

07.07

International Search Program for NEOs

D. Morrison (NASA/ARC)

A NASA-sponsored workshop is currently studying the hazard to Earth posed by impacts of comets and asteroids. This workshop, which was requested by the U.S. Congress, is developing recommendations for an international program to discover and track near-Earth asteroids (NEAs). Previous studies (e.g. the 1981 Snowmass Study) suggest that the threshold for substantial global ecological damage from an impact is at a few thousand Mtn, corresponding to objects about 1 km in diameter. Shoemaker, Bowell, and others estimate at least 1000 objects in this size range with Earth-crossing orbits. Taking a conservative position, the NASA workshop is investigating the problem of determining orbits for essentially all objects (about 10,000) larger than 500 m diameter in a 10-20 year effort. Preliminary proposals call for several dedicated telescopes in the 2-m class with moderately large FOV, large-format CCD detectors, and automatic data processing. Further details of the proposed program will be presented at the meeting. Workshop members are: R. Binzel (MIT), T. Bowell (Lowell), C. Chapman (PSI), L. Friedman (TPS), T. Gehrels (UAZ), E. Helin (JPL), B. Marsden (CFA), A. Maury (Cote d'Azur), T. Morgan (NASA HQ), D. Morrison (NASA ARC), S. Ostro (JPL), J. Rahe (NASA HQ), R. Rajamohan (Indian Inst. Astrophys.), J. Rather (NASA HQ), K. Russell (AAT), E. Shoemaker (USGS), A. Sokolsky (ITA/USSR), H. Smith (UTX), D. Steel (AAT), D. Tholen (UHI), J. Veverka (Cornell), F. Vilas (NASA JSC), and D. Yeomans (JPL).

07.08

The First Workshop on 2060 Chiron: What Manner of Beast is the Centaur?

R. L. Marcialis (JPL/Caltech) and S. J. Bus (Lowell Obs.)

As Chiron was unique among the Centaurs, the object named after him is unique among the numbered asteroids. Half man and half horse, Chiron was known for his goodness and wisdom.

2060 Chiron possesses traits that are a blend of asteroid and comet. Its large size and relatively small orbital eccentricity are atypical of comets, yet one would not expect an asteroid to have a coma, episodic outbursts, nor an orbit larger than Saturn's.

Chiron comes to perihelion in 1996, and is particularly well-placed for Northern hemisphere observatories ( $\alpha \sim 8^h 30^m$ ;  $\delta \sim 11^\circ$  N). In 1991 its  $R$ -magnitude was +15.65.

We announce the first Workshop on 2060 Chiron, held in conjunction with the 23rd DPS Meeting. We invite all interested people to attend, and hope to:

- Encourage photometric observations *throughout* an apparition, not just near opposition. How frequently do outbursts occur?
  - Coordinate observations at sites around the world to provide nearly continuous photometry over the span of a few days. Do the outbursts have characteristic rise and fall times? What do these tell us about Chiron's size and composition?
  - Appeal to the astronomical community in general for assistance. One or two "target of opportunity" images per night will provide important information on Chiron's outbursts between periods of dedicated observations. Now that the 5.9 hr rotational lightcurve is well-characterized, such observations are nearly as useful as complete lightcurves. How frequent are outbursts?
  - Foster communication, cooperation, and collaboration between observers and theorists. Are current models realistic? How can observers test these models? Do other Chiron-like bodies exist?
- For further information, please write or contact the authors at [umpire@ipac.caltech.edu](mailto:umpire@ipac.caltech.edu) (RLM), or [sbus@percy.span](mailto:sbus@percy.span) (SJB).

**MONDAY EVENING****NASA and Planetary Science: Perspectives on the Future (D. Cruikshank, Moderator)****4:00-6:00, Large Conference Room****Panel Discussion****"What is the Role of the Human Exploration Program in the Future of Planetary Science?"****8:15-10:00, Large Conference Room**