

April rho Cygnids and comet C/1917 F1 Mellish

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We have examined the recently-established April ρ Cygnids meteor shower (ARC, IAU#348). The ARC was discovered by the Canadian Meteor Orbit Radar survey (Brown et al., 2010), and later confirmed by video observations made by the Cameras for Allsky Meteor Surveillance project (Phillips et al., 2011). As reported by Neslusan and Hajdukova (2014), the stream could be a part of a broader complex of showers, possibly associated with the long-period comet C/1917 F1 (Mellish), which is the known parent body of the December Monocerotids (MON, IAU#019). According to their model of the meteoroid stream originating from the comet, one of the filaments corresponds to the April ρ Cygnids. However, the similarity between the mean characteristics of the predicted and the real showers is not clear.

The present study is based on an analysis of the orbital parameters of the April ρ Cygnids extracted from several catalogues, using an independent identification methodology proposed by Rudawska et al. (2014). The catalogues used include the radio meteor database of the IAU Meteor Data Center (Lindblad, 2003), the EDMOND database (Kornos et al., 2014 a, b), and the SonotaCo catalogue (SonotaCo, 2009). The results of the orbital evolution of the meteoroid stream and the comet, as well as the conclusion as to their common origin, will be presented.

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