Proyectos adjudicados:

i. **2025 – 2027:** Fondo Regional para la Productividad y el Desarrollo FRPD, *Tecnología sostenible para monitoreo y gestión de fugas de agua en tiempo real para Ñuble*. Investigador Responsable: **Manuel Bravo**

ii. **2025 – 2026:** Proyecto UnACh y Universidad Peruana Unión PI-251, *El campo eléctrico asociado a Eclipses solares aplicando inteligencia artificial: Implementación de sensores EFM-100 en Perú-Chile*. Investigador Responsable: **Manuel Bravo**

iii. **2024 – 2027:** Proyecto Internacional Amateur Radio Digital Communication ARDC 1460, *Observatorio Escolar de Tiempo Espacial para Chile*. Investigador Responsable: **Benjamín Urra** (www.oeste-space.cl)

iv. **2025 – 2027:** Proyecto UnACh PI-253, *Dinámica de las ondas iónicas ciclotrónicas en plasmas espaciales*. Investigador Responsable: **Elías Ovalle**

v. **2024 – 2026:** Proyecto UnACh PI-218, *Construcción de una Jaula de Helmholtz para Calibración de Magnetómetros*. Investigador Responsable: **Enrique Rojo**

vi. **2023 – 2025:** Proyecto UnACh PI-204, *Tendencias ionosféricas a mediano y largo plazo sobre Sudamérica y su posible asociación con fenómenos climáticos.* Investigador Responsable: **Manuel Bravo**

vii. **2023 – 2025:** Proyecto UnACh PI-188, *Análisis de la variabilidad de parámetros ionosféricos y magnéticos durante eventos geomagnéticos*. Investigador Responsable: **Benjamín Urra**

viii. **2022 – 2023:** Proyecto Internacional Scientific Committee on Solar Terrestrial Physics/Predictability of the variable Solar Terrestrial Coupling SCOSTEP/PRESTO, *The Argentinian-Chilean Validated Ionospheric Database (ACVID)*, Investigador Responsable: **Elías Ovalle**

ix. **2022 – 2025:** Proyecto UnACh PI-175, *Parámetros M(3000)F2 y de perfiles de densidad electrónica como candidatos a precursores ionosféricos de terremotos: un estudio para los sismos en Chile de 1960 y 2010*. Investigador Responsable: **Adán Godoy**

x. **2022 – 2025:** Proyecto UnACh PI-176, *Receptor de ionosonda basado en SDR para IPS-42*. Investigador Principal: **Enrique Carrasco**

xi. **2021 – 2025:** FONDECYT Regular 1211144, *Roles of turbulent transport and total pressure balance in dynamics of Earth's magnetosphere*. Co-Investigador: **Manuel Bravo**

Publicaciones bajo afiliación CInC:

1. Canales M, Duran T, **Bravo M**, Zalizovski A, Foppiano A (2025), Distinct ionospheric long-term trends in Antarctica due to the Weddell Sea Anomaly, *Annales Geophysicae, Special issue: Long-term trends in the stratosphere–mesosphere–thermosphere–ionosphere system*, doi:10.5194/egusphere-2025-114, Aceptado. (https://egusphere.copernicus.org/preprints/2025/egusphere-2025-114/)

2. **Bravo, MA**, **Villalobos, CU**, Castillo Rivera, C, **Foppiano, AJ**, **Ovalle, EM** (2024) Seasonal evolution of the ionospheric summer evening and Weddell Sea Anomalies: Antarctic Peninsula area, *Adv Space Res*, 75(6), 4740-4755, doi:10.1016/j.asr.2024.12.047 (https://www.sciencedirect.com/science/article/pii/S0273117724012936)

3. Castillo-Rivera, C, **Bravo, M**, Calisto, I, González, J, **Urra, B**, Benavente, R, **Foppiano, A**, Figueroa, D, and **Ovalle, E** (2024). Detection of near- and far-field traveling ionospheric disturbances during Tsunami Events over South Pacific, *Adv Space Res*, 75(1), 1033-1051, doi:10.1016/j.asr.2024.10.020 (https://www.sciencedirect.com/science/article/pii/S0273117724010305)

4. **Foppiano, AJ**, **Bravo, MA**, Resende, LCA, Arriagada, MA, Flores, PA (2024) Sporadic-E studies over Southern Hemisphere geomagnetic mid-latitudes. *J Atmos Solar-Terr Phys, VSI:COLAGE's Special Edition*, 256, 106200, doi:10.1016/j.jastp.2024.106200 (https://www.sciencedirect.com/science/article/pii/S1364682624000282)

5. Valdés-Abreu, JC, Diaz, MA, **Bravo, M**, Stable-Sánchez, Y (2023). Ionospheric Total Electron Content Changes during the 15 February 2018 and 30 April 2022 Solar Eclipses over South America and Antarctica. *Remote Sens*, 15(19), 4810. doi:10.3390/rs15194810 (https://www.mdpi.com/2072-4292/15/19/4810)

