MPEC Editorial Notices

58 notices, newest MPEC first. The text is taken from the locally stored Minor Planet Electronic Circular source files.

MPEC 2026-K125: EDITORIAL NOTICE: digest2 population model update

https://www.minorplanetcenter.net/mpec/K26/K26KC5.html

M.P.E.C. 2026-K125 Issued 2026 May 29, 14:43 UT

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Prepared using the Tamkin Foundation Computer Network

URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: digest2 population model update

The Minor Planet Center (MPC) is announcing an update to the population model of the "digest2" code used for scoring tracklets submitted to the Near-Earth Object Confirmation Page (NEOCP). Tracklets with digest2 scores greater than 65 are eligible to be posted to the NEOCP. These updates will become operational on Thursday, June 4th, 2026, at 14:00 UTC.

The MPC updates the population model (digest2.model.csv) to align with the current completeness of the discovered minor planets, which stands at 1.5 million orbits. In recent years, the updates have become more frequent due to the rapid increase in the number of discovered objects, thanks to the dedicated efforts of large surveys. We expect the updates to become even more frequent when the Vera Rubin Observatory (LSST) and NEO Surveyor commence routine operations. The differences introduced by these updates are expected to be minimal.

The digest2 source code and data files can be retrieved from https://github.com/Smithsonian/mpc-public

MPEC 2026-J142: EDITORIAL NOTICE: Requesting observations of Trojan asteroid mutual events

https://www.minorplanetcenter.net/mpec/K26/K26JE2.html

M.P.E.C. 2026-J142 Issued 2026 May 15, 21:58 UT

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Prepared using the Tamkin Foundation Computer Network

URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: Requesting observations of Trojan asteroid mutual events

H. Levison, J. Spencer, M. Buie, S. Marchi, Southwest Research Institute; K. Noll, Planetary Science Institute; T. Statler, NASA Headquarters, and the Lucy Mission Team report the likely detection of a mutual shadowing event between (15094) Polymele and its unnamed satellite. The satellite was previously detected via two stellar occultations, in 2022 and 2023. The apparent shadowing event was detected as an unexpectedly deep dip in Polymele's lightcurve during routine lightcurve observations from the Lucy spacecraft, which will encounter Polymele on September 15 2027. The event lasted from 2026 March 29.441 to March 29.757 UT, with maximum depth of 25%. The event duration is consistent with a mutual event, given available constraints on the satellite's orbit, but inconsistent with being part of a rotational lightcurve, given Polymele's estimated rotation period of 11.5 hours. Orbit fits to this event and the previous occultation detections imply that this was a shadow event, likely an eclipse of the satellite by Polymele, rather than an occultation. Therefore subsequent similar events, and their counterparts (likely transits of the satellite's shadow across Polymele) should also currently be detectable from Earth. Additional observations of these events are strongly encouraged, as they would greatly improve the knowledge of the size and orbit of Polymele's satellite prior to the Lucy encounter. This knowledge will not only allow for improved science planning, but will mitigate the risk of the satellite interfering with Lucy's autonomous target tracking.

The available orbital constraints do not uniquely determine the satellite orbital period, but constrain the period to two likely values, 14.99487 +/- 0.00055 or 13.11343 +/- 0.00045 days, allowing probabilistic predictions of the mid-times of future events, given below. Probabilities decrease with time due to the expected end of the eclipse season. Event durations are difficult to predict, but will likely be shorter than the 7.6 hour event observed by Lucy on March 29, and will decrease as the season advances. Event depths will also decrease from the 25% depth of the March event, and in addition may be shallower as seen from Earth. Mid-time uncertainties are always less than 15 minutes. The event type is given as "E" for eclipses of the satellite by Polymele, and "T" for transits of the satellite's shadow across Polymele. Polymele's V magnitude is currently 19.1, fading to 20.0 by mid-August. More detailed information, including predictions of possible occultation events in addition to these shadow events, will shortly be provided at https://lucy.swri.edu/polymele-mutual-events-2026.html

Predicted Mutual Event Midpoints in year 2026

Time (UT)	Probability	Type
May 20.981	0.089	E
May 21.010	0.508	T
May 27.539	0.075	T
May 28.508	0.440	E
Jun. 03.096	0.057	E
Jun. 05.006	0.362	T
Jun. 09.653	0.047	T
Jun. 12.504	0.304	E
Jun. 16.210	0.036	E
Jun. 20.002	0.250	T
Jun. 22.768	0.028	T
Jun. 27.500	0.190	E
Jun. 29.325	0.021	E
Jul. 04.999	0.141	T
Jul. 05.883	0.016	T
Jul. 12.440	0.012	E
Jul. 12.497	0.103	E

Jul. 18.997 0.009 T
Jul. 19.995 0.074 T
Jul. 25.555 0.008 E
Jul. 27.494 0.054 E
Aug. 01.112 0.006 T
Aug. 03.992 0.037 T
Aug. 07.668 0.004 E
Aug. 11.490 0.025 E
Aug. 14.225 0.003 T
Aug. 18.988 0.019 T
Aug. 20.778 0.001 E
Aug. 26.486 0.013 E

MPEC 2026-J119: EDITORIAL NOTICE: DELETION of 2026 JG2

https://www.minorplanetcenter.net/mpec/K26/K26JB9.html

M.P.E.C. 2026-J119 Issued 2026 May 14, 16:14 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: DELETION of 2026 JG2

The designation 2026 JG2, announced in MPEC 2026-J83 on May 12, 2026 UT, is being retired.

Initially reported by Palomar Mountain--ZTF (I41) on May 10 UT, the object was posted on the NEOCP under the temporary designation ZTF10Do and was rapidly followed up by other stations. While the object remained on the NEOCP, members of the community attempted additional follow-up and informed the MPC that, using the ephemeris available at that time, their attempts had not been successful.

While Minor Planet Center staff were investigating this issue, the object was designated through its automated NEOCP processing system. After receiving feedback from astrometry submitters indicating that some follow-up data were incorrect, the MPC has decided to retire the designation 2026 JG2. The object will be listed as omitted.

The MPC remains grateful for the continued contributions and feedback from all astrometry submitters, and staff is working actively on improving its automated processing so that cases like this can be addressed promptly. At the same time, we ask that users submit only high-quality astrometry, especially to the NEOCP. We also encourage submitters to exercise caution when relying on astrometry derived from stacked images, particularly when the source object is faint, diffuse, trailed, or otherwise difficult to measure reliably. Incorrect data can shift the orbital solution enough to prevent follow-up observers from recovering the object.

MPEC 2026-E23: Editorial Notice: New digest2 repository and package

https://www.minorplanetcenter.net/mpec/K26/K26E23.html

M.P.E.C. 2026-E23 Issued 2026 March 5, 14:50 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

Editorial Notice: New digest2 repository and package

digest2 is the MPC's near-Earth object (NEO) classification tool, designed to evaluate newly submitted tracklets and provide a probabilistic score indicating the likelihood that an object belongs to a dynamically interesting population, particularly NEOs. It is widely used by survey teams and follow-up observers to prioritize candidates for rapid confirmation.

The digest2 repository has been migrated from Bitbucket to the mpc-public GitHub repository: https://github.com/Smithsonian/mpc-public/tree/main/digest2

On May 1st, 2026, the MPC is going to fully deprecate the Bitbucket version. We strongly recommend the community to switch to the use of the new repository as soon as possible, before May 1st.

As part of this transition, we have modernized the distribution by packaging digest2 as an installable Python package, making it straightforward to incorporate into automated workflows and analysis pipelines. We have also developed a Jupyter notebook that demonstrates how to install, configure, and run digest2, with practical examples illustrating how to interpret its output. This effort is aligned with our broader documentation and infrastructure modernization, as already explained in the MPC's new public documentation section.

We also addressed a bug in digest2 that was reported by a member of the community, and we thank them for bringing it to our attention. In the process of reviewing the code, we improved the magnitude conversions to the visible V band to ensure greater consistency and accuracy in the scoring procedure. In addition, the migrated code makes available the upgrades to digest2 announced in Veres et al (2023), that allow data to be ingested in the ADES format, and for the evaluation of observation-level uncertainties as input in ADES format data.

To validate the updates, we performed a systematic comparison between the previous and revised implementations. The differences in the resulting scores are summarized in two histograms in Fig. 1, which illustrate the overall impact of the changes and confirm that the updates behave as expected. The few visible differences are to be attributed to the improved band conversions.

MPEC 2026-B195: Editorial Notice: TESS Observations of 3I/ATLAS

https://www.minorplanetcenter.net/mpec/K26/K26BJ5.html

M.P.E.C. 2026-B195 Issued 2026 January 27, 20:01 UT

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Editorial Notice: TESS Observations of 3I/ATLAS

On behalf of NASA's Transiting Exoplanet Survey Satellite (TESS) team, we announce the availability of the first data from the TESS's observations of interstellar comet 3I/ATLAS, collected over 15-22 January 2026.

TESS is a wide-field imager (21 arcseconds per pixel over a 96 degree x 24 degree field of view) with a broad optical bandpass (600-1000 nm) collecting precise and stable photometry at fast cadence (20-s, 120-s, and 200-s).

TESS data are calibrated and publicly archived with no proprietary period at MAST, with the first set of 3I/ATLAS data products from the initial 18 hours of observations taken during January 15 available now. Additional data taken during January 18-22 will be archived at MAST as soon as that data is downlinked from TESS and calibrated.

For more information, including resources to help new TESS users get started with this dataset, please see recent posts on the TESS Science Support Center website: https://heasarc.gsfc.nasa.gov/docs/tess/ or email their help desk at tesshelp@bigbang.gsfc.nasa.gov.

MPEC 2026-A89: EDITORIAL NOTICE: Revised headers of MPECs now in use

https://www.minorplanetcenter.net/mpec/K26/K26A89.html

M.P.E.C. 2026-A89 Issued 2026 January 12, 21:26 UT

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EDITORIAL NOTICE: Revised headers of MPECs now in use

With this Minor Planet Electronic Circular (MPEC), the revised MPEC
header, as announced in MPEC 2026-A23 and the October 2025 newsletter
is now in use.

MPEC 2026-A25: EDITORIAL NOTICE: HOW TO USE THE MPC HELPDESK

https://www.minorplanetcenter.net/mpec/K26/K26A25.html

M.P.E.C. 2026-A25 Issued 2026 January 8, 00:35 UT

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Prepared using the Tamkin Foundation Computer Network

MPC@CFA.HARVARD.EDU
URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: HOW TO USE THE MPC HELPDESK

As part of our legacy system, the MPC maintained a general contact e-mail address (mpc@cfa.harvard.edu) that users could use to reach us. With the implementation of our Helpdesk Portal we now strongly encourage all users to communicate with us through the helpdesk rather than by direct e-mail. Users should likewise not e-mail individual MPC staff members directly; using the helpdesk ensures that your request is seen and assigned to the person most suitable for resolving the issue/request. We would like to thank the many users who are already using the helpdesk and have been doing so for some time. We greatly appreciate your cooperation.

The helpdesk, which is powered by Atlassian Jira, offers several important advantages over direct e-mail communication. These include centralized tracking of requests, assignment of a dedicated staff member to each ticket (ensuring clear responsibility and follow-up), and weekly ticket reviews that helps minimize the risk of oversights. In contrast, requests sent directly by e-mail may experience significant delays.

To file a helpdesk ticket, please visit the helpdesk portal. Select the most appropriate sub-portal (use "General Support" if none of the others apply), then choose the most relevant issue type (use "Other questions" if no category fits). You will then be prompted to enter your e-mail address, an issue summary (similar to an e-mail subject line), and a description of the issue (similar to the e-mail body). Once submitted, your helpdesk ticket has been created.

After submitting your ticket, you will receive a confirmation e-mail from jira@mpc-service.atlassian.net. Please ensure that messages from this address are not blocked or routed to spam. The e-mail subject line will include your helpdesk ticket number (e.g. "MPCHLP-1234") along with your issue summary. Any replies from MPC staff will appear within that e-mail thread (same subject line).

You may interact with the helpdesk ticket in one of two ways:

- By clicking the "view request" link in the confirmation e-mail, and setting up a Jira account, which allows you to view and manage all of your tickets in one place.
- By replying directly to the confirmation e-mail or any follow-up messages. Please ensure that your response is above any quoted text or e-mail signatures, and that your e-mail client does not modify the subject line (adding "Re: " should be OK).

Please note that any communications sent to the legacy e-mail address mpc@cfa.harvard.edu or directly to individual MPC staff members will be treated as lowest priority. Monitoring of mpc@cfa.harvard.edu will eventually be discontinued entirely.

MPEC 2026-A23: EDITORIAL NOTICE: Revised headers of MPECs and other MPC publications

https://www.minorplanetcenter.net/mpec/K26/K26A23.html

M.P.E.C. 2026-A23 Issued 2026 January 7, 22:17 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: Revised headers of MPECs and other MPC publications

We advise those members of the community that might scrape the content of Minor Planet Electronic Circulars (MPECs), that the Minor Planet Center (MPC) will be revising the text at the top of future published MPECs. The following line:

MPC@CFA.HARVARD.EDU

will be replaced with a blank line.
This change was also announced in the October 2025 newsletter.

Additionally, the following line will be removed from the headers of future Minor Planet Circulars, Minor Planet Supplements and Minor Planet Orbit Supplements:

MPC@CFA.HARVARD.EDU (science) OBS@CFA.HARVARD.EDU (observations)

The change will take effect 12 January 2026.

MPEC 2025-U223: EDITORIAL NOTICE: DELETION of 2025 US6

https://www.minorplanetcenter.net/mpec/K25/K25UM3.html

M.P.E.C. 2025-U223 Issued 2025 October 26, 21:08 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: DELETION of 2025 US6

The designation 2025 US6, announced in MPEC 2025-U218 on Oct. 26, 2025 UT is being deleted. Initially reported by Catalina Sky Survey (703) On Oct. 26 UT, it was posted on the NEOCP and followed-up rapidly by other stations. Shortly after designation, the community noted its Earth-like orbit and potential geocentric solution as well as its attribution to DRO-B artificial object on a distant retrograde orbit around the Moon. Therefore, the designation 2025 US6 is being deleted and will be listed as omitted.

