

Simon Steel

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Education

Ph.D. Astrophysics 1995	Coláiste na hOllscoile, Baile Átha Cliath University College Dublin, Ireland <i>Spectrophotometric Observations of Haro Starburst Galaxies</i>
M.A. Physics 1991	Brandeis University, Massachusetts, USA
P.G.C.E. Physics Education 1986	Oxford University, Oxford, UK
B.Sc. Physics & Astronomy 1984	Sussex University, Brighton, UK

Experience

Deputy Director, Carl Sagan Center	SETI Institute 2022- Principal Investigator, NASA Community College Network
Director, Education and Outreach	SETI Institute 2019-22
Lecturer In Astronomy	University College London 2011-19
Resident Director of Study Abroad	Tufts University in London 2009-19
Science Education Specialist	Harvard-Smithsonian Center for Astrophysics 2002-09
Lecturer in Astronomy	Harvard University 1998-02
Physics Demonstrator	Harvard University 1996-98
Lecturer in Experimental Physics	University College Dublin 1994-96
Science Teacher	Marlborough School, Oxfordshire, 1986-88

Professional Societies

Royal Astronomical Society
American Astronomical Society
International Astronomical Union (Member, IAU Commission C5 Cultural Astronomy)

Simon Steel - Education and Outreach

SETI Institute (2021-) The NASA Community College Network, PI for NASA SMD SciAct project bringing skills and resources of NASA science into community college classrooms.

SETI Institute (2020-22) NASA Planetary Protection Support Services, content and training materials developer.

University College London (2011-2018) Certificate of Higher Education in Astronomy, Lecturer in Astronomy, PHAS 1515 Foundations of Astronomy and (2016-2018) Laboratory Instructor PHAS1510 Observational Astronomy Lab.

Ithaca College in London (2018) Adjunct Professor in Astronomy, Physics 141 British Natural Science. Pepperdine University in London (2016) Adjunct Professor in Astronomy, NASC 109 Introduction to Astronomy.

Tufts University Summer School (2011-2015) Adjunct Professor in Astronomy, Ast 10B *Wanderers in Space*.

Royal Observatory, Greenwich (2012). Instructor, *A Question of Scale*, a 5-week adult education program celebrating the 2012 Transit of Venus

Royal Observatory, Greenwich (2011) Instructor, *Cosmic Revolutions*, a 6-week adult education program on the history of ideas about the structure & evolution of the Universe

SETI Institute, Big Picture Science radio show and podcast, Science presenter: *Cosmos: It's Big, It's Weird* (January 9, 2012); *Scoping out Astronomy* (January 12, 2009); *Time's Mysteries* (November 10, 2008); *Get Your Boson* (September 22, 2008).

From the Earth to the Universe (2010) Smithsonian Institution/NASA/Chandra X-Ray Observatory. Special needs advisor and science writer for set of tactile image displays, making a major international astronomy exhibit accessible to blind and visually impaired audiences.

Runyon, C., Steel, S. et. al. (2008). Space Science is For Everyone: Creating and Using Accessible Resources in Educational Settings. *National Aeronautics and Space Administration, Washington DC*

The Incredible 2-inch Universe (2008). Hands-on teacher resource for teaching about the size and scale in the universe. Adapted for hearing-impaired audiences. Smithsonian Institution/NASA/Chandra X-Ray Center.

Grice, N., Steel, S., & Daou, D. (2007). Touch the Invisible Sky: A multi-wavelength Braille Book for visually impaired students. *NASA & Ozone Publishing Corporation*.

Exceptional Needs Workshop. Astrophysics content speaker, product developer and participant in SERCH Broker Facilitator workshops adapting NASA education products for special needs audiences. US Space & Rocket Center, Huntsville (2005); Boston Museum of Science (2006) and National Federation of the Blind, Puerto Rico (2007).

Night Sky Network (2005-7). Co-development between NASA Universe Education Forum and the Astronomical Society of the Pacific, resource kits for amateur astronomers: *Black Hole Survival Kit* and *Telescopes: Eyes on the Universe*.

Beyond the Solar System: Expanding the Universe in the classroom, 2005 Smithsonian Institution/NASA. Professional development DVD designed support the teaching of cosmology in the classroom.

