

Taurids 2015 - spectra and structure diversity by AMOS

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Introduction

Predicted outburst of Taurid meteor shower based on [1] was also observed by AMOS cameras and by spectral camera AMOS-Spec [2] in Slovak Video meteor Network. More Taurid spectra were obtained during the expedition in Atacama, Chile Nov. 5-13, 2015. The Taurid meteoroid stream and its source have been studied extensively for many years. The stream has been frequently linked with short period comet 2P/Encke along with various near-Earth objects [3, 4, 5, etc.] and even two observed carbonaceous meteorite falls [6, 7]. However, recent studies show rather skeptical results [8, 9].

Here we present spectral, dynamical and physical analysis of Taurid meteor shower from numerous observations. Emission line ratios of Fe, Mg, Na are compared with material parameters and structural characteristics of simultaneously observed Taurid meteoroids. We will discuss the similarity of observed spectral features with chondritic composition, and the dispersion of iron and sodium among observed cases. Their dynamical and physical characteristics with possible implications to parent body(ies) are discussed.

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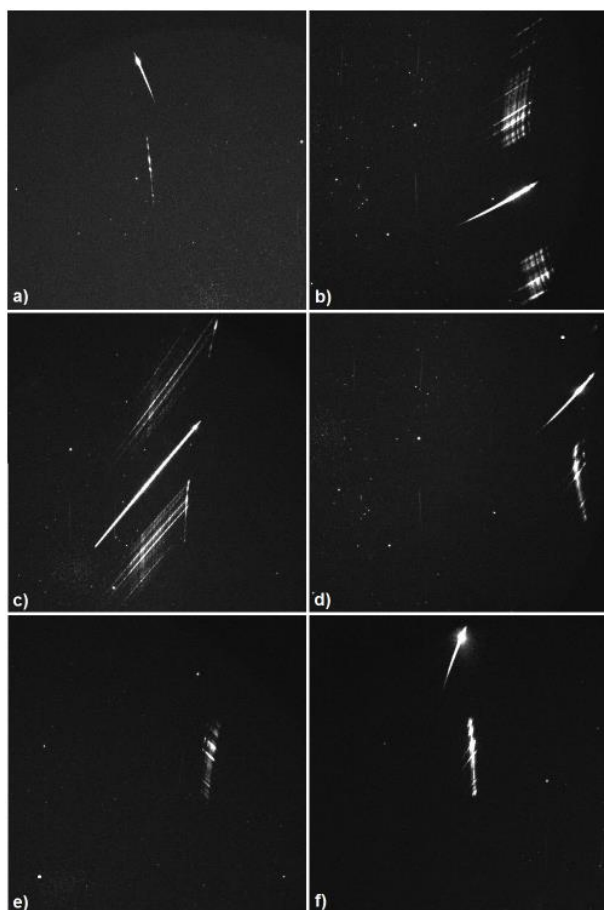


Fig 1 Taurid meteor spectra compositions from Chile 2015.