

## NEO-Survey and Hazard Evaluation

YUEHUA MA<sup>1</sup> and GUANGYU LI<sup>2</sup>

<sup>1</sup>*Purple Mountain Observatory, CAS, Nanjing 210008, China*

<sup>2</sup>*National Astronomical Observatories, CAS*

The enormous power of celestial bodies impacts is matchless. The danger of NEOs (Near Earth Objects) impacts with earth threatens our living space all the time. The annihilation of dinosaur 65 million years ago, the great blast of Tunguska in 1908, the impacts of SL9 on Jupiter in 1994 and NEOs passing near earth orbit with short distances these years warn us that we can not treat them lightly.

Chinese scientists have done many works in this field. The former Director of Purple Mountain Observatory (PMO) C.Y. Chang found Asteroid 1125--China at Yerkes Observatory in 1928 and found Asteroid Purple 1 at PMO with J. X. Zhang in 1955. Up to the middle period of 1980s, over 130 new numbered asteroids were found at PMO and among them 2 are Mars-crossing asteroids, which was the 5<sup>th</sup> place in the world.

The Schmidt CCD Asteroid Program (SCAP) of Beijing Astronomical Observatory (BAO) was put in practice in 1995. 2 NEOs and a Mars-crossing asteroid were found in 1997, and 575 asteroids were found by SCAP in 1990s, which was the 1<sup>st</sup> place in the world at that time.

Our NEO Search Telescope construction was started in 1999 and has been finished in principle. It is a 1.0/1.2 m Schmidt Telescope with 4K×4K shift scanning CCD detector. The telescope can also inspect space debris.

In addition to ground base NEO Survey and investigation, we have tabled a proposal "Auto-navigation for NEO exploration" and hope to have international cooperation.