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Cover image: Navigation image of (1) Ceres, obtained by the DAWN mission. Courtesy NASA/JPL-CALTECH.
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Errata

The following section corrects errors that have appeared in this publication (indicated as *Bull.*, with volume, issue and page number) or in names or citations published in the *Minor Planet Circulars*.

Reference | Line(s) | For | read | Laurence (b. 1965) and Jean-Claude (b. 1969)
MPC 94741 | −19 | Laurence (b. 1969) and Jean-Claude (b. 1965)
Bull. 1, #6, 5 | 20 | Oauam | Poznañuni

New Names of Minor Planets

The following new names of minor planets have been approved by the WGSBN. Discovery details, for information only, are given in the following order: date of discovery; discoverer(s) name(s); discovery site; discovery site observatory code. The discoverer(s) names(s) is/are followed by an asterisk if this is a change from what was published when the object was numbered.

(10401) Masakoba = 1997 VD₃
*Discovery: 1997-11-06 / T. Kobayashi / Oizumi / 411*
Masateru Kobayashi (b. 1953) is a Japanese amateur astronomer and the chairperson of the Astronomical Society of Yamaguchi prefecture. He has served as a guide at numerous stargazing meetings, and has planned and conducted many total solar eclipse tours.

(16367) Astronomiasvecia = 1980 FS₄
*Discovery: 1980-03-16 / C.-I. Lagerkvist / La Silla / 809*
The name celebrates the 2019 centenary of the Swedish Astronomical Society (Svenska astronomiska sällskapet), which was founded in 1919.

(18628) Taniasagrati = 1998 DJ₃₃
Tania Sagrati (1967–2012) was the cousin of the second discoverer. She graduated from the Art Institute of Firenze and worked as an interior decorator.

(22416) Tanimotoyoshi = 1995 UC₄₇
*Discovery: 1995-10-28 / K. Endate, K. Watanabe / Kitami / 400*
Motoyoshi Tani (b. 1945) is a well-known astronomy popularizer in Osaka. His interests include the design of astronomical telescopes, observational instruments, and astronomical observatories.
Eiichi Shibusawa (1840–1931), called the “father of the modern Japanese economy”, was involved in the founding of almost 500 companies and promoted economic development in Japan. He also poured his efforts into social welfare, social public enterprises and international relations around the turn of the 20th century.

Albino Carbognani (b. 1965) has worked extensively on astrometric and photometric observations of near-Earth, main-belt, Trojans and TNO asteroids. He currently works on fireballs and a space surveillance project about artificial satellites, spaces debris and near-Earth asteroids with optical observations from the ground.

Madonna Louise Ciccone (b. 1958), known professionally as Madonna, is an American singer, songwriter and actress. She frequently reinvented both her music and image and was named as “Queen of Pop” in the 1980s. Her musical CD *Evita* has accompanied the discoverer on numerous blinking nights.

Mike Puzio (b. 2004) is an Eagle Scout. He suggested the name for Bennu, target of the OSIRIS-REx mission. He has given many presentations about the mission as an OSIRIS-REx Ambassador.

Jack Mapanje (b. 1955) is a Malawian writer. Educated at the University of London, he became head of the Department of Language and Linguistics at the University of Malawi. He moved back to the UK in 1991 and is now a visiting professor at Leeds University.

Luigi Sannino (b. 1981) is an Italian amateur astronomer, studying comets and asteroids.

Rubens de Azevedo (1921–2008) was a Brazilian astronomer and science promoter. He founded observatories and associations, including the Brazilian Society of Astronomy Friends, the first amateur astronomical association in Brazil. He was a selenographer and active participant in NASA’s Lunar International Observers Network.
(85564) Emilia = 1998 BU$_7$
*Discovery: 1998-01-17 / Osservatorio San Vittore / Bologna / 552*
Emilia Colombini (b. 2020) is the first daughter of Federico Colombini and Claudia Guarnieri.