MPEC 2025-U142: Editorial Notice: Announcement of IAWN Comet Astrometry Campaign

https://www.minorplanetcenter.net/mpec/K25/K25UE2.html

M.P.E.C. 2025-U142 Issued 2025 October 21, 21:08 UT

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Editorial Notice: Announcement of IAWN Comet Astrometry Campaign

Announcement of IAWN Comet Astrometry Campaign,
Nov. 27, 2025 - Jan. 27, 2026.

Comets present unique challenges for accurate astrometric measurements and orbit predictions. Cometary bodies are extended with morphological features (comae and tails) that can systematically pull their centroid measurements off their central brightness peak, presenting challenges to estimate comet trajectories.

The International Asteroid Warning Network (IAWN) announces a comet campaign from November 27, 2025, through January 27, 2026 to introduce methods for improving astrometry from comet observations. The campaign will target comet 3I/ATLAS (C/2025 N1) to exercise the capability of the observing community to extract accurate astrometry. To prepare for the campaign, we will hold a workshop on techniques to correctly measure comet astrometry.

Registration is required by November 7th (here)
for the workshop and only those participants that attend the workshop can participate in the campaign.

The Campaign Schedule is provided below:
- Comet Campaign Workshop, Nov. 10, 2025, 15:00 UTC
- Campaign Kick Off: Nov. 25, 2025, 15:00 UTC (1 hour)
- Observing Window Opens: November 27, 2025
- Mid-Campaign Check-in Telecon: December 9, 2025, 15:00 UTC.
- Observing Window Closes: January 27, 2026
- Close-out Telecon: February 3, 2026, 15:00 UTC.

MPEC 2025-R47: Editorial Notice: MPECs for TNOs and other distant objects

https://www.minorplanetcenter.net/mpec/K25/K25R47.html

M.P.E.C. 2025-R47 Issued 2025 September 5, 18:49 UT

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Editorial Notice: MPECs for TNOs and other distant objects

The number of known distant objects has grown dramatically in recent years, and we expect an even larger increase in discoveries by the Rubin LSST. Distant minor planets, defined as non-comets with perihelion q>5.6 au, have until now always received an MPEC when they have been seen in multiple oppositions (i.e. either at first recovery or at discovery if the initial arc is already multi-opposition) or if they have appeared on the Near-Earth Object Confirmation Page (NEOCP). Continuing to provide MPECs for all distant objects that meet these criteria will result in an overwhelming number of MPEC, from which it will be challenging for users to identify unusual objects.

Thanks to the feedback received by the distant object community during the last TNOs meeting in June 2024, the MPC is changing the MPEC criteria for distant objects, as also described in the April 2025 newsletter.

Effective immediately, to receive an MPEC, a distant object must meet at least one of the following conditions in addition to the existing q>5.6 au and multi-opposition requirements (being on the NEOCP will no longer bypass the multi-opposition requirement):

- semi-major axis a>150 au, or
- perihelion q>50 au, or
- inclination i>50 degrees, or
- absolute magnitude H<5

These criteria have been selected in order to highlight the unusual distant objects in MPECs. If you find a distant object that met the previous MPEC criteria, but does not meet the new criteria and you believe it is interesting enough that an MPEC should be issued, please reach out via the Jira Helpdesk before submission.

MPEC 2025-R23: EDITORIAL NOTICE: COMET NAME CORRECTION FOR C/2025 Q1

https://www.minorplanetcenter.net/mpec/K25/K25R23.html

M.P.E.C. 2025-R23 Issued 2025 September 3, 14:00 UT

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EDITORIAL NOTICE: COMET NAME CORRECTION FOR C/2025 Q1

By mistake, the comet C/2025 Q1 was announced and published with a name PANSTARRS in MPEC 2025-R19. The correct name for comet C/2025 Q1 is ATLAS.

MPEC 2025-P132: EDITORIAL NOTICE: DELETION of 2024 BY15

https://www.minorplanetcenter.net/mpec/K25/K25PD2.html

M.P.E.C. 2025-P132 Issued 2025 August 11, 19:53 UT

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EDITORIAL NOTICE: DELETION of 2024 BY15

The designation 2024 BY15, announced in 2024-D53 on Feb 18, 2024 UT and published in MPS 2117513, is being deleted. Initially reported by the Pan-STARRS 2 (F52) survey on Jan. 19 UT, it was posted on the NEOCP and followed up by Pan-STARRS 1 two days later. The subsequent follow-up observations extended the arc of the object to several months and Bill Gray pointed out strong non-gravitational acceleration in this Earth-like heliocentric object, deriving a very low area-to-mass ratio. Jonathan McDowell suggested it may be related to Helios B or Helios 2 upper stage launched in 1976. Therefore, the designation 2024 BY15 is being deleted and will be listed as ommited.

MPEC 2025-A49: EDITORIAL NOTICE: DELETION OF 2018 CN41

https://www.minorplanetcenter.net/mpec/K25/K25A49.html

M.P.E.C. 2025-A49 Issued 2025 January 3, 16:13 UT

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EDITORIAL NOTICE: DELETION OF 2018 CN41

The designation 2018 CN41, announced in MPEC 2025-A38 on Jan 2, 2025 UT, is being deleted. The object was reported throught the identifications pipeline as a 3-nighter linkage found in the isolated tracklet file and more tracklets were linked in the ITF, leading to a small object on a heliocentric NEO orbit. The next day it was pointed out the orbit matches an artificial object 2018-017A, Falcon Heavy Upper stage with the Tesla roadster. The designation 2018 CN41 is being deleted and will be listed as omitted.

MPEC 2024-Y07: EDITORIAL NOTICE: LAS CAMPANAS OBSERVARY CODES

https://www.minorplanetcenter.net/mpec/K24/K24Y07.html

M.P.E.C. 2024-Y07 Issued 2024 December 18, 16:29 UT

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EDITORIAL NOTICE: LAS CAMPANAS OBSERVARY CODES

For many years, astrometry reported from Las Campanas Observatory has been submitted from the observatory code 304, which incorporated all the observatories built on the summit. This observatory code does not use program codes. Improving astrometric accuracy meant that topocentric distances between the actual observer's site and the nominal position of 304 became visible in the orbital fits, particularly of nearby NEOs. Since 2012, the New Horizons collaboration has acquired obscodes for each of the twin Magellan Telescopes; the Clay Telescope (268) and Baade Telescope (269) allowing the submission of highly accurate astrometry. The MPC has decided to open these observatory codes for use by all observers. These observatory codes will use program codes to distinguish observers. The original observatory code (304) will remain in use, with its coordinates having been updated to be near the two Magellan telescopes that have supplied the majority of observations from that observatory code, rather than being several hundred metres away from any of the telescopes. However, we encourage the use of the telescope-specific observatory codes listed below for new submissions. If any other telescope on the summit is regularly used for minor planet observations, please inform us so we can set up observatory codes for those telescopes as well. The under-construction Giant Magellan Telescope will naturally be assigned a new observatory code when it is completed.

The full list of updated observatories at Las Campanas is as follows:

304 Las Campanas Observatory
268 Magellan-Clay Telescope
269 Magellan-Baade Telescope

MPEC 2024-U264: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K24/K24UQ4.html

M.P.E.C. 2024-U264 Issued 2024 October 31, 13:28 UT

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EDITORIAL NOTICE

Beginning Monday, November 4th, the MPC will introduce a new 'B' flag in the NEOCP Note column. Previously, this column was used only to flag potential artificial objects ('S'). The new 'B' flag will indicate a nominal orbit with a high RMS fit (RMS > 2"), signaling a possible bad tracklet or unsuccessful orbit fit that could impact the predicted ephemeris and may require manual review.

MPEC 2024-S182: Editorial Notice: Edgar Wilson Award

https://www.minorplanetcenter.net/mpec/K24/K24SI2.html

M.P.E.C. 2024-S182 Issued 2024 September 30, 21:33 UT

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Cambridge, MA 02138, U.S.A.

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Prepared using the Tamkin Foundation Computer Network

MPC@CFA.HARVARD.EDU
URL https://www.minorplanetcenter.net/ ISSN 1523-6714

Editorial Notice: Edgar Wilson Award

The Edgar Wilson Award is conferred annually to amateur astronomers who have discovered one or more comets.

Under the Will of Edgar Wilson of Lexington, KY, a Trust was established from which a fraction of the annual proceeds would be provided to the Smithsonian Astrophysical Observatory (SAO) to administer a perpetual program in support of amateur astronomy.

The terms of the bequest from 1996 - 2020 instructed that the funds be used to identify and honor amateur astronomers who discovered comets during the preceding year.

In October of 2020, the terms of the bequest were changed such that the SAO should use the funds to: Organize programs for amateur astronomers, where the programs shall consist of presentations and training sessions from leading astronomers in the field of comets and asteroids, and honor amateur astronomers who discovered comets during the preceding year with a commemorative plaque.

Recipients

The recipients of the Edgar Wilson Awards for the annual periods from 11 June 2018 through 11 June 2024 have been posted to the following webpage.

The recipients are as follows:

2019 Award Winners (June 11, 2018 - June 11, 2019)

Donald Machholz, Shigehisa Fujikawa and Masayuki Iwamoto:
C/2018 V1 (Machholz-Fujikawa-Iwamoto)

Masayuki Iwamoto:
C/2018 Y1 (Iwamoto)

2020 Award Winners (June 11, 2019 - June 11, 2020)

Gennady Borisov: 2I = C/2019 Q4 (Borisov)
Gennady Borisov: C/2019 V1 (Borisov)
Masayuki Iwamoto: C/2020 A2 (Iwamoto)
Eduardo Pimentel: P/2020 G1 (Pimentel)
Cristovao Jacques, João Ribeiro de Barros ,Paulo Holvorcem, Eduardo Pimentel:
C/2020 J1 (SONEAR)

2021 Award Winners (June 11, 2020 - June 11, 2021)

Leonardo Scanferla Amaral: C/2020 O2 (Amaral)
Gennady Borisov: C/2020 Q1 (Borisov)
Georges Attard and Alain Maury: C/2021 J1 (Maury-Attard)
Gennady Borisov: C/2021 L3 (Borisov)

2022 Award Winners (June 11, 2021 - June 11, 2022)

Hideo Nishimura: C/2021 O1 (Nishimura)
Alain Maury and Georges Attard: P/2021 U3 (Attard-Maury)
Alain Maury and Georges Attard: C/2021 X1 (Maury-Attard)
Alain Maury and Georges Attard: C/2022 J1 (Maury-Attard)

2023 Award Winners (June 11, 2022 - June 11, 2023)

Georges Attard and Alain Maury: C/2022 N1 (Attard-Maury)

Jost Jahn: P/2023 C1 (Jahn)

2024 Award Winners (June 11, 2023 - June 11, 2024)

Hideo Nishimura: C/2023 P1 (Nishimura)
Gennady Borisov: C/2023 T2 (Borisov)
Jordi Camarasa and Grzegorz Duszanowicz: C/2023 V4 (Camarasa-Duszanowicz)
Robson Henrique dos Santos Hahn: P/2024 FG9 (Nanshan-Hahn)

MPEC 2024-N07: EDITORIAL NOTICE: DELETION OF 2023 JW34

https://www.minorplanetcenter.net/mpec/K24/K24N07.html

M.P.E.C. 2024-N07 Issued 2024 July 1, 14:21 UT

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EDITORIAL NOTICE: DELETION OF 2023 JW34

The designation 2023 JW34, announced in MPEC 2024-J115 on May 7, 2024 UT and published in MPS 2171498, is being deleted. Initially reported by the Catalina Sky Survey on May 13, 2023 UT, it was posted on the NEOCP and followed up by the Steward Observatory, Mt. Lemmon Station the same night. Due to insufficient follow-up and a short observation arc, it was removed from the NEOCP on May 21, 2023. The object was later designated in an attempt to confirm short-arc NEOCP candidates with potentially reliable orbits. However, Bill Gray identified a likely geocentric orbit for 2023 JW34, similar to other uncatalogued ETBO objects. Consequently, the designation 2023 JW34 is being deleted and will be listed as omitted.

MPEC 2024-J105: Editorial Notice

https://www.minorplanetcenter.net/mpec/K24/K24JA5.html

M.P.E.C. 2024-J105 Issued 2024 May 6, 23:13 UT

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Editorial Notice

The IAU WGSBN is pleased to announce that the long-planned move of the Name Submission/Voting site from the MPC server to the WSGBN website has now been scheduled. The WGSBN thanks the Minor Planet Center for hosting the site in the past, particularly during the last four years.

The timeline for the move is as follows: on May 20, the current site will be shutdown (the existing links on the MPC site will be repointed to static pages informing users that the site is being transferred); and on May 22, the new site will be brought on-line (the links on the MPC site will be repointed to the corresponding links on the WGSBN site). If you have the current links bookmarked, please be sure to update them as soon as possible after May 22. The MPC will not maintain the redirects beyond the end of 2024.

Between May 20 and 22, the data from the current DB will be downloaded, transferred to the WGSBN server, converted for use by the new DB, then uploaded into the new DB. Various consistency checks will then be performed, to ensure that no data is lost during the transfer and that the data was convered correctly.

During the period May 6 to 20, WG members and discoverers can test out the new site, reporting any problems using the bug-reporting facilities on the new site. This gives two weeks to fix any issues before the new site goes live. Note that any data input into the new system before May 20 will be deleted, so using Lorem ipsum text as citation text is fine, as is changing discoverer names to the names of cartoon characters. The main point of the test period is that pages function as intended, that links go the correct pages and that information entered into system is correctly recorded.

Usernames for the new site for discoverers and WGSBN members are unchanged from the old site, but new passwords have been assigned. If you are willing to test out the new site, please send an email to secretary@wgsbn-iau.org, stating the username that you used on the current system. If accepted as a tester, your password will be sent to you.

MPEC 2024-F100: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K24/K24FA0.html

M.P.E.C. 2024-F100 Issued 2024 March 29, 21:39 UT

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EDITORIAL NOTICE

Due to technical issues, the creation and distribution of the Daily Orbit Update (MPEC 2024-F97) did not occur properly. Subsequent attempts to recreate the DOU resulted in the creation of a new DOU (MPEC 2024-F98) containing only a pair of observations of 2024 FG2, but lacking the previously missing observations and orbits. The MPC has restored and redistributed MPEC 2024-F97, and as a result, is retracting MPEC 2024-F98. The observations of 2024 FG2 will be included in the forthcoming DOU.

