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About catalogue of orbit and atmospheric trajectory of 4500 radio meteors brighter $+5^m$

M.Narziev, R.P.Tshebotaryov.
Institute of astrophysics AS Tajikistan, Dushanbe, Buhoro 22, 6. mirhusseyn_narzi@mail.ru

Abstract

Published by this time the majority of catalogues of a radiant, speeds and elements of orbits of meteors, basically, are based on a interpretation of the given radio observations by diffraction-time a method. However the given method is applicable for processing of 15-25 % of observed meteors that leads to loss of the most part of an observed material. Besides, the error of measurement of an antiaircraft corner of a radiant σZr with increase in a corner to 60°÷70 ° will be increased in 2-3 times, and at the further increase in a corner the error grows even faster, so measurements lose meaning.

In 1968-1970 in action period of the Soviet equatorial meteor expedition to Somalia, simultaneously and radio observations of meteors in HisAO from four points have been resulted. For interpretation of the radar data the bearing-time method radio method developed and applied for the first time in Tajikistan is used. This approximately twice increases number of the measured radiant and speeds. What's more, the error of measurement of an antiaircraft corner does not depend on antiaircraft distance of a radiant. The velocity of meteor is determined by the bearing-time method, and by the diffraction picture.

In the catalogue along with a radiant, speeds and elements of orbits, for the first time the height, value of linear electronic density, radio magnitude and masses of each of 4500 radio meteors registered since December 1968 till May, 1969 are resulted.