

SBN/MPC Annex:

PDS Small bodies node Users Group (SmUG) meeting



sbmmpc.astro.umd.edu

MPC IAWN SBN SBN-MPC DB Reports MPEC Watch MUG

Minor Planet Center Annex @ SBN

SBN-MPC

The [Minor Planet Center](#) (MPC) is the world's ([International Astronomical Union](#) designated) nerve center for asteroid and comet observations, and has become a functional sub-node of the [Small Bodies Node](#) of the [NASA Planetary Data System](#). The MPC collects, processes, and distributes all positional measurements, orbits, and discovery information for all minor planets and comets (and some natural satellites too). The MPC also alerts the [NASA Planetary Defense Coordination Office](#) and elements of the [International Asteroid Warning Network](#) (IAWN) of any potential for impact by newly discovered [Near Earth Objects](#) (NEOs), helping to coordinate worldwide observers.

The Minor Planet Center Annex at the SBN (SBN-MPC -- this site) provides ancillary products and support regarding the MPC.

9P/Tempel 1, [Deep Impact](#)

SBN Beta Distribution of the MPC PG database – OBSTABLE:


- MPC – OBSTable Schema MUG reviewed March, Lien corrections in April, internal distribution testing May, now distributed.
- OBSTable is the largest augmentation to the new PG database in terms of data volume, and is exported to the publicly distributed DB live copy.
- **Presently** being distributed to several (>6) volunteer institutions/users.



Table Name	obs_external				
Table Comment:	The fields in this table describe the "obs" table that is/will-be replicated externally.				
	Column	Type	Field Type (Approx)	Description / Comment	
	1 disc	Character(1)	ADES_Observations	Discovery flag. An asterisk marks a new discovery record	
	2 obstime	timestamp	ADES_Observations	UTC time of the observation in ISO 8601 format, i.e., { <code>\lem yyyy-mm-ddThh:mm:ss.ssZ</code> }.	
	3 id	integer	MPC_ops	db-assigned unique ID	
	4 obsid	text	MPC_ops	Unique MPC-Assigned Observation ID	
	5 submission_id	text	MPC_ops	Unique MPC-Assigned Submission ID	
	6 submission_bloc	text	MPC_ops	Unique MPC-Assigned Submission-Block ID	
	7 obs80	text	MPC_ops	80-Character observation string	
	8 status	character(1)	MPC_ops	processing status: to be tied to obs_status table	
	9 healpix	bigint	MPC_ops	Convenience calculation; (RA,Dec) -> 63arc-sec healpix (nside = 32768 nested = True)	
	10 prev_desig	text	MPC_ops	Previous designation for a redesignated observation: Can also track via "obs_alterations_redesignation"	
	11 prev_ref	text	MPC_ops	Previous publication references for data	
	12 created_at	timestamp	MPC_ops	database record of row creation	
	13 updated_at	timestamp	MPC_ops	database record of row update	
	14 trksub	text	ADES_Observation	Observer-assigned tracklet identifier, unique within submission batch.	
	15 trkid	text	ADES_Observation	Globally Unique alphanumeric tracklet ID assigned by MPC	
	16 ref	text	ADES_Observation	Reference field used for citations	
	17 permid	text	ADES_Observation	IAU permanent designation, i.e., IAU number	
	18 provid	text	ADES_Observation	MPC provisional designation (unpacked format)	

SBN Distribution of the MPC PG database – Status Pages:

MPC IAWN SBN SBN-MPC DB Reports MUG



Minor Planet Center Annex @ SBN

Latest update of every table in MPC MariaDB and Postgres
2022-01-25 15:10:01 (GMT)

Status of all major tables from MariaDB (mpc_development) and PostgresDB (mpcbeta). It includes list of all major tables, number of records in each tables, the latest updated record in each table. A color code corresponds to records updated less than 1 day, from 1 to 3 days and older than 3 days. Updated every 5 min. GMT timestamp of update is at the top left of the page.