MPEC 2024-B180: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K24/K24BI0.html

M.P.E.C. 2024-B180 Issued 2024 January 31, 19:33 UT

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EDITORIAL NOTICE

The Minor Planet Center (MPC) is announcing a minor update to the digest2 code. The updated code will become operational on Feb 1 at 00:00 UTC. The digest2 score is used by the MPC to score tracklets submitted to NEOCP: only tracklets with scores above 65 can be posted to NEOCP.

The latest update includes a bug fix in digest2.c source code, an updated population model reflecting the MPCORB catalog from Jan 22, 2024 (1.34 million orbits), and the addition of three observatory codes with expected astrometric uncertainties.

The digest2 code can be downloaded from the following Bitbucket repository:
https://bitbucket.org/mpcdev/digest2
The population model and the configuration file with the obscodes can be downloaded from https://bitbucket.org/mpcdev/digest2/downloads/

MPEC 2023-U90: EDITORIAL NOTICE: DELETION OF 2023 QB20

https://www.minorplanetcenter.net/mpec/K23/K23U90.html

M.P.E.C. 2023-U90 Issued 2023 October 18, 20:09 UT

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EDITORIAL NOTICE: DELETION OF 2023 QB20

The designation 2023 QB20, announced on MPEC R140 on Sep. 11, 2023 UT, is being deleted. The object was first reported by the Zwicky Transient Facility (I41) on Aug. 27 UT and follow-up from two other sites confirmed an apparent NEO-like orbit. B. Gray has identified these observations as belonging to a previously seen artificial object with a very high area/mass ratio, making its position difficult to predict over long timescales. Therefore, the designation 2023 QB20 is being deleted and will be listed as omitted.

MPEC 2023-P03: EDITORIAL NOTICE: DIGEST2 UPDATES

https://www.minorplanetcenter.net/mpec/K23/K23P03.html

M.P.E.C. 2023-P03 Issued 2023 August 1, 22:01 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE: DIGEST2 UPDATES

The Minor Planet Center (MPC) is announcing an update to the configuration file and the population model of the "digest2" code used for scoring tracklets submitted to the NEOCP (Near-Earth Object Confirmation Page). Tracklets with digest2 scores greater than 65 are eligible to be posted to the NEOCP. These updates will become operational on Friday, August 4th, at 14:00 UTC.

The MPC updates the population model (digest2.model.csv) to align with the current completeness of the discovered minor planets, which stands at 1.3 million orbits. In recent years, the updates have become more frequent due to the rapid increase in the number of discovered objects, thanks to the dedicated efforts of large surveys. We expect the updates to become even more frequent when the Vera Rubin Observatory (LSST) and NEO Surveyor commence their operations.

Furthermore, the MPC has expanded the configuration file (MPC.config), which now includes a list of 140 observatory codes with assumed uncertainties. These observatory codes are utilized in the computation of the digest2 score, marking a significant expansion from the previous list of only 35 observatories

Both files can be downloaded as an archive (d2model.tar.bz2) from https://bitbucket.org/mpcdev/digest2/downloads/

MPEC 2023-M165: Editorial Notice: MPC planned power outage - Saturday 8 July 2023

https://www.minorplanetcenter.net/mpec/K23/K23MG5.html

M.P.E.C. 2023-M165 Issued 2023 June 29, 17:44 UT

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Prepared using the Tamkin Foundation Computer Network

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

Editorial Notice: MPC planned power outage - Saturday 8 July 2023

There is a planned power outage at the facility where the Minor Planet Center's pipeline servers reside. The outage is scheduled to take place on Saturday 8 July 2023 from 09:00 UTC to 19:00 UTC.

The MPC's web server will remain up and operational throughout the power outage and the MPC will continue to receive and archive all submitted observations. However these submissions will not be processed or published until power is restored to the pipeline server.

With the goal of ensuring the rapid communication of NEO observations, the MPC will issue two DOUs on Saturday 8 July: one at ~07:00 UTC, and the second at ~21:00 UTC.

We apologize for any inconvenience caused.

Any suggestions or questions related to this power outage should be directed via the MPC's Jira Helpdesk: https://minorplanetcenter.net/contact

MPEC 2022-T103: EDITORIAL NOTICE: Revised text at the top of MPECs

https://www.minorplanetcenter.net/mpec/K22/K22TA3.html

M.P.E.C. 2022-T103 Issued 2022 October 7, 14:09 UT

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MPC@CFA.HARVARD.EDU
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EDITORIAL NOTICE: Revised text at the top of MPECs

We advise those members of the community that might scrape the content of Minor Planet Electronic Circulars (MPECs), that the Minor Planet Center (MPC) will be revising the text at the top of future published MPECs. The revised text will read:

> The Minor Planet Electronic Circulars contain information on unusual
> minor planets, routine data on comets and natural satellites,
> and occasional editorial announcements. They are published
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> Minor Planet Center, Smithsonian Astrophysical Observatory,
> Cambridge, MA 02138, U.S.A.

The change will take effect 1 November 2022.

MPEC 2021-S42: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K21/K21S42.html

M.P.E.C. 2021-S42 Issued 2021 September 19, 16:04 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE

The Minor Planet Center (MPC) is announcing an update that affects the posting of new candidates to the NEO Confirmation Page (NEOCP) and NEO Rating service (digest2) on MPC website. The changes will become operational on Monday September 27th at 14:00 UTC.

The updated digest2 code will increase the number of bands used for conversion to a common V-band magnitude. The supported bands are published at:
https://minorplanetcenter.net/iau/info/OpticalObs.html
and the V-band conversion at:
https://minorplanetcenter.net/iau/info/BandConversion.txt

An updated version of the digest2 source code can be downloaded from the following Bitbucket repository: https://bitbucket.org/mpcdev/digest2.

MPEC 2021-J216: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K21/K21JL6.html

M.P.E.C. 2021-J216 Issued 2021 May 14, 15:14 UT

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EDITORIAL NOTICE

Proposals for new minor planet names are judged by the Working Group for Small-Body Nomenclature (WGSBN) of the International Astronomical Union (IAU). For the past few decades, after approval by the WGSBN, the IAU Minor Planet Center was responsible for officially announcing the new minor planet names in the Minor Planet Circulars (MPCs).

Starting on May 14, 2021, new minor planet names will be announced via a new IAU-approved PDF publication, the WGSBN Bulletin.
New names will no longer be published or announced in the MPCs.
All naming requests and queries about names, citations and corrections should be directed to the WGSBN at contact@wgsbn-iau.org. Issues of the WGSBN Bulletin are available from two sources:

https://www.iau.org/publications/iau/wgsbn-bulletins/
and https://www.wgsbn-iau.org/.

Data files containing the new names and citations (in json format) are available at the second URL.

MPEC 2021-G106: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K21/K21GA6.html

M.P.E.C. 2021-G106 Issued 2021 April 8, 20:50 UT

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URL https://www.minorplanetcenter.net/ ISSN 1523-6714

EDITORIAL NOTICE

The Minor Planet Center (MPC) is announcing two updates that affect the posting of new candidates to the NEO Confirmation Page (NEOCP). Both updates will become operational on Friday April 9th at 14:00 UTC.

Background: The MPC uses the "digest2" code to "score" tracklets submitted to the NEOCP. Tracklets with scores larger than 65 are posted to the NEOCP. The digest2 code can be downloaded from the following Bitbucket repository: https://bitbucket.org/mpcdev/digest2

(1) digest2 Population Model.

In recent years, knowledge of the size-distribution of asteroids has improved, and surveys have more thoroughly cataloged the known asteroid population. The digest2 code uses the expected size-distribution, along with the fraction of the population that has been discovered, to form the basis of its score. The MPC has updated the population model used by digest2. The updated population model, "digest2.model.csv", can be downloaded from: https://bitbucket.org/mpcdev/digest2/downloads/d2model.tar.bz2 Included in the same download is a file "MPC.config" that contains an expanded set of observatory codes with assumed uncertainties for digest2.

Observers who employ the digest2 code within their own pipelines are also encouraged to update the population model and uncertainty files.

(2) Bright Objects

In addition to the population model update discussed above, the MPC is updating its rules to allow any submitted unidentified tracklet brighter than 19 magnitude to be posted to the NEOCP irrespective of the digest2 score.

On a final note, the MPC would like to take this opportunity to reiterate the standard instructions that all NEOCP candidates must be visually vetted by the submitting observers and must be submitted with "NEO CANDIDATE" subject line or ACK keywords.

M. P. C. Staff M.P.E.C. 2021-G106

MPEC 2015-O06: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K15/K15O06.html

M.P.E.C. 2015-O06 Issued 2015 July 16, 17:31 UT

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EDITORIAL NOTICE

A new astrometry data exchange standard has been proposed and is anticipated to be adopted by the Minor Planet Center after concurrence from the IAU. The new standard allows for communication of significantly more information, in particular measurement uncertainties, than is possible with the current submission format, which will initially be deprecated and eventually disallowed for MPC astrometry submissions.

The proposed standard is based on XML and thus is flexible, extensible and hierarchical. XML affords automated data validation and is supported by input/output libraries across a wide range of computing languages and platforms. The standard includes an alternate plain-text representation that is suitable for viewing and editing in conventional text editors. Libraries and utility programs for file conversion, validation, input/output and other functions will be developed and made publicly available in a number of programming languages as a part of the transition to the new standard.

The proposal will be discussed at the IAU XXIX General Assembly during the Commission 20 Business Meeting. The draft proposal can be obtained from https://minorplanetcenter.net/iau/info/IAU2015_ADES.pdf. Community input regarding this proposal may be sent to the President of Commission 20, Steven Chesley (JPL), whose contact information is available at http://www.iau.org/administration/membership/individual/9425/.

Steven R. Chesley M.P.E.C. 2015-O06

MPEC 2014-H70: EDITORIAL NOTICE (2014 HC5)

https://www.minorplanetcenter.net/mpec/K14/K14H70.html

M.P.E.C. 2014-H70 Issued 2014 Apr. 29, 11:32 UT

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EDITORIAL NOTICE (2014 HC5)

The designation 2014 HC5, announced as a NEO on MPEC 2014-H41, is being retracted, as subsequent observations show that the three nights of observations do not belong to the same object. We are checking the status of the first two nights and will assign a new designation if appropriate. The object observed on the third night, which is the same as the originally-reported Apr. 10 object, has been designated 2014 GF53. This is a routine Hungaria.

Gareth V. Williams M.P.E.C. 2014-H70

MPEC 2013-A21: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K13/K13A21.html

M.P.E.C. 2013-A21 Issued 2013 Jan. 5, 18:53 UT

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EDITORIAL NOTICE

The Minor Planet Center is announcing a number of items relevant to observers. Comments or reports of problems with these new features should be sent by e-mail to tspahr@cfa or via an on-line Feedback form.

1. New NEOCP Landing Page

A new NEOCP landing page has been developed that allows observers to sort the objects in a wide variety of ways. The new page is https://www.minorplanetcenter.net/iau/NEO/toconfirm_tabular.html. The two existing NEOCP pages (ordered by discovery date and Right Ascension) will continue to be updated for the forseeable future.

Ideally, any scripts that attempt to parse the existing pages will be rewritten to use the new text file which contains the data from the NEOCP page: https://www.minorplanetcenter.net/iau/NEO/neocp.txt. This is a pure ASCII file containing the data for one object on one line.

2. NEOCP Desirability Scores

The MPC is introducing an NEOCP follow-up desirability score (NDS) to assist observers in selecting NEOCP targets to provide the most needed and effective observations for orbit improvement. Our goal is to distribute the limited follow-up resources efficiently and to provide the highest number of NEOCP objects with adequate coverage for preliminary orbital solutions. The basic NDS is the digest2 score, which is then modified to take into account the number of observations, the span of observations, the nominal absolute magnitude, and the interval between observations. The MPC would like to note that too often the "easiest" objects to observe are over-observed, and other objects that need follow-up are ignored. We request observers use the NDS to assist them in making their valuable observations more useful still.

3. mpc@cfa vs obs@cfa

The e-mail submission of observations should now be made to obs@cfa, rather than mpc@cfa. We are announcing a cut-off date of 2013 Mar. 1 for observation submissions to mpc@cfa. After that date, any observation batches sent to mpc@cfa will not be forwarded to the automated processing routines. The address mpc@cfa will continue as a general contact address for the MPC.

A. U. Tomatic

MPEC 2012-F55: EDITORIAL NOTICE : MAILING OF MPECS

https://www.minorplanetcenter.net/mpec/K12/K12F55.html

M.P.E.C. 2012-F55 Issued 2012 Mar. 22, 19:15 UT

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EDITORIAL NOTICE : MAILING OF MPECS

This is a notification that at some point in the next few days (possibly as soon as later today) the route via which the Minor Planet Center e-mails Minor Planet Electronic Circulars (MPECs) will change. The MPECs will be mailed out from one of our public-facing Linux boxes. Specfically, from the address mpec@mpcapp1.cfa.harvard.edu. This address will be used only for mailing MPECs and any messages sent to this address will be ignored. For most MPEC recipients, this change will be transparent. However, if you run any SPAM filtering or white-listing software, you may need to adjust your software to allow the new e-mailing address to be accepted.

Gareth V. Williams M.P.E.C. 2012-F55

MPEC 2012-E38: EDITORIAL NOTICE : THE RETRACTION OF 2012 EL1

https://www.minorplanetcenter.net/mpec/K12/K12E38.html

M.P.E.C. 2012-E38 Issued 2012 Mar. 5, 23:19 UT

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EDITORIAL NOTICE : THE RETRACTION OF 2012 EL1

The designation 2012 EL1, announced on MPEC 2012-E24, is being retracted, as the object is identical to 2012 EK1, announced on MPEC 2012-E23. The observations published under the former designation will be republished under the latter designation on the next DOU MPEC.

Since the object never appeared in the Minor Planet Circulars or Minor Planet Observation Supplement (MPS), the status of the designation 2012 EL1 will be "omitted".

Gareth V. Williams M.P.E.C. 2012-E38

MPEC 2012-D99: EDITORIAL NOTICE: THE DELETION OF 2012 DU32

https://www.minorplanetcenter.net/mpec/K12/K12D99.html

M.P.E.C. 2012-D99 Issued 2012 Feb. 28, 21:00 UT

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URL http://cfa-www.harvard.edu/iau/mpc.html ISSN 1523-6714

EDITORIAL NOTICE: THE DELETION OF 2012 DU32

The second night observations attributed to the NEO 2012 DU32 do not belong to this object.