(92251) Kuconis = 2000 AF$_{187}$
*Discovery: 2000-01-08 / LINEAR / Socorro / 704*
As the Executive Officer of MIT Lincoln Laboratory, John E. Kuconis (b. 1951) provided outstanding leadership for Director’s Office initiatives. He was responsible for community outreach, including outreach for the LINEAR program.

(112320) Danielegardiol = 2002 MB$_1$
*Discovery: 2002-06-19 / M. Di Martino, F. Bernardi * / Campo Imperatore / 599*
Daniele Gardiol (b. 1968) is an astronomer at the Torino Astrophysical Observatory (Italy). He is the principal investigator of the PRISMA project, a network of all-sky cameras dedicated to the observation of bright meteors in order to determine the trajectory and orbit of the progenitor bodies and to delimit the area where possible meteorites fall.

(132903) Edgibson = 2002 RG$_{234}$
*Discovery: 2002-09-14 / R. Matson / Palomar / 644*
Edward G. Gibson (b. 1936) was one of the first scientist-astronauts, selected for NASA Group 4 in 1965. He was CAPCOM for Apollo 12 and science pilot for Skylab 4, setting a new spaceflight record and conducting landmark solar research. Ed is also a noted author and U.S. Astronaut Hall of Fame inductee.

(216319) Sanxia = 2007 TY$_{286}$
*Discovery: 2007-10-10 / PMO NEO Survey Program / XuYi / D29*
Sanxia Daxue (China Three Gorges University) is a university with prominent hydraulic and electrical disciplines, located in Yichang City, Hubei Province, P. R. China.

(239645) Shandongas = 2008 WQ$_{58}$
*Discovery: 2008-11-20 / Shandong University / Weihai / D39*
ShandongAS is the abbreviation of Shandong Astronomical Society (SAS). Shandong province is the origin of astronomical education and scientific research in modern China. SAS is a new organization founded in 2021. Its mission is to serve astronomers, astronomical educators and amateurs and promote the development of astronomy.

(287829) Juancarlos = 2003 SB$_{201}$
*Discovery: 2003-09-23 / A. Sota / Sierra Nevada / J86*
Juan Carlos Atienza Ballano (1961–2017) was a Catholic priest for 33 years. He held the positions of Episcopal Vicar, Rector of the Seminary and Dean of the El Burgo de Osma Cathedral, amongst others. He worked to conserve the religious artistic heritage of Soria province.
Chuwenshin (1883–1939), a Chinese astronomer, was a pioneer who used modern scientific methods to study the ancient history of Chinese astronomy systematically and wrote a variety of books on this topic.

Konstantin Yurievich Chaykin (b. 1975) is a Russian watchmaker and inventor. He is a creator of the most complicated watches in the world and has won many international awards.

Keanu Charles Reeves (b. 1964) is a well-known Canadian actor. He is known for his iconic acting roles (including The Matrix, Constantine and Point Break) as well as for his kindness and selflessness.

Natalie Mainzer (b. 1978) is an American nurse who has cared for many patients suffering from COVID-19 during the global pandemic.

The Mausoleum of Halicarnassus, built 353-350 BCE, was the tomb of Mausolus, a governor in the Achaemenid Empire. It was one of the seven wonders of the ancient world.

Feng Min (b. 1940), a researcher of Chinese Academy of Sciences, is an expert in the modern application of traditional Chinese medicine. He led the team that was the first to extract Ganoderma lucidum spore oil.

César Manrique Cabrera (1919–1992) was a Canarian painter, sculptor and artist. He combined his work with his support for the environmental of the Canary Islands. He sought harmony between art and nature as a creative space. He won the World Prize for Ecology and Tourism and the Europe Prize.
The Jesuit school in the medieval town of Porrentruy was founded in 1591 by the bishop of Basel, Jacques-Christophe Blarer of Wartensee. In 1979 the old school became the Lycée cantonal, which is nicknamed “La Canto” by students. The discoverer has taught physics there for more than thirty years.

Árpád Juhász (b. 1935) is a Hungarian geologist, one of the most significant figures in the spreading of scientific knowledge in Hungary. During his career, he made a number of geographical films and participated as an expert in geographical-themed popular science series on TV.

