(2003)**. “*Simultaneous detection of ionospheric cosmic noise absorption events over sub-polar and south Atlantic geomagnetic anomaly region*”. 7th Brazilian Meeting on Plasma Physics + X Latin American Workshop on Plasma Physics, Águas de São Pedro, SP, Brazil, Nov. 30 to Dec. 5. |
| ***018.*** | ***Brum, C.G.M.***; Abdu, M.A.; Santos, P.M.T.; Bertoni, F.C.P.; Aquino, M.G.S. and Barros, L.P. **(2003)**. “*Detection of travelling ionospheric disturbances over sub-polar and South Atlantic Magnetic Anomaly regions by riometers data*”. 7th Brazilian Meeting on Plasma Physics + X Latin American Workshop on Plasma Physics, Águas de São Pedro, SP, Brazil, Nov. 30 to Dec. 5. |
| ***017.*** | Santos, P.M.T.; Souza, J.R.; Sobral, J.H.A.; ***Brum, C.G.M.*** and Bailey, G.J. **(2003)**. “I*mplementation of the Ionosphere E-Region in the Sheffield University Plasmasphere-ionosphere Model*”. 7th Brazilian Meeting on Plasma Physics + X Latin American Workshop on Plasma Physics, Águas de São Pedro, SP, Brazil, Nov. 30 to Dec. 5. |
| ***016.*** | ***Brum, C.G.M.***; Abdu, M.A.; Batista, I.S. and Rodrigues, F.S. **(2002)**. “*Study of the variation of lower ionosphere ionization through cosmic noise ionospheric absorption in the South America sector during solar maximum (1989-1991)*”. 34th COSPAR Scientific Assembly, Houston, TX, Oct. 10-19. |
| ***015.*** | Contreira, D.B.; Rodrigues, F.S.; Makita, K.; ***Brum, C.G.M.***; Gonzalez, W.D.; de Paula, E.R.; Silva, M.R. and Schuch, N.J. **(2002)**. “*An experiment to study the solar flares effects on radio-communication signals*”. 34th COSPAR Scientific Assembly, Houston, TX, Oct. 10-19. |
| ***014.*** | ***Brum, C.G.M.***; Fernandez, J.H.; Fedrizzi, M.; Rodrigues, F.S. **(2002)** “*Cosmic noise absorption behavior during solar minimum period*”. X Seminário sobre Pesquisa Antárticas, Universidade de São Paulo, São Paulo, Brazil, Nov. 7-8. |
| ***013.*** | Fernandez, J.H.; Trivedi, N.B.; ***Brum, C.G.M.***; Rodrigues, F.S. and Fedrizzi, M. **(2002)** “*Curvas da variação geomagnética diária: Ordem no Caos?*”. X Seminário sobre Pesquisa Antárticas, Universidade de São Paulo, São Paulo, Brazil, Nov. 7-8. |
| ***012.*** | Rodrigues, F.S.; ***Brum, C.G.M.***; Makita, K.; Nishino, M.; de Paula, E.R.; Abdu, M.A.; Nozaki, K. and Contreira, D.B. **(2001)** “*Using a commercial radio receiver for lower ionosphere monitoring: initial results*”. VI Latin American Conference on Space Geophysics (VI COLAGE), Puerto de Tomé, Chile, Oct. 1-5. |
| ***011.*** | Rodrigues, F.S.; ***Brum, C.G.M.***; Makita, K.; Nishino, M.; de Paula, E.R.; Abdu, M.A.; Nozaki, K.; Silva, M.R. and Schuch, N.J. **(2001)** “*Use of a radio receiver computer controlled to study the lower ionosphere*”. VI Latin American Conference on Space Geophysics (VI COLAGE), Puerto de Tomé, Chile, Oct. 1-5. |
