

# Impact as a Hazard

## Small Meteorites - Recent Examples

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### ► Fireball observed over Eastern United States on October 7, 1992

- Football sized meteor dropped into trunk of Chevrolet in Peekskill, New York.
- Event observed by thousands attending high school football games throughout region.



The meteorite recovered at Peekskill, N.Y., (41.28 deg. N, 81.92 deg. W) had a mass of 12.4 kg and was subsequently identified as an H6 monomict breccia meteorite (Wlotzka, 1994). The video record suggests that the Peekskill meteorite probably had several companions, however, given the fireball's shallow angle of trajectory the fall ellipse is large. This fact coupled with the harsh terrain surrounds the Peekskill area would suggest that the recovery of related fragments is unlikely.

This photograph, taken by S. Eichmiller in Altoona P.A., was taken after the catastrophic fragmentation of the main meteoroid body. Note the large transverse displacement of the smaller fragments.

The events surrounding the fall of the Peekskill meteorite on October 9th, 1992 are quite remarkable. Not only did the meteorite announce its arrival by hitting a parked car in suburban Peekskill, New York, but also the fireball that preceded the fall of the meteorite was videographed by at least 16 independent videographers.

Eyewitness accounts indicate that the fireball associated with the Peekskill meteorite first appeared over West Virginia at 23:48 UT (+/- 1 min.). The fireball, which traveled in an approximately northeasterly direction had a pronounced greenish colour, and attained an estimated peak visual magnitude of - 13 (comparable to the Full Moon). During a luminous flight time that exceeded 40 seconds the fireball covered a ground path of some 700 to 800 km (Brown et al, 1994).

