

L03a **NEO observations at Kiso**

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Near-Earth objects (NEOs) are of interest from two viewpoints: the impact hazard to Earth, and research into dynamics. Astrometric measurements of NEOs are essential for precise orbit determination, which is needed both to allow the objects to be found in the future and also for detailed dynamical studies.

Our observational project, begun in 1996, using the Kiso 1.05-m Schmidt telescope with CCD has become one of the world's main contributors to follow-up astrometry of NEOs. One reason for this is that it can observe fainter than the majority of other (mainly smaller) telescopes doing this work. The software we have developed enables us to identify suitable targets to observe, namely those NEOs whose observation will allow the greatest improvement to orbital accuracy.

During our last observing run, in 1997 November, all recent (i.e., discovered in the previous few weeks) NEOs were observed, with the results quickly distributed by the Minor Planet Center as being of immediate use to other observers; in addition many other NEOs were observed, with the results being of more long term use. Since 1996, we have reported CCD astrometric positions of about 140 objects, including 100 or so NEOs. The project is aimed at follow-up rather than discovery but one NEO has been discovered by chance by another astronomer at Kiso (T. Hasegawa).

Kiso Schmidt photographic plates taken over the past two decades are searched when our software suggests that a recently discovered NEO may have appeared on a past exposure. This allows the observational timespan of such an NEO to be increased greatly, with a corresponding increase in orbital accuracy. In addition we are performing an analysis of the likely number of NEOs detectable in the library of 7000 photographic images.