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

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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) name(s) is/are followed by an asterisk if this is a change from what was published when the object was numbered.

(8002) Tonyevans = 1986 XF<sup>5</sup>

*Discovery: 1986-12-04 / A. Mrkos / Klet / 046*

Anthony Evans (b. 1944) is an English amateur astronomer involved in tracking Near-Earth Asteroids. He established the “A-Team” of asteroid- and comet-tracking enthusiasts, using robotic telescopes, providing tutorials and assistance to those interested in submitting observations to the MPC.

(27063) Richardmontano = 1998 SY<sup>60</sup>

*Discovery: 1998-09-17 / LONEOS / Anderson Mesa / 699*

Richard Montano (b. 1995) is a Visitor Experience Lead for Lowell Observatory. He is a shift lead for the Starry Skies Shop and ticketing desks. Richard helps manage product receiving and inventory control.

(27240) Robhall = 1999 TR<sup>36</sup>

*Discovery: 1999-10-12 / LONEOS / Anderson Mesa / 699*

Rob Hall (b. 1994) is a Visitor Experience Lead for Lowell Observatory. He is a shift lead for the Starry Skies Shop and ticketing desks. Rob helps train people and maintain our point of sale and ticketing software and also helps with reporting.
Todd Gonzales (b. 1979) is Education Manager at Lowell Observatory. He oversees the development of many of the Observatory's educational programs, particularly those geared toward children. He previously served as Public Program Supervisor and Philanthropy Ambassador.

Shannon Gonzales (b. 1989) is the Membership and Database Manager for Lowell Observatory. She oversees the membership program in addition to managing the Observatory's donor database system and gift processing department. She previously served as a Retail Associate and as a Development Assistant.

Scott Hao Do (b. 1981) is Lowell Observatory's IT Systems Support Specialist. He maintains vital infrastructure for more than 100 staff, from scientists to engineers to educators. He also ensures smooth functioning of the computing resources required to operate the Observatory's numerous telescopes.

Jim Cole (b. 1951) is a Senior Public Program Educator at Lowell Observatory. He began by giving campus tours and operating telescopes for the public. He now serves as a telescope technician and was a major contributor to the design and implementation of the Giovale Open Deck Observatory.

Kevin Conley (b. 1990) is a Public Program Supervisor at Lowell Observatory. He facilitates experiences for guests by leading tours of the historic campus, operating telescopes, teaching the public about astronomy, designing and implementing new programming, and training new educators.

Curtis Dankof (b. 1994) is a Public Program Supervisor at Lowell Observatory and is responsible for the day-to-day operations of the public outreach programs. He also leverages the knowledge he gained as a certified interpretive guide to train the outreach team on effective interpretive methods.
(27505) Catieblazek = 2000 GN\textsuperscript{141}  
*Discovery: 2000-04-07 / LONEOS / Anderson Mesa / 699*  
Catie Blazek (b. 1988) is the HR/Payroll Supervisor for Lowell Observatory. She is instrumental in Lowell Observatory's wellness efforts, which were impactful during the COVID-19 pandemic. She is a guardian of our company culture and champions a diverse, equitable, friendly, collegial workplace.

(27509) Burcher = 2000 GB\textsuperscript{143}  
*Discovery: 2000-04-07 / LONEOS / Anderson Mesa / 699*  
Sarah Burcher (b. 1990) is Outreach Manager at Lowell Observatory. She oversees the outreach team and the programs they deliver. She was a critical member of the team that commissioned the Giovale Open Deck Observatory and has significantly improved the quality of the live video observing program.

(27520) Rounds = 2000 HL\textsuperscript{26}  
*Discovery: 2000-04-24 / LONEOS / Anderson Mesa / 699*  
Hannah Rounds (b. 1987) is the Corporate and Foundation Relations Manager at Lowell Observatory. She acquires funding from organizations for astronomy research, educational activities, historic preservation, and capital projects. She previously served as a Development Assistant and as Grant Writer.

(27531) Sweaton = 2000 HH\textsuperscript{66}  
*Discovery: 2000-04-26 / LONEOS / Anderson Mesa / 699*  
Mike Sweaton (b. 1957) is the Electrical Engineer for Lowell Observatory. He has ensured the continued successful operation of the Lowell Discovery Telescope (LDT). He has also made many performance improvements to the LDT and assisted with night time operations.