6. de Haro Barbas BF, Zossi, BS, Tan Jun, G, **Bravo, M**, Martinez-Ledesma, M, Venchiarutti, V, Gonzalez,G, Medina, FD, Duran, T, Elias, AG (2023), Performance of the IRI-2016 and IRI-Plas 2020 considering Mg II as EUV solar proxy, *Adv Space Re*s, 72(6), 2406-2417, doi:10.1016/j.asr.2023.06.007 (https://www.sciencedirect.com/science/article/pii/S0273117723004374)

7. Perez-Quezada, JF, Barichivich, J, Urrutia-Jalabert, R, **Carrasco, E**, Aguilera, D, Bacour, C, & Lara, A (2023). Warming and drought weaken the carbon sink capacity of an endangered paleoendemic temperate rainforest in South America. *J Geophys Res: Biogeosciences*, 128, e2022JG007258, doi:10.1029/2022JG007258 (https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2022JG007258)

8. Molina, MG, **Bravo, MA**, **Ovalle, E**, López, J, **Urra, B**, Nacud, M, Namour, J, Tarulli,S, Martinez-Ledesma, M, Pasquale, L (2023) The Argentinian-Chilean Validated Ionospheric Database (ACVID), *SCOSTEP/PRESTO Newsletter*, 34, 5-7. (www.isee.nagoya-u.ac.jp/wp-content/uploads/2023/01/SCOSTEP_PRESTO_Newsletter_Vol34.pdf)

9. **Bravo MA**, Molina MG, Martínez-Ledesma M, de Haro Barbás B, **Urra B**, Elías A, Souza J, **Villalobos C**, Namour JH, **Ovalle E**, Venchiarutti JV, Blunier S, Valdés-Abreu JC, Guillermo E, **Rojo E**, de Pasquale L, **Carrasco E**, **Leiva R**, Castillo Rivera C, **Foppiano A**, Milla M, Muñoz PR, Stepanova M, Valdivia JA and Cabrera M (2022) Ionospheric response modeling under eclipse conditions: Evaluation of 14 December 2020, total solar eclipse prediction over the South American sector. *Front. Astron Space Sci*, 9, doi:10.3389/fspas.2022.1021910 (https://www.frontiersin.org/journals/astronomy-and-space-sciences/articles/10.3389/fspas.2022.1021910/full)

10. Juan A. Lazzús, Pedro Vega-Jorquera, Rene Pacheco, Luis Tamblay, Miguel Martínez-Ledesma, **Elías M. Ovalle**, **Enrique Carrasco**, **Manuel Bravo**, **Carlos U. Villalobos**, Ignacio Salfate, Luis Palma-Chilla, and **Alberto J. Foppian**o (2022). Changes in meteorological parameters during the total solar eclipse of 2 July 2019 in La Serena, Chile. *Annales of Geophysics*, doi:10.4401/ag-8623 (https://www.annalsofgeophysics.eu/index.php/annals/article/view/8623)

11. Valdés-Abreu, JC, Diaz, MA, **Bravo, M**, Báez, JC, & Stable-Sánchez, Y (2022). Ionospheric Behavior During the 10 June 2021 Annular Solar Eclipse and Its Impact on GNSS Precise Point Positioning. *Remote Sens*, 14(13), 3119. doi:10.3390/rs14133119 (https://www.mdpi.com/2072-4292/14/13/3119)

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13. BF de Haro Barbás, **M Bravo**, AG Elias, M. Martínez-Ledesma, G Molina, **B Urra**, JV Venchiarutti, C Villalobos, JH Namour, **E Ovalle**, ED Guillermo, **E Carrasco**, L de Pasquale, **E Rojo**, **R Leiva** (2022). Longitudinal variations of ionospheric parameters near totality during the eclipse of December 14, 2020. *Adv. Space Res*, doi:10.1016/j.asr.2021.12.026 (https://www.sciencedirect.com/science/article/pii/S0273117721009364)

14. Martínez-Ledesma, M, **Bravo, M**, **Urra, B**, Souza, J, & **Foppiano, A** (2020). Prediction of the Ionospheric Response to the 14 December 2020 Total Solar Eclipse Using SUPIM-INPE. *J Geophys Res Space Physics*, 125, e2020JA028625. doi:10.1029/2020JA028625 (https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020JA028625)

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16. **Foppiano, AJ**, **Bravo, MA**, **Villalobos, CU** & **Concha, GV** (2020). Ionosonde observations at King George Island, Antarctica: 1986-1991, P*olar Data Journal*, 4, 30-44. doi:10.20575/00000011 (https://pdr.repo.nii.ac.jp/?action=pages_view_main&active_action=repository_view_main_item_detail&item_id=20&item_no=1&page_id=15&block_id=22)

17. **MA Bravo**, **CU Villalobos**, **RE Leiva**, LE Tamblay, P Vega-Jorquera, **EM Ovalle**, & **AJ Foppiano** (2019). Ionospheric Response to the Space Weather Events of 4-10 September 2017: First Chilean Observations. *The Open Atmospheric Science Journal*, 13, 1-12, doi:10.2174/1874282301812010001 (https://openatmosphericsciencejournal.com/VOLUME/13/PAGE/1/FULLTEXT/)