MariaDB mpc_development:
Source file of data: [statusDB.csv](#)

Table	Count	Created_at	Updated_at
close_approaches	223366	2019-05-23 19:22:13	2019-05-23 19:22:13
comet_names	4586	2017-03-15 16:46:33	2017-03-15 16:46:33
comet_orbit_uncertainties	1015	2019-06-04 12:15:27	2019-06-04 12:15:27
comet_orbits	11435	2014-02-10 15:54:04	2022-01-12 00:31:05
identifications	593069	2022-01-12 12:07:06	2022-01-12 12:07:06
isolated_tracklets	35324851	2022-01-25 15:07:40	2022-01-25 15:07:40

Database Status: **GREEN**
24 Jan 2022
1. Nominal
Please [report concerns!](#)
KEY

Database Status: **RED**
5 Oct 2022

1. Temporary out of service due to hardware failure. It could be unavailable for the next 1-3 days.

Please [report concerns!](#)
KEY

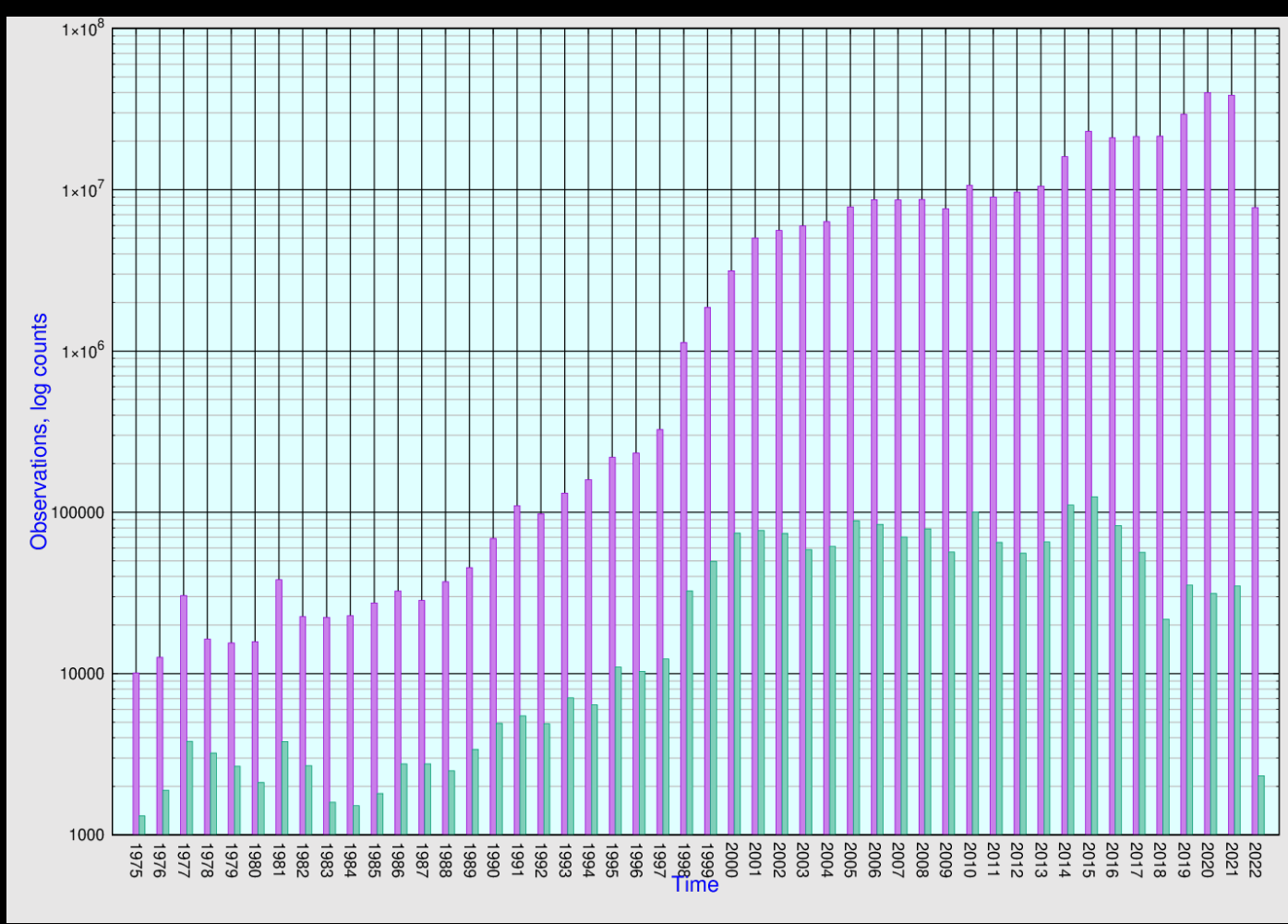


Next Step – failover ...

- Hardware design (To be Deployed at SBN-PSI)
- Cloud design

SBN MPC Annex :

- New semester summary statistics compiled from MPC DB (Andrei Mamoutkine)
- <https://sbnmpc.astro.umd.edu/>



Year	Code	#Obs	#NumMP-obj	#UnumMP-obj	#Comet-obj	#Sat-obj	#NumMP-obs	#UnumMP-obs	#Comet-obs	#Sat-obs	#Disc
2014	Z99	107	9	21	1	0	36	68	3	0	0
2015	Z99	270	26	55	4	0	80	178	12	0	0
2016	Z99	342	61	49	3	0	188	145	9	0	0
2017	Z99	54	9	9	0	0	27	27	0	0	0
2018	Z99	144	20	23	2	0	60	75	9	0	0
2019	Z99	410	43	79	6	0	121	259	30	0	1
2020	Z99	1866	114	263	34	0	452	1182	232	0	0
2021	Z99	1479	73	237	12	0	323	1115	41	0	0



MPEC WATCH:

- Developed by Quanzhi Ye
- Lists total MPECs by year and by obscode.
- Also provides Tables for:
 - *Top MPEC Contributors*
 - *Top MPEC-ed Discoverers*
 - *Top MPEC-ed Follow-up Observatories*
 - *Top MPEC-ed First Follow-up Observatories*
 - *Top MPEC-ed Precoverers*

.. Based on last year, last 5 years, and all time.

MPEC Watch Home Observatory Browser Statistics by Object Type (under development) MPC Stuff Issue Tracker SBN-MPC Annex

Welcome to MPEC Watch!

Note: This site is still under active development. Some links do not work.

MPEC Watch provides various statistical metrics and plots derived from [Minor Planet Center's Minor Planet Electronic Circular](#) service. This website is created and maintained by [Quanzhi Ye](#). Tables and plots are automatically updated at midnight US Eastern Time.

Last update: UTC 2022-06-07 04:02:15

At a glance

Number and type of MPECs by year

Year	Discovery	OrbitUpdate	DOU	ListUpdate	Retraction	Other	Editorial
1995	100	50	20	10	5	5	0
2000	400	300	150	50	20	10	0
2005	600	500	250	100	50	20	0
2010	900	700	400	150	100	50	0
2015	1500	1000	600	200	150	100	0
2020	3200	1500	800	250	200	150	0
2022	1300	100	50	50	50	50	0

MPECType

- Editorial
- Discovery
- OrbitUpdate
- DOU
- ListUpdate
- Retraction
- Other



MPEC WATCH 2:

[OBSCOD data](#) (Quanzhi Ye and undergraduate intern, Taegon Hibbitts)

- OBSCOD Table summary.
- Observatory-specific breakdown.