Andrea Corsali (1487–?) was an Italian explorer who traveled to Asia and the south seas aboard a Portuguese merchant vessel. He identified, located, illustrated and named the constellation now known as the Southern Cross.

Ron Beck (b. 1955) is an American engineer who specializes in the operations of ground data systems for space missions including Voyager, the Infrared Astronomical Satellite, the Two Micron All-Sky Survey, the Spitzer Space Telescope, the Wide-field Infrared Survey Explorer, and the Zwicky Transient Facility.

The Akashi Kaikyo bridge is the longest suspended bridge in the world. Its main span is 1991 meters long. It joins the city of Kobe on Honshu Island to Awaji island, passing over the strait of Akashi.

Pál Kitaibel (1757–1817) was a Hungarian botanist and chemist. He spent several years investigating flora and fauna in the Carpathian Basin and surrounding mountains. In 1789 he independently discovered the element tellurium. The genus *Kitaibelia* of mallows was named after him.
Ágnes Nemes Nagy (1922–1991) was a Hungarian poet, writer, educator, and translator. She is generally considered to be Hungary's most important woman poet of the 20th century. In 1946 she published her first volume of poetry, but during the 1950s, her own work was suppressed and she worked as a translator.

Pál Bugát (1793–1865) was a physician, linguist, university professor, full member of the Hungarian Academy of Sciences, and a language reformer. One of the founders of the Hungarian medical language, he was the first president of the Royal Hungarian Society for Natural Sciences from 1841 to 1844.

Italian humanist Antonio Bonfini (1427–1502) was the court historian for Matthias Corvinus, the king of Hungary. Matthias commissioned him to write Hungary's history from the time of the Huns. With this great work, and his other writings and translations, Bonfini exerted a powerful influence on Hungarian historiography.

Jin Zhangwei (b.1968), a member of the Xingming Observatory Sky Survey team, is a Chinese astronomy amateur in Ningbo, Zhejiang. He has discovered several new objects, including asteroids, supernovae and SOHO comets.

Alice Gorman (b. 1964) is an Australian archaeologist and an expert in lithic analysis and Heritage management. She is one of the pioneers in the field of space archaeology, the study of human material culture in space and related material culture on Earth.
Recent Comet Names & Numberings

Recently-assigned comet names and numbering of periodic comets are listed below. The recently-assigned names list indicates, using an asterisk, any comet whose discovery is eligible for the Edgar Wilson Award, as well as the reference where the name first appears (this may not be the circular announcing the discovery).

### Recently-Assigned Names

<table>
<thead>
<tr>
<th>Comet Name</th>
<th>MPEC 2021-Q102</th>
</tr>
</thead>
<tbody>
<tr>
<td>C/2021 Q4 (Fuls)</td>
<td></td>
</tr>
<tr>
<td>C/2021 Q3 (ATLAS)</td>
<td>MPEC 2021-Q97</td>
</tr>
<tr>
<td>C/2021 P4 (ATLAS)</td>
<td>MPEC 2021-Q42</td>
</tr>
<tr>
<td>C/2021 P3 (PANSTARRS)</td>
<td>MPEC 2021-Q29</td>
</tr>
<tr>
<td>C/2021 P2 (PANSTARRS)</td>
<td>MPEC 2021-Q28</td>
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<tr>
<td>C/2021 P1 (PANSTARRS)</td>
<td>MPEC 2021-Q02</td>
</tr>
<tr>
<td>C/2021 O3 (PANSTARRS)</td>
<td>MPEC 2021-P05</td>
</tr>
<tr>
<td>C/2021 O1 (Nishimura) *</td>
<td>MPEC 2021-O47</td>
</tr>
<tr>
<td>C/2021 N3 (PANSTARRS)</td>
<td>MPEC 2021-O39</td>
</tr>
<tr>
<td>C/2021 N2 (Fuls)</td>
<td></td>
</tr>
<tr>
<td>C/2021 N1 (ZTF)</td>
<td>MPEC 2021-N137</td>
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<tr>
<td>C/2021 L4 (PANSTARRS)</td>
<td>MPEC 2021-M77</td>
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<tr>
<td>C/2021 L3 (Borisov) *</td>
<td>MPEC 2021-M75</td>
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<td>C/2021 L2 (Leonard)</td>
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<tr>
<td>C/2021 K3 (Catalina)</td>
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<td>C/2021 K2 (MASTER)</td>
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<tr>
<td>C/2021 J3 (ATLAS)</td>
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<tr>
<td>C/2021 J2 (PANSTARRS)</td>
<td>MPEC 2021-L24</td>
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<tr>
<td>C/2021 G3 (PANSTARRS)</td>
<td>MPEC 2021-M86</td>
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<tr>
<td>C/2014 UN_{271} (Bernardinelli-Bernstein)</td>
<td>MPEC 2021-M83</td>
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### Recent Numberings

