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The Chelyabinsk Meteorite Orbit, Trajectory and Recovery

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Abstract

We performed a detailed analysis of available video records of the fireball observed over Chelyabinsk region on February 15, 2013. We have reconstructed deceleration rate, atmospheric trajectory and corresponding object's orbit in the solar system with account for [1, 2]. Based on our solution we make further prediction on the strewn field resulted after this impact, and, in particularly, make landing site prediction for 2 largest fragments. We compare these results with details and position of over 500 found Chelyabinsk meteorite fragments as well as with other relevant estimates [3, 4].

References

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