

Asteroids colliding with the Earth
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Abstract:

Studying the collision of celestial bodies with the Earth is important. Where it could prepare us to see the most dangerous impacts of colliding with the Earth and how could we keep our planet from this real disaster. Although there are not many recorded collisions, colliding with the Earth may cause real disasters. The method of calculating the risk of collision with the Earth is done by the famous scale of determining the probability of the collision risk called Palermo scale. This method shows the probability of the risk ratio for these asteroids if they collide with the Earth. The range of the risk ratios is limited by this condition: if the risk value is higher than zero, this means that the risk is 100 times more likely than negative probability values. Negative values do not show that there is a risk of collision with the Earth, but requires careful follow-up in case of rising to the positive values. In this project, we present an asteroid Apophis 99942; this is the most dangerous asteroid that may collide with the Earth. The possible collision date is April 13, 2029 with a possible risk of 1.10.

Keywords: Asteroid: collision, risk scale-Palermo scale, free-fall