Meteor Terminology poster translated into different languages

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The American Meteor Society (AMS) has created an educational poster that defines the major terms of the meteor terminology. This poster is an educational tool made available for free on the AMS website. We offer this poster to be translated and shared among the IMO members.

1 Introduction

In a constant effort to create excitement about Science and to increase the level of the general population's knowledge about Meteor Astronomy, the American Meteor Society (AMS) has created an educational poster about Meteor Terminology (Figure 1). This poster illustrates and defines the following terms and concepts:

- Comet
- Asteroid
- Meteoroid
- Meteor
- Bolide
- Fireball
- Meteor Showers
- Meteorite

2 Definitions

Some terms of the Meteor Science suffer from having different definitions depending on the scientists who are using them. There is a lack of consensus in our community about the definition of *meteoroid* (Rubin and Jeffery, 2010) or *bolide*[1] (Belton, 2014) for instance.

In an educational perspective, we decided to use the most commonly used and the most comprehensible and consensual definitions:

Comet: A solid body made of ice, rock, dust and frozen gases. As they fracture and disintegrate, some comets leave a trail of solid debris. *Nucleus (solid part): tens of kilometers, Tail: millions of kilometers.*

Asteroid: Small rocky, iron or icy debris flying in space. *From 1 meter to hundreds of kilometers.*

Meteoroid: A small asteroid. *From microns to 1 meter.*

Meteor: The light emitted from a meteoroid or an asteroid as it enters the atmosphere.

Fireball: A meteor brighter than the planet Venus.

Bolide: The light emitted by a large meteoroid that explodes in the atmosphere.

Meteorite: A fragment of a meteoroid or an asteroid that survives passage through the atmosphere and hits the ground. *From few grams to several dozen of tonnes.*

Meteor shower: An annual event, when the Earth passes through a region having a great concentration of debris, such as particles left by a comet. From Earth, it looks like meteors radiate from the same point in the night sky.

We understand these definitions can be discussed and we encourage all IMO members and all scientists of the field to share their opinion about these definitions with us.

3 Translation

The AMS Meteor Terminology poster has already been translated in Croatian by Vanesa Ujčić Ožbolt and in French by Vincent Perlerin. The translated versions of the poster are available at www.amsmeteors.org/resources/posters/. All the versions of the poster will be soon available for free on the new IMO website and on each IMO organization members' website.

Sometimes, a literal translation is impossible. For instance, the term *Fireball* cannot be directly translated in French as the difference between a *Fireball* and a *Bolide* doesn't exist in French. For the French version of the poster, we decided to define the explosion of a fireball – "Explosion de bolide".

We encourage all the IMO members to send us the translation of the terms defined in the poster in their own language. Once approved, we will send them a PDF of the poster that they will be able to print and share among the community and beyond.

[1] "*Introduction: What is a Bolide?*". (1998). woodshole.er.usgs.gov/epubs/bolide/introduction.html.

4 Design

The poster has been designed to dramatize and illuminate scientific principles. The graphical representation of each phenomenon doesn't necessarily reflect the reality. Once again, we would be very happy to receive feedback and suggestions from the members of the Meteor Science community.

Acknowledgments

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References

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Rubin A., and Jeffrey N. (2010). "Meteorite and meteoroid: New comprehensive definitions.". In *Meteoritics & Planetary Science*, **45(1),** 114–122.

Figure 1 – English version of the AMS poster "Meteor Terminology".