(53109) Martinphillipps = 1999 AD\textsuperscript{5}  
*Discovery: 1999-01-12 / I. P. Griffin / Cocoa / 758*  
Martin Phillipps (b. 1963) is the lead singer of the Dunedin rock band The Chills, whose music forms the backbone of the so-called “Dunedin sound.”

(58580) Elenacuogi = 1997 SW\textsuperscript{2}  
*Discovery: 1997-09-24 / E. Colombini / Bologna / 552*  
Elena Cuoghi (b. 1990) is a European Languages and Cultures graduate of the University of Modena. She is the daughter-in-law of the discoverer of this minor planet.

(65770) Leonardotestoni = 1995 KF\textsuperscript{1}  
*Discovery: 1995-05-28 / Osservatorio San Vittore / Bologna / 552*  
Leonardo Testoni (b. 2017) is the first nephew of one of the co-discoverers of this minor planet.

(66856) Stephenvoss = 1999 VW\textsuperscript{22}  
*Discovery: 1999-11-13 / I. P. Griffin, N. Brady / Lake Tekapo / 474*  
Stephen Voss (b. 1966) is a New Zealand-born general physician and noted amateur astronomer and astrophotographer. He founded the Aurora Australis Facebook page.
(90875) Hoshitori = 1996 VE₁
Discovery: 1996-11-03 / Saji / Saji / 867

“Hoshitori” (“catching a starry sky”) is a nickname for Tottori prefecture where Saji Observatory is located. Tottori has undertaken a dark skies campaign to preserve the night sky and it is one of the best dark sky locations in Japan.

(112313) Larrylines = 2002 LL₅₅
Discovery: 2002-06-12 / J. Dellinger, P. Garossino * / Needville / 735

Larry Lines (1949–2019) was a Canadian exploration geophysicist. During his distinguished career he was a researcher at Amoco's Tulsa lab, a professor and industry consortium leader at Memorial University of Newfoundland and the University of Calgary, and president of the Society of Exploration Geophysicists.

(114612) Sandrasavaglio = 2003 DV₁₂
Discovery: 2003-02-26 / CINEOS / Campo Imperatore / 599

Sandra Savaglio (b. 1967) is a physicist and a leading researchers on γ-ray bursts. She has taught at Johns Hopkins University in Baltimore, and at the Max Plank Institute in Germany. Savaglio is currently teaching astronomy at the University of Calabria.

(121133) Kenflurchick = 1999 JN₁₄
Discovery: 1999-05-15 / R. A. Tucker / Goodricke-Pigott / 683

Ken Flurchick (1951–2018) enjoyed a successful career at North Carolina A&T in the field of supercomputers. He published extensively in the fields of computational physics, astronomy, chemistry, and engineering, and also taught a wide variety of courses in these areas.

(122632) Riccioli = 2000 RW₇₈
Discovery: 2000-09-05 / S. Donati / Monte Agliale / 159

Giovanni Riccioli (1598–1671) was one of the first telescopic observers of the Moon. He was author of the Almagestum Novum, that contains a lunar map still used today.

(124114) Bergersen = 2001 HX₆₅
Discovery: 2001-04-21 / R. A. Tucker / Goodricke-Pigott / 683

Thomas Jacob Bergersen (b. 1980) is a prolific composer, having scored over one thousand movie soundtracks and film trailers. His music typically has an epic quality.

(124368) Nickphoenix = 2001 QT₁₄₂
Discovery: 2001-08-24 / R. A. Tucker / Goodricke-Pigott / 683

Nick Phoenix (b. 1967) is a prolific composer, having scored over one thousand movie soundtracks and film trailers. His music typically has an epic quality.

(181872) Cathaysa = 1999 FL₉₀
Discovery: 1999-03-21 / Sloan Digital Sky Survey / Apache Point / 645

Cathaysa was the name of a Guanche aboriginal girl who lived in Tenerife and was sold in Valencia as a slave in 1494, as well as the daughter (b. 2005) of the Spanish astronomer David Martinez-Delgado. This name recognizes the Canary Islands' contribution to astronomy.
(216446) Nanshida = 2009 FA\textsubscript{45}  
*Discovery: 2009-03-25 / PMO NEO Survey Program / XuYi / D29*  
Nanshida, the Chinese abbreviation for the Nanjing Normal University, dates back to 1902 with the establishment of Sanjiang Normal College.

