

Searching for near-earth asteroids from space

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The Near-Earth Asteroids are a possible source of enormous wealth or terrible grief, space-faring civilizations may not ignore them. In recent years, professional asteroid search surveys have become very efficient in finding Near-Earth Asteroids that come within their detection range. However, they must still operate from the surface of the earth and with the limitations that circumstance imposes. An asteroid-search spacecraft would be free of many of these constraints but would be enormously more expensive. We discuss the possible designs for such spacecraft, the advantages and constraints, search methods, and costs.

Biography

Roy Tucker received a B.S. in physics from Memphis State University in 1978 and his M.S. degree in Scientific Instrumentation from the University of California, Santa Barbara in 1981. He has been involved with many astronomically-oriented electro-optical instrumentation efforts with institutions such as Kitt Peak National Observatory, the National Solar Observatory, and the Multiple Mirror Telescope Observatory. Roy currently is a Senior Engineer at the University of Arizona's Imaging Technology Laboratory. Using instrumentation of his own construction, he has discovered hundreds of asteroids and many other objects. He is a co-discoverer of the Earth-threatening asteroid (99942) Apophis.