



CALIFORNIA INSTITUTE OF TECHNOLOGY

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**Christina M.S. Cohen**

**Current Position:**

Member of the Professional Staff, California Institute of Technology  
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**Education:**

Ph.D. (physics), University of Maryland, 1995  
M.S. (physics), University of Maryland, 1992  
B.S. (physics), University of New Hampshire, 1989

**Professional Experience:**

September 2005 to present - Member of the Professional Staff, California Institute of Technology, Pasadena, CA  
September 2023 to present – Visiting Research Collaborator, Princeton University, Princeton, NJ  
September 2002 to 2005 - Senior Research Fellow, California Institute of Technology, Pasadena, CA  
September 1999 to 2002 - Senior Postdoctoral Scholar, California Institute of Technology, Pasadena, CA  
September 1996 to 1999 - Postdoctoral Scholar, California Institute of Technology, Pasadena, CA  
May 1995 to May 1996 - Postdoctoral Research Associate, University of Maryland, College Park, MD

**Mission Experience:**

2023-present: Deputy Principal Investigator for the Low Energy Telescope (LET) experiment on the Solar Terrestrial Relations Observatory (STEREO); Co-Investigator for the In-situ Measurements of Particles and CME Transients (IMPACT) Suite on STEREO  
2022-present: Principal Investigator for the Solar Isotope Spectrometer (SIS) and Cosmic Ray Isotope Spectrometer (CRIS) on the Advanced Composition Explorer (ACE)  
2021-present: Deputy Principal Investigator for the Integrated Science Investigation of the Sun (ISOIS) Suite on the Parker Solar Probe  
2019-present: Co-Investigator for the Sun Radio Interferometer Space Experiment (SunRISE)  
2018-present: Co-Investigator for High-energy Ion Telescope (HIT) on the Interstellar Mapping and Acceleration Probe (IMAP)  
2016-present: Co-Investigator for the Energetic Particle Instrument - High (EpiHi) on the Parker Solar Probe

- 2007-2023: Member of the Solar Terrestrial Relations Observatory science team (Low Energy Telescope experiment)  
1997-2022: Member of the Advanced Composition Explorer science team (Solar Isotope Spectrometer experiment)  
1996-2003: Member of the Galileo science team (Heavy Ion Counter experiment)

**Research Experience:**

- 2023-present: Co-Investigator on ‘Investigating the Origin of Solar Energetic Particles and Their Transport in the Inner Heliosphere’, NASA-HTMS grant  
2022-present: Co-Investigator on ‘DYNAMCS: A DYNAmically evolving Model of CMEs and SEPs’, NASA-LWS grant  
2021-present: Member of International Expert Advisory Group of the European Solar Energetic Particle Analysis Platform for the Inner Heliosphere (SERPENTINE) Consortium  
2020-present: Co-Investigator on ‘Suprathermal Seeds for Solar Energetic Particles: Two-stage Acceleration from Flares to CME-Shocks’, NASA-LWS grant  
2020-present: Co-Investigator on ‘A Multi-spacecraft Approach to Understand the Spectral and Temporal Evolution in Large Solar Energetic Particle Events’, NASA-LWS grant  
2020-present: Project Manager and Co-Investigator on ‘Solar Flare Energy Release (SolFER), a NASA DRIVE Center grant  
2019-present: Principal Investigator on ‘New Insights into SEP Sources, Acceleration and Transport: An Integrated Observation-Modeling Approach’, NASA-LWS grant  
2018-2022: Co-Investigator on ‘Understanding the Origin of Variable Properties of Solar Energetic Particle Events’, NASA-HSR grant  
2017-2022: Co-Investigator on ‘Plasma and Energetic Particle Archive for Jovian Magnetospheric Interactions with the Galilean Moons’, NASA-PDART grant  
2016-2022: Principal Investigator on ‘Characteristics of Solar Energetic Particle Events Resulting from Filament Eruptions’, NSF-SHINE grant  
2016-2020: Co-Investigator on ‘What is Causing the Deficit of High-Energy Solar Particles in Cycle 24?’, NSF-SHINE grant  
2015-2016: Member of ‘Energetic Ions: The Elusive Component of Solar Flares’, International Space Science Institute team  
2013-2014: Member ‘First principles physics for charged particle transport in strong space and astrophysical magnetic turbulence’, International Space Science Institute team  
2012-2016: Principal Investigator on ‘Observations and Modeling of the Longitudinal Extent and Variation of Multi-Spacecraft Solar Energetic Particle (SEP) Events’, NSF-SHINE grant  
2011-2016: Co-Investigator on ‘Understanding the Variable Intensity and Evolution of CME-Shock-Accelerated Solar Energetic Particles’, NASA-LWS grant

