

PERSONAL INFORMATIONS

Piersanti Mirko



Born in Teramo (Italy) on 09/12/1975

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BRIEF PRESENTATION

I am a Researcher of the University of L'Aquila, Italy. I worked for over 18 years in international collaborations in the field of Space Weather, in terms of Magnetospheric – Ionospheric coupling process during solar active conditions, from both experimental and theoretical point of view.

Author of more than 60 papers published in international scientific journals, in the 2017 I drove the Italian community of Space Weather in doing the first comprehensive analysis about a geomagnetic storm from the Sun to the Earth (<https://doi.org/10.1007/s11207-017-1186-0>). From 2018 I am the Italian scientific responsible of the electric and magnetic field instruments (EFD and HPM) on-board the CSES satellite. From 2020 I am the scientific investigator of the research group LiMIC (Litospheric-Magnetospheric-Ionospheric Coupling) in the frame of the CSES-Limadou mission. On September 2019 I obtained the Italian ASN – MIUR. On 2021 I developed and published on Remote Sensing, Nature the first analytical model that demonstrate the lithosphere-ionosphere-magnetosphere coupling in concomitance of an earthquake.

WORKING ACTIVITIES

03/02/2022-today

Fixed Position (RTDb)

University of L'Aquila (Italy)

Italian Scientific investigator of the research group LiMIC (Litospheric-Magnetospheric-Ionospheric Coupling) in the frame of the CSES-Limadou mission. Responsible of the commissioning phase of the EFD-02 instrument in the frame of the CSES-02 satellite.

01/02/2021–02/02/2022

Fixed Position (TD - art. 36 della legge n. 165 del 30-3-2001)

INAF – IAPS, Rome (Italy)

Italian Scientific investigator of the research group LiMIC (Litospheric-Magnetospheric-Ionospheric Coupling) in the frame of the CSES-Limadou mission. Responsible of the commissioning phase of the EFD-02 instrument in the frame of the CSES-02 satellite.

01/03/2018–31/01/2021

Fixed Position (TD - art. 36 della legge n. 165 del 30-3-2001)

INFN - "Tor Vergata", Rome (Italy)

Italian Scientific investigator of the magnetic, electric fields and plasma experiment on board CSES satellite in the frame of CSES-Limadou mission

01/12/2017–28/02/2018

Fellows

INAF-IAPS, Rome (Italy)

Evaluation of the environmental and instrumental background for the DEMETER and CSES missions". Preliminary calibration activity of DEMETER data to find possible lithosphere-ionosphere-magnetosphere coupling in the frame of CSES-Limadou mission.

- 01/10/2021-01/11/2021 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Recupero Conoscenze Base per la Fisica" (a.a. 2021/2022) (30 hours).
- 01/11/2021-01/06/2022 **University lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Physics I and Physics II" for Chemistry (a.a. 2020/2021) (40 hours).
- 01/10/2020–01/11/2020 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Recupero Conoscenze Base per la Fisica" (a.a. 2020/2021) (30 hours).
- 01/10/2020–01/06/2020 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Physics I and Physics II" for Chemistry (a.a. 2020/2021) (40 hours).
- 01/10/2017–01/02/2018 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Electromagnetism exercises" (a.a. 2017/2018) (30 hours).
- 01/12/2014–30/11/2017 **Research Fellows**
University of L'Aquila, L'Aquila (Italy)
Italian Responsible for the Determination of magnetospheric currents, concentration and composition of the plasmasphere, ULF waves during active magnetospheric conditions in the frame of Italian MIUR-PRIN grant 2012P2HRCR on "The active Sun and its effects on Space and Earth climate.
- 01/10/2016–01/02/2017 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Electromagnetism exercises" (a.a. 2016/2017) (40 hours).
- 01/10/2016–01/02/2017 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Physical and Chemical Sciences on "Recupero Conoscenze Base per la Fisica" (a.a. 2016/2017) (30 hours).
- 01/10/2012–31/08/2015 **University Lecturer**
Accademia delle Belle Arti dell'Aquila, L'Aquila (Italy)
Lecturer at the Accademia delle Belle Arti dell'Aquila on Elementi di Fisica Applicata al Restauro (a.a. 2012/2013, 2013/2014, 2014/2015) (60 hours).

