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James F. Reilly¹, Patricia W. Dickerson², William R. Muehlberger³ (1) National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, TX (2) Lockheed Martin, National Aeronautics and Space Administration, Lyndon B. Johnson Space Center (3) University of Texas at Austin, Austin, TX

Want a Shot? We Can Get It! Astronaut Photographs as Research and Teaching Tools

Socrates observed, over 2500 years ago, that "only when we rise above the Earth can we fully understand the world on which we live." Astronauts photographing Earth over the past 40 years have helped capture Socrates' "big picture" by acquiring more than 400,000 images over the majority of the landmass between 51 degrees north and south latitudes. These images have changed our perceptions of the tectonic fabric of our planet, the rates of change of geological processes and have provided a time-series of data for use in ecological, geographical and meteorological studies.

Crews have often collaborated in research by evaluating qualitative aspects of image acquisition (e.g., sunglint, illumination angle, obliquity) to obtain the highest quality image for use on the ground. In addition, crews have the ability to observe ephemeral events that might otherwise be unrecorded. With the advent of the International Space Station, crews will now be on-orbit full time to expand the database further.

Requests, both external and internal, are compiled daily by ground controllers and uplinked to the crews. Post-mission images are available on web sites (<http://eol.jsc.nasa.gov>, <http://earthobservatory.gsfc.nasa.gov>) to provide a low-cost database for researchers and educators.