Additional follow-up observations made by Spacewatch on Feb. 27 UTC show that the linkage of the Feb. 23 and 24 observations, which led to the assignment of the designation 2012 DU32 and its announcment on MPEC 2012-D91, is incorrect. The designation 2012 DU32 is therefore being removed. Since the object never appeared in the Minor Planet Circulars or Minor Planet Observation Supplement (MPS), the status of the designation 2012 DU32 will be "omitted".

The second night observations belong to 2009 RC48 and will appear in the next mid-month MPS batch.

Gareth V. Williams

MPEC 2011-E67: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K11/K11E67.html

M.P.E.C. 2011-E67 Issued 2011 Mar. 11, 19:57 UT

The Minor Planet Electronic Circulars contain information on unusual
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EDITORIAL NOTICE

Recent observing practices among both amateur and professional observers have resulted in a dramatic increase in problem batches received at the Minor Planet Center. The most troublesome cases involve isolated single observations on a single night. Subtle hints in recent months to observers about this bad habit have not, in most cases, been heeded. From this point forward, any submissions containing isolated single observations from single nights will be ignored by the MPC, with an explanatory note highlighting the deletion being returned to the observer. Let the record show that single-detection observing of moving objects has never been acceptable observing practice, and with the advent of more efficient detectors, telescopes and observing programs, there has been a rather disappointing increase in this sort of poor and incomplete submission to the MPC. Surely if the object is important enough to observe, it is important enough to observe properly. This new policy at the MPC is an attempt to show that one observation per night is no longer acceptable.

Another common type of problem batch received at the MPC is poorly-measured positions from the 'shift-and-stack' technique. The MPC frequently receives one observation per night from various groups using this technique. While these will now be deleted going forward, the MPC will also suggest that observers using this method perform at least three discrete stacks, repositioning the telescope between subsequent stacks. This process should reduce false positive detections. Dithering is essential, and we will strongly encourage it.

Finally, the MPC requests that observers strive to obtain at least three positions over at least 30 minutes for all detections. Best practice would be three to five observations over an one to two hour interval for discovery purposes. Follow-up observations can have smaller observation intervals, but we will still encourage observers to lengthen observation intervals in most cases.

Timothy B. Spahr M.P.E.C. 2011-E67

MPEC 2010-U20: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K10/K10U20.html

M.P.E.C. 2010-U20 Issued 2010 Oct. 19, 02:20 UT

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EDITORIAL NOTICE

The rules defining who discovered a particular object have evolved over the past two centuries. In the days of visual observation, discovery was credited to the first person to report an observation of a new object. If a subsequent report emerged of an earlier observation, the discovery credit was switched to the earlier observer. This reassignment of discovery credit was applied somewhat arbitrarily and there are a number of cases where earlier observations are simply listed as "prediscovery". Designations would be assigned on the basis on single-night approximate measures. When the Minor Planet Center (MPC) was founded, discoveries continued to be credited on the basis of single approximate positions (e.g., Minor Planet Circular 2). After the MPC moved to Cambridge in 1978, an Editorial Notice (Minor Planet Circular 4845-4846) informed observers that approximate observations were no longer eligible for discovery credit. In 1995, the decision was taken to no longer assign designations to single-night detections (Minor Planet Circular 24597).

The Minor Planet Center (MPC) recently changed the way discovery credit was assigned to new discoveries. Rather than being the earliest observation in the initial two-night linkage, the discovery credit was to be given to the earliest observation at that opposition. In practice, it is often difficult to determine which observation is the earliest at the time the designation needs to be assigned.

Effective immediately, the MPC will separate the concept of discovery credit from the assignment of asterisks. Asterisks will revert to being simply an indication of the initial assignment of a new designation and will not be associated with any discoverer.

In addition, the MPC will begin adding timetags to all archived and newly-received observations, to indicate when they were received at the MPC. For the moment, these timetags will be maintained only on internal datasets. External availability of the timetags will depend on certain professional users of the observational datasets indicating that their software will cope with the extended format. For newly-submitted observations, the timetags will indicate when the observation was accepted by the AUTOACK routine. For previously-submitted observations, a timetag will be constructed that is related to the date of observation. Known cases of delayed submission of observations will be accounted for in these constructed timetags.

Discoverers will be defined only when an object is numbered. At that time, the timetags on all the observations included in the solution will be examined. The discovery observation will be that observation which is the earliest-reported observations at the opposition with the earliest-reported second-night observation. The discovery observation will then define the discoverer. This scheme, which will be entirely automatic, is consistent with the following resolution adopted by Commission 20 at the 1979 IAU General Assembly: "The Commission defines the discovery as the earliest apparition at which an orbit useful in the establishment of identifications was calculated" (taken from Minor Planet Circular 4845-4846).

The new scheme removes one common complaint with the current scheme: that the assignment of discovery credit depended, to some degree, on the ability of either the MPC or the observer to make the initial night-to-night linkages. In addition, it removes the apparent arbitrary nature of the order of designations in new identifications.

Objects that have multiple-opposition orbits as of now will be grandfathered into the old scheme of assigning discovery credit.

Timothy B. Spahr M.P.E.C. 2010-U20

MPEC 2008-M37: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K08/K08M37.html

M.P.E.C. 2008-M37 Issued 2008 June 25, 22:30 UT

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EDITORIAL NOTICE

A new edition--the seventeenth--of the MPC/CBAT "Catalogue of Cometary Orbits", complete through the entries in the June 2008 batch of the Minor Planet Circulars, will shortly be available. Given that the catalogue includes 3815 orbits for 3708 cometary apparitions, it was decided to place the 1490 orbits of comets observed only from SOHO, STEREO, SMM and SOLWIND in a separate section. There is also a section giving the 1139 orbits for 1062 apparitions of the 200 numbered comets. Except for the nine of these comets that are considered "lost", there are tabulations of the osculating elements for the standard epochs 2007 Oct. 27.0, 2008 May 14.0, 2008 Nov. 30.0, 2009 June 18.0, 2010 Jan. 4.0 and 2010 July 23.0. "Original" and "future" reciprocal semimajor axes are given for 499 high-quality long-period orbits. The 195-page catalogue sells for $60.00 ($80.00 for airmail delivery outside North America). There is also an e-mail edition (with just the basic orbital information) for $80.00. Orders should be sent to Mail Stop 18, Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge, MA 02138, U.S.A., iausubs@cfa.harvard.edu or FAX +1-617-495-7231.

Brian G. Marsden M.P.E.C. 2008-M37

MPEC 2007-V70: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K07/K07V70.html

M.P.E.C. 2007-V70 Issued 2007 Nov. 9, 00:56 UT

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EDITORIAL NOTICE

A posting on the Minor Planet Mailing List by Denis Denisenko suggested that the object designated 2007 VN84 on MPEC 2007-V69 might be the Rosetta spacecraft. Our investigation of this possibility, using information from the Satellite Situation Center (http://sscweb.gsfc.nasa.gov/), show that this suggestion is indeed correct. The positional information available on the SSC website does not begin until Nov. 12.0 UT. However, the agreement at this time between the predicted positions for Rosetta and 2007 VN84 is well within 1'. The minor planet 2007 VN84 does not exist and the designation is to be retired.

This incident, along with previous NEOCP postings of the WMAP spacecraft, highlights the deplorable state of availability of positional information on distant artificial objects (whether in earth orbit or in solar orbit). The Distant Artificial Satellites Observations (DASO) page on the MPC website (http://www.cfa.harvard.edu/iau/SpaceJunk/SpaceJunk.html) lists a number of such objects, but has to be updated on a fairly regular basis from five different sources and data is not always available for the timespans needed. A single source for information on all distant artificial objects would be very desirable.

A. U. Tomatic

MPEC 2006-R19: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K06/K06R19.html

M.P.E.C. 2006-R19 Issued 2006 Sept. 7, 17:35 UT

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EDITORIAL NOTICE

(From MPC 57525)

At the IAU General Assembly in Prague on Aug. 24 a very substantial majority of the members present agreed to accept that the solar system contains just eight "planets" (Mercury-Neptune) and that objects in hydrostatic equilibrium orbiting the sun but not dominating their vicinity would be considered as "dwarf planets". (1) Ceres, Pluto and 2003 UB313 were identified as members of this new category, with other objects such as 2003 EL61 and 2005 FY9 likely to be added in the future. Since at least one of the "dwarf planets" is already included in the catalogue of numbered "minor planets"--with comets and other natural sun-orbiting material a component of a new category of "small solar-system bodies"--and since the Minor Planet Center Terms of Reference emphasize the need for the MPC to maintain a database of the astrometric observations of such bodies observed beyond the confines of the earth's atmosphere, Pluto and the above-mentioned three provisionally designated objects are now being added to this list of objects with reliable orbit determinations under the numbers (134340), (136199), (136108) and (136472), respectively. It should be noted that, just as some of the numbered objects that have exhibited cometary activity also have designations in the catalogue of numbered periodic comets, the numbering of "dwarf planets" does not preclude their having dual designations in possible separate catalogues of such bodies.

Timothy B. Spahr M.P.E.C. 2006-R19

MPEC 2006-N03: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K06/K06N03.html

M.P.E.C. 2006-N03 Issued 2006 July 1, 17:56 UT

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EDITORIAL NOTICE

A computer mis-hap has resulted in the loss of several of the proposals of names for minor planets submitted since early May. The list below refers to the objects for which the name proposals are safe, pending approval by the Committee for Small-Body Nomenclature. Discoverers and others who have recently submitted names for minor planets that are _not_ on this list (and that were not included in the June 13 batch of Minor Planet Circulars, for example) are therefore kindly requested to resubmit their proposed names and citations to the Minor Planet Center (mpc@cfa.harvard.edu) as soon as possible.

(3481) 1982 DS6
(5013) 1964 VT1
(6397) 1991 BJ
(6486) 1991 FO
(14513) 1996 GK17
(15202) 1977 EM5
(15671) 1977 EP6
(15672) 1977 EX7
(15861) 1996 HB12
(15969) 1998 EW11
(16498) 1990 SX8
(16583) 1992 OH2
(16689) 1994 PZ26
(17445) 1989 YC5
(17519) 1992 YE2
(19148) 1989 YA5
(24701) 1990 VY5
(26177) 1996 GN2
(38046) 1998 SW144
(40227) 1998 SR145
(41986) 2000 YR29
(48801) 1997 UC1
(52500) 1996 DC1
(61401) 2000 QQ6
(61402) 2000 QS6
(79375) 1997 FA
(80180) 1999 VS
(82092) 2001 DV86
(88260) 2001 HE23
(100000) 1982 SH1
(108140) 2001 HO
(111696) 2002 CU14
(115058) 2003 RH8
(120141) 2003 GO21
(128036) 2003 KM18

Brian G. Marsden M.P.E.C. 2006-N03

MPEC 2004-S73: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K04/K04S73.html

M.P.E.C. 2004-S73 Issued 2004 Sept. 28, 00:04 UT

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EDITORIAL NOTICE

(from MPC 52733)

Among the new names of minor planets published in this batch of Minor Planet Circulars is (90377) Sedna = 2003 VB12. This naming has created some controversy, particularly in the community of amateur astronomers, because it was already publicized by the discoverers six months ago during a press conference at which they described their finding this exceptionally interesting object in the outer solar system. At that time the object did not qualify for naming because it had not yet been numbered, something that did not happen until Aug. 30 (MPC 52567, 52620, MPO 64543). Although the discoverers did state that the naming was not yet official, the point is that the guidelines for naming minor planets have indicated that names should not be publicized before they are announced in the Minor Planet Circulars. This is because, even after an object has been numbered, the proposed names are judged by the IAU Committee on Small-Body Nomenclature, principally to ensure that they are in fact reasonably compatible with the guidelines, in particular that a name is neither "in bad taste" nor "too closely similar" to one already in use (in which case the CSBN might in fact unilaterally make a change in the name).

We note that, as an indication of the widespread displeasure generated by the premature action of the 2003 VB12 discoverers, one amateur astronomer submitted an alternative proposal of the name "Sedna" for one of his own discoveries of a quite undistinguished main-belt object. In the past, of course, there have been severe disagreements over the namings of several solar-system bodies found since the invention of the telescope, famous early cases involving the first four satellites of Jupiter, the two outermost gas-giant planets and the twelfth minor planet. In these cases the reasons involved either real or perceived national sensibilities or accusations of plagiarism by the rightful discoverer against a rival astronomer who had made the proposal. The Sedna case is different in that the complaint was entirely one of procedure: the proposal came from the discoverers, no objection has been voiced to the name itself, and no other name has been proposed for 2003 VB12. Indeed, the mythological name proposed is quite in line with the names of other unusual objects in the outer solar system and is to be commended for representing cultural diversity. The fact is that, with observations already recognized by the discoverers at earlier oppositions, 2003 VB12 was almost ready for numbering when it was first reported to the Minor Planet Center, only five days before the press conference. At that time the decision was made to forward the discoverers' name proposal to one or two members of the CSBN to verify that it did not seem to be unsuitable; the proposal was not sent to all the members, partly because of the request for secrecy surrounding the planned press conference, partly because there was was not enough time for a full-blown discussion by all 15 CSBN members.

Since the Sedna problem was simply a procedural one, it is appropriate to examine whether a simple change could be made in the CSBN guidelines in order to handle similar cases that might arise in the future. Accordingly, the CSBN has agreed that under some highly unusual circumstances it will in the future consider name proposals for minor planets before they are numbered.
It is to be understood that this will occur only for objects of extraordinary interest. One important requirement is that the orbit be sufficiently well established that the object concerned will not be lost (unless, perhaps, it is about to collide with another solar-system member...). In a qualifying case, a name should be submitted to the CSBN at least one week before it needs to be disseminated (e.g., at a press conference), assuming that it is in fact approved, and neither CSBN members nor the discoverers should announce the name until that particular dissemination.

This whole episode has made it rather clear that the CSBN has been

delinquent in updating the formal guidelines for naming minor planets.
A broader rewriting of all of the guidelines is in preparation and will be
issued soon.

