

RULES AND GUIDELINES FOR NAMING NON-COMETARY SMALL SOLAR-SYSTEM BODIES

IAU WG Small Body Nomenclature

Version 1.0 (2021 December 20)

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Naming of Non-Cometary SSSBs

INTRODUCTION

The International Astronomical Union (IAU) is charged with the responsibility of approving names for small solar-system bodies (SSSBs) by international agreement. The IAU's Working Group Small Body Nomenclature (WGSBN) is the body that carries out this charge.

Small bodies can be named by their discoverers once their orbits are sufficiently well-known and small body numbers have been assigned by the Minor Planet Center. Small bodies are uniquely identifiable by their provisional designations assigned at discovery and later by their MPC number designation. The addition of a name to a newly-numbered small body is not required for identification. However, names have traditionally been assigned to many small bodies and have drawn from mythological characters, planetary scientists, astronomers, and accomplished scientists, engineers, and technicians in other fields. People who have made contributions to the arts, sports, medicine, and other aspects of society are also recognized. Discoverers have also used names of personal significance to them.

The naming of non-cometary small solar-system bodies (which includes objects known as asteroids, minor planets and asteroid-comet hybrids, and their satellites) is governed by the following Rules and *Guidelines*. Prior guidelines have been lacking in clarity, making proposers unsure of whether a proposal will be deemed suitable, and leaving open the possibility of different personal interpretations as to the suitability of a name or citation by WG members. This document is intended to make the naming rules and guidelines much clearer, for both the WG members and for name proposers. It will be updated, as necessary, if it is found to be lacking. Updates will be proposed by WG members (perhaps based on feedback from discoverers) and will require a majority vote by WG members for approval.

Although the main goal of the IAU is to assign names to planetary bodies for purposes of identification, the personal view of discoverers is that they do it for commemoration and this difference in viewpoint has to be recognized and appreciated. IAU policy on designations is to require two identifiers for each object. For most numbered objects, there is a number and a principal provisional designation, so a name is a third identifier. But, for low-numbered objects, discovered before 1892, there is no principal provisional designation, and the name is the second identifier.

Existing names that are in violation of these rules and guidelines will not be changed. They are "grandfathered" in. A future document will describe the procedure for the removal of names and/or citations.

In this document, "named discoverer" or "named individual" refers to an individual being listed as the (co-)discoverer of a numbered minor planet, and "survey" or "team member" refers to any other form of discoverer.

RULES AND GUIDELINES

The following Rules and *Guidelines* were adopted on 2021 December 20.

1: NAMING PRIVILEGES

- Discoverers of small bodies, whether named individuals or surveys, as recognized by the Minor Planet Center, have the privilege of proposing a name for ten years after an object is numbered.
- Ten years after numbering, the WGSBN may assign a name to an unnamed object. However, consultation with the discoverer by the WG is still encouraged as a matter of courtesy, for objects of special interest.
- Naming privileges for discoverers are not continued after their death. Existing name proposals from deceased discoverers remain in the voting system until they are approved or rejected.¹

2: NAMES

- Names become official when they are published in the *WGSBN Bulletin*.
- Names are limited to a maximum length of 16 characters.²
- Names must be in the modern Latin script.
- Names as proposed must contain any diacritical marks and other extensions to the Latin script that are present in the source name.³
- Names must not match the existing name of a satellite of a major or minor planet.
- Names must not match the existing name of a constellation.
- Names must differ from any similar name by at least one letter.⁴
- Names proposed by discoverers cannot contain their own surname.
- Named discoverers may propose names of close relatives: spouses; children; grandchildren; parents; grandparents; siblings; and cousins.
- Names of close relatives (as for named discoverers) proposed by survey team members cannot contain their own surname.
- First names or surnames proposed as names should be given as normally spelled.
- If full names of people are used as names, the various parts of the name must be concatenated, with spaces, hyphens, apostrophes and embedded capitalization removed. E.g., "Ewen McTeagle" would become "Ewenmcteagle".
- Geographic names should be proposed as normally spelled. Alternatively, a proposer may elect to concatenate multiple parts of a name, if they so desire, but the name is then subject to the concatenation rules for personal names.

1 Naming privileges cannot be willed to anyone else. This is to avoid the unlikely but possible situation where courts in multiple jurisdictions (countries or states) reach contradictory decisions in a disputed will. Disputes between divorced couples have already occurred, fortunately without courts getting involved.