- 04/11/2011–03/11/2014 **Research Fellows**
University of L'Aquila, L'Aquila (Italy)
Scientific responsible of the development of an algorithm for the determination of the plasmaspheric plasma density using magnetometer ground stations and FLR technique in the frame of "The PLASMON" project: European Union Seventh Framework Programme [FP7/2007-2013] under grant agreement 263218.
- 01/11/2011–01/02/2012 **University Lecturer**
University of L'Aquila, L'Aquila (Italy)
Lecturer at the Department of Engineer on Fisica Generale I (a.a. 2011/2012) (60 hours).
- 01/06/2010–07/12/2010 **Visiting Researcher**
Centre for Space Physics School of Mathematical and Physical Sciences Faculty of Science, University of Newcastle, Newcastle (Australia)
The research examined the correlation among waves SW, in the magnetosphere and on the ground, focusing attention on SI events in order to establish whether broad band activity can be direct sources of global magnetospheric modes.
- 04/05/2008–03/05/2010 **Research Fellows**
University of L'Aquila, L'Aquila (Italy)
The research activity focused on the determination of magnetospheric current system dynamics switching on after the passage of an Interplanetary Shock Front.

EDUCATION

- 02/10/2004–01/10/2007 **PHD in Physics**
University of L'Aquila, L'Aquila (Italy)
- 04/11/1994–17/12/2003 **Degree in Physics**
University of L'Aquila, L'Aquila (Italy)
Grading score 105/110

PERSONAL EXPERTISE

Native language Italian

	COMPREHENSION		SPOKEN		WRITTEN
	Listening	Reading	Interaction	Oral	
English	C2	C2	C1	C1	C2

Livelli: A1 e A2: Utente base - B1 e B2: Utente autonomo - C1 e C2: Utente avanzato
Quadro Comune Europeo di Riferimento delle Lingue

- Research Activity**
- Winner of the call for ideas ESA for the "Campaign: Nanosatellites for Space Weather Monitoring" called "**CUBE (CME Catcher Carousel)**" (IDEA: I-2021-04591) – **Selected for Implementation**.
 - Key Person** for the WP1310; WP1330; WP1320; WP1710 of the **CAESAR** project relative to the ASI call "Attività di studio per la comunità scientifica dello Space Weather per lo sviluppo del prototipo del centro dati scientifico ASPIS" for the: "Evaluation of magnetospheric currents, of the ionospheric currents and of the geoelectric field, and in support of CSES data and the validation of the GIC index".

- **Winner of the DRAGON5** 2020 – 2024 international project (ID. 59236) (<https://eo4society.esa.int/2020/02/20/dragon-5-cooperation-call-for-proposals/>).
- **Italian PI of the** “The cross-calibration and validation of CSES/Swarm magnetic field and plasma data” in the frame of the 2020-2024 DRAGON 5 cooperation project (ID. 59236) between ESA and NRSCC of China (<https://eo4society.esa.int/2020/02/20/dragon-5-cooperation-call-for-proposals/>).
- **PI** of the calibration/validation of the Electric Field instrument on board CSES-01 satellite in the frame of the SWARM/CSES satellites cal-val group.
- **PI** of the commissioning phase of the Electric Field instrument (EFD) on board the satellite CSES-02 in the frame of the CSES-Limadou collaboration.
- **Winner of the project ASI ”LIMADOU scienza plus” n°2021-18-H1 and WP leader (WP 1A-UA4)** for the “Studio delle caratteristiche fisiche e dei campi del Plasma Ionosferico” (406 k€).
- **Scientific Responsible** of the LiMIC (Lithosphere-Magnetosphere-Ionosphere Coupling) research group in the frame of the “CSES-Limadou” project for the analysis and the modellization of the Lithosphere-ionosphere-magnetosphere coupling during active seismic conditions and of the magnetosphere-ionosphere coupling during active solar conditions.
- **Winner of the ISSI-Bj project** “The electromagnetic data validation and scientific application research based on CSES satellite” (http://www.ief.ac.cn/laimc_issi_bj/team.php.html).
- **Scientific responsible** of the Italian research activity related to the electric and magnetic field instrument on board the CSES-01 satellite in the frame of the CSES-Limadou collaboration.
- **Responsible** for the generation of a forecasting model about magnetospheric and ionospheric currents systems during a Geomagnetic Storm in the frame of MIUR-PRIN (2012P2HRCR) “The active Sun and its effects on Space and Earth climate”.
- **Scientific organizer** of the International School of Space Science on :“The Polar Upper Atmosphere: From Science to Operational Issues”, L'Aquila, Italia, 17-09-2018 al 21-09-2018. The School wa co-funded by the European Geoscience Union.
- **Scientific organizer** of the Summer School plus Conference on “Mathematics for Nonstationary Signals and applications in Geophysics and other fields” – L'Aquila, 19-24 July 2021

