

Biographies for Chairs and Presenters of Session 3 – Finding Small NEAs: Capabilities and Gaps

Session Chair Biographies

Dr. Paul Abell

NASA Johnson Space Center (JSC)

Paul Abell is the Lead Scientist for Planetary Small Bodies assigned to the Astromaterials Research and Exploration Science Directorate at the NASA Johnson Space Center in Houston, Texas. His main areas of interest are physical characterization of near-Earth objects (NEOs) via ground-based and spacecraft observations, examination of NEOs for future robotic and human exploration, and identification of potential resources within the NEO population for future resource utilization. He was a telemetry officer for the Near-Earth Asteroid Rendezvous spacecraft Near-Infrared Spectrometer team and was a science team member on the Japan Aerospace Exploration Agency (JAXA) Hayabusa near-Earth asteroid sample-return mission. Paul was also a member of the Hayabusa contingency recovery team and participated in the successful recovery of the spacecraft's sample return capsule. He is a science team member of the Large Synoptic Survey Telescope (LSST) Solar System Collaboration tasked with identifying NEOs for future robotic and human space missions, and is also the Science Lead for NEO analog activities and operations of the NASA Extreme Environment Mission Operations (NEEMO) and Research and Technology Studies (RATS) projects. Asteroid 8139 (1980 UM1) is named Paulabell in recognition of Paul's contributions to NEO research and exploration studies.

Dr. Richard Dissly

Ball Aerospace & Technologies Corp.

Rich Dissly is a Senior Manager at Ball Aerospace, responsible for business development in science missions and instruments for the Civil Space and Technologies organization. He has over 20 years of experience in mission and instrument concept formulation, with an emphasis on planetary flight applications. Previous to Ball, Rich was a research scientist at the NOAA Aeronomy Laboratory, where he was responsible for the design, fabrication and deployment of instrumentation for the measurement of trace atmospheric species from aircraft. Rich received his doctorate in Planetary Sciences from Caltech in 1994.

Presenter Biographies

Dr. Tim Spahr

International Astronomical Union Minor Planet Center (MPC)

Tim Spahr is the Director of the International Astronomical Union sanctioned Minor Planet Center, the repository for all observations and orbit data on small bodies of our solar system. Tim attended graduate school at the University of Florida studying celestial mechanics. As a graduate student, Tim conducted a photographic survey for minor planets, using the University of Arizona's Catalina Schmidt Telescope. After graduating from Florida, Tim wrote software for the Catalina Sky Survey team from 1998 to 2000. In May of 2000, Tim accepted a position at the Minor Planet Center, and specialized in refining MPC operations with respect to NEOs. Tim was promoted to MPC director in 2006.

Dr. Lance Benner

NASA Jet Propulsion Laboratory (JPL)

Lance Benner is a Research Scientist at the Jet Propulsion Laboratory where he specializes in radar imaging of near-Earth asteroids. He received an A. B. in Physics at Cornell University in 1987 and a Ph.D. in Earth and Planetary Sciences at Washington University in St. Louis in 1994. He came to JPL in November of 1995 as a National Research Council postdoctoral fellow to work with Dr. Steven Ostro. He worked closely with Steve Ostro for 13 years and succeeded him as the principal investigator of JPL's Asteroid Radar Research program in 2008. He regularly observes near-Earth asteroids at Goldstone and at the Arecibo Observatory in Puerto Rico. He has received several NASA group achievement awards, has authored more than 50 peer-reviewed research papers on asteroids and comets, and asteroid 9012 Benner was named after him in recognition for his work in asteroid science.

Mr. Steve Larson

Lunar and Planetary Laboratory, University of Arizona

Steve Larson is a Senior Staff Scientist at the Lunar and Planetary Lab who founded the Catalina Sky Survey for NEOs. He worked with the early JPL CCDs in the late '70s and is co-discoverer of the Saturnian co-orbital satellites Epimetheus and Telesto. He served as Discipline Specialist of the Near-Nucleus Studies Net of the International Halley Watch and a guest investigator on the Vega mission to Comet Halley. He formed a global network to observe the impact of D/Shoemaker-Levy 9 on Jupiter. He studied cometary coma morphology and developed an image enhancement algorithm to bring out details of anisotropic emission of material from the nucleus. More recently, he worked to modify three old, unused telescopes for the Catalina Sky Survey, which has been the leading survey since 2004, and through colleagues at Caltech have mined CSS data for optical transients of astrophysical interest

Presenter Biographies (Cont'd)

Dr. Eva Schunova

Institute for Astronomy, University of Hawaii

Eva Schunova received her Ph.D. in Astronomy in 2012 from the Comenius University in Bratislava, Slovakia. Her research interests include the origin, evolution, and dynamical relationship of small bodies in the solar system. In her current research she focuses on the modeling and search for dynamical families of fragmented NEOs, in particular families created by tidal disruption near Earth (Schunova et al. 2012, Schunova et al. 2013 – in prep). Her other work includes estimating expected ATLAS and PanSTARRS2 survey discovery rates for small NEOs in orbits where the objects are either easily retrievable by robotic spacecraft or accessible for human exploration, and characterizing their population.

Dr. Amanda Mainzer

NASA Jet Propulsion Laboratory (JPL)

Amy Mainzer is a Principal Scientist at JPL who specializes in astrophysical instrumentation and small body science. She is the principal investigator of the NEOWISE project, the solar system portion of NASA's Wide-field Infrared Survey Explorer (WISE) mission. WISE surveyed the entire sky in four infrared wavelengths; with the NEOWISE project, the mission detected >158,000 minor planets at infrared wavelengths and discovered >34,000 new objects over the course of its one year survey. Included among those objects are ~700 near-Earth objects (NEOs), one of which is Earth's only known Trojan asteroid, discovered by NEOWISE. Mainzer is the principal investigator of the Near-Earth Object Camera (NEOCam) project, a proposed mission to NASA's Discovery program to carry out a comprehensive survey for NEOs using a 50 cm infrared telescope located at the Earth-Sun L1 Lagrange point. Mainzer proposed NEOCam to Discovery in 2005 and 2010; in 2010, the project was awarded technology development funding to mature the required infrared detectors. The first NEOCam detectors were produced in 2012. Mainzer designed and built the fine guidance sensor for NASA's Spitzer Space Telescope; the sensor has been used continuously throughout Spitzer's 10 years of science operations. She has also worked on low mass stars and star formation, as well as the First Light Camera for NASA's Stratospheric Infrared Observatory (SOFIA).