

Wednesday, August 05, 2015  
4:14 PM

**Your abstract submission has been submitted for the 2015 AGU Fall Meeting. You will receive an email confirmation.**

Click [HERE](#) to print this page now.

**Receipt of this notice does not guarantee that your submission was accepted for the 2015 AGU Fall Meeting. All submissions are subject to review and acceptance by the Program Committee. You may review or edit your abstract submission until the deadline of 6 August 2015 23:59 EDT/03:59 +1 GMT. After this date, no further edits will be made to the submission.**

---

**Resource Prospector: A lunar volatiles prospecting and ISRU demonstration mission**

**Anthony Colaprete**, NASA Ames Research Center, Moffett Field, CA, United States

**Abstract Text:**

A variety of recent observations have indicated several possible reservoirs of water and other volatiles. These volatiles, and in particular water, have the potential to be a valuable or enabling resource for future exploration. NASA's Human Exploration and Operations Mission Directorate (HEOMD) Advanced Exploration Systems (AES) is supporting the development of Resource Prospector (RP) to explore the distribution and concentration of lunar volatiles prospecting and to demonstrate In-Situ Resource Utilization (ISRU). The mission includes a NASA developed rover and payload, and a lander will most likely be a contributed element by an international partner or the Lunar Cargo Transportation and Landing by Soft Touchdown (CATALYST) initiative. The RP payload is designed to: (1) locate near-subsurface volatiles, (2) excavate and analyze samples of the volatile-bearing regolith, and (3) demonstrate the form, extractability and usefulness of the materials. RP is being designed with thought given to its extensibility to resource prospecting and ISRU on other airless bodies and Mars. This presentation will describe the Resource Prospector mission, the payload and measurements, and concept of operations

**Topic Selection:** The Science of Exploration as enabled by the Moon, Near Earth Asteroids and the moons of Mars

**Title:** Resource Prospector: A lunar volatiles prospecting and ISRU demonstration mission

**Submitter's E-mail Address:** anthony.colaprete-1@nasa.gov

**Preferred Presentation Format:** Assigned by Program Committee (Oral or Poster)

First Presenting Author

---

**Presenting Author**

Anthony Colaprete

**Primary Email:** anthony.colaprete-1@nasa.gov

**Phone:** (650)604-2918

**Affiliation(s):**

NASA Ames Research Center  
Moffett Field CA (United States)

**Student:** No