Southern Hemisphere Asteroid Research Consortium (SHARC) Support to Planetary Defence

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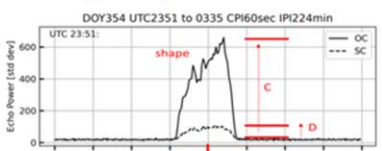
Southern Hemisphere Asteroid Radar Program (SHARP) CSIRO, JPL, UTAS



Antennas in the CDSCC, ATNF Group

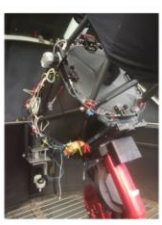
ATNF - ATCA

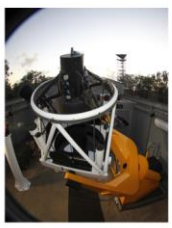
ATNF – Murriyang (Parkes)

CDSCC – DSS43 70m

(Benson et al. 2017 Radio Science), (Horiuchi et al. 2021 Icarus), (Kruzins et al. 2023 Frontiers in Space Technology)

Optical Telescope Network – UNSW, UWA, CURTIN

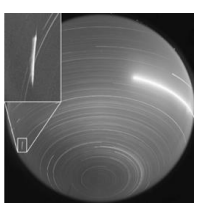




UNSW telescopes
Viper 0.4m
Falcon Canberra 0.5m

UWA telescopes
Zadko 1m
C14 0.4m
Falcon Gin Gin 0.5m

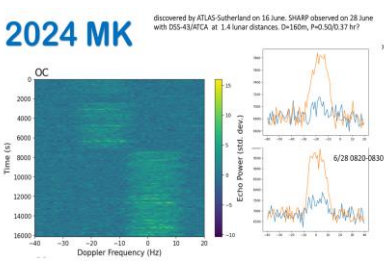
Curtin University
Desert Fireball Network

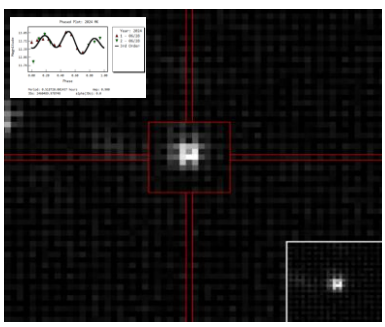


Research and STEM

- The Southern Hemisphere Asteroid Research student program now includes graduate and post graduate students.
- Student research and supervisor/mentor group of Uni's, CSIRO, JPL for projects in:
  - Observing and analysing radar echo
  - Assisting JPL/NASA databases
  - Simulation of echo signals and interpretation
  - Correlation techniques
  - Stokes Vector Polarisation Analysis
- Target planning for southern hemisphere radar and optical telescope deployment

Radar/Optical Analysis of Earth Orbit Crossing Apollo/Aten Asteroids





Radar Echo Spectrum, Delay/Doppler imagery, Astrometry and Photometry of Asteroid 2024MK

CSIRO Australia's National Science Agency

NASA Jet Propulsion Laboratory California Institute of Technology

UNSW

UNIVERSITY of TASMANIA

THE UNIVERSITY OF WESTERN AUSTRALIA

Curtin University