2 Exceptions to the length restriction are only permitted when a named lost periodic comet is identified with a designated but unnamed minor planet. In such cases, the name of the comet is applied to the minor planet. The only instance of this so far was the 17-character name assigned to (4015) Wilson-Harrington = 107P/Wilson-Harrington.

3 If in doubt about a name that you wish to propose, please contact the WG *before* submission.

4 Accented characters are treated as if they were unaccented. So 'Sämple' would not be acceptable if there was already a name 'Sample', but 'Sanple' or 'Sampley' would be acceptable. Capital and lower-case versions of the same letter are treated as the same for comparison purposes.

- *Names of pet animals are discouraged.*
- Names of political or military persons or events are not permitted until 100 years after the death of the person or the event occurred. After that time, any such names may still not be approved at the discretion of the WGSBN.
- Names of individuals known primarily for business activities are also not permitted until after their death. They should also have done some societal good, which must be mentioned in the citation.
- Names of a commercial nature are not permitted.
- Names cannot contain numbers. This includes numbers as digits (e.g., "4"), as words ("four") or as Roman numerals ("IV" or "iv")⁵.
- Generic words, such as "university" (English) or "daxue" (transliterated Chinese), are strongly discouraged in names. Use contractions wherever possible, such as "uni".
- *Names that are acronyms are discouraged. Any such names must be pronounceable and unique. As an alternative, creative variations written as a normal word are encouraged. Creative variations are required if the acronym can only be pronounced by spelling out the letters.*⁶

3: CITATIONS

- Citations are limited to a maximum length of 360 bytes. If the citation is pure 7-bit ASCII, this will be 360 characters. If there are UTF-8 characters present, it will be fewer characters.
- Citations must be written in English. Short phrases in other languages may be included, if appropriate.
- Citations for close relatives of named discoverers can be brief. Simply stating name, dates and relationship is sufficient, *although adding an additional detail about an adult person in the citation is encouraged.*
- Citations for close relatives of non-named discoverers must give additional details.
- Citations for persons must include birth year (and, if appropriate, a death year).⁷
- Citation must be written as one or more complete sentences. Bullet points are not acceptable.
- Mention of specific names of commercial companies must be avoided.
- All political statements are disallowed.⁸
- Blatant self-promotion of the discoverer is not permitted. Some self-reference may be necessary to explain the reason for the naming.
- Citations should be original. Copying from on-line sources (e.g., Wikipedia) is discouraged.
- Citations should be comprehensible to a worldwide audience.

5 Geographical names that contain numbers as words (e.g., "Four Corners") are acceptable.

6 NASA is an example of a pronounceable acronym, IAU is not (it is spelled out as "eye-eh-you").

7 For those with only a birth year, the correct form is "(b. 1975)". For birth and death dates, the correct form is "(1844-1923)". Forms such as "(c. 1500-1576)" (circa) or "(fl. 300 BCE)" (flourished) or "(bef. 1500-1549)" (before) or "(1745-aft. 1801)" (after) are acceptable. For dates before the year 1, use "BCE"; use "CE" for end dates that span the boundary between the two eras.

8 Political statements include support/criticism of a country, its leaders or political institutions, or its judicial system, as well as acts of protest. This would include mentioning that someone was imprisoned unjustly or without trial, even if in a country known for such abuses.

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- Avoid acronyms in citations.⁹
- The proposer is responsible for ensuring citations are factually correct. The WG cannot guarantee to fact check every statement.
- Citations are intended to be correct at time of publication. They are not updated to reflect future changes. Corrigenda are published only to correct errors present at time of publication.

4: SPECIAL NAMES REQUIRED FOR SPECIAL OBJECTS

The following special objects must have names that match the given theme. Objects requiring mythological names may draw from the myths of any culture and may include modern myths (including fictional) as well as more ancient sources. Whenever possible, representatives of the culture from which the mythological name is drawn must be consulted to ensure that the use of the name for a small body is non-offensive.

In the table below, the defining orbital elements are indicated by their standard symbols: q , perihelion distance; and a , semi-major axis.

