Analysis of Great Fireball from Sonic Boom Records on Seismograms

# Yoshiaki Ishihara [1], Shin'ya Tsukada [2], Shin'ichi Sakai [3], Yoshihiro Hiramatsu [4], Muneyoshi Furumoto [1]


One method to determine a fireball trajectory is an analysis of sonic boom records on seismographs. Since the device to record sonic booms is a seismometer, this method can determine trajectory even in daytime. In this study we try to determine trajectories by this method. A total of 17 great fireballs, which were observed in time interval 1996 September to 1998 November, are investigated.

The trajectory of one fireball (Mar. 30, 1998) is determined by sonic boom records.

Fireballs that have the brightness less than magnitude -10 generate only weak sonic booms which have not enough energy to be recorded by seismographs.