Brian G. Marsden M.P.E.C. 2004-S73

MPEC 2003-V27: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K03/K03V27.html

M.P.E.C. 2003-V27 Issued 2003 Nov. 6, 19:31 UT

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EDITORIAL NOTICE

Users of the orbital information in the Minor Planet Center's webpages will have been aware of some problems on these pages during the past few days. It was during this time period that the MPC was also preparing the Nov. 9 batch of Minor Planet Circulars, and the problems arose because the Daily Orbit Update MPECs were also being issued. When the software that produces the DOU MPECs was first written the practice was to discontinue them for the few days while the Minor Planet Circulars were being prepared. This practice has been changed over the years, in line with the MPC's policy of providing the very best service, but some parts of the software really could not cope with the simultaneous activity. Indeed, the webpage problems have to a lesser extent also been apparent in the past. Accordingly, the software that produces the DOU MPECs is currently being completely rewritten. This will mean that the DOU MPECs will not be issued automatically during the next several days (over the full-moon period), although it is possible that they will from time to time be prepared manually, while the new software is being tested.

Brian G. Marsden M.P.E.C. 2003-V27

MPEC 2002-Y16: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02Y16.html

M.P.E.C. 2002-Y16 Issued 2002 Dec. 16, 21:14 UT

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EDITORIAL NOTICE

Owing to staff absences, the batches of Minor Planet Circulars that would normally be dated 2002 Dec. 19 and 2003 Jan. 18 will be replaced by a single mini-batch to be published on or about 2003 Jan. 6. There will be a "mid-month" batch of the observations Supplement later this week, and probably twice during January.

Brian G. Marsden M.P.E.C. 2002-Y16

MPEC 2002-S33: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02S33.html

M.P.E.C. 2002-S33 Issued 2002 Sept. 21, 11:25 UT

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EDITORIAL NOTICE

[reprinted from MPC 46469, 2002 Sept. 21]

Staff absences from the Minor Planet Center during the next month will entail some reduction in the service the international astronomical community normally enjoys. Every effort will be taken to ensure that The NEO Confirmation Page is maintained as usual, but rapid action involving main-belt minor planets should not be expected.

Brian G. Marsden M.P.E.C. 2002-S33

MPEC 2002-Q20: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02Q20.html

M.P.E.C. 2002-Q20 Issued 2002 Aug. 22, 13:40 UT

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EDITORIAL NOTICE

[reprinted from MPC 46173, 2002 Aug. 22]

In an Editorial Notice on 2001 July 5, we asked observers to inform us whether they wished to have their "one-night stands"--single-night detections of unidentified, unlinked or otherwise unconfirmed objects--made available by the IAU Minor Planet Center on an anonymous ftp server at the Smithsonian Astrophysical Observatory or "returned to the sender." Failure of an observer to respond by the 2001 Sept. 15 deadline was taken by the MPC to mean that such observations would _not_ be made publicly available. In accordance with the contract between the IAU and the SAO, this procedure was initiated last October for observations that were at least six months old.

The IAU General Secretary, in consultation with the chair of the IAU MPC Advisory Committee, notes that the contract implies that failure to respond means that an observer's one-night stands _should_ be made available. Accordingly, observers who have so far not responded are now being given a second chance to respond--by 2002 Oct. 10. Those who have not responded by then will be presumed to accept that their one-night-stand data will be made publicly available.

In considering their responses, observers should understand that the IAU officials require that _one-month-old_(or even more recent) one-night-stand data be made available on the ftp server in the next monthly update. If such data are _not_ to be made available, it is required that the MPC return them to the observers with the notification that the data will not be used for further linkages, because they are not "public data." Furthermore, in order to fulfill the IAU requirements, the MPC is prohibited from accepting a resubmission of these same observations unless and until they have been identified or linked.

Brian G. Marsden M.P.E.C. 2002-Q20

MPEC 2002-D44: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02D44.html

M.P.E.C. 2002-D44 Issued 2002 Feb. 27, 20:09 UT

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EDITORIAL NOTICE

[reprinted from MPC 44683, 2002 Feb. 27]

The Minor Planet Center acknowledges with thanks the receipt of donations this past month from A. C. Beresford (South Australia) and P. A. Shugart (Texas).

As noted on MPC 44163, the acceptance and publication of new names for minor planets continues to be more delayed than in the past. Nevertheless, all names submitted before today are now in the hands of the Committee on Small-Body Nomenclature. As also noted, there are plans for the preparation of a website, the use of which will be mandatory for the submission of name proposals, but the preparation of which has also been delayed. In the mean time, and effective immediately, submitters are advised that name proposals that are not sent by e-mail precisely according to specification, or that appear to be too long, will be rejected. Submissions by e-mail to mpc@cfa.harvard.edu will be automatically acknowledged, but there will be no notification of rejection. It is therefore important that all those submitting names familiarize themselves with the instructions in the "Guide to Minor Body Astrometry" (http://cfa-www.harvard.edu/iau/info/Astrometry.html), referring specifically to question 29. Citations should not be sent as an attachment, the spacing is important, the provisional designation and discovery date should be provided in the proper form, and the header line must be included. Diacritical marks should be indicated according to the conventions of TeX, and for names honoring people the years of birth (and death) and some geographical information should be included. Recent discussions in the CSBN have led to suggestions that contrived or concatenated names (e.g., consisting of elements of the first and last names of persons to be honored) should be confined to no more than 12 letters, if at all possible, and that the acknowledgment of others, such as a person suggesting a name to or preparing the citation for the discoverer, should be kept to a minimum.

Brian G. Marsden M.P.E.C. 2002-D44

MPEC 2002-C06: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02C06.html

M.P.E.C. 2002-C06 Issued 2002 Feb. 2, 21:45 UT

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EDITORIAL NOTICE

[reprinted from MPC 44251, 2002 Jan. 28)

Contributors of perturbed orbital elements are advised that use of the Epoch 2002 May 6.0 TT (rather than 2001 Oct. 18.0 TT) will become effective after the next batch of MPCs.

The Minor Planet Center acknowledges with thanks the receipt of donations this past month from R. Covington (North Carolina), M. Griesser (Switzerland) and L. K. Sloan (California). Donations, which are tax deductible (in the U.S.), can be sent (with an indication they are for the Minor Planet Center) to Amanda Preston, Development Officer, Smithsonian Astrophysical Observatory, Mail Stop 31, 60 Garden Street, Cambridge, MA 02138, U.S.A. (telephone +1-617-495-7321, FAX +1-617-384-7689, e-mail apreston@cfa.harvard.edu).

MPEC 2002-A03: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K02/K02A03.html

M.P.E.C. 2002-A03 Issued 2002 Jan. 2, 21:53 UT

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EDITORIAL NOTICE

[reprinted from MPC 44163, 2001 Dec. 30]

As indicated in the Editorial Notice on Nov. 30 (MPC 43801-43802), there were several occasions in December when staff members were on leave, from both the Minor Planet Center and the Central Bureau for Astronomical Telegrams, and there was as a result some delay in responding to many enquiries and in the processing of all but the most urgent data. For the same reason, no electronic MPS batch was issued in mid-December, and the current MPC batch is a "minibatch" that will be followed by an MPS batch in a few days.

That Editorial Notice discussed priorities for the MPC. Further discussion, particularly in the Minor Planet Mailing List, seems generally to have confirmed that prioritization, affirming that the questioned activities do need to be performed, particularly with regard to main-belt minor planets.

While the naming of minor planets has great popular appeal, it is clear that from a scientific point of view the assignment of new names to minor planets must have a priority that is low in relation to the priorities for the other MPC activities mentioned. The 26 new names in the current MPC batch were selected by the Committee for Small-Body Nomenclature by a procedure of selection and voting similar--but not identical--to that used in the Nov. 1 MPCs. Nevertheless, the majority feeling in the CSBN has been that this committee should concentrate on eliminating a small number of bad names, rather than on accepting a small number of good ones. Of course, this feeling does not solve the problem, brought up in the Nov. 1 Editorial Notice (MPC 43737-43739), of editing and otherwise attending to the increasing number of name proposals. Most of the other names that have already been proposed are therefore likely to appear in future MPC batches, although there will be some delay, possibly considerable, and this will carry forward into the handling of proposals of names submitted in the future. The most innovative suggestion for attending to names and citations in the future involves the use of a website for the submission of names, as well as for the editing of citations and the judging by the CSBN, but it will take some time to establish this, should this route be followed.

Returning to the matter of MPC funding, one MPML contributor remarked that the MPC should make a competitive proposal for funding at a national level in the same way other research proposals are made. This is reasonable for scientific activities related to the MPC, but the point is that most of what the MPC does is service, not science. Inasmuch as this service goes to observing programs in the U.S. that are funded by NASA, it is clearly appropriate that much of the funding should come from NASA, either directly or through these individual observing programs. But the MPC serves the international community, and international funding is therefore also appropriate, a point that was made in the recommendations of both the U.K. Task Force and the Seville Workshop. In this connection, we must apologize to the International Astronomical Union for suggesting that it has not lived up to its part of the contract with the Smithsonian Astrophysical Observatory: the IAU has been seeking support for the MPC, but so far not with success.

There remains the point, however, as to how far professional sources of funding should be used to pay for the services the MPC supplies to amateur astronomers. It is precisely because of this that the MPC has traditionally made a charge for its services, that charge being in the form of subscriptions to MPC publications. This process worked very well in the days of exclusively printed publication, but--as has also been remarked upon in the MPML--it is really rather unsatisfactory in these days when information is very widely distributed electronically. It is this single

fact that has caused most of the funding problem for the MPC. It is also why the suggestion was made that those--even amateur astronomers--who submit observations to the MPC should pay more directly for the processing of their observations. While this idea was rather better received in the MPML, some amateurs have understandably balked at the idea of this additional expense, over and above the considerable sacrifice they make to acquire their observing equipment in the first place.

There remains the option of donations. While it seems unlikely that these could be sufficiently extensive to fund fully even one staff member, all donations, which can be made as charitable gifts (and are therefore tax deductible, at least in the U.S.) to SAO in the name of the MPC, are very much appreciated. Continuing our policy of acknowledging such donations in the MPCs, we wish to show our appreciation of recent contributions from M. Dawson (Luxembourg) and D. Dixon (New Mexico).

Brian G. Marsden M.P.E.C. 2002-A03

MPEC 2001-W73: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K01/K01W73.html

M.P.E.C. 2001-W73 Issued 2001 Nov. 30, 22:01 UT

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EDITORIAL NOTICE

[reprinted from MPC 43801-43802, 2001 Nov. 30]

The Editorial Notice a month ago (MPC 43737-43759) prompted some discussion, notably among the community of mainly amateur astronomers who subscribe to the "Minor Planet Mailing List". In stressing the perceived "right" of discoverers to name the minor planets they find, and whether or not the 10 million observations currently in the Minor Planet Center's files represent a mere "database-management" problem, most of the discussion rather missed the point. The point is that, while there have been great strides in artificial intelligence in recent years, and while the MPC's computers are open 24/7 to receive observations, computers do require human agents to keep them running, and the MPC's problem is a shortage of personnel for even 16/7 operation, with most importantly a need for a systems manager/engineer. Not only has the greater-than-exponential increase in the influx of observations in recent years made the need for additional staff imperative, but without serious financial support--soon--the MPC will have to introduce cutbacks in its operation, even to the point of a reduction in staff.

If cutbacks are to be a consideration, discussion should center on priorities for the MPC operation as a whole. Given the potential danger to the survival of the human race, it seems appropriate to continue to give highest priority to the processing of information on NEOs, particularly by means of the very successful NEO Confirmation Page and rapid formal MPEC announcement of confirmed NEO discoveries (but do further follow-up observations of NEOs need to be disseminated seven days a week, and if there is indeed a potential danger, why are the world's governments not clamoring to provide financial support?).

From a scientific point of view, it is also reasonable that the MPC should continue to work with the community interested in TNOs, given the exciting insight these bodies provide on the origin and evolution of the solar system (and is it more important to register hundreds of weak two-night discoveries or to ensure dozens of secure second-opposition recoveries and meaningful orbit determinations?). Since early 2000, the MPC has provided similar services involving the outer satellites of the giant planets, conveniently in time for the recognition of numerous new satellites of Jupiter and Saturn (and the same parenthetical question can be asked). Since 1978, and working closely with the Central Bureau for Astronomical Telegrams in the interests of efficiency, the MPC has taken over from the CBAT the routine filing of astrometric observations and orbital information for comets, leaving the CBAT principally with the responsibility for announcing new discoveries (but is it necessary to continue to give special attention to non-NEOs suspected to be comets from their orbital computations but where observational confirmation is often both difficult and confusing, and why should there be any urgency in dealing with comets found near the sun by the SOHO mission that no longer even exist by the time the measurements become available?).

Of course, more than 99 percent of the objects handled by the MPC are main-belt minor planets. Although the vast majority of the observations are nowadays extracted from the immense amount of data provided by the principal NEO search programs, most of the actual observers of these objects are amateur astronomers who overwhelmingly concentrate on main-belt minor planets. Observation for observation, it is much more efficient for the MPC to process a daily set of organized but unidentified observations from an NEO program that may number in the tens of thousands than to deal with scores of e-mails daily from individual observers each containing at most a dozen or so observations of main-belt objects. While there has been very little comment either way on the suggestion last month that a small charge per e-mail submission and/or a very small charge per observation should be levied, the fact is that such charges could

support {\it most} of the processing (including sometimes the need for e-mail interchanges) of the data at the MPC. While one can indeed argue whether there is much real scientific value in the reliable identifications and orbit determinations that nowadays eventually contribute to the enormous rate of new numberings of minor planets, to utilize for this purpose organized all-sky observations to a consistent magnitude limit does minimize selection effects. Rather than produce ever more routine astrometry, does it not now make some sense for many amateur astronomers instead to carry out careful photometry on a more limited selection of main-belt objects? And while there is understandable appeal to naming a minor planet of which one has been credited as the discoverer, has not the CCD revolution all but eliminated the very concept of "discovery" in an automated observing process that is then supplemented by a computer revolution that automatically yields identifications and renders the orbital solutions more and more routine the more complete and extensive the observational set becomes? While it is appropriate to acknowledge in the MPCs those individuals who collectively contribute to this broad observing and computing collaboration, the MPC has this past month been making a start on removing the assignment of credit to individuals (as opposed to projects) for the computational work on specific objects.