Principal Skills:

Space Physics, Programming in Fortran, Magnetosphere, Model Building, Programming in MATLAB, Elettro-magnetism expertise, magnetosphere - ionosphere interactions, Geomagnetic Sudden Impulses, ULF waves activity, Solar Wind Dynamics, Magnetic Pulsations, MI-Coupling, Numerical Simulation, Magnetospheric Physics, Plasma Physics, Fluid Dynamics, Computational Fluid Dynamics, Turbulence, Geophysics, Fluid Mechanics, Magnetohydrodynamics, Kinetic Theory, Space Plasma Physics, Ionosphere, Space Weather, Geomagnetism, Solar Wind, Sun, Ionospheric Physics, Solar Activity, Space Environment, Solar Terrestrial Interactions, Plasma, Nonlinear Physics Of Plasma Turbulence, Electromagnetism, Solar Physics, Astronomy & Astrophysics, Solar Astrophysics, Plasmasphere, GNNS, Total Electron Content, Geomagnetic Storms, Interplanetary Magnetic Field

Scores (Scholar)

h-index: 15;
Citations: 508;
i10-index: 20;

Certification

Abilitazione Scientifica Nazionale (Fascia II), held on 02/09/2019 in “Settore Concorsuale 02/C1: Astronomia, Astrofisica, Fisica della Terra e dei Pianeti.”
 SSD: FIS06

Awards

Winner of the "ARIA-Canberra Australian Travel Awards for L'Aquila Researchers 2010".
 Winner of the EGU call for training schools 2021 for the Summer School plus Conference on “Mathematics for Nonstationary Signals and applications in Geophysics and other fields” to be held in l'Aquila, Italy 19-24 July 2021.

Membership and Editorial activities

- **Journal Reviewer:** Journal of Geophysical Research, Annales Geophysicae, Earth and Planetary Physics, Advanced in Space Research, Journal of Atmospheric and Solar-Terrestrial Physics, Astrophysics and Space Science, Geosciences Reviewer, Pure and Applied Geophysics, Annals of Geophysics, Journal of Space Weather and Space Climate.
- **Journal Editor:** Annales Geophysicae, Journal of Space Weather and Space Climate, Remote Sensing and Frontiers in Earth Science.
- **Scientific Memberships:** AGU, IAGA, EGU, ESWW.
- **Responsible** of the " Science and links to National and International Funding Programmes for Research and Technological Development group" in S.W.I.C.O. (Space Weather Italian Community).
- **Member** of the II (Aeronomic Phenomena), III (Magnetospheric Phenomena) e V (Geomagnetic Observatories, Surveys and Analyses) IAGA (International Association of Geomagnetism and Aeronomy) Italia division.
- **Member of** INAF-IAPS.
- **Vice President and co-founder of the " MODERN SIGNAL ANALYSIS ITALIAN COMMUNITY (MO.SA.I.Co.)" Association** for the scientific promotion and the outreach of Geophysics, Space Physics Mathematics and their applications from 2020 till today.

Publications

1. Book Chapter:

- Piersanti M., C. Cesaroni, L. Spogli, T. Alberti, L. Alfonsi, U. Villante: Ionospheric currents and TEC variations during the March 17, 2015 Sudden Impulse.. Marco Bellacosa edited by Giovanni Bianchi Bazzi, 2016; Società Italiana di Fisica, Bologna., ISBN: 978-88-7438-106-7;
- Piersanti M., B. Carter: Geomagnetically Induced Currents. The Dynamical Ionosphere, 2019: pages 180; Elsevier Science and Technology., ISBN: 9780128147825;
- U. Villante, M. Piersanti: Sudden Impulses in the Magnetosphere and at Ground. Exploring the Solar Wind, 2012; , ISBN: 978-953-51-0339-4, DOI:10.5772/36770.

