

# DR. HENRY B. THROOP

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## RESEARCH INTERESTS

Dusty rings of Saturn and Jupiter; Pluto and the Kuiper Belt; Formation environment of the Solar System; Circumstellar disks; Astrobiology; R&A Program Management

## EDUCATION

- Ph.D. **University of Colorado**, Astrophysical and Planetary Sciences May 2000  
Thesis: *Light Scattering and Evolution of Circumstellar Disks and Planetary Rings*  
Advisors: L. W. Esposito, J. Bally
- M.S., **University of Colorado, Boulder**, Astrophysical and Planetary Sciences May 1997
- B.A., **Grinnell College**, Physics May 1994

## POSITIONS HELD

- **NASA HQ (via Agile Decision Sciences), Washington, DC** February 2019–present  
*Program Scientist*
- **Planetary Science Institute, Tucson, AZ & Mumbai, India** 2011–2018  
*Senior Scientist*
- **St. Xavier's College, Mumbai, India** 2016-2017  
*Lecturer*
- **University of Pretoria, South Africa** 2013–2015  
*Senior Lecturer*
- **NASA Headquarters, Washington, DC** 2012–2013  
*Discipline Scientist, Cassini DAP and Origins programs*
- **Southwest Research Institute, Boulder, CO** 2001–2017  
*Research Scientist; Senior Research Scientist; Consultant*
- **Laboratory for Atmospheric and Space Physics, U. Colorado** 1995–2000  
*Research Assistant; Research Associate*

## SELECTED PUBLICATIONS (OF MORE THAN 40)

- T. Lauer, **H. Throop**, et al. 2017. *Results of New Horizons' Searches for Rings in the Pluto System*. *Icarus*, **301**, 155–175.
- **H. Throop** et al. 2014. *Limits on Pluto's ring system from the June 12 2006 stellar occultation and implications for the New Horizons impact hazard*. *Icarus* **246**, 345-351.
- **H. Throop** 2011. *UV Photolysis, Organic Molecules in Young Disks, and the Origin of Meteoritic Amino Acids*. *Icarus* **212**, 885-895.
- **H. B. Throop** and J. Bally 2010. *Accretion of Jupiter's Atmosphere from a Supernova-Contaminated Molecular Cloud*. *Icarus* **208**, 329–336.
- **H. B. Throop** and J. Bally 2008. *'Tail-end' Bondi-Hoyle accretion in young star clusters: implications for disks, planets, and stars*. *AJ* **135**, 2380-2397.
- **H. B. Throop**, and J. Bally 2005. *Can photoevaporation trigger planetesimal formation?* *ApJ* **623**, L149-L152.
- **H. B. Throop**, C. C. Porco, R. A. West, J. A. Burns, M. R. Showalter, and P. D. Nicholson 2003. *The Jovian Rings: New Results Derived from Cassini, Galileo, Voyager, and Earth-based Observations*. *Icarus* **172**, 59–77.

- **H. B. Throop**, J. Bally, L. W. Esposito, and M. J. McCaughrean 2000. *Evidence for dust grain growth in young circumstellar disks*. *Science* **292**, 1686–1689.

### **SELECTED INVITED TALKS (OF MORE THAN 150)**

- Hayden Planetarium / American Museum of Natural History, New York, 2019
- US Embassy, Kathmandu, Nepal, 2018
- Indian Institute of Space Science and Technology, Thiruvananthapuram, India, 2018
- Astronomy Winter School on Star Formation, Hyderabad, India, 2017
- US Embassy, Delhi, India, 2017
- Tata Institute for Fundamental Research, Mumbai, India, 2016
- Physical Research Laboratory, Ahmedabad, India, 2016
- University of Namibia, Windhoek, 2015
- South African National Space Agency (SANSA), Hermanus, South Africa, 2015.
- SciFest Africa, Grahamstown, South Africa, 2012-2014
- National Science Foundation, Arlington, VA, 2011

### **SERVICE**

- **NASA ROSES Group Chief** 2003, 2007, 2008, 2009, 2010, 2011, 2018
- **NASA SMD Mission Selection Panel Member** 2012
- **NASA Co-Op Selection Panel Member** 2013
- **NSF AST/AAG Panel Member** 2011, 2017

### **AWARDS**

- **Carl Sagan Medal**, American Astronomical Society – Division for Planetary Science. For science communication to the public by an active planetary scientist. 2017.
- **Avis Bohlen Award**, US State Department – AFSA. For global outreach by a family member of a diplomat in the US Foreign Service. 2017.
- **NASA Group Achievement Award**, NASA SMD. Seven awards, 2002 - 2015.

### **FUNDING HISTORY AS PI**

#### **\$1.9M awarded in 9 programs**

- NASA SSW: Hypervelocity Collisions and Icy Rings
- NASA OPR: Hypervelocity Collisions and Dusty Rings
- NASA ATP: Bondi-Hoyle Accretion onto Young Protoplanetary Disks
- NASA OPR: New Horizons Observations of the Jovian Ring
- NASA TPF-FS: Dense Star Clusters and Terrestrial Planet Formation
- NASA Exobiology: Volatile Evolution in Circumstellar Disks
- NASA Origins: Photo-evaporation and the Formation of Planetesimals
- SwRI IR: Capability Development for Modeling Young Solar System Evolution
- NASA JSDAP: Photometry and Evolution of the Jovian Ring System

### **OBSERVING PROGRAMS**

- Near-Earth Object Observations and Rapid Followup SAAO 1m 2013, 14 nights

- Outburst Activity on Comet Siding Spring LCOGT 2013, 75 hours
- New Rotationally Resolved Spectra of Pluto SALT 2013+2014, 30 hours
- Hubble Deep Search for Debris and Satellites in the Pluto System HST (Co-I), 34 orbits
- Are There Large Dust Grains in Orion's Circumstellar Disks? HST, 10 orbits