<table>
<thead>
<tr>
<th>Numbering</th>
<th>MPC 132232</th>
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<tbody>
<tr>
<td>425P/2005 W3 = P/2021 O2 (Kowalski)</td>
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<tr>
<td>424P/2012 S2 = P/2021 L5 (La Sagra)</td>
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<tr>
<td>423P/2008 C{L}_{04} = P/2021 A12 (Lemmon)</td>
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<tr>
<td>422P/2006 S4 = P/2021 L1 (Christensen)</td>
<td></td>
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<tr>
<td>421P/2009 U4 = P/2020 H10 (McNaught)</td>
<td></td>
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<tr>
<td>420P/2009 Q1 = P/2021 E1 (Hill)</td>
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<tr>
<td>419P/2015 F1 = P/2021 A11 (PANSTARRS)</td>
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<tr>
<td>418P/2010 A5 = P/2020 Y5 (LINEAR)</td>
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<tr>
<td>417P/2015 J3 = P/2021 B1 (NEOWISE)</td>
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<tr>
<td>416P/2013 A2 = P/2021 A8 (Scotti)</td>
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</tbody>
</table>
Standard Acronyms & Abbreviations

Listed below, in alphabetical order, are the standard acronyms that may be used in citations without needing to be expanded.

AAVSO American Association of Variable Star Observers
CFHT Canada-France-Hawaii Telescope
ESO European Southern Observatory
IAU International Astronomical Union
JPL Jet Propulsion Laboratory
MPC Minor Planet Center
NASA National Aeronautics and Space Administration
NTT New Technology Telescope
USNO U.S. Naval Observatory

Statistics & Links

There are currently 22727 named minor planets.

Discoverers of minor planets may submit name proposals via the WGSBN voting website at: https://minorplanetcenter.net//submit_name/login

Registration is required to access this site. Requests for access should be made to contact@wgsbn-iau.org.

Work on a new voting website is underway.

Archival copies of the Bulletin, as well as machine-readable datafiles of new names, citations and corrigenda from each issue, are available on the WGSBN website:
https://www.wgsbn-iau.org/

The Bulletin is also available from the Publications section of the IAU website:
https://www.iau.org/publications/iau/wgsbn-bulletins/

The email address for the WGSBN is contact@wgsbn-iau.org.
WGSBN Members

There are 15 members of the WGSBN, 11 of whom are voting members. The other four members, who are *ex-officio*, are the President and General Secretary of the IAU, and representatives for the IAU WG Planetary System Nomenclature and the IAU Minor Planet Center.

The current members of the WGSBN are listed below:

- Jana Tichá, Chair
- Keith Noll, Vice-Chair
- Gareth Williams, Secretary
- Yuliya Chernetenko
- Julio Fernández
- Daniel Green
- Pam Kilmartin
- Syuichi Nakano
- Carrie Nugent
- Don Yeomans
- Jin Zhu
- Debra M. Elmgreen, *ex-officio* (IAU President)
- José Miguel Rodríguez Espinosa, *ex-officio* (IAU General Secretary)
- Rita Schulz, *ex-officio* (WGPSN)
- Peter Vereš, *ex-officio* (MPC)

The WGSBN is a functional Executive Committee Working Group of the IAU.