

Interactive comment on “Canadian Meteor Orbit Radar (CMOR)” by A. R. Webster et al.

Anonymous Referee #1

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The paper presents a description of a new meteor radar system, CMOR, and the method used for the determination of the velocities and orbits of meteoroids in space and represents a valuable contribution to meteor research. The first results obtained and presented in the paper, from the period of the observation of the 2002 Leonid meteor shower, document a great effectiveness of the system. With the effectiveness this system is comparable to the AMOR facility operating in the southern hemisphere, designed to provide a continuous survey of meteoroids orbits. The CMOR, at a continuous operation in the northern hemisphere could greatly contribute to our knowledge of the meteoroid population near the Earth's orbit.

The paper is well written and I recommend its publication on ACP in full extent. What follows are just few notes to the authors or some technical corrections.

1. The abstract presents information about a radial resolution of 3 km, however, no quantitative estimate or a discussion of this value is given in the text.

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2. It might be of interest to know since when the system is operating and with what program. Will it operate continuously, or in selected periods only?
3. For a standard reader, it would be better to explain what the abbreviation AOA in the last row of the Fig.3 caption means.
4. As cited in the manuscript, several thousand echoes per day are recorded by the radar, so one can expect that about a thousand new meteor orbits can be obtained (about 25%). How it is solved with the orbit determination when two or more measurable meteor echoes appear at the same time?
5. During an apparition of a long enduring echo multiple reflections from the same meteor can appear and its orbit can be measured more times. When the output is automatic how it is recognized?
6. Equation (3): the meteor direction, u , is given by the vector product $d.p$. The product sign is designated as an index "x".
7. Page 4, r. 14: "... 165 echoes is shown in Fig. 10, giving an estimate of 69.8 km/s". However, a value of 68.7 km/s is presented in Fig. 10. Which value is correct?

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