2. Publications:

- Chao Xiong, Haicheng Jiang, Rui Yan, Hermann Lühr, Claudia Stolle, Fan Yin, Artem Smirnov, Mirko Piersanti, Yiwen Liu, Xin Wan, Piero Diego, Zeren Zhima, Xuhui Shen, Matthias Förster, Stephan Buchert, Dieter Bilitza (2022). Solar flux influence on the in-situ plasma density at topside ionosphere measured by Swarm satellites. JOURNAL OF GEOPHYSICAL RESEARCH. SPACE PHYSICS, ISSN: 2169-9402, doi: 10.1029/2022JA030275
- Marco Cristoforetti, Roberto Battiston, Andrea Gobbi, Roberto Iuppa, Mirko Piersanti (2022). Prominence of the training data preparation in geomagnetic storm prediction using deep neural networks. SCIENTIFIC REPORTS, ISSN: 2045-2322, doi: 10.1038/s41598-022-11721-8
- M. Piersanti, S. Di Matteo, Z. Zhima, Y. Yang, Z. Zhang, M. F. Marcucci, A. Parmentier, G. D'Angelo, D. Recchiuti, P. Diego, P. Ubertini (2022). On the source of the anomalous June 23, 2020 ULF waves detected at both ground and satellite data. JOURNAL OF GEOPHYSICAL RESEARCH. SPACE PHYSICS, ISSN: 2169-9380, doi: 10.1029/2021JA030044
- Piersanti, M., D. Del Moro, A. Parmentier, M. Martucci, F. Palma, A. Sotgiu, C. Plainaki, G. D'Angelo, F. Berrilli, D. Recchiuti, E. Papini, L. Giovannelli, G. Napolitano, R. Iuppa, P. Diego, A. Cicone, M. Mergé, C. De Donato, C. De Santis, R. Sparvoli, P. Ubertini, R. Battiston, P. Picozza (2022). On the magnetosphere-ionosphere coupling during the May 2021 geomagnetic storm. SPACE WEATHER, ISSN: 1542-7390, doi: 10.1029/2021SW003016
- Giuseppe Consolini, Virgilio Quattrociochi, Simone Benella, Paola De Michelis, Tommaso Alberti, Mirko Piersanti, Maria Federica Marcucci (2022). On Turbulent Features of E x B Plasma Motion in the Auroral Topside Ionosphere: Some Results from CSES-01 Satellite. REMOTE SENSING, vol. 14, ISSN: 2072-4292, doi: 10.3390/rs14081936
- Bartocci S, R Battiston, F Benotto, S Beolé, W J Burger, D Campana, G Castellini, P Cipollone, S Coli, L Conti, A Contin, M Cristoforetti, L de Cilladi, C De Donato, C De Santis, F M Follega, G Gebbia, R Iuppa, M Lolli, N Marcelli, M Martucci, G Masciantonio, M Mergé, M Mese, C Neubüser, F Nozzoli, A Oliva, G Osteria, L Pacini, F Palma, F Palmonari, A Parmentier, F Perfetto, P Picozza, Piersanti M, M Pozzato, E Ricci, M Ricci, S B Ricciarini, Z Sahnoun, V Scotti, A Sotgiu, R Sparvoli,

V Vitale, S Zoffoli, P Zuccon (2022). Deep learning based event reconstruction for the Limadou High-Energy Particle Detector. *PHYSICAL REVIEW D*, ISSN: 2470-0010, doi: 10.1103/PhysRevD.105.022004