It is also necessary to consider the priority that should be given to the free services the MPC provides in the WWW. Part of the reason the Nov. 1 MPCs were a "mini" batch was an urgent need to repair some of these services around the time of full moon when the lull in observational activity normally provides an opportunity for the MPCs to be prepared and the observations documented and filed. In response to requests from other orbit computers for the more rapid dissemination of observations of main-belt objects, the MPC early this year instituted a procedure whereby "mid-month" batches of MPSs can be issued with observations that have been checked but not yet documented and filed. "Mid-month" is a loose term that can also apply to MPSs issued almost simultaneously with a "mini" batch of MPCs, such a batch being one that contains none of the time-consuming documentation (and therefore also does not involve the extensive filing) of observations and orbits of minor planets. While the MPC thought that orbit computers would appreciate this availability of the observations, it appears that what the orbit computers really want is the filing of the observations--as evidenced by the note during the past month in the website of one of these computers to the effect that "the data from the Minor Planet Center are not available in the required format to be processed automatically". We regret the inconvenience. Likewise, it was not possible this past month to add to the provision in the WWW of the "one-night stands", which are the single-night detections of the almost exclusively main-belt minor planets remaining at any time after all the known identifications and night-to-night linkages have been removed. Although the MPC has received further negative comments about this, it has seen no evidence that any use has in fact been made of the 12 000 ONS observations made available by ftp in October. Nevertheless, while it is anticipated that, like most of the world's astronomers, each MPC staff member will be on leave for some part of December, it is hoped that it will be possible to add to the ONS entries already available shortly. The extreme attention accorded nowadays to the dissemination (but a disinclination to support the work financially) of fully routine astrometric observations of main-belt minor planets is hard to fathom, given the disdain in which this subject was held during almost the whole of the twentieth century. Indeed, in discussing the announcement of (433) Eros, the first asteroidal NEO, A. C. D. Crommelin (1898, The Observatory 21, 370) began: "The discovery of a new minor planet is hailed as a rule with equanimity, not to say indifference. The number has grown so large, and they are for the most part of so little practical importance in astronomy, that but few observers care to devote themselves to search for them."

With 2013 new numberings, the ranks of the highest-quality orbit determinations are today being swollen by almost five times as many minor planets as were known when Crommelin wrote the above words. The new total, (32729), represents a doubling during the past 15 months alone. Today's MPO batch also contains some 34 000 orbit determinations of lower quality. Furthermore, in documenting the data that appeared in the MPS batches dated Oct. 21, Nov. 3 and Nov. 17, as well as today, the current MPC batch refers to more than 1.1 million observations.

The MPC takes some encouragement in the fact that there have been this past month several new subscribers, particularly to the Computer Service the MPC shares with the CBAT. Although this does not make up for the continuing net reduction in the number of subscribers, even during the past six months, the MPC hopes that other newcomers will subscribe, particularly to the Extended Computing Service (where the MPCs, MPSs, MPOs and filed observations are available)--or to the printed MPCs, anachronistic though these nowadays may be. The MPC is also happy to acknowledge the receipt of donations in November from J. Schiff (New Zealand) and from M. Trueblood and R. Crawford (Arizona).

MPEC 2001-V02: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K01/K01V02.html

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EDITORIAL NOTICE

[reprinted from MPC 43737-43739, 2001 Nov. 1]

We apologize to those who use our free services on the WWW for several breakdowns in the system during the past month. As discussed in the Editorial Notice on MPC 43423, September provided a new extreme in record activity for the Minor Planet Center, mainly of course in attending to observations and orbits of main-belt minor planets, including a record number of new discoveries. The corresponding activity in October was at only a slightly reduced level, but it was sufficient to deplete on several occasions the available diskspace on the older computers used for most of the WWW services. We might note that the total number of observations in our files is now very close to 10 million, a tenfold increase in just six years.

The procedures that update the data provided in the WWW services were still carried out on the older computers, because--rightly or wrongly--it was considered more important for the small MPC staff to attend as promptly as possible to the large number of new observations of "ordinary" minor planets received every day. Although there is now in place an automatic process for acknowledging the receipt of observations sent to the address mpc@cfa.harvard.edu, and priority is given to the objects that are more obviously NEO candidates, the increased burden has recently resulted in delays of as long as 48 hours in our informing observers of identifications or new MPC designations for the objects they report. The problem of attending to observer reports is exacerbated by mistakes and inconsistencies in some of the designations of the objects reported, gross errors in the dates and times of observation, and extreme departures from the specified format that therefore require human (rather than computer) attention to decipher. Again, we apologize for the delays, which will presumably become more common as the volume of observations reported continues inexorably to increase, although we note that the current situation would be alleviated by the addition of one or two members to the MPC staff.

With the situation near breaking point, MPC Associate Director Gareth Williams has put in a heroic effort in the past week or two to get some of the WWW services, as well as the production of the "Daily Orbit Update" MPECs, operating on the cluster of modern computers developed over the past couple of years as the result of much-appreciated gifts from the Tamkin Foundation. The totality of activities carried out by the MPC is one of extreme complexity, and both the transfer of procedures from the old computers to the new and the introduction of new procedures have necessarily been rather gradual processes, often hampered by hardware problems (cf. MPC 42427) that would be much better solved if the MPC could employ, even part-time, a systems manager/engineer.

Because of the above-mentioned difficulties, as well as an urgent need over the full-moon respite from observational activity to spend time getting additional procedures properly operating on the computer cluster, this batch of MPCs is a "mini" batch (cf. MPC 42649). The observations of minor planets received during the past two weeks will be published shortly in a "mid-month" MPS batch, and they will be documented and filed at the time of the preparation of the Nov. 30 MPCs. Orbital elements for minor planets are of course appearing in their usual temporary fashion in the DOU MPECs.

The MPC sometimes receives unsolicited advice on how some of its activities, e.g., involving NEOs, could be transferred to other organizations. With the use of The NEO Confirmation Page and both the individual and the DOU MPECs, it has been widely acknowledged that the NEO activity is handled very well, given that not every perceived NEO candidate turns out to be an NEO (or even a real celestial object); that some NEOs at times masquerade as main-belt minor planets; and that there has in recent years

been the increasing problem of recognizing when an apparently asteroidal object is in fact a comet--the discovery announcement of which would then be made by the Central Bureau for Astronomical Telegrams, which is conveniently co-located with the MPC at the Smithsonian Astrophysical Observatory. Of course, other aspects of NEO research can and should be carried out at other organizations. For example, the group at the University of Pisa uses the observations and preliminary orbit computations published by the MPC to make variant computations needed to recognize for its "risk page" http://newton.dm.unipi.it objects that have a nonzero probability of earth impact during the next century.

As was mentioned on MPC 42955-42956, one area of current MPC activity that could rather obviously be handled by a separate organization is the receipt of proposals of names of minor planets and the submission of computer files of edited citations for MPC publication after adjudication by the Committee for Small-Body Nomenclature. Following, but not because of, this mention in the July 5 MPCs, the whole question of the appropriateness of continuing to name minor planets has been discussed by various groups within the IAU, including again the CSBN. Although a final decision on the subject is far from being made, it was decided that the CSBN should conduct an experiment with regard to the set of names proposed for the current batch of MPCs. This was done rather than follow the advice on MPC 42956, which was to accept only those names and citations that were submitted in the proper form. If that advice had been followed, only 36 of the relatively small set of 97 submissions during July 31-Sept. 10 would have qualified, subject to the need in some cases to rewrite the citations in more acceptable English. Furthermore, to do this would have eliminated many very good proposals in a set that the CSBN felt was of particularly high quality--in rather sharp contrast to the name proposals submitted for the July 5 MPCs. The procedure followed was to ask each of the 13 CSBN members to select (secretly) up to "about" 10 of the 97 proposals as worthy of further consideration. The 54 name proposals selected by at least one member were then made known to the CSBN members, and each member was asked to vote (again secretly) for up to 20 of these names. The outcome was that one name received 9 votes, three names received 8 votes, two received 7 votes, five received 6 votes, five received 5 votes and ten received 4 votes. These 26 names were therefore deemed those accepted. At this point--and not earlier--the corresponding citations were edited for publication on MPC 43762-43763.

While there are obvious merits to the above procedure (raising the standards of minor-planet names; reversing the fact that minor-planet naming has become so commonplace and indiscrimate that to have a minor planet named for one can nowadays scarcely be considered an "honor"; greatly reducing the time and effort spent by the MPC editing and otherwise verifying citations that are not very understandable; greatly reducing the back-and-forth discussion in the CSBN on names that are questionable), the CSBN is well aware that not everybody will be happy with the result. In particular, while some names honoring amateur astronomers were accepted, they are clearly underrepresented in the total, and names that are solely of significance to the proposers and their friends were excluded. Nevertheless, it would be difficult to argue that acceptance of just the 36 proposals that were properly formatted would have been a better choice.

Since the action this time by the CSBN was an experiment, not preannounced, it would be inappropriate to reject the other 71 names outright. Most of these other names are therefore likely to be accepted by the CSBN for publication in future MPC batches, with their citations properly edited as time permits. Of course, this by no means solves the naming problem, and the MPC has already received 129 further name proposals (again just 36 of them properly formatted!) that will be sent late next week to the CSBN for consideration for publication in the Dec. 30 MPCs.

So we come back to the matter of proper funding for the MPC. Recommendation 7 of the U.K. Government Report of the Task Force on potentially hazardous Near Earth Objects (Sept. 2000) requests that the (U.K.) Government and other interested parties "seek ways of putting the governance and funding of the Minor Planet Center on a robust international footing"; and Recommendation 2/2 of a workshop cosponsored by the American Institute of Aeronautics and Astronautics, the U.N. Office of Outer Space Affairs, the Confederation of European Aerospace Societies and the International Academy of Astronautics, International Space Cooperation: Addressing Challenges of the New Millennium (Mar. 2001), also states that the MPC "should be put on an adequate and stable financial footing". It ought to be clear from much of what is stated in the above paragraphs that the matter is now becoming rather urgent. Traditionally, the MPC has relied on the time-honored practice of generating income from subscriptions to its services to cover a large fraction of its expenses. The recent policy of the IAU has been to discourage funding of this type, which is in any case difficult to assure nowadays, when services are largely provided electronically, rather than via printed pages (even though the change from paper to electronic actually increases the expenses, because of a desire

to publish more material and more quickly). In recent years, the diminishing subscriptional support has been supplemented by what was first a grant from and then a contract with NASA. While this support has become essential to the operation of the MPC, it is not a help when NASA "stretches" a year to 19 months, and the internationality of the MPC makes it inappropriate that it receive its entire funding from a single government.

One clause of the contract signed between the IAU and the Smithsonian Astrophysical Observatory on Apr. 17 reads: "Should their combined resources be inadequate to operate the MPC at the desirable level of activity, the IAU and SAO will collaborate to identify and attract additional funding and/or staff for the MPC operations." Although the MPC has sought advice on this topic from the IAU Minor Planet Center Advisory Committee on more than one occasion since the contract was signed, no advice whatsoever has been forthcoming. Indeed, the principal response from the MPCAC Chair has been a statement, dated Oct. 26, "officially, on behalf of the MPCAC" to the effect that our making available single-night detections of unidentified minor planets by ftp (cf. MPC 43423), though carried out as required within six months of the signing of the contract, was "contrary" to the terms of the contract. Certainly, this first attempt at making the "one-night stands" available was incomplete in that it did not yet contain any observations made prior to 2001: obviously, the intention is to add earlier data (back to 1992) as time permits them to be collected together. Furthermore, while some may consider the "release" of the ONS to be a high-priority task for the MPC, past experience with the ONS suggests otherwise (cf. MPC 42955).

In the absence--so far--of "robust" or "stable" future funding for the MPC, stopgap measures are of course welcome. The simplest measure is to encourage more subscribers. While detailed information about subscriptions can be obtained from iausubs@cfa.harvard.edu, we note here that the regular monthly subscription rate for the printed MPCs is $22.50, that for the Computer Service is $10.00, and the latter can be combined with the Extended Computer Service (which includes all the MPC files) for $35.00. Donations can also be accepted. On MPC 42955 there was mention of a possible fee for processing name proposals: the amount discussed was in the neighborhood of $20.00-$30.00 per name, and it must be stressed that this is strictly a fee that would allow a name and citation to be prepared for publication--not an indication that the name is being "sold" (i.e., along the lines of the International Star Registry). Yet another suggestion is that a fee be instituted for processing observations, perhaps in the range 0.1-1 cent per observation, with a minimum charge of $1.00 per e-mail message that could be waived for observations of objects on The NEOCP.

In making suggestions for financial support like those in the previous paragraph, we do not wish to alienate amateur astronomers, who in contributing observations also contribute their time. Nevertheless, an amateur does have a choice of what he or she does, and the MPC has always tried to be meticulous about assigning credit to amateurs for their work. But all contributors (amateur or professional) of data to the MPC, as well as those who either make free use of MPC services or seek advice directly from the MPC staff, should be aware of the strain the ever-increasing activity on minor planets is now placing on a staff of 2.5 people. Remember that, after all, if an MPC staff member is on the job after he has put in the 40 hours per week for which he is paid, he, too, becomes an amateur; furthermore, to get the job done, he has little choice but to spend time checking out a batch of observations of numbered minor planets, a process for which there is scant credit, whether or not the observations have actually been identified by the observer.

When the Minor Planet Center was located at the Cincinnati Observatory it was common for as long as six months to elapse between the publication of batches of MPCs. And although the Cincinnati staff was comparable in size to what it is now, the total amount of data processed during those 30 years was some three times less than what was processed by the MPC in Cambridge during September 2001 alone.
When the MPC moved to SAO in 1978 the decision was made to issue the MPCs in monthly batches. In doing so, we were able to maintain the quality control, documentation and referenceability that was the hallmark of the Cincinnati operation--and, indeed, should be expected of any work carried out on behalf of the IAU. For more than 23 years this monthly publication has in fact appeared, with only a very occasional month missed (and then by prior arrangement) because of staff attendance at scientific meetings, occasional vacations, etc. In response to the current widespread interest in minor planets--which was never the case when the MPC was in Cincinnati--the MPC is nowadays updating information on new discoveries of NEOs several times a day (a task formerly handled by the CBAT); observations of NEOs and orbit computations for minor planets generally are provided daily; and in recent months, by means of the MPSs and MPECs, we have been publishing fully checked observations of minor planets and the recent comets twice a month. Obviously, we should like to maintain, even to

improve on, the services the MPC provides, in terms of both frequency and content. But, given the intolerability of the present financial situation, which both prevents the expansion of the MPC staff and may in fact result in its reduction, it will be impossible to respond to all but the most urgent communications from observers and others with its traditional almost legendary speed, and it may be necessary to cut back on the frequency with which its present services are updated or otherwise provided.