The pages here are still under active development and testing. Comments, suggestions and bug reports are welcome (via Issue Tracker or by email). Quanzhi 09/02/22

Statistics by Observatory - All time

[All time](#) | [1993](#) | [1994](#) | [1995](#) | [1996](#) | [1997](#) | [1998](#) | [1999](#) | [2000](#) | [2001](#) | [2002](#) | [2003](#) | [2004](#) | [2005](#) | [2006](#) | [2007](#) | [2008](#) | [2009](#) | [2010](#) | [2011](#) | [2012](#) | [2013](#) | [2014](#) | [2015](#) | [2016](#) | [2017](#) | [2018](#) | [2019](#) | [2020](#) | [2021](#) | [2022](#)

Last update: UTC 2022-10-05 05:21:30

Search

Code	Observatory	City	County	State	Country	MPECs	Disc.	F/U	1st F/U	Prec.
000	Greenwich	London		England	United Kingdom	0	0	0	0	0
001	Crowborough	Wealden District	East Sussex	England	United Kingdom	0	0	0	0	0
002	Rayleigh	Chelmsford	Essex	England	United Kingdom	0	0	0	0	0
003	Montpellier		Hérault	Occitania	France	0	0	0	0	0
004	Toulouse	Toulouse	Haute-Garonne	Occitania	France	0	0	0	0	0
005	Meudon		Hauts-de-Seine	Ile-de-France	France	0	0	0	0	0
006	Fabra Observatory, Barcelona	Barcelona	Barcelonès	Catalonia	Spain	319	0	0	0	0
007	Paris	Paris		Ile-de-France	France	0	0	0	0	0
008	Algiers-Bouzareah		Bab El Oued District	Algiers	Algeria	0	0	0	0	0
009	Berne-Uecht	Bern	Bern-Mittelland administrative district	Bern	Switzerland	0	0	0	0	0
010	Caussols		Maritime Alps	Provence-Alpes-Côte d'Azur	France	6	2	1	0	0
011	Wetzikon		Bezirk Hinwil	Zurich	Switzerland	0	0	0	0	0
012	Uccle		Brussels-Capital		Belgium	116	0	27	2	0
013	Leiden	Leiden		South Holland	Netherlands	0	0	0	0	0
014	Marseilles	Marseille	Bouches-du-Rhône	Provence-Alpes-Côte d'Azur	France	0	0	0	0	0



MPEC WATCH 2:

- OBSCOD Table summary.
- Observatory-specific breakdown.

MPEC Watch Home **Observatory Browser** Various Statistics MPC Stuff Issue Tracker SBN-MPC Annex

033 Karl Schwarzschild Observatory, Tautenburg

Where is this place?

033 Karl Schwarzschild Observatory, Tautenburg | Number and type of MPECs by year

Year	Discovery	Other	DOU	Retraction	ListUpdate	OrbitUpdate	Editorial
1995-2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	10
2012	0	0	0	0	0	0	20
2013	0	0	0	0	0	0	30
2014	0	0	0	0	0	0	40
2015	0	0	0	0	0	0	50
2016	0	0	0	0	0	0	60
2017	0	0	0	0	0	0	70
2018	0	0	0	0	0	0	80
2019	0	0	0	0	0	0	90
2020	0	0	0	0	0	0	100
2021	0	0	0	0	0	0	110
2022	0	0	0	0	0	0	120
2023	0	0	0	0	0	0	130
2024	0	0	0	0	0	0	140
2025	0	0	0	0	0	0	150
2026	0	0	0	0	0	0	160
2027	0	0	0	0	0	0	170
2028	0	0	0	0	0	0	180
2029	0	0	0	0	0	0	190
2030	0	0	0	0	0	0	200

033 Karl Schwarzschild Observatory, Tautenburg | Top 10 Observers

Observer(s)	Percentage
S. Melnikov, C. Hoegner, U. Laux, F. Ludwig, B. Stecklum	26.1%
Others	17.4%
C. Hoegner, B. Stecklum	10.2%
S. Melnikov, C. Hoegner, B. Stecklum	7.83%
S. Melnikov, F. Ludwig, B. Stecklum	7.54%
F. Ludwig, B. Stecklum	7.48%
U. Laux, B. Stecklum	6.4%
B. Stecklum, C. Hoegner	5.09%
S. Melnikov, U. Laux, B. Stecklum	4.33%
B. Stecklum, F. Ludwig	3.86%
B. Stecklum	3.73%