- Papini E, Cicone A, Franci L, Piersanti M, Landi S, Hellinger P, Verdini A., Spacetime Hall-MHD turbulence at sub-ion scales: structures or waves? *The Astrophysical Journal Letters*, 917, L12 2021, <https://doi.org/10.3847/2041-8213/ac11fd>.
- Piersanti M, Burger WJ, Carbone V, Battiston R, Iuppa R, Ubertini P. On the Geomagnetic Field Line Resonance Eigenfrequency Variations during Seismic Event. *Remote Sensing* 2021; 13(14):2839. <https://doi.org/10.3390/rs13142839>.
- D'Angelo G, Piersanti M, Pignalberi A, Coco I, De Michelis P, Tozzi R, Pezzopane M, Alfonsi L, Cilliers P, Ubertini P. Investigation of the Physical Processes Involved in GNSS Amplitude Scintillations at High Latitude: A Case Study. *Remote Sensing* 2021; 13(13):2493. <https://doi.org/10.3390/rs13132493>.
- Palma F, Sotgiu A, Parmentier A, Martucci M, Piersanti M, Bartocci S, Battiston R, Burger WJ, Campana D, Carfora L, Castellini G, Conti L, Contin A, D'Angelo G, De Donato C, De Santis C, Follega FM, Iuppa R, Lazzizzera I, Marcelli N, Masciantonio G, Mergé M, Oliva A, Osteria G, Palmonari F, Panico B, Perfetto F, Picozza P, Pozzato M, Ricci E, Ricci M, Ricciarini SB, Sahnoun Z, Scotti V, Sparvoli R, Vitale V, Zoffoli S, Zuccon P. The August 2018 Geomagnetic Storm Observed by the High-Energy Particle Detector on Board the CSES-01 Satellite. *Applied Sciences*. 2021; 11(12):5680. <https://doi.org/10.3390/app11125680>.
- Consolini G., V. Quattrocchi, G. D'Angelo, T. Alberti, M. Piersanti, M. F. Marcucci and P. De Michelis, Electric field multifractal features in the high-latitude ionosphere: CSES-01 observations, *MDPI Atmosphere*, 2021, doi: 10.3390/atmos12050646.
- Martucci M., R. Sparvoli, S. Bartocci, R. Battiston, W. J. Burger, D. Campana, L. Carfora, G. Castellini, L. Conti, A. Contin, C. De Donato, C. De Santis, F. M. Follega, R. Iuppa, I. Lazzizzera, N. Marcelli, G. Masciantonio, M. Mergé, A. Oliva, G. Osteria, F. Palma, F. Palmonari, B. Panico, A. Parmentier, F. Perfetto, P. Picozza, M. Piersanti, M. Pozzato, E. Ricci, M. Ricci, S. B. Ricciarini, Z. Sahnoun, V. Scotti, A. Sotgiu, V. Vitale, S. Zoffoli and P. Zuccon, Trapped proton fluxes estimation inside the South Atlantic Anomaly using the NASA AE9/AP9/SPM radiation models along the China Seismo-Electromagnetic Satellite orbit, *Appl. Sci.* 2021, doi:10.3390/app11083465.
- Carbone V., M. Piersanti, M. Materassi, R. Battiston, F. Lepreti and P. Ubertini, A mathematical model of Lithosphere-Atmosphere coupling for seismic events, *Scientific Reports, Nature*, 2021, doi:10.1038/s41598-021-88125-7.
- Zhima, Z.; Hu, Y.; Shen, X.; Chu, W.; Piersanti, M.; Parmentier, A.; Zhang, Z.; Wang, Q.; Huang, J.; Zhao, S.; Yang, Y.; Yang, D.; Sun, X.; Tan, Q.; Zhou, N.; Guo, F. Storm-Time Features of the Ionospheric ELF/VLF Waves and Energetic Electron Fluxes Revealed by the China Seismo-Electromagnetic Satellite. *Appl. Sci.* 2021, 11, 2617. <https://doi.org/10.3390/app11062617>.
- Cicone A., M. Piersanti, G. D'Angelo, G. Consolini, I. Bertello, P. Diego, M. Materassi, and P. Ubertini, Auroral oval layers detection by using CSES plasma and electric field data, *Il Nuovo Cimento C*, 2021. <https://doi.org/10.1393/ncc/i2021-21117-3>.
- D'Angelo G., M. Piersanti, P. Diego, M. Pezzopane and P. Ubertini, Analysis of the August 14, 2018 plasma bubble by CSES satellite, *Il Nuovo Cimento C*, 2021. <https://doi.org/10.1393/ncc/i2021-21118-2>.
- Diego P., J. Huang, M. Piersanti, D. Badoni, Z. Zeren, R. Yan, G. Rebutini, R. Ammendola, M. Candidi, Y.-B. Guan, J. Lei, G. Masciantonio, I. Bertello, C. De Santis, P. Ubertini, X. Shen and P. Picozza, *The Electric Field Detector on board the China Seismo Electromagnetic Satellite: In-Orbit Results and Validation*, MDPI Instruments, 2021.
- Piersanti, M.; Materassi, M.; Battiston, R.; Carbone, V.; Cicone, A.; D'Angelo, G.; Diego, P.; Ubertini, P. Magnetospheric–Ionospheric–Lithospheric Coupling Model. 1: Observations during the 5 August 2018 Bayan Earthquake. *Remote Sens.*, 12, 3299, doi:10.3390/rs12203299, 2020.
- Sotgiu A., C. De Donato, C. Fornaroy, S. Tassaz, M. Scannaviniz, D. Iannacciox, G. Ambrosi, S. Bartocci, L. Basara, R. Battiston, W.J. Burger, D. Campana, L. Carfora, G. Castellini, P. Cipollone, L. Conti, A. Contin, F. De Persio, C. De Santis, F.M. Follega, C. Guandalini, M. Ionica, R. Iuppa, G. Laurenti, I. Lazzizzera, M. Lollo, C. Manea, M. Martucci, G. Masciantonio, M. Mergé, G. Osteria, L. Pacin, F. Palma, F. Palmonari, B. Panico, A. Parmentier, F. Perfetto, P. Picozza, M. Piersanti, M. Pozzato, M. Puel, I. Rashevskaya, E. Ricci, M. Ricci, S. Ricciarini, V. Scotti, R. Sparvoli, B. Spataro, V. Vitale, S. Zoffoli, P. Zuccon, Control and Data Acquisition Software of the High-Energy Particle Detector on board the CSES Space Mission, *Software Practice and Experience*, 2020,

