

2021 Nov. 14
第3回新天体搜索者会議@オンライン

近年における彗星発見の状況

東亜天文学会 彗星課
佐藤 裕久

ドイツのMaik Meyer氏が公開している
ホームページ **The COCD Homepage** から
彗星発見の状況を見してみる

<http://www.comethunter.de/>

“Catalogue of Comet Discoveries”

The COCD* Homepage

* Catalogue Of Comet Discoveries

[> Catalogue of Comet Discoveries <](#)

[Cometography Series](#) - Volume 5 & 6 are out! Buy it at [Cambridge UP](#) or [Amazon](#)

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Year	Discoveries*	Amateur	Visual
2021	63	4	0
2020	76	5	0
2019	64	2	0
2018	45	3	1
2017	59	6	0
2016	38 (1**)	1	0
2015	70 (1**)	8	0
2014	67 (1**)	9	0
2013	65 (3**)	14	0
2012	58 (4**)	8	0
2011	49 (3**)	5	0

Survey	Official Comet Discoveries
SOHO (incl. SWAN)	1985
PanSTARRs	260
LINEAR	224
Mt. Lemmon Survey	152
Catalina Sky Survey	149
Siding Spring Survey	101
SPACEWATCH	66
ATLAS	59
NEAT	55

The Catalogue of Comet Discoveries



I obtained a sketch of comet C/1874 H1 (Coggia) by Carl Christian Bruhns (1830 - 1881), discoverer of 5 comets.

[Look here for more details!](#)

The 2002 edition of the Catalogue is available for free download! Please visit the [Download Page](#) for more information!

Due to [some book projects](#) I will stop publishing updates of the Catalogue until further notice. Please note that the online version contains some errors. However, up-to-date (in progress) versions can be requested via e-mail.

If you want to hunt for comets, you will be interested in past comet discoveries. This was the case for me and so I created the *Catalogue of Comet Discoveries*. The main idea of the catalogue came from Michael Rudenkos *Catalogue of Cometary Discovery Positions*. I converted the catalogue from the printed version into an electronic version... quite a piece of work. I extended the format and corrected some mistakes.

Following is an excerpt of this catalogue. The first entry in the catalogue is the apparition of 1P/Halley of 239 B.C. Please remember that the full version is also under permanent construction. **If you use the catalogue in any form, be sure to quote the correct source.** Here is the [catalogue info](#), which must always be given away with any data of the catalogue.

P/1990 B1	1990 01 21.983 09 37.4 +20 26 161M P 40D	13.5 CHE 026	4950	116P/Wild
C/1990 E1	1990 03 14.79 00 57.0 +43 22 49E V 12R35 5 2 9	LTU 570 A	4980 x	Cernis-Kiuchi-Nakamura
	1990 03 16.441	V 15B25		
	1990 03 16.441	V 12B20		
C/1990 K1	1990 05 20.44 23 57.0 +27 49 53M V 40L 5 2 9.5 USA	A	5017	Levy
C/1990 M1	1990 06 19.554 17 43.8 -65 32 138E P124D 2 0.1 17	AUS 413	5036	McNaught-Hughes
C/1990 N1	1990 07 13.522 12 34.2 +30 57 67E P A 4 8 8.5 JPN 396 A		5052	Tsuchiya-Kiuchi
	1990 07 16.506 12 27.3 +39 44 64E V 15B25	JPN A		

Year	Discoveries *	Amateur	Japanese	Visual
2021	63	4	1	
2020	76	5	1	
2019	64	2		
2018	45	3	2	1
2017	59	6		
2016	38 (1**)	1		
2015	70 (1**)	8		
2014	67 (1**)	9		
2013	65 (3**)	14	1	
2012	58 (4**)	8		
2011	49 (3**)	5		
2010	57 (201**)	6	1	2
2009	44 (187**)	6	1	
2008	42 (180**)	4		
2007	54 (169**)	3		
2006	54 (152**)	2		1
2005	53 (169**)	2		
2004	52 (169**)	3		2
2003	44 (148**)	1		
2002	50 (131**)	7	4	5
2001	40 (107**)	1	1	1
2000	33 (99**)	1	1	1

Survey	Official Comet Discoveries
SOHO (incl. SWAN)	1985
PanSTARRs	260
LINEAR	224
Catalina Sky Survey	149
Mt. Lemmon Survey	149
Siding Spring Survey	101
SPACEWATCH	66
ATLAS	59
NEAT	55
STEREO	43
LONEOS	43
WISE/NEOWISE	39

Credited Discoverer	Comets
McNaught	82
Shoemaker	32
Gibbs	31
Hill	27
Pons	26
Boattini	25
Christensen	24
Levy	22
Brooks	21
Bradfield	18
Garradd	17
Skiff	16
Barnard	16
Mueller	15
Kowalski	14