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MPEC 2001-J16: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/K01/K01J16.html

M.P.E.C. 2001-J16 Issued 2001 May 11, 18:07 UT

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EDITORIAL NOTICE

The following text is taken from the Editorial Notice in the 2001 May 9 batch of MPCs:

> As noted in the previous Editorial Notice, the first mid-month batch of MPS was issued on April 22. The ability to produce these mid-month batches gives the Minor Planet Center greater flexibility in publishing data. This flexibility is very desirable this month because of staff absences in the week leading up to the preparation of this MPC batch. It has therefore been decided that this current batch will be a "mini" batch that contains everything except the minor planet observations, observation summary and minor planet orbits. There will therefore be no need for the accompanying MPS and MPO batches. To ensure that the minor planet observations are available to other researchers, another mid-month MPS batch will be published a few days after these MPCs are completed. It is anticipated that this "mini" MPC feature will be used only rarely in the future.

Users of the ECS are warned that the data files associated with the May 9 MPC batch will be somewhat different than in previous months. Specifically, the complete files of minor-planet observations will be unchanged from last month and the minor-planet update files (both observations and orbits) will be blank. The observations that appear in the mid-month MPS batches will, of course, be available separately through the ECS.

The next seven MPECs will, as usual, be the monthly object summaries that normally follow the completion of the MPC preparation. Because the recent orbits of minor planets are not included in the May 9 MPCs, some of the orbit references will be to MPECs, with "G33", for example, to be interpreted as "MPEC 2001-G33". It should also be noted that the "last observation" dates are up-to-date.

Brian G. Marsden M.P.E.C. 2001-J16

MPEC 1999-C10: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J99/J99C10.html

M.P.E.C. 1999-C10 Issued 1999 Feb. 5, 16:49 UT

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EDITORIAL NOTICE

A clarification is necessary with regard to the Editorial Notice on MPEC 1999-C03. As shown at the end of the Notice, this was reprinted from MPC 33615-33616, which had been prepared two days earlier. The pressure of work to prepare the monthly batch of MPCs prevented the preparation of a new Notice when MPEC 1999-C03 was issued.

In the mean time, as many readers will realize, a Press Release was issued by Johannes Andersen, the IAU General Secretary, noting very clearly that Pluto would in no way be "demoted", a point made, equally strongly, in the Minor Planet Center's Editorial Notice. The Press Release also clarified that the Small Bodies Names Committee had, in the mean time, decided not to use the number (10000) for Pluto.

The main purpose of our Editorial Notice, also clearly stated, was to select an appropriate name for (10000), given that the Feb. 2 batch of Minor Planet Circulars contains numberings through (9999).

In this regard, other than with its decision on Pluto, the SBNC did not complete its charge. It expects to make an appropriate decision on a name for (10000) by Feb. 26, now with the help of information received as a result of the invitation to readers in our Editorial Notice.

Some 24 hours now after MPEC 1999-C03 was issued, the messages received are 63 percent in favor of using (10000) for Pluto, 37 percent against. The in-favor fraction has fluctuated between 58 and 68 percent, suggesting that the vote represents a genuine international concern, not one influenced by any campaign. Unfortunately, there have been few suggestions of alternatives, and no obvious candidates have yet emerged. The SBNC will consider all of this information in its further deliberations, and it is to be hoped that the outcome will be a wise decision of which the IAU can be proud.

Although the experiment is now officially at an end, there is obviously still a need for appropriate alternatives to Pluto. Given the precedents listed in the second paragraph of MPEC 1999-C03, we should like the name of (10000) to be on a suitably grand scale. I thank everyone who participated. I also apologize to any astronomers who feel in any way slighted by my remarks on this subject, but it is also very clear that the "Pluto issue" is a very emotional one, separate from any scientific or historical considerations. I particularly apologize to my good friends Johannes Andersen, IAU Assistant General Secretary and Commission 20 President Hans Rickman, and Division III President Mike A'Hearn, for any confusion caused by the timing of yesterday's statement, and I thank them for their support during this trying time.

Brian G. Marsden M.P.E.C. 1999-C10

MPEC 1999-C03: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J99/J99C03.html

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URL http://cfa-www.harvard.edu/iau/mpc.html

EDITORIAL NOTICE

On 1801 Jan. 1 Guiseppe Piazzi discovered the object between Mars and Jupiter that he called Ceres Ferdinandea, "the eighth planet". Following the discovery a year later of a similar object, and in subsequent years further objects in what might be termed the "Cisjovian Belt", Piazzi's discovery eventually became known under either the name Ceres or the symbol (1), where the numeral, originally placed inside a complete circle, indicated that this was the first object found in that region of the solar system. By 1849 the sequence of discoveries in the region had reached (10), and 1868 saw the discovery of (100). By 1923, when (1000) was announced, the set of objects, while still mainly members of that Cisjovian Belt (also known simply as the "Asteroid Belt", or "Main Belt" of "minor planets"), also included objects that approached within 0.1 AU of the earth or extended out to the orbit of Saturn.

Next month, we shall pass (10000) in what is a collection of small objects that are not obviously cometary (although three members do also have well-documented dual status in the Catalogue of Cometary Orbits) and travel around the sun in independent orbits (i.e., satellites are excluded) that are well determined (i.e., with one exception that will surely be eventually remedied, the positions of the objects are very precisely predictable). Again, although the vast majority of the objects are in the Cisjovian Belt, there are members that are at perihelion significantly closer to the sun than Mercury or are at aphelion beyond the orbit of Neptune. It has been traditional to have a special celebration with each thousandth numbering. For example, (1000) was named in honor of the discoverer of Ceres, (2000) in honor of the discoverer of Uranus, (5000) in honor of the International Astronomical Union and (6000) in honor of the United Nations. Obviously, it would be appropriate to have some very special celebration to acknowledge (10000).

Most readers of these Circulars will be aware of recent discussions in the press concerning a proposal that the number (10000) should be given to Pluto. The principal reasoning for this is the recognition during the past few years that Pluto was the first discovered and largest known member of the "Transneptunian Belt" (sometimes called the "Kuiper Belt" or "Edgeworth-Kuiper Belt") of small objects beyond Neptune that possess some similarity, at least dynamically, to bodies in the Cisjovian Belt. Although as many as 95 members (or possible members) of the Transneptunian Belt are now listed, most of the orbital solutions are very weak, and none of the bodies has so far been included in the collection of those with "guaranteed" orbit determinations. A few of the discoveries from 1992-1994 are now approaching this state, which will also allow them to receive permanent names.

Although it is not unlikely that further Transneptunian Objects as large as Pluto will be discovered in the future, Pluto obviously holds a very special place in our appreciation of this new population, and by assigning to it the number (10000), we should guarantee that Pluto will be at the head of the Transneptunian list. It is also very important to affirm that there is absolutely no implied "demotion" or "reclassification" of Pluto from its position in the list of the "planets" (or "major planets" or "principal planets"). Unfortunately, many of the articles that have appeared in the press have accidentally (or deliberately) misinterpreted this issue. As with (2060) = 95P/Chiron, (4015) = 107P/Wilson-Harrington and (7968) = 133P/Elst-Pizarro, where the choice of "minor planet" or "comet" designation depends on the context, we are proposing that Pluto would have dual status as a "major" and a "minor" body. Readers of these Circulars, in particular, will appreciate that Pluto is sufficiently fainter than the other major planets that it can be

confused with many other minor planets. We have in fact identified observations of Pluto several times during the past couple of years in data reported by the survey programs for Near-Earth Objects, and some astrometric observers specifically report to us observations of Pluto. There is currently no outlet for publishing these observations. It should be emphasized that the number (10000) would be used only in the context of publishing such observations or in matters directly related to Pluto's place in the Transneptunian Belt.

Much has been made in the press that the IAU is "voting" on Pluto's status, and at least one astronomical organization issued a press release on the subject. Members of the public seem completely baffled by this kind of attention. The question of relevance to the readers of these Circulars concerns the numbering and naming of (10000). Indeed, the IAU Small Bodies Names Committee has already been working on this particular matter for the past month or so. Progress is slow and uncertain, however, and there are some who think that democracy would be better served by seeking opinions from a larger, but informed community. The astronomers, amateur and professional, who contribute material to these Circulars--astrometric observations, identifications, orbit determinations--are such an informed community.

Accordingly, any reader with an opinion on the subject is invited to e-mail it to us at the Minor Planet Center, preferably using the address mpc@cfa.harvard.edu. Such a message could consist of a brief statement such as "I approve (10000) Pluto" or "I do not approve (10000) Pluto", although the value of the latter choice would be augmented if an appropriate alternative suggestion were made for (10000). Brief comments on the subject (preferably constructive) would also be welcome, and writers are encouraged to identify themselves. Modern bureaucracy rarely pays much attention to comments from even an informed public, but since this issue is of concern principally to our readers (more so, in fact, than to many professional astronomers with little or no interest in solar-system astronomy who just happen to be serving on a committee), we feel that it is appropriate for us to solicit advice in this way. Your early response is desirable. It is not necessary that you actually subscribe to these Circulars in order to respond. Appropriate responses will be examined and considered in connection with the deliberations by the Small Bodies Names Committee by their deadline of Feb. 26.

-- The above is the Editorial Notice that appears
on MPC 33615-33616, dated 1999 Feb. 2

Brian G. Marsden M.P.E.C. 1999-C03

MPEC 1997-X17: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J97/J97X17.html

M.P.E.C. 1997-X17 Issued 1997 Dec. 15, 23:27 UT

The Minor Planet Electronic Circulars contain information on unusual
minor planets and routine data on comets. They are published
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EDITORIAL NOTICE

One shortcoming of the monthly preparation cycle of the Minor Planet Circulars (MPCs) is that newly-computed orbits that appear in each MPC batch have not been available during the month, except those for unusual objects appearing on these Minor Planet Electronic Circulars (MPECs). As an aid to observers, for the past few years it has been possible to generate ephemerides from such unpublished elements in the Observers submenu (option 'B' in the main menu) of the telnet Computer Service. The elements themselves were not supplied, as there was heretofore no way of referencing them. Recognizing that observers may have legitimate needs for referenceable elements, the Minor Planet Center desired the implementation of some procedure that would make these elements available to the astronomical community in a more timely manner.

The procedure that is being adopted by the Minor Planet Center is to issue daily orbit updates on the MPECs, containing orbits computed at or submitted to the Center over the previous 24 hours. Each MPEC will contain a list of new identifications and double designations, followed by the orbits, separated into old-numbered, multi-opposition, one-opposition perturbed and one-opposition unperturbed orbits. On the MPECs the elements will be given to 0.001 degree for the angles, with a corresponding precision for the other elements. This seemingly-limited precision, sufficient to locate a main-belt object to better than 0'.1, is simply to constrain each line on the MPEC to 80 characters. The names of the orbit computers will be abbreviated to a single letter. A list matching these characters to individual orbit computers will appear shortly on the MPC homepage.

The new orbits will be available in both the telnet Computer Service and the Web versions of MPCUPDATE and MPCAT. The 'E' option in the telnet Computer Service has been completely rewritten and is now faster and more flexible than the previous version. A new link on the Web MPCUPDATE page will take ECS subscribers to a page that will contain further links to the previous 40 batches of daily orbit updates. A new link on the Web MPCAT page will lead to a new page allowing the downloading of sets of orbital elements (to full precision and with the names of the orbit computers).

The internal interface to the updated 'E' option in the telnet Computer Service is completely incompatible with the old interface. It is therefore not possible to bring the new 'E' option online prior to the issuance of the first daily update MPEC. Therefore, the new 'E' option and the links in the Web versions of MPCUPDATE and MPCAT will become active tomorrow. Note that inclusion of the daily update files in the telnet version of MPCUPDATE is not practicable.

Subscribers should note that the daily-update orbital elements are preliminary and that they have not been subjected to the rigorous checking to which MPC orbits are normally subject. They are thus subject to amendment or retraction over the course of the month.

Interfacing the daily update procedures into the existing routines of the Minor Planet Center has not been trivial. Although these update procedures have been tested extensively over a number of weeks, it has not been possible to pretest every component of the procedure. We believe that the procedure will work, but subscribers should expect some teething problems during the first few days. Priority will be given to fixing any problems that do arise, ensuring that the daily update procedures conform, insofar as is possible, to the high standards of the Minor Planet Center.

We wish to stress that these "daily orbit update" MPECs are to be prepared and issued in a completely automatic manner during the early morning hours here in Massachusetts. This complete automation also extends to the preparation of the files for MPCUPDATE and MPCAT.

It is anticipated that the first "daily orbit update" MPEC will be issued as MPEC 1997-Y01 approximately nine hours from now.

Brian G. Marsden Gareth V. Williams

 M.P.E.C. 1997-X17

MPEC 1995-M03: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J95/J95M03.html

M.P.E.C. 1995-M03 Issued 1995 June 17, 19:53 UT

The Minor Planet Electronic Circulars contain information on unusual
minor planets and routine data on comets. They are published
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BMARSDEN@CFA.HARVARD.EDU or GWILLIAMS@CFA.HARVARD.EDU

EDITORIAL NOTICE

The transneptunian object 1995 FB21 (the 27th such object discovered during the past three years) has the distinction of being the first of these very faint objects to be discovered independently by different observing teams, although--following well-established practice for minor-planet discoveries--only the first of the teams is actually credited with the discovery on MPEC 1995-M01.

