

Abstract Submitted  
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**Warning times for potentially hazardous long-period comets** SUSAN MARTINEZ, UTSA, SwRI San Antonio, DAN BOICE, WALTER HUEBNER, SwRI San Antonio — Southwest Research Institute and Los Alamos National Laboratory are developing a program to avert collisions of potentially hazardous objects with Earth. Aggressive methods and continuous alertness will be needed to defend against objects with short warning times. In this study we discuss the threat posed by long-period comets. Although relatively rare but large and fast moving, their detection cannot be predicted because of their long orbital periods. For example, Comet C/1983 H1 was discovered on 27 April 1983, and passed Earth at a distance of 0.0312 AU on 11 May 1983. It has an orbital period of 963.22 years. We have developed a database of long-period comets over the last decade that includes dates of discovery, perihelion passage, perigee passage, and the associated distances. We summarize results of anticipated warning times for long-period comets to present nominal and worst-case scenarios for these potentially hazardous objects, given advances in modern telescopic facilities searching for such objects.

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