- 2010-2015: Principal Investigator on ‘Using Impulsive SEP Events as Probes of Solar-Heliospheric Structures and the Coronal Origins of the Slow Solar Wind’, NASA-LWS grant
- 2010-2014: Co-Investigator on ‘The Near-Sun Origins of High Energy SEP Variability: Examining the Shock-Geometry Hypothesis with STEREO, ACE, and Wind’, NASA-HGI grant
- 2009-2012: Co-Investigator on ‘The Extreme Solar Minimum of Cycle 24: Consequences for Energetic Particle Populations’, NASA-CCMSC grant
- 2009-2012: Co-Investigator on ‘Solar Flares as a Source of Gradual Solar Energetic Particle Events’, NASA-LWS grant
- 2007-2011: Co-Investigator on ‘Understanding Propagation Characteristics of Heavy Ions to Access the Contribution of Solar Flares to Large SEP Events’, NASA-LWS grant
- 2006-2010: Principal Investigator on ‘Understanding Energetic Particle Responses to Local Interplanetary Shocks through Observations and Theory’, NASA-LWS grant
- 2006-2010: Co-Investigator on ‘Modeling and Observations of Solar Energetic Particle Spectral Breaks’, NASA-LWS grant
- 2006-2009: Co-Investigator on Atmospheric Energy Deposition at Mars, Venus and Extrasolar Planets from Solar Energetic Particle Events
- 2007-2009: Co-Investigator on ‘Ultra-Thin Silicon Detectors for Energetic Particle Studies in Planetary Environments’, NASA-PIDDP grant
- 2005-2010: Principal Investigator on ‘Heavy Ion Absorption Signatures near the inner Jovian Moons’, NASA-OPR grant
- 2005-2009: Principal Investigator on ‘Solar Longitude Dependence of Solar Energetic Particle Events’, NSF-SHINE grant
- 2005-2009: Co-Investigator on ‘Data Analysis and Modeling of Large Solar Energetic Particle Events’, NASA-LWS grant
- 2004-2009: Co-Investigator on ‘Solar Origin of Impulsive SEPs’, NASA-SR&T grant
- 2003-2006: Principal Investigator on ‘Forecasting Shocks and Energetic Particle Hazards Using L1 Monitors’, NASA-LWS grant
- 2000-2001: Co-Investigator on ‘Nonlinear Dynamics and Ion Transport in Jupiter’s Magnetosphere’, NASA-JSDAP grant
- 1999: Co-Investigator on ‘Energetic Ion Interactions with the Galilean Satellites’, NASA-JSDAP grant
- 1998-2002: Co-Investigator on ‘Magnetospheric Irradiation of Io and Europa’, NASA-JSDAP grant

### **Committee/Leadership Positions**

- Co-chair of Space Weather Science and Applications Panel of the Decadal Survey for Solar and Space Physics, 2022-present
- Dean of NASA’s Heliophysics Summer School, 2022-present
- Secretary of Commission on Astroparticle Physics for the International Union of Pure and Applied Physics, 2022-present
- Chair of LWS Architecture Committee, 2021-2022