Both teams were attempting to observe 1994 JS (cf. MPEC 1995-K04) at the time. The Mar. 29-30 Siding Spring observations were actually reported to the Minor Planet Center some weeks ago, although since the solar elongation was 130 deg, there existed the possibility that the object was a minor planet in the inner part of the main belt only slightly shifted from its stationary point. The absence of discernible diurnal parallax during the hour over which the new object was observed on each night did slightly favor the transneptunian solution, but a typical main-belt solution at a geocentric distance of as little as 1.5 AU could also be obtained showing no residual greater than 1 arcsec. Taken alone, the Apr. 6-7 ESO observations, made at a solar elongation of 138 deg, were also not entirely inconsistent with a main-belt orbit, although the effect of parallax during the 2-3 hours covered by the observations on each night would result in residuals of +/- more than 2 arcsec. Of course, taking the observations collectively makes the object's transneptunian status--at least currently--completely obvious.

The above example should bring home to observers the need for special care in claiming the discovery of transneptunian objects (Kuiper Belt candidates) at a range of solar elongations centered around 125-130 deg and extended down to 115 deg to avoid Trojans (if Jupiter is at an appropriate elongation) and up to 145 deg and even more to eliminate main-belt objects with moderate orbital eccentricity. Given that modern CCD astrometry of minor planets is sometimes consistent to significantly better than 1 arcsec (particularly when the same reference stars are used), the confusion is best removed by ensuring that an object is observed several hours apart on at least one of the first two nights of observation. Of the transneptunians actually reported, 1995 GJ (solar elongation 145 deg; cf. MPEC 1995-G07) and 1995 GY7 (solar elongation 138 deg; cf. MPEC 1995-M02) are the two most likely to suffer from this confusion, although again, main-belt solutions utilizing the parallactic coverage on the two available nights yield residuals in excess of +/- 2 arcsec. A long nightly span can be useful even when a discovery is made close to opposition (as has in fact been obtained for most of the transneptunians), for the resulting parallax can quickly enable one to distinguish between an object that is transneptunian and one that is near the earth and rapidly approaching it. Observations on three or four nights in quick succession tend not to be helpful for slow-moving objects near opposition, although they can usefully distinguish transneptunians found near the main-belt stationary points. Continued parallactic coverage is not useful after some preliminary information about the orbit has been even tolerably established.

As the number of known transneptunian objects increases, there is a concomitant need for continued follow-up. While patterns may have been emerging, such as near-circular orbits with radii 42-46 AU and the stabilizing influence of the 2:3 Neptune resonance for objects discovered only just beyond the orbit of that planet, these effects--particularly the Neptune resonance--have been unequivocally proven for very few objects. In recent months there have been indications that other Neptune resonances, notably 3:5 and perhaps 3:4 (possibly even 4:7), may also be involved, although there is no current candidate for the 1:1 resonance. It is clear that very much more remains to be learned about the structure of the Kuiper Belt, and this is going to require a rather considerable effort over the course of the next few years with some of the world's largest telescopes. As some observers have noted, the

identification of transneptunian objects near their own stationary points near solar elongation 100 deg is extremely difficult, but it is certainly appropriate to attempt to record the season's new discoveries at 80-90 deg elongation in the evening sky--the best insurance that recovery will be possible after solar conjunction. Finally, the appreciation that as many as four of the six known short-term-unstable, planet-crossing Centaurs are transneptunian at aphelion and are bright enough to be detected at aphelion must again provide a warning that one should not simply assume that all objects discovered at transneptunian distances are low-eccentricity, long-term-stable members of the Kuiper Belt. In no sense are the orbit computations to be considered orbit determinations until the observations span several months, perhaps even a year or more.

The above remarks about parallax and highly-accurate modern CCD astrometry nowadays have relevance for discoveries of all minor planets, particularly, of course, for discoveries of the near-earth objects that are another important ingredient for these MPECs. It is necessary to voice some concern, however, about proposed extensive all-sky surveys for near-earth objects. If an object is discovered at solar elongation much less than 90 deg, the time available for parallactic observations will be considerably curtailed; and it does not help to depend on assistance from other observers, for those at different longitudes will have to observe at the same hour angle anyway, and those at greatly different latitudes may not be able to observe the object at all. With follow-up observations made on several nights after discovery, general orbit determination should be possible, although one must be aware that at these solar elongations (even as high as 117 deg) the observations (including limited parallactic coverage) may be satisfied equally well by two completely different orbit determinations. This situation has always existed in connection with the near-sun discovery of a comet, but in such a case the problem is generally resolved by supposing the orbit to be an exact parabola. For a minor planet, both determinations can be elliptical and therefore viable, and more extensive observational coverage will be necessary to eliminate the one that is physically incorrect.

Brian G. Marsden M.P.E.C. 1995-M03

MPEC 1995-C20: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J95/J95C20.html

M.P.E.C. 1995-C20 Issued 1995 Feb. 15, 22:31 UT

The Minor Planet Electronic Circulars contain information on unusual
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EDITORIAL NOTICE

The last issue in this record halfmonth for MPECs provides a good opportunity to mention a few policy changes.

As discussed in today's monthly batch of Minor Planet Circulars, an "uncertainty number" is being introduced to indicate the reliability of orbits of minor planets, mainly when observations at more than one opposition are linked. This quantity, denoted by U and measured on a logarithmic scale, is related to the possible in-orbit longitudinal runoff with time and is represented by an integer from 0 (for a superbly precise computation) to 9 (where the uncertainty can cover the whole sky). It will also be indicated on the MPECs, in the line giving H and G. Since a weak distribution of observations in a short-arc orbit and/or the assumption of prescribed values for one or more of the orbital elements can compromise the determination of U, we do not intend to publish a U number for unperturbed orbit solutions, and it will not be given for comets because of the largely unpredictable nature of nongravitational effects. Among the requirements for a new numbering of a minor planet is that U should be no larger than 2. Small-to-moderate-field CCD observers wishing to record an unnumbered minor planet at a subsequent opposition should probably only consider orbits having U = 4 or less.

One of the features of the new system of cometary designations is that the concept of the "recovery" of a short-period comet every time it returns to perihelion has been greatly reduced in scope. This has had the expected effect of reducing pressure on the IAU Circulars, issued on behalf of Commission 6 by the Central Bureau for Astronomical Telegrams, which has the authority for providing new cometary designations. Recognition of a recovery is now generally to be restricted to the first return following a comet's original discovery (unless the comet is followed all around its orbit), or to cases where a comet's revolution period is unusually long. This being the case, the increasing attention drawn on the MPECs to recoveries--and precoveries--of minor planets has now become anomalous (see also MPEC 1995-C09, where the recent observations of comet 41P/Tuttle-Giacobini-Kresak had to be termed a recovery). Certainly, there is a continuing need for the MPECs to provide improved orbital solutions and ephemerides (for either minor planets or comets), particularly when the predicted orbits and ephemerides require substantial correction. The extraordinary efforts made by a handful of observers in connection with these recoveries and precoveries--and, for that matter, the final observations during a given apparition--are indeed of supreme value to the work of Commission 20. But to dwell on the inaccuracy of the prediction is of little interest to the observer who merely requires a new, accurate ephemeris. Accordingly, when applicable, we shall simply precede a new orbit computation with the residuals in R.A. and Decl. of the first and last newly-tabulated observations from the referenced prediction, the name of the recoverer or precoverer then being clear from the observer details. Furthermore, since the original discovery of an object nowadays generally involves the measurement of precise positions and is often part of a collaborative process involving organized follow-up activity, it seems to be sufficient to acknowledge a discoverer in the same way, the actual discovery observation being marked with an asterisk. (Visual discoveries by an amateur astronomer are, of course, an exception to this, but it is likely nowadays that they would apply only to comets, the discoveries of which will continue to be described in detail on the IAU Circulars.) In any case, a record of the discovery of every minor planet is maintained in the files of the Minor Planet Center.

When the series was started, "the temporary nature of the MPECs" was stressed (cf. MPEC 1993-S01), and it was noted that "All the relevant material (particularly observations and final orbits) appearing in the MPECs will also be published in the monthly MPCs". For these reasons, as well as the fact that the MPECs are produced largely automatically, it has not been customary to issue errata. As with the MPCs, most of the

errors seem to consist of the occasional omission or misspelling of a name. On very rare occasions, as on MPEC 1995-C05, a completely misleading orbit computation may be published. In this case, replacement observations and a corrected orbit computation were supplied less than three hours later on MPEC 1995-C07, but this evidently escaped the attention of many of those who had been captivated by the unusual nature of the MPEC 1995-C05 orbit. In the future, we shall therefore attempt to draw attention to the more egregious errors (generally with a short note at the end of a future MPEC on a totally different subject), as well as to cases where an orbit published on a previous MPEC is being only slightly improved.

No astute reader pointed out the error on MPEC 1995-C17, where it was incorrectly stated that the "libration period" of 1993 SC was 494 years. The term intended was simply "recurrence period". A 3-million-year numerical integration of that 1993 SC orbit made in 20 minutes yesterday by H. F. Levison, Southwest Research Institute, shows the libration period to be some 20 000 years and the libration amplitude +/- 37 degrees.

Brian G. Marsden M.P.E.C. 1995-C20

MPEC 1993-Y05: EDITORIAL NOTICE

https://www.minorplanetcenter.net/mpec/J93/J93Y05.html

M.P.E.C. 1993-Y05 Issued 1993 Dec. 25, 13:59 UT

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EDITORIAL NOTICE

In response to several requests, we propose to issue in these Circulars monthly lists of the unusual minor planets that are reasonably observable. These will be listings of the objects in order of increasing right ascension from the sun for the "ten-day date" closest to each new moon. Numbered and other multiple-opposition objects will be included, together with objects from the current opposition and from earlier single oppositions for which perturbations were included in the orbit solution. Minor planets will generally be included if they are brighter than magnitude 21 and their elongations from the sun are greater than 90 degrees. At smaller elongations, the brightness limit will be changed by 0.1 mag/deg to a limit of magnitude 18 and elongation 60 degrees for numbered objects and magnitude 15 and elongation 30 degrees for unnumbered objects. Because of their extreme interest and the difficulty of securing adequate observations, the magnitude limit will be ignored for unnumbered objects with perihelia greater than 7 AU and down to a 30-degree elongation.

The various columns will give the number and/or provisional designation or name, together with the number of observed oppositions or the observed arclength in days for unnumbered minor planets. Reference will be given to the orbital elements, either in Efemeridy Malykh Planet (EMP) for a specified year (last two digits), the five-digit (or four-digit) number of the Minor Planet Circulars, or (for very recent orbits) the three-character coding for these Minor Planet Electronic Circulars. After the right ascension and declination (J2000.0) in the usual units, five columns (Geo., Hel., El., Ph. and V) will give the geocentric and heliocentric distances (in AU), the solar elongation and phase angle (in deg) and the visual magnitude.

In some instances there will be an asterisk following the reference. This will generally indicate unusual numbered objects that are on the critical list, although the opportunity will also be taken to indicate other objects for which observations are particularly desirable, with the reasons given in notes at the end.

The appearance of the word "precovered" on MPEC 1993-Y03 necessitates an explanation. In the case of an unnumbered minor planet, the "discovery" refers to the detection that allowed a provisional designation to be given, generally to the first observation on the first of two or more nights. It is possible that an "independent discovery" will be made at the same opposition. It can also happen that one or more "prediscovery", chronologically earlier images will be detected at that opposition by an observer aware of the discovery. Sometimes it will not immediately be appreciated, or it may initially be unclear, that there is an independent discovery of a particular object at the same opposition, in which case a second designation may be applied to the same object; if and when the objects are proven to be the same, there is a "double designation". An "identification" refers to the recognition that the same object has been given provisional designations at different oppositions. In such a case, a "principal discovery" and "principal designation" will be defined, generally to the chronologically earliest opposition for which there was an orbit determination that allowed the identification to be established. The principal discovery is the one of relevance when the minor planet is deemed to have a reliable enough orbit solution that the object can be numbered. Each supporting designation will generally then be of a "rediscovery" of the object. When a single-opposition object is found from a deliberate search on an exposure deliberately made for the object at a future opposition, there is said to be a "recovery", a term that can also apply to a multiple-opposition object found far from its expected place. The term "precovery" refers to the same act on an exposure that was not deliberately made for the object, the exposure generally being at an earlier opposition. It can be noted that, in the case of a comet, a "recovery" generally applies to the first deliberate detection at the first of each sequence of oppositions that observations again become possible--generally as the object next approaches perihelion--and the

comet receives a new provisional designation. If a comet is observed at all of its oppositions (or most oppositions, including one near aphelion), the term recovery and a provisional designation are not applied. A new permanent designation is given to a comet at each perihelion passage when observations are made, whether or not a recovery is involved.

Brian G. Marsden M.P.E.C. 1993-Y05

MPEC 1993-S01: EDITORIAL

https://www.minorplanetcenter.net/mpec/J93/J93S01.html

M.P.E.C. 1993-S01 Issued 1993 Sept. 19, 13:30 UT

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EDITORIAL

As noted on IAUC 5866, the Minor Planet Center is introducing a series of Minor Planet Electronic Circulars (MPECs) to disseminate urgent material on unusual minor planets. For some time it has been clear that the IAUCs themselves are an expensive medium for this information and that a second series of Circulars, issued in electronic form only, would be more convenient. The MPECs are easier to produce and do not have a strong restriction on length. It may also be desirable to include some cometary information too. The MPECs are being automatically incorporated in the Computer Service and, for the moment at least, e-mailed to IAUC e-mail subscribers at no extra charge. E-mail subscribers who do NOT wish to receive the MPECs should let us know. All the relevant material (particularly observations and final orbits) appearing in the MPECs will also be published in the monthly MPCs, and even though the MPECs are only an electronic publication, it should be stressed that attempts will be made to ensure that their content has the high standards of accuracy and reliability of the IAUCs and MPCs.

The form of the MPECs will generally be simply to give the observations, in the J2000.0 format in which observations are SUBMITTED to the Minor Planet Center and maintained in the MPC files; this format is described on MPC 18847-18850 (1991 Oct. 23). Orbital elements and ephemerides will be in the "extended" format of the MPCs. Although observers and orbit computers will be specified, comments will be kept down to a minimum.

This Circular is numbered MPEC 1993-S01. By analogy with the system for provisional designations of minor planets, this means that it is the first MPEC issued during the second half of September 1993. In the Computer Service it should simply be specified as "S01", a designation that properly indicates the temporary nature of the MPECs and the realization that the MPCs themselves will supersede them. It is not expected that there will be more than 99 MPECs in any given halfmonth ...

Brian G. Marsden M.P.E.C. 1993-S01