<https://doi.org/10.1002/spe.2947>.

- Piersanti M., M. Pezzopane, Z. Zhima, P. Diego, C. Xiong, R. Tozzi, G. D'Angelo, R. Battiston, J. Huang, P. Picozza, Y. Rui, X. Shen, R. Sparvoli, P. Ubertini; Y. Yan, S. Zoffoli, Can an impulsive variation of the solar wind plasma pressure trigger a plasma bubble? A case study based on CSES, SWARM and THEMIS data, *Advances in Space Research*, 2020, <https://doi.org/10.1016/j.asr.2020.07.046>
- Bartocci, S., R. Battiston, W.J. Burger, D. Campana, L. Carfora, G. Castellini, L. Conti, A. Contin, C. De Donato, F. De Persio, C. De Santis, P. Diego, F.M. Follega, R. Iuppa, I. Lazzizzera, N. Marcelli, M. Martucci, G. Masciantonio, M. Mergè, G. Osteria, F. Palma, F. Palmonari, A. Parmentier, F. Perfetto, P. Picozza, M. Piersanti, M. Pozzato, I. Rashevskaya, E. Ricci, M. Ricci, S. Ricciarini, V. Scotti, A. Sotgiu, R. Sparvoli, P. Ubertini, V. Vitale, S. Zoffoli, and P. Zuccon, Galactic cosmic-ray hydrogen spectra in the 40-250 MeV range measured by the High-Energy Particle Detector (HEPD) on board the CSES-01 satellite between 2018 and 2020, *The Astrophysical Journal*, 2020, <https://doi.org/10.3847/1538-4357/abad3e>.
- Diego P., M. Piersanti, M. Laurenza and U. Villante, Properties of solar wind structures at Mercury's orbit, *Journal of Geophysical research – Space Physics*, DOI:10.1029/2020JA028281, 2020.
- Zhima Z., Y. Hu, M. Piersanti, X. Shen, A. De Santis, R. Yan, Y. Yang, S. Zhao, Z. Zhang, J. Huang, Q. Wang, F. Guo, The abnormal seismic ELF emissions in occasion of the 2010 Ms 7.8 Northern Sumatra Earthquake, *Front. Earth Sci.*, 2020, doi: 10.3389/feart.2020.572393.
- Papini E., A. Cicone, M. Piersanti, L. Franci, P. Hellinger, S. Landi, A. Verdini, Multidimensional Iterative Filtering: a new approach for investigating plasma turbulence in numerical simulations, *Journal of Plasma Physics*, doi: 10.1017/S0022377820001221, 2020.
- Piersanti G., M. Piersanti, A. Cicone, P. Canofari, M. Di Domizio, An Inquiry into the Structure and Dynamics of Crude Oil Price Using the Fast Iterative Filtering Algorithm, *Energy Economics*, 10.1016/j.eneco.2020.104952, 2020.
- Ambrosi G., S. Bartocci, L. Basara, Roberto Battiston, William Burger, Donatella Campana, Luca Carfora, Guido Castellini, Piero Cipollone, Livio Conti, Andrea Contin, Cinzia De Donato, Fulvio De Persio, Cristian De Santis, Francesco Follega, Cristina Guandalini, Maria Ionica, Roberto Iuppa, Giuliano Laurenti, Ignazio Lazzizzera, Mauro Lolli, Cristian Manea, Matteo Martucci, Giuseppe Masciantonio, Matteo Mergè, Giuseppe Osteria, Lorenzo Pacini, Francesco Palma, Federico Palmonari, Beatrice Panico, Alexandra Parmentier, Laura Patrizii, Francesco Perfetto, Piergiorgio Picozza, Mirko Piersanti, Michele Pozzato, Matteo Puel, Irina Rashevskaya, Ester Ricci, Marco Ricci, Sergio Ricciarini, Valentina Scotti, Alessandro Sotgiu, Bruno Spataro, Vincenzo Vitale, Simona Zoffoli, Paolo Zuccon, Beam test calibrations of the HEPD detector on board the China Seismo-Electromagnetic Satellite, *Nuclear Instrumentations and Methods in Physics Research*, 2020.