Inside Einstein's Universe, 2005, Boston Museum of Science/ Smithsonian Institution/NASA. Web based resources for the 2005 Einstein Centennial. Suite of online resources for schools and museums, including scripted presentations, hands-on demonstrations and themed presentations. Program was piloted by 12 museums and planetariums across the United States.

NASA Educator Ambassador Program (2004, 2006). Represented Chandra X-ray Center as professional development trainer for NASA's Astrophysics Educator Ambassadors. Sonoma State University, CA.

Earth and Space Science Education "Train the Trainers" Workshops (2002-6). Professional development provider in high energy astrophysics to NASA's Aerospace Education Specialists. NASA Goddard Space Flight Center (2002), NASA Langley Research Center (2003) & NASA Johnson Space Center (2005, 2006). IGES/NASA.

Cosmic Questions (2003) Exhibit designer and science content developer for 5000 sq. ft. traveling exhibit on the nature of the universe and our place within it. Exhibit opened in eight US cities between 2002 and 2006. Funded by NASA & National Science Foundation.

Publications and Proceedings

Tarter, J. and Steel, S. (2024) *Searching for extraterrestrial intelligence across a Century* J. Phys.: Conf. Ser. 2877 012051

Steel, S., Harman, P., Backman, D., Clark, C. (2021). The NASA Community College Network. *Astronomical Society of the Pacific Conference Series*. 531, 356

Arcand, K.; Lestition, K.; Watzke, M. & Steel, S. (2010). The Invisible Universe: A Tactile and Braille Exhibit of Astronomical Images, *Bulletin of the American Astronomical Society*. 36, 1117.

Steel, S. J.; Dussault, M. E.; Sienkiewicz, F. F.; Deutsch, F. S.; Reinfeld, E. L. & Gould, R. R. (2009). Observing With NASA, *Bulletin of the American Astronomical Society*. 41, 412.

Smith, D. A.; Summers, F.; Hasan, H.; Steel, S.; Dussault, M.; Lestition, K.; Arcand, K.; Watzke, M.; Squires, G.; Hurt, R. (2009). NASA and IYA: Bringing the Cosmos to the Public. *Bulletin of the American Astronomical Society*, 41, 488.

Reinfeld, E.; Dussault, M.; Steel, S., Gould, R., & Schnepps, M. (2008). IYA Resources from the Harvard-Smithsonian Center for Astrophysics. *Astronomical Society of the Pacific Conference Series*. 400, 285

Steel, S.; Grice, N. & Daou, D. (2008). Touch the Invisible Sky: A multi-wavelength Braille book featuring NASA images. *Communicating Astronomy with the Public 2007: Proceedings from the IAU/National Observatory of Athens/ESA/ESO Conference, Athens, Greece*. 64.

Simon Steel - Publications and Proceedings cont.

Gould, R.; Dussault, M.; Griswold, A.; Reinfeld, E. & Steel, S. (2008). The Black Hole Experiment Gallery ASP Conference Series, 389, 79.

Steel, S. J. (2008). See What Galileo Saw - And More! With Online Telescopes. *Mercury Magazine* 37, 24.

Slane, P. O.; Romaine, S.; Murray, S. S.; Brissenden, R.; Elvis, M.; Gorenstein, P.; Steel, S.; O'Dell, S. et al. (2008). Simbol-X: A New Generation Soft/Hard X-ray Telescope. *American Astronomical Society, High Energy Astrophysics Division*. Meeting 10, 28.01.

Steel, S. J.; Reinfeld, E. L.; Dussault, M. E. & Gould, R. R. (2006). On the Horizon: Black Hole Experiment Gallery. *Bulletin of the American Astronomical Society*. 38, 359.

Steel, S. J.; Dussault, M. E.; Reinfeld, E. L. & Gould, R. R. (2006). E/PO With A Big Bang: Expanding Opportunities for Public Learning About the Universe. *American Astronomical Society*, Meeting 208, 75.07.

Steel, S. J. (2005). Engaging the public in cutting-edge discoveries in modern astrophysics through partnerships with museums and scientists. *Bulletin of the American Astronomical Society*. 37,1416.