(216893) Navina = 2009 DP\textsubscript{111}  
*Discovery: 2009-02-28 / R. Apitzsch / Wildberg / 198*  
Navina Lamminger (b. 1978) is a German social scientist and author. She graduated in Tibetology at the University of Munich in 2013. She now works as a dramaturge for top cabaret artists.

(319009) Kudirka = 2005 UP\textsubscript{488}  
*Discovery: 2005-10-10 / K. Černis, J. Zdanavičius * / Moletai / 152*  
Vincas Kudirka (1858–1899) trained as a physician but is best known as a Lithuanian poet. He is regarded in Lithuania as a National Hero and he wrote both the music and lyrics of the Lithuanian National Anthem, Tautiska giesme.

(332632) Pharos = 2008 UO\textsubscript{1}  
*Discovery: 2008-10-22 / V. S. Casulli / Vallemare Borbona / A55*  
The Pharos of Alexandria was considered one of the seven wonders of the ancient world. This lighthouse, one of the tallest structures in the world at the time, was built on the island of Pharos, in front of the port of Alexandria of Egypt, and was destroyed by two earthquakes.

(353404) Laugalys = 2011 PR\textsubscript{13}  
*Discovery: 2006-09-25 / K. Černis, J. Zdanavičius * / Moletai / 152*  
Vygandas Laugalys (b. 1972), Lithuanian astronomer, is an expert in Galactic structure and stellar photometry. He is known as a hunter of asteroids and together with K. Černis, he discovered the first asteroid from Lithuania in 2001. He is the author of more than 40 scientific papers.

(374338) Fontana = 2005 UZ\textsubscript{4}  
*Discovery: 2005-10-25 / V. S. Casulli / Vallemare Borbona / A55*  
Francesco Fontana (c.1585–1656) was an Italian astronomer and telescope maker.

(375798) Divini = 2009 TA\textsubscript{4}  
*Discovery: 2009-10-12 / V. S. Casulli / Vallemare Borbona / A55*  
Eustachio Divini (c.1610–1685) was an Italian astronomer and telescope maker.

(378076) Campani = 2006 UQ\textsubscript{64}  
*Discovery: 2006-10-23 / V. S. Casulli / Vallemare Borbona / A55*  
Giuseppe Campani (c.1636–1715) was an Italian astronomer and telescope maker.
(418689) Gema = 2008 UQ₄
Discovery: 2008-10-24 / Lacruz J. * / La Cañada / J87
The Asociación deportiva GEMA (Grupo de Espeleología Murcielago Alegre), is a speleology group based in Gijon, Asturias, Spain. Founded in the late 1960s by a group of amateurs, generations of its members have explored many caves in the karst massif of Picos de Europa, in northern Spain.

(448988) Changzhong = 2012 AS₁₄
Discovery: 2009-03-23 / PMO NEO Survey Program / XuYi / D29
Changzhong (Changzhou Senior High School of Jiangsu Province) is located in the historic city of Changzhou, China. Founded in 1907, the school has educated students who have made contributions to the reform and development of Chinese society, including more than 20 academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering.

(541487) Silviapablo = 2011 OG₁₈
Discovery: 2011-07-25 / Observatorio Cielo / Observatorio Cielo / J01
Silvia (b. 2006) and Pablo (b. 2010) are the children of the Spanish amateur astronomer and discoverer Juanjo Gonzalez.

(542926) Manteca = 2013 PP₃₁
Discovery: 2007-08-04 / R. Ferrando, M. Ferrando / Pla D'Arguines / 941
José Manteca (b. 1959) is a Spanish astronomer who directs the Begues Observatory (Barcelona). He has discovered several minor planets and the breakup of comet 51P in 2001.

(543198) Rastislavmráz = 2013 TT₁₁₅
Discovery: 2013-09-05 / T. Csörgei, K. Sárneczky * / Piszkéstető / 461
Rastislav Mráz shihan, (b. 1959) is a former Slovakian Karate champion. He has represented Slovakia at many tournaments, and also served as a head coach for the Slovakian National Karate team for many years. He is one of the few non-Japanese to attain 7th Dan rating from the Japan Karate Federation, and he holds the title of Kyoshi.

(544033) Lihsing = 2014 RR₂₇
Li Hsing (b. 1930) is one of the most important film directors of Taiwan, and a key figure of the Healthy Realism movement. He has directed more than fifty films and got the Golden Horse Life-Achievement Award in 1995.