NEAs ($q < 1.15$ AU)	Mythological names, except those associated with creation or the underworld. Distant Amors ($1.15 < q < 1.3$ AU) may have routine names.
Jupiter Trojans	Names from the Trojan War (if H_v brighter than 12.0) or names of Olympians and Paralympians (if H_v fainter than 12.0).
Neptune Trojans	Names of mythological Amazons.
Plutinos	Mythological names connected to the underworld.
Centaurs	Mythological Centaurs ($a < 30$ AU, $q > 5.5$ AU), mythological Chimeras (if $q < 30$ AU).
TNOs	Mythological names. Names associated with creation myths are encouraged for Classical objects. “TNOs” includes all Classical, Resonant, Detached, and Scattered Disk objects, except as explicitly noted above.

Plutinos are objects that, like (134340) Pluto, are in 3:2 mean-motion resonance with Neptune.

For athlete names used for small Jupiter Trojans, the shortest unique version of the name (using just the surname or forename, if possible) is preferred over a concatenated full name.

5: DIVERSITY OF PROPOSED NAMES

The IAU is an international organization. Names should be proposed in a balanced way, with wide geographical distribution, as well as gender representation. E.g., for small Jupiter Trojans (see section 4), this means considering both male and female athletes who participated at summer or winter Olympics or Paralympics: as of 2016, athletes from 225 current or obsolete National Olympic Committees have participated in one or more summer Olympics.

⁹ A list of acronyms that can be used in citations without requiring explanation is included in each *Bulletin*, as well as being available from the WGSBN website.

Multiple proposals related to one country that is over-represented in current names may be released for voting to the WG in batches over a period of months.

6: HISTORICAL CONSIDERATIONS

There are many views held by a majority, or enshrined in law, in centuries past that are unacceptable to us in the modern day. Proposed names of historical figures must be judged by the standards of their lifetimes, and any distasteful actions or opinions must be weighed against the merits for which the naming is being considered.

However, historical persons whose acts were in stark contrast with current values (being involved in, e.g., the slave trade, genocide or eugenics) will be judged as unacceptable.

NAMING OF SATELLITES

The WGSBN is responsible for naming satellites of most small solar-system bodies (see next section for the exception). Names proposed for such satellites should be related in some way to the name of the primary. Provisional designations for newly-reported satellites are the responsibility of the IAU Minor Planet Center.

The naming of satellites of the major planets is handled by the WG Planetary System Nomenclature (WGPSN).

NAMING OF DWARF PLANETS & THEIR SATELLITES

The naming of dwarf planets and their satellites is handled jointly by the WGSBN and WGPSN. Proposals for names of such objects must be submitted to both WGs.

ACCEPTANCE OF PROPOSALS

Proposed names are accepted and published in the *WGSBN Bulletin* if, at the time that preparation begins on a specific batch (a date that is communicated to WG voting members well in advance), the number of votes cast is as follows:

- 6 for, 0 against;
- 7 for; 0 or 1 against;
- 8 for; 0 or 1 or 2 or 3 against;
- 9 for; 0 or 1 or 2 against;
- 10 for; 0 or 1 against; or
- 11 for.

A proposal that would qualify for publication, but which has one or more claims of a rules violation, will be held over. If the claim is deemed valid, the proposal will be rejected. If the claim is not valid, the proposal will be accepted, although publication may be delayed to the following *Bulletin*.

If a request for announcement on a specific date or in a specific month has been made, accepted proposal(s) will be held over until a later *Bulletin*. Single requests for a specific date may not be possible: where feasible, the approved name will appear in the last *Bulletin* before the specified date.

CONTACTING THE WGSBN

Please address all queries regarding nomenclature matters of small solar-system bodies to the WGSBN using the e-mail address contact@wgsbn-iau.org.

VERSION INFORMATION

This is version 1.0 of this document, dated 2021 December 20.

The version number consists of a major identifier, a period, and a minor identifier.

Corrected typos will update the minor identifier.

New or changed rules or guidelines will update the major identifier.

VERSION HISTORY

1.0	2021-12-20	First public release
0.6	2021-11-27	Sixth draft version for WG member consideration.
0.5	2021-11-25	Fifth draft version for WG member consideration.
0.4	2021-11-23	Fourth draft version for WG member consideration.
0.3	2021-11-23	Third draft version for WG member consideration.
0.2	2021-11-16	Second draft version for WG member consideration.
0.1	2021-11-06	Draft version for WG member consideration.