- Marsal S., J. M. Torta, F. J. Pavón-Carrasco, S. P. Blake, M. Piersanti, Including the Temporal Dimension in the SECS Technique, *Space Weather*, 2020, doi:10.1029/2020SW002491.
- Zhima, Z., Huang, J., Shen, X., Xia, Z., Chen, L., Piersanti, M., et al., Simultaneous observations of ELF/VLF rising tone quasiperiodic waves and energetic electron precipitations in the high - latitude upper ionosphere. *Journal of Geophysical Research: Space Physics*, 125, 2020, <https://doi.org/10.1029/2019JA027574>
- Piersanti M., P. De Michelis, D. Del Moro, R. Tozzi, M. Pezzopane, G. Consolini, M. F. Marcucci, M. Laurenza, S. Di Matteo, A. Pignalberi, V. Quattrocchi, P. Diego, From the Sun to the Earth: August 25, 2018 geomagnetic storm effects, *Annales Geophysicae*, 2020, <https://doi.org/10.5194/angeo-2019-165>.
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Conferences

Principal meeting and Convening.

- Speaker at XI IAGA Scientific Assembly in Sopron, Hungary about "*Sudden Impulses at geosynchronous orbit and at ground.*" 23-08-2009 al 30-08-2009.
- Speaker at IAGU Fall Meeting 2012, San Francisco USA about "*Sudden Impulses: the discrimination between magnetospheric and ionospheric contributions in ground manifestations.*" 03-12-2012 al 07-12-2012
- Invited Speaker at SAit 2017 in Padova about "*Accoppiamento Magnetosfera – Ionosfera durante una Tempesta Geomagnetica.*" 15-09-2017 al 15-09-2017.
- Invited speaker at 2nd International Conference on Astrophysics and Particle Physics, San Antonio, USA about :"*Ionospheric currents and TEC variations during Sudden Impulses.*" 13-11-2017 al 15-11-2017.
- Speaker at the ESWW meeting in Ostend, Belgium about "*Comprehensive analysis of the Geoeffective Solar Event of June 21, 2015: Effects on the Magnetosphere, Plasmasphere and Ionosphere Systems.*" 26-11-2017 al 30-11-2017
- Invited Speaker at ESA-ESLAB in Noordwijk about: "*High energy astrophysical hazards for habitability*" 04-12-2017 al 05-12-2017.
- Speaker at European Geoscience Union meeting in Vienna about : "*Adaptive Local Iterative Filtering: a promising technique for the analysis of non-stationary signals.*" 09-04-2018 al 09-04-2018.
- Speaker at European Geoscience Union meeting in Vienna about "*Geomagnetically induced currents during the September 6, 2017 Storm Sudden Commencements.*" 13-04-2018 al 13-04-2018
- Speaker at COSPAR 2018 42nd Assembly, in Pasadena, USA about: "*The definition of instrumental and environmental backgrounds in the electromagnetic emissions above seismic regions.*" 16-07-2018 al 16-07-2018.
- Invited Speaker at Third Meeting of the Italian Solar and Heliospheric Community in Torino about "*The consequences of ICME impact on the circumterrestrial environment: the September 6-11, 2017 geomagnetic storm case event*" 28-10-2018 al 31-10-2018.