(546845) Wulumuqiyzhong = 2016 UB₁₀₁
Discovery: 2011-12-21 / Z. Xu, X. Gao / Xingming / C42
Wulumuqiyzhong (Urumqi No.1 Senior High School) in Xinjiang Province, China, which founded in 1891, celebrated its 130th anniversary in 2021. Some of the discoveries of Xingming Observatory were made by telescopes provided by the school.
(551231) Żywiec = 2013 AT²₄

*Discovery: 2013-01-04 / M. Kusiak, M. Żołnowski / Tincana / D03*

Żywiec is a town in southern Poland, located in the center of Żywiec Basin, on the Soła and Koszarawa rivers. The town has a rich and interesting history and tradition dating back 750 years.
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.

Recently-Assigned Names

C/2021 L4 (PANSTARRS)  \textit{MPEC} 2021-M77
C/2021 L3 (Borisov)  \textit{MPEC} 2021-M75
C/2021 L2 (Leonard)  \textit{MPEC} 2021-M74
C/2021 K3 (Catalina)  \textit{MPEC} 2021-M87
C/2021 K2 (MASTER)  \textit{MPEC} 2021-L89
C/2021 K1 (ATLAS)  \textit{MPEC} 2021-K89
C/2021 J3 (ATLAS)  \textit{MPEC} 2021-L26
C/2021 J2 (PANSTARRS)  \textit{MPEC} 2021-L24
C/2021 J1 (Maury-Attard)  \textit{MPEC} 2021-L11
C/2021 G3 (PANSTARRS)  \textit{MPEC} 2021-M86
C/2021 G1 (Leonard)  \textit{MPEC} 2021-J72
C/2021 E3 (ZTF)  \textit{MPEC} 2021-J71
C/2021 D2 (ZTF)  \textit{MPEC} 2021-F67
C/2021 C6 (Lemmon)  \textit{MPEC} 2021-F63
C/2021 C5 (PANSTARRS)  \textit{MPEC} 2021-E64
C/2020 PV$_6$ (PANSTARRS)  \textit{MPEC} 2021-K93
C/2020 F7 (Lemmon)  \textit{MPEC} 2021-F110
C/2019 U5 (PANSTARRS)  \textit{MPEC} 2021-G80
C/2014 UN$_{271}$ (Bernardinelli-Bernstein)  \textit{MPEC} 2021-M83

Recent Numberings

421P/2009 U4 = P/2020 H10 (McNaught)  \textit{MPC} 130596
420P/2009 Q1 = P/2021 E1 (Hill)  \textit{MPC} 128966
419P/2015 F1 = P/2021 A11 (PANSTARRS)  \textit{MPC} 128966
418P/2010 A5 = P/2020 Y5 (LINEAR)  \textit{MPC} 127300
417P/2015 J3 = P/2021 B1 (NEOWISE)  \textit{MPC} 127300
416P/2013 A2 = P/2021 A8 (Scotti)  \textit{MPC} 127300
415P/2013 EW$_{90}$ = P/2020 Y4 (Tenagra)  \textit{MPC} 127300
414P/2016 J3 = P/2021 A3 (STEREO)  \textit{MPC} 127300
413P/2014 E1 = P/2020 W4 (Larson)  \textit{MPC} 127300
412P/2010 B2 = P/2020 Y1 (WISE)  \textit{MPC} 127300
411P/2007 B1 = P/2020 W3 (Christensen)  \textit{MPC} 127300
Numbering of Minor Planet Satellite

The WGSBN was remiss in not documenting the assignment of the Roman numeral for the satellite of (469705) in the last Bulletin. It is numbered below to demonstrate how future numberings will be handled.

(469705) ǃKâgâra I = ǃHâunu = S/2009 (2005 EF$_{298}$) 1

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 22609 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.
WGSBN Members

There are 14 members of the WGSBN, 11 of whom are voting members. The other three members, who are *ex-officio*, are representatives for IAU Division F, 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
- Rita Schulz, *ex-officio* (WGPSN)
- Gonzalo Tancredi, *ex-officio* (Div. F)
- Peter Vereš, *ex-officio* (MPC)
- Don Yeomans
- Jin Zhu

The email address for the WGSBN is [contact@wgsbn-iau.org](mailto:contact@wgsbn-iau.org).