

Curriculum Vitae (Brief)

Ana G. Elias



Full Name: Ana Georgina ELIAS

Place of Birth: Tucuman, Argentina

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Academic Degrees

- PhD in Physics, Universidad Nacional de Tucuman (UNT), Argentina, July 1999.
- Bachelor in Physics, Universidad Nacional de Tucuman (UNT), Argentina, December 1992.

Actual Positions

- Researcher, CONICET (Consejo Nacional de Investigaciones Cientificas y Tecnicas), Argentina, since October 2001
- Professor of “Statistical Physics I” and “Statistical Physics II” at the Physics Department, Facultad de Ciencias Exactas y Tecnología (FACET), UNT, Argentina, since 2013.
- Director of the Laboratory of Atmospheric Physics (LAFIAT), FACET, UNT, Argentina, 2014-2019 (<https://www.facet.unt.edu.ar/labatmosfera/>)
- Director of the Laboratory of Ionosphere, Neutral Atmosphere and Magnetosphere (LIANM), FACET, UNT, Argentina, since 2019.

Participation in Research Programmes in the last 4 years

1. Member of the team in charge of FONCYT Research Project “Upper atmosphere research applied to telecommunications and climatic change”, PICT: 2015-0511, 2016-2018.
2. Member of the ISSI Program (International Space Science Institute) “Climate Change in the Upper Atmosphere”, directed by Shungrong Zhang from the Haystack Observatory, MIT, 2016-2018.
3. Member of the CIUNT Research Project “Sun-Earth System: Study of Variability and Trends in Atmospheric, Solar and Geomagnetic Parameters”, E642, 2018 – 2021.

Publications in the last 10 years

1. Lower and middle atmosphere and ozone layer responses to solar variation, A.G. Elias, Proceedings of the International Astronomical Union, Vol. 5, Symposium S264, pp. 336 -342, 2010.
2. Trends in the solar quiet geomagnetic field variation linked to the Earth's magnetic field secular variation and greenhouse gases increasing concentration, A.G. Elias, M. Zossi de Artigas & B.F. de Haro Barbas, Journal of Geophysical Research, 115, A08316, 2010.

3. Possible Sources of Long-Term Variations in the Mid-Latitude Ionosphere, A.G. Elias, *The Open Atmospheric Science Journal*, 5, 9-15, 2011.
4. Long-term variation of the semiannual amplitude in the aa index, A.G. Elias, V.M. Silbergleit, & A.L. Clua de Gonzalez, *Journal of Atmospheric and Solar-Terrestrial Physics*, 73, 1492-1499, 2011.
5. A study on possible solar and geomagnetic effects on the precipitation over northwestern Argentina, T. Heredia & A.G. Elias, *Advances in Space Research*, 51, 1883-1892, 2013.
6. Long-term trend of foF2 at a West African equatorial station linked to greenhouse gas increase and dip equator secular displacement, D.A. Gnabahou, A.G. Elias & F. Ouattara, *Journal of Geophysical Research*, 118, 3909–3913, 2013.
7. Long-term changes in solar quiet (Sq) geomagnetic variations related to Earth's magnetic field secular variation, B.F. de Haro Barbas, A.G. Elias, I. Cnossen, & M. Zossi de Artigas, *Journal of Geophysical Research*, 118, 3712–3718, 2013
8. Filtering ionosphere parameters to detect trends linked to anthropogenic effects, A.G. Elias, *Earth, Planets and Space*, 66, 113, 2014.
9. Effect of solar cycle 23 in foF2 trend estimation, A.G. Elias, B.F. de Haro Barbas, K. Shibasaki & J.R. Souza, *Earth, Planets and Space*, 66, 111, 2014.
10. On the inclusion of data from solar cycle 19 to estimate F2 layer characteristic long term trends, B.F. de Haro Barbas & A.G. Elias, *Annals of Geophysics*, 58, A0441, 2015.
11. Ionospheric trends in Southern Hemisphere stations due to the increasing greenhouse gases concentration, J.V. Venchiarutti, B.F. de Haro Barbas & A.G. Elias, *Annals of Geophysics*, 58, A0332, 2015.
12. Precipitation over two Southern Hemisphere locations: Long-term variation linked to natural and anthropogenic forcings, T. Heredia & A.G. Elias, *Advances in Space Research*, 57, 1391-1401, 2016.
13. foF2 long-term trend linked to Earth's magnetic field secular variation at a station under the northern crest of the equatorial ionization anomaly, H.P. Thi Thu, C. Amory-Mazaudier, M. Le Huy, & A.G. Elias, *Journal of Geophysical Research*, 121, 719–726, 2016.
14. Earth's magnetic field effect on MUF calculation and consequences for hmF2 trend estimates, A.G. Elias, B.S. Zossi, E. Yigit, Z. Saavedra, & B.F. de Haro Barbas, *Journal of Atmospheric and Solar-Terrestrial Physics*, 163, 114-119, 2017.
15. Recent Advances in Atmospheric, Solar-Terrestrial Physics and Space Weather From a North-South network of scientists [2006-2016], C. Amory-Mazaudier, R. Fleury, M. Petitdidier, S. Soula, F. Masson, GIRGEA team, J. Davila, P. Doherty, A.G. Elias, S. Gadimova, J. Makela, B. Nava, S. Radicella, J. Richardson, & A. Touzani, *Sun and Geosphere*, 12, 21-69, 2017.
16. Critical frequencies of the ionospheric F1 and F2 layers during the last four solar cycles: Sunspot group type dependencies, E. Yigit, A. Kilcik, A.G. Elias, B. Donmez, A. Ozguc, V. Yurchshyn, & J.P. Rozelot, *Journal of Atmospheric and Solar-Terrestrial Physics*, 71, 157-163, 2018.
17. Ionospheric conductance spatial distribution during geomagnetic field reversals, B.S. Zossi, A.G. Elias, & M. Fagre, *Journal of Geophysical Research*, 123, 2379–2397, 2018.
18. On ionic contributions to Pedersen conductance, B.S. Zossi, M. Fagre & A.G. Elias, *Journal of Geophysical Research* 123, 10,310–10,318, 2018.
19. Polar caps during geomagnetic polarity reversals, B. Zossi, M. Fagre, H. Amit & A.G. Elias, *Geophysical Journal International*, 216, 1334–1343, 2019.
20. New Approach to OTH Main Parameters Determination, Z. Saavedra, J.N. Argota, M.A. Cabrera, & A.G. Elias, *Radioengineering*, 28, 643-650, 2019.
21. Tendencias en la precipitación en Tucumán bajo efecto del cambio climático, F.M. Bazzano, T. Heredia, A.G. Elías, C.M. Lamelas & J. Forciniti, *Meteorológica*, in press, 2019.