- Convener of the Session: "ESWW15 - Thermosphere and Ionosphere: Irregular dynamics and structures as a response to Space Weather Events" at the XV European Space Weather Week 2018, 5-9 November 2018, Leuven, Belgium.
- Convener of the Session NH6.9/ST4.10 "Satellite observations for space weather and geo-hazards" at the European Geoscience Union 2019, Vienna, Austria. 07-04-2019 al 12-04-2019.
- Convener of the Session ST3.1 "Open Session on the Ionosphere and Thermosphere" at the European Geoscience Union 2019, Vienna, Austria. 07-04-2019 al 12-04-2019.
- Speaker at the European Geoscience Union 2019, Vienna, Austria about: "On the variations of the magnetospheric field line resonance frequency during solar and seismic activity." 09-04-2019 al 09-04-2019.
- Speaker at the 1st International Symposium on Geo-hazards PCP & The 4th International Workshop of CSES Mission, Changsha, China about: "The August 26, 2018 geomagnetic storm: a multi-instrumental analysis from CSES satellite and ground magnetometers", 17-10-2019 al 20-10-2019.
- Speaker at the 1st International Symposium on Geo-hazards PCP & The 4th International Workshop of CSES Mission, Changsha, China about: "Radiation-belt signature of the August 2018 geomagnetic storm by HEPD and HEPP detectors on board CSES-01", 17-10-2019 al 20-10-2019.
- Convener of the Session 10 "ESWWW16 - Geomagnetic Storm and Substorms: a Geomagnetically Induced Current Prospect" Space Weather Week 2019, 17-22 November 2019, Liegi, Belgium. *PS. Kevles*
- Speaker at the 1st SWICO meeting, Rome, Italy about: "From the Sun to the Earth: August 25, 2018 geomagnetic storm effects." 12-02-2020 al 13-02-2020.
- Speaker at the European Geoscience Union 2020, Vienna, Austria about: "From the Sun to the Earth: August 25, 2018 geomagnetic storm effects." 04-05-2020 al 08-05-2020.
- Speaker at the 10th Swarm Data quality meeting Workshop about: "Swarm-CSES joined activities on Plasma". 05-10-2020 al 09-10-2020.
- Convener of the Session C1.4: "CSES and Swarm Data Analysis of the Ionosphere Dynamics at Different Temporal and Spatial Scales" at the 43 COSPAR Scientific assembly, Sydney, Australia, 31-01-2021 al 03-02-2021.
- Speaker at the European Geoscience Union 2021, Vienna, Austria about: "Magnetospheric-Ionospheric-Lithospheric coupling model. Observations during the August 5, 2018 Bayan Earthquake." 19-04-2021 al 30-04-2021.
- Speaker at the 2021 Seismological Society of America annual meeting, USA, about: "Magnetospheric-Ionospheric-Lithospheric coupling model. Observations during the August 5, 2018 Bayan Earthquake." 19-04-2021 al 23-04-2021.
- Speaker at the IAGA 2021 meeting, IASPEI, India about: "Magnetospheric-Ionospheric-Lithospheric coupling model. Observations during the August 5, 2018 Bayan Earthquake." 24-08-2021 al 28-08-2021.
- Invited Speaker at "5th International Workshop of CSES Mission", Beijing, China about: "A mathematical model of Lithosphere-Atmosphere-Ionosphere-Magnetosphere coupling for seismic events", 23-10-2021.
- Convener of the Session C1.3: "Magnetosphere-ionosphere-atmosphere coupling dynamics at different temporal and spatial scales" at the 44 COSPAR Scientific assembly to be held in Athens, Greece, on July 2022.

Trattamento dei dati personali

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.