Steel, S. J.; Dussault, M. E.; Sadler, P. M. & Gould, R. R. (2005). Astronomy for All: The MicroObservatory Guest Observer Portal. *Bulletin of the American Astronomical Society*. 37,1265.

Dussault, M.; Sadler, P.; Coyle, H.; Gould, R.; Reinfeld, E.; Steel, S.; Gregory, B. & Grier, J. A. (2005). What do students (and teachers) understand about the universe? Using qualitative and quantitative assessments to inform and improve astronomy education efforts. *Bulletin of the American Astronomical Society*. 37, 1210.

Mendez, B. J.; Bartolone, L.; Craig, N.; Dussault, M.; Gould, R. R.; Grier, J. A.; Steel, S.; Lestition, K.; Lochner, J.; Plait, P.; Porro, I. et al. (2005). Modeling the Universe: Professional Development for Teachers Designed by NASA's Universe Forum Education and Outreach Program. *Bulletin of the American Astronomical Society*. 37, 432.

Grier, J. A.; Reinfeld, E. L.; Dussault, M. E.; Steel, S. J. & Gould, R. (2005). The Solar System in Its Universal Context: Ideas, Misconceptions, Strategies and Programs to Enhance Learning. *36th Annual Lunar and Planetary Science Conference*. 36,1954.

Reinfeld, E. L.; Dussault, M. E.; Gould, R. R.; Grier, J. A.; Steel, S. J. "Inside Einstein's Universe" Using current science to explore key questions about space and time, *Bulletin of the American Astronomical Society*, Vol. 36, p.1347

Grier, J. A.; Steel, S. J.; Dussault, M. E.; Reinfeld, E. L. & Gould, R. R. (2004). Placing the Solar System in its Universal Context. *Bulletin of the American Astronomical Society*. 36, 1090.

Grier, J. A.; Dussault, M. E.; Spaulding, K. L.; Reinfeld, E.; Steel, S. J. & Gould, R. R. (2004). Working with Local School Districts: A Possible Model for ROSS E/PO Programs. *Bulletin of the American Astronomical Society*. 36, 965.

Simon Steel - Publications and Proceedings cont.

- Steel, S. J.; Gould, R. R.; Dussault, M. E.; Grier, J. A. (2004). The Structure & Evolution of the Universe Education Forum: Opportunities for scientist involvement in education and public outreach. *Bulletin of the American Astronomical Society*. 36, 965.
- Grier, J. A.; Steel, S. J.; Dussault, M. E. & Gould, R. R. (2003). Determining Age: An Educational Perspective on Our Place in Time. Lunar and Planetary Science Conference. 34,1692.
- Rabbette, M.; McBreen, B., Smith, N. & Steel, S. (1998). A search for rapid optical variability in radio-quiet quasars. *Astronomy and Astrophysics Suppl.* 129, 445-454.
- Metcalf, L., Steel S. et al. (1996). ISO Observations of Wolf-Rayet Galaxy Haro 3. *Astronomy and Astrophysics* 315 L105-L108.
- Steel, S., Smith, N., Metcalfe, L., Rabbette, M. & McBreen B. (1996). Spectrophotometric Observations of Dwarf Starburst Galaxy Haro 3. *Astronomy and Astrophysics* 311 721-730.
- Rabbette M., McBreen B., Steel S. & Smith N. (1996). Rapid optical variability in the BL Lac AO 0235+164 *Astronomy and Astrophysics* 310 1-7.
- Steel, S., Smith, N., Metcalfe, L. & McBreen, B. (1994). Spectrophotometry of Haro Starburst Galaxies. *IAC-RGO Conference on Violent Star Formation from 30 Doradus to QSOs*. Cambridge University Press. 309-313.
- Hurley, K. J.; McBreen, B.; Rabbette, M. & Steel, S. (1994). The lognormal properties of the soft gamma-ray repeater SGR 1806-20 and the VELA pulsar. *Astronomy and Astrophysics* 288 L49-L52
- Rueckner, W., Goodale, D., Rosenberg, D., Steel, S. & Tavilla, D. (1993). Lecture Demonstration of Wineglass Resonances, *American Journal of Physics* 61 (2).