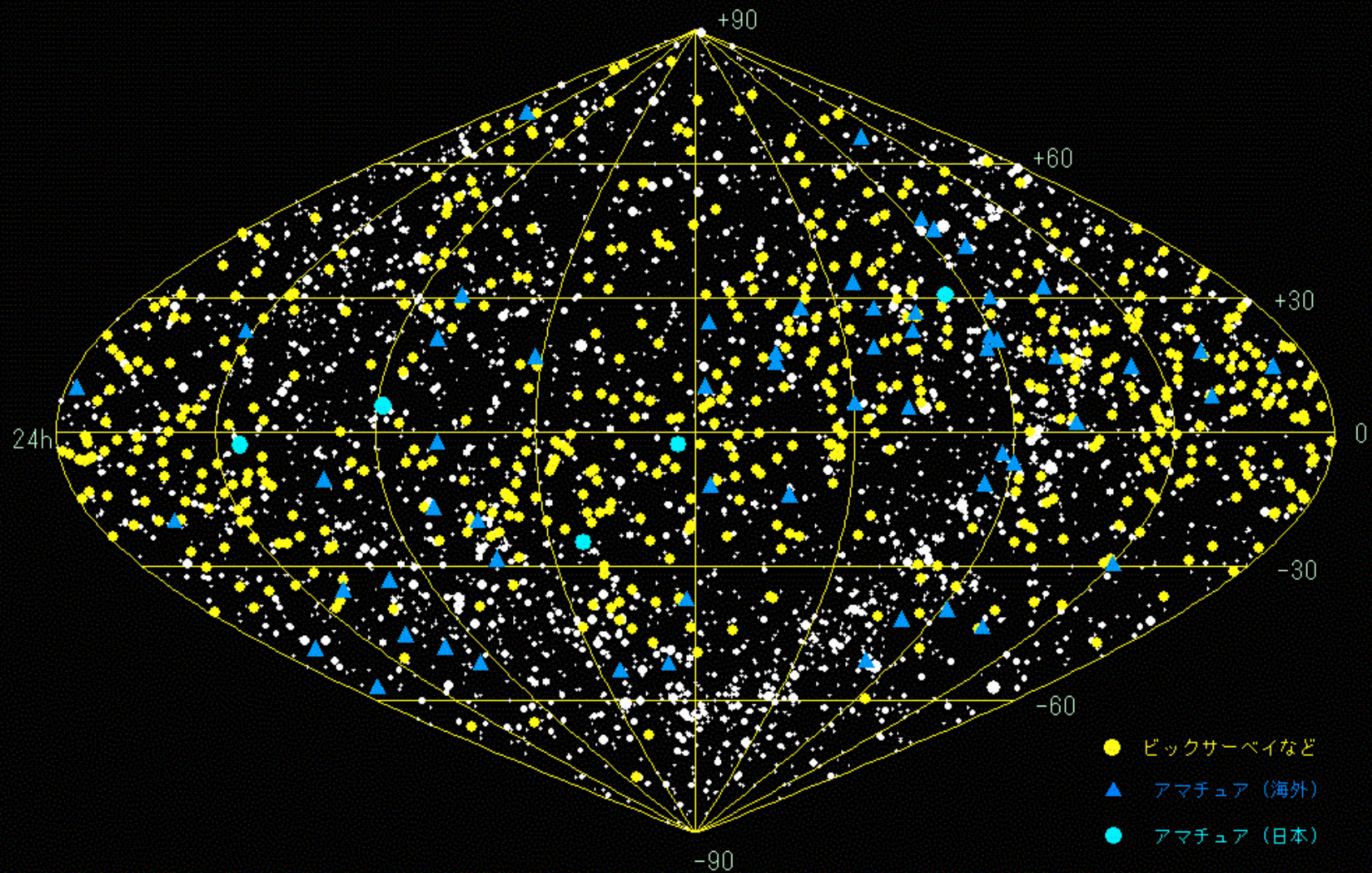
* without re-/pre-discoveries

** SOHO/STEREO discoveries, numbers not complete (SWAN NOT included)

出典: Maik Meyer "Catalogue of Comet Discoveries"

P/2021 N1	2021 07 02.464 02 52.0 +24 34 53M C124D	2 0.2 18.5 USA I41	C4999 x	ZTF
P/2021 N2	2021 07 09.436 02 00.7 +17 24 73M C 68D	2 0.1 18 USA 703	C5000 x	Fuls
C/2021 N3	2021 07 13.515 21 50.1 -26 06 148M C180Y	4 0.1 19.5 USA F51	C5003 x	PANSTARRS
P/2021 N4	2021 07 08.530 23 07.8 +09 16 114M C180Y	4 21.5 USA F51	C5019 x	PANSTARRS
C/2021 O1	2021 07 21.783 06 31.6 +30 38 23M C 20A	3 2.5 9.5 JAP A	C5004 x	Nishimura
C/2021 O3	2021 07 26.481 23 27.2 +27 48 115M C180Y	4 0.1 19 USA F51	C5009	PANSTARRS
C/2021 P1	2021 08 09.509 00 31.6 +02 34 129M C180Y	4 0.1 21 USA F51	C5020 x	PANSTARRS
C/2021 P2	2021 08 07.524 01 01.8 +18 57 114M C180Y	4 21 USA F51	C5023 x	PANSTARRS
P/2021 P3	2021 08 11.585 00 24.5 -03 40 134M C180Y	4 0.1 19.5 USA F51	C5022 x	PANSTARRS
C/2021 P4	2021 08 10.537 01 06.9 +55 52 94M C 50D	2 0.2 19.5 USA T05	C5024	ATLAS
C/2021 Q3	2021 08 26.297 15 36.1 +82 48 78E C 50D	2 0.2 19 USA T05	C5027 x	ATLAS
C/2021 Q4	2021 08 26.299 19 17.2 +50 32 107E C150L	2 0.1 19.5 USA G96	C5028 x	Fuls
P/2021 Q5	2021 08 29.607 06 50.7 +22 54 55M C 50D	2 2 15 USA T05	C5029	ATLAS
C/2021 Q6	2021