22. Searching for solar-like interannual to bidecadal effects on temperature and precipitation over a Southern Hemisphere location, T. Heredia, F.M. Bazzano, R.G. Cionco, W. Soon, F.D. Medina & A.G. Elias, *Journal of Atmospheric and Solar-Terrestrial Physics*, 193, 105094, 2019.
23. Ionospheric high frequency wave propagation using different IRI hmF2 and foF2 models, M. Fagre, B.S. Zossi, J. Chum, E. Yigit, & A.G. Elias, *Journal of Atmospheric and Solar-Terrestrial Physics*, 196, 105141, 2019.
24. Effect of the inclusion of solar cycle 24 in the calculation of foF2 long-term trend for two Japanese ionospheric stations, B.F. de Haro Barbas & A.G. Elias, *Pure and Applied Geophysics*, 177, 1071–1078, 2020.
25. High frequency sky wave propagation during geomagnetic field reversals, M. Fagre, B.S. Zossi, E. Yigit, H. Amit & A.G. Elias, *Studia Geophysica et Geodaetica*, 64, 130–142, 2020.
26. Simulated high frequency ray paths considering traveling ionospheric disturbances, M. Fagre, B.S. Zossi, J. Chum, & A.G. Elias, *SN Applied Sciences*, 2, 615, 2020.

Book Chapters

1. The Quasi-Biennial Oscillation in Time Series of Solar Activity Parameters, A.G. Elias & M. Zossi de Artigas, *Solar Physics Research Trends*, Nova Publishers, New York, ISBN: 1-60021-987-x, Editors: Pingzhi Wang, 3-13, 2008.
2. The 27-Day Periodicity in Geomagnetic Activity and Solar Wind Parameters over Solar Cycle 23, A.G. Elias, V.M. Silbergleit, A. Curcio & P.A. Larocca, *Handbook on Solar Wind: Effects, Dynamics and Interactions*, Nova Publishers, New York, ISBN: 978-1-60692-572-0, Editor: Hans E. Johannson, 2009.

Book Edition

Investigaciones en Facultades de Ingeniería del NOA, Editorial: ECO FACET UNT, Tucumán, Argentina, ISBN: 978-987-23950-0-1, Editores: Nieves Ortiz de Adler, Ana G. Elias y Teresita Heredia, 2007.

Honors

- Diploma for the highest qualifications in the Bachelor in Physics career at the National University of Tucuman, 1992, given by the Argentine Federation of University Women.
- Top 10 Reviewer 2013 y 2014 of the Journal “Advances in Space Research”, Elsevier.

Fellowships

1. CONICET Postdoctoral fellowship, April 2001- June 2001.
2. CONICET Fellowship to do my PhD studies in Physics for the period April 1994- March 1999.
3. Fellowship to participate in the Solid State Physics course in the Balseiro Institute during September 1990 in Bariloche, Argentina.

Meeting Organizations

1. Member of the Local Organizing Committee of the “XXVI Reunión Científica de la Asociación Argentina de Geofísicos y Geodestas” (AAGG2012), 5-9 November, 2012, Tucumán, Argentina.
2. Convener of the Local Organizing Committee of the “7th Workshop on Long-Term Changes and Trends in the Atmosphere”, 11-14 September, 2012, Buenos Aires, Argentina.

3. Member of the Local Organizing Committee of the “101 Reunión de la Asociación Física Argentina”, 4-7 de Octubre de 2016, Tucumán, Argentina.
4. Member of the Scientific Organizing Committee of the “10th Workshop on Long-Term Changes and Trends in the Atmosphere”, 14-19 Mayo 2018, Hefei, China.

Others

1. Member of ALAGE (Asociación Latinoamericana de Geofísica Espacial).
2. Member of AGU (American Geophysical Union) (Number 10263502)
3. Topical-Editor of *Annales Geophysicae*, Copernicus Publications, Germany, since 2017.
4. Director at the moment of 5 (five) PhD Thesis at the Universidad Nacional de Tucuman, Argentina. 3 (three) are about to finish this year.