

## Meteor train campaign in Japan : Leonids 1999

# Masayuki Toda[1], Masa-yuki Yamamoto[2]

[1] NMS, [2] Astronomy and Geophys., Tohoku Univ.

The Leonids meteor burst was expected in 1998 and 1999 because of the perihelion return of its mother comet of 55P/Tempel-Tuttle after 33 years interval. We have conducted the campaign of simultaneous photographic observations of the meteor train called "Meteor Train Campaign" since 1998 and have established the observation network by several amateur observers in Japan. In 1999, we have successfully obtained 5 persistent train observations over Japan including 3 pairs of simultaneous photographic observations in early morning on Nov.19. In our paper we will discuss the 3-D structures of these persistent trains, its formation mechanism, and especially whether the persistent trains usually form the spiral of 300 m scale, as have been observed earlier, and/or the large spiral structures of 10 km.