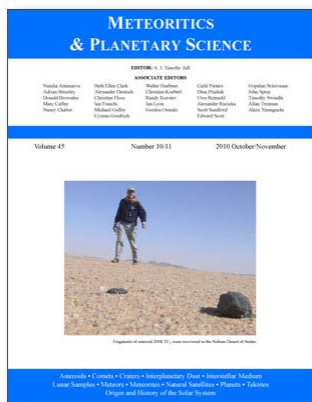


Asteroid Tracked -- Meteorites Found!

In the early morning of October 6, 2008 an asteroid close to Earth was detected by a Catalina Sky Survey (CSS) telescope at Mount Lemmon, Arizona. It entered and broke up in Earth's atmosphere 19 hours later leaving behind a luminous train of clouds in the sky and meteorites on the desert floor.

The first meteorites were recovered two months later in the Nubian Desert of northern Sudan by students and staff from the University of Khartoum (Sudan) led by Dr. Muawia Shaddad and Dr. Peter Jenniskens of the SETI Institute and NASA Ames Research Center (Mt. View, California). Eventually over 600 samples with a total weight of 11 kilograms were recovered, many of which are ureilites, a rare type of coarse-grained meteorite made of graphite-rich, olivine-pigeonite rock that resembles peridotite from the Earth's mantle. Yet some of the fragments are quite different, and include diverse types of ordinary and enstatite chondrites, suggesting perhaps that the parent body was a intriguing rubble pile of all sorts of materials from partly melted and unmelted asteroidal bodies. A session at the 41st Lunar and Planetary Science Conference held March 1-5, 2010 focused on ureilitic asteroids and insights from Almahata Sitta. The October/November 2010 issue of



Meteoritics & Planetary Science (the international monthly journal published by the Meteoritical Society) contains 20 papers by over 100 authors with detailed coverage of the extensive research being done on the Almahata Sitta meteorite fragments, and parent asteroid 2008TC₃.

See: The Oct/Nov 2010 issue of [Meteoritics and Planetary Science](#), volume 45. See also a Dec. 15, 2010 [NASA Press Release](#) and the [PSRD](#) article [Asteroid, Meteor, Meteorite](#).

Written by Linda M. V. Martel, Hawai'i Institute of Geophysics and Planetology, for [PSRD](#).



[[About PSRD](#) | [Archive](#) | [CosmoSparks](#) | [Search](#) | [Subscribe](#)]

[[Glossary](#) | [General Resources](#) | [Comments](#) | [Top of page](#)]



December 2010

<http://www.psrд.hawaii.edu>

psrd@higp.hawaii.edu