Co-chair of National Academies Committee for Space Weather Operations and Research Infrastructure Workshop: Phase II, 2021-2022  
AGU SPA Past President, 2021 - 2022  
AGU SPA President, 2019 - 2020  
Leader of NASA/LWS Focused Science Topic Team, 2019 - present  
EOS Science Advisor, 2019-2021  
Member of National Academies Committee on Solar and Space Physics, 2019 - 2022  
Member of Commission on Astroparticle Physics for the International Union of Pure and Applied Physics, 2018 - 2022  
Member of National Academies U.S. Liaison Committee for the International Union of Pure and Applied Physics, 2018 - present  
Reviewer for National Academies NRC Research Associateship Programs, 2018 - present  
Member of Next Step Space Weather Benchmarks Committee; Ionization Radiation Chair, 2019  
Member of International Scientific Program Committee for International Cosmic Ray Conference; Solar and Heliospheric Committee Chair, 2019  
AGU SPA President-Elect, 2017 - 2018  
EOS editor for space physics, 2010 - 2019  
Member of the Shakti P. Duggal Award Committee, 2017  
Member of International Scientific Program Committee for International Cosmic Ray Conference; Solar and Heliospheric Committee Chair, 2017  
Member of the NSF Geospace Section Portfolio Review Committee, 2015-2016  
Lecturer for BU summer school 2014  
Chair of AGU SPA Section Fellows Committee, 2013 - 2014  
Co-Leader of 'Understanding the CME/SEP connection' working group for Extreme Space Weather Events (ESWE) Workshops, 2012 - 2014  
Co-Leader for SEP working group for In-Situ Heliospheric Science Symposium, 2012  
Member of Committee of Visitors panel for reviewing NSF Geospace division, 2011  
Co-Leader of Interplanetary Working Group for Advanced Computational Capabilities for Exploration in Heliophysical Science (ACCEHS), 2010  
Member of Living With a Star (LWS) Steering Committee, 2009 - 2010  
Chair of steering committee for Solar, Heliospheric, and Interplanetary Environment (SHINE) Workshop, 2007 - 2010  
Member of the scientific organizing committee for the SOHO 20 workshop, 2007  
Lecturer for SPD Summer School on High Energy Solar Physics, UNH, 2006  
Guest Editor for Advances in Space Research, Proceedings of COSPAR 2004, Session D2.5  
Member of steering committee for Solar, Heliospheric, and Interplanetary Environment (SHINE) Workshop, 2003 - 2006  
Member of NASA's Solar & Heliospheric Management Operations Working Group (MOWG), 2002 - 2005

Co-Leader of SEP working group for Solar, Heliospheric, and Interplanetary Environment (SHINE) Workshop, 2001-2003  
Co-Leader of SEP-science working group for Living With a Star - Coordinated Data Analysis Workshop (LWS CDAW), 2002  
Co-Leader of SEP working group for Ulysses/Voyager/ACE Heliospheric Workshop, 2001

### **Outreach/Mentor Activities**

AGU Mentoring 365 Mentor, 2021 – present  
Europlanet Mentoring Mentor, 2021 - present  
Ask a Scientist for Solar Week, 2004 - present  
Radio interview on KVMR, January 2022  
Public lecture at Villa Gardens, Pasadena, CA, October 2018  
Public lecture at California State University Northridge Planetarium, April 2018  
Weizmann Day School Science Fair judge, Spring 2018  
Public lecture at the Converse County Library, Douglas WY, August 2017  
Scientific writing mentor for Caltech undergraduate student, Spring 2017  
Public lecture at Villa Gardens, Pasadena, CA, June 2013  
Lecture for 8<sup>th</sup> graders at Flintridge Preparatory School, La Canada Flintridge, CA, April 2013  
Advisor for Summer Undergraduate Research Fellowship (SURF) student, Caltech, 2013  
Advisor for summer high school students, Caltech, 2012-2014  
Lecture for 8<sup>th</sup> graders at High Point Academy, Pasadena, CA, May 2010  
Presenter at Sally Ride Science Festival, UCLA, November 2003

### **Honors and Awards:**

Elected AGU Fellow, December 2023  
received NASA Silver Achievement Medal for contributions to the Parker Solar Probe Mission, November 2019  
received NASA Group Achievement Award for design, development and launch of the Advanced Composition Explorer (ACE), June 1998  
received NASA Group Achievement Award for contributions to the Wind SMS Team, June 1998  
received NASA Group Achievement Award for work during Ulysses' Jupiter flyby, February 1993  
received NASA Group Achievement Award for design, development and testing of SWICS, June 1992  
received Graduate Student Research Fellowship from NASA, August 1992 (a three year fellowship)  
graduated Suma Cum Laude from University of New Hampshire, May 1989

### **Affiliations:**

member of American Geophysical Union  
member of the European Geophysical Union  
member of Phi Beta Kappa honor society

member of Phi Kappa Phi honor society  
member of Sigma Pi Sigma honor society