

ON THE ESTABLISHING OF A PLANETARY SCIENCE TERMINOLOGY AND NOMENCLATURE SYSTEM IN A LANGUAGE OTHER THAN ENGLISH

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Abstract. As part of the work of the Planetology Group of Eötvös University, Budapest, we have started to make the Hungarian terminology and nomenclature system of planetary bodies. This is not a simple translation or transliteration, but it brings up problems that has no "right" or "wrong" answer, so we have to decide on the rules of orthography used in planetary science.

Introduction.

The Planetary Sciences in the last decades has accumulated an amount of knowledge that is comparable to other Earth Sciences. The study of planets is not any more a computation of orbital data, but the investigation and description of surface features of dozens of planetary bodies, including our own Earth. This way, it is only an extension of the present Earth sciences like geography, geology, geophysics, meteorology etc.

In Hungary, Planetary Science studies has been made for decades, but especially today, numerous popular scientific works are published, and the subject of planetology (and also exobiology linked to it) is taught in more and more secondary schools and universities. This makes a demand for a Hungarian language terminology and nomenclature in the relatively new discipline of Planetology. It is needed because the present terminology of geosciences is not adequate for the description of the surface conditions and structures in other planetary bodies. In the mean time it has to be in accord with the Earth-based system.

Since this is areal discipline in its subject, it is of high importance that the areas studied be identifiable easily, unambiguously and descriptively. This makes the translation/transcription of IAU's nomenclature our second goal.

This is not a simple transliteration of the proper names used in planetary body nomenclatures, but the task is also the setting of the basic rules used in the making of Hungarian nomenclature system.

It would be useful, if the system would be useable for any body of the solar system. It has to fit into the system of both the IAU's nomenclature and the Hungarian geographic name system [2]. This makes a double task: to make a system that is appropriate both linguistically and scientifically.

The need for this work came when we formed a Planetology Group at Eötvös Loránd University, Budapest and has begun our activity by editing a Hungarian Planetology textbook and a map series for our students [3].

One goal of this work is also to work up recommendations for the Commission on Planetary Cartography of the International Cartographic Association. A later goal can be the making of a multilingual terminology and nomenclature system in English, Russian, Arabic, Chinese, Japanese and other languages.

For such work, many examples are available from different disciplines, experiences that can be used for our future work.

The establishing of a terminology and dictionary.

Like in the case of Planetology, the undersea features have also an artificially created nomenclature. Its Hungarian translation was made by Márton M. et al. [1]. The undersea topography is especially important in a planetary view in the case of Earth, these fit best into the planetary approach.

The names of features discovered in international waters have no language preference, though the naming is usually made in English. On other bodies of the Solar System, the naming is in Latin, where the proper names can be chosen from a thematic group (like Fire Gods, for example), determined by IAU. The international approach is well defined by the choice of Latin as the basis of this system, but in everyday use, and especially for middle school education and popular science, the use of a nomenclature system in the mother language would be preferred.

The task is to make the surface feature nomenclature system of planetary bodies:

(1) The nomenclature system: the common name part of the names, based on the IAU system and the already used Hungarian nomenclature system. Here, there is a need for creating new words for features that has no parallel on Earth (e.g. facula, fossa, catena); and for creating new names for those features that can be translated, but it would call up an improper view of the feature.

For this work it is also advisable to make a system of large- medium- and small scale features (or landscapes). (see later)

It is important, that when choosing a certain word for translation, we bear in mind all genetically or in the nomenclature similar features on other planets or moons.

In the making of the nomenclature it is advisable to have respect to both Russian and American use of planetary nomenclature and terminology.

(2) The rules of transliteration of proper names. In the case of names which originally use an other than Latin alphabet (Russian, Indian, Chinese, Arabic);, we have to find the original spelling, and according to the rules of Hungarian transliteration of these alphabets, we have to re-spell it into Latin letters, but in this case, using our rules of orthography. A decision is needed whether we want to translate the meaning of the common Latin words or not (like *Caloris* or *Borealis*). It should be decided whether in Hungarian we want to use the Latin spelling of Greek names of the widely used Hungarian spelling of the original Greek forms instead (*Kopernikusz* vs. *Copernicus*). Now, for the names of planets, we use a form that is close to the pronunciation of the Latin names which in its written form is happen to be closer to the Greek translit-

eration rules. So a third variation can be to follow the pronunciation of the latin terms. It is important to be aware of the possessive latin forms of proper names.

A specially problematic case is the Maria and Mountains of the Moon. The Full Hungarian name system is widely accepted (Esők tengere - Mare Imbrium. The mountain names are derived from the Earth mountain names (like Kárpátok for the Carpathians). As far as we know, the situation is similar in other Central European countries. This is an other important to create a rule for the translation of those names which originates from a geographic feature of Earth. Should it be similar, or, on the contrary, should it be distinguished from its Earth analogue in its name, too.

The „final word” will be said by the Hungarian Academy's Hungarian Linguistic Commissions Geographic Name Commission, based on the decision of an ad hoc group of scientist and linguists.

(3) The terminology system. It would be wise - even though not necessary - to create the Hungarian terminology of the technical words of Planetary Science. In this case we have to find/create Hungarian analogues to English terms. At this moment there are parallelly used words for the same terms and in other cases the Hungarian words are born *in situ*, at the lectures. The situation is somewhat similar in printed publications, where certain authors prefer a certain terminology, while others prefer other sets. (And some are more international than others).

(4) Locating the features on the map. At this moment there is no standard, uniform, hierarchic nomenclature system in which the forms (or landscapes) cover the whole surface of a planetary body. This would be important for the identification of any point on a surface using one geographic name, like in the case of Earth. IAU identifies every feature using one coordinate pair and one datum for the size of the feature. It would be also needed to determine if the feature is radial, linear or areal. It would be important to draw the borders of the features.

It is important to make a hierarchic system in which in the different landscape levels (especially in the large scale (large forms) since these data are available globally) cover the whole surface, so that there does not be „holes” between the land forms.

At the moment the scientific literature identifies features by one pair of coordinates, which is (1) not always enough, since the areal size it is referring is not known, and (2) impractical in education, and popular science, since it tells very little to a non-scientist. Of course for such a system it is needed that at least the large forms be known for the reader, in our case, in its Hungarian (easily memorizable) form.

References

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