Solar System object image search: A precovery search engine

S. Gwyn[1], N. Hill[1], and J. Kavelaars[1]

[1]Canadian Astronomy Data Centre

While regular archive searches can find images at a fixed location, they cannot find images of moving targets such as asteroids or comets. The Solar System Object Image Search (SSOIS) at the Canadian Astronomy Data Centre allows users to search for images of moving objects, allowing precoveries. SSOIS accepts as input either a list of observations, an object designation, a set of orbital elements, or a user-generated ephemeris for an object. It then searches for observations of that object over a range of dates. The user is then presented with a list of images containing that object from a variety of archives. Initially created to search the CFHT MegaCam archive, SSOIS has been extended to other telescopes including Gemini, Subaru/SuprimeCam, HST, the SDSS, AAT, the ESO telescopes, and the NOAO telescopes (KPNO/CTIO/WIYN), for a total of 7.6 million images. The SSOIS tool is located on the web at http://www.cadc-ccda.hia-iha.nrc-cnrc.gc.ca/en/ssois/.