| ***010.*** | ***Brum, C.G.M.***; Rodrigues, F.S.; Abdu, M.A. and Medrano-B, R.A. **(2000)** “*The galactic cosmic rays as source of ionization in the ionospheric D-Region in the middle and high latitudes”*. 33th COSPAR Scientific Assembly, Varsaw, Poland, Jul. 16-23. |
| ***009.*** | Rodrigues, F.S.; ***Brum, C.G.M.***; Schuch, N.J.; Rodrigues, E.P.; Gonzalez, W.D.; Makita, K.; Nishino, M. **(2000)** “*Estudos experimentais dos Possíveis impactos causados por distúrbios ionosféricos sobre as Rádio-comunicações”*. XV Congresso Regional de Iniciação Científica e Tecnológica em Engenharia, Rio Grande do Sul, Brazil. |
| ***008.*** | Ruviaro, A.; Rodrigues, F.S.; Azevedo, J.B.; Furtado, J.C.; ***Brum, C.G.M.*** and Schuch, N.J. **(2000)** “*Observações da camada D ionosférica sobre a Estação Antártica Brasileira (68oS, 58oO) utilizando dados de Riômetro”*. XV Jornada Acadêmica Integrada da Universidade Federal de Santa Maria, Santa Maria, RS, Brazil. |
| ***007.*** | Azevedo, J.B.; Rodrigues, F.S.; Marchesan, E.R.; ***Brum, C.G.M.***; Schuch, N.J. and Furtado, J.C. **(2000)** “*Otimização de software para redução de dados de Monitoramento Ionosférico”*. XV Jornada Acadêmica Integrada da Universidade Federal de Santa Maria, Santa Maria, RS, Brazil. |
| ***006.*** | Rodrigues, F.S.; ***Brum, C.G.M.***; Wrasse, C.M.; Marchesan, E.R.; Vargas, F.A.; Wrasse, G.R.; Takahashi, H.; Fernandez, J.H.; Makita, K.; Abdu, M.A.; Nishino, M. and Schuch, N.J. **(1999)** “*O Laboratório de Aeronomia - LAE: estrutura, Linhas de Pesquisa e Cooperações”*. XIV Jornada Acadêmica Integrada, Universidade Federal de Santa Maria, RS, Brazil. |
| ***005.*** | Rodrigues, F.S.; ***Brum, C.G.M.***; Fernandez, J.H; Piazza, L.R.; Abdu, M.A.; Nishino, M. And Schuch, N.J. **(1999)** “*Evidência de Distúrbios na Propagação de Ondas na Faixa de 0.4 à 80Khz”*. XIV Jornada Acadêmica Integrada, Universidade Federal de Santa Maria, RS, Brazil. |
| ***004.*** | Marchesan, E.R.; Rodrigues, F.S.; ***Brum, C.G.M.***; Furtado, J.C. and Schuch, N.J. **(1999)** “*Software para redução de dados de riômetros”*. IV Encontro de Iniciação Científica, Taubaté, SP, Brazil. |
| ***003.*** | Rodrigues, F.S.; Marchesan, E.R.; ***Brum, C.G.M.***; Schuch, N.J. and Furtado, J.C. **(1999)** “*A colaboração do laboratório de ciências espaciais de Santa Maria - LACESM/CT/UFSM na redução e análise de dados de pesquisas da alta atmosfera na Antártica”*. Feira das Profissões - UFSM - 2 Edição, Santa Maria, RS, Brazil. |
| ***002.*** | ***Brum, C.G.M.*** and Medrano-B, R.A. **(1999)** “*In Search a Unique Quiet Day Cosmic Noise for Transient events in Ionospheric Absorption Studies”*. VII Seminário Sobre Pesquisa Antártica, Centro de Pesquisas Antárticas da Universidade de São Paulo, São Paulo,Brazil, Nov. 4-5. |
| ***001.*** | Medrano-B, R.A. and ***Brum, C.G.M.* (1999)** “*The Galactic Cosmic Rays as Source of Ionization in the Ionospheric D-Region in the Middle Latitudes”*. VII Seminário Sobre Pesquisa Antártica, Centro de Pesquisas Antárticas da Universidade de São Paulo, São Paulo,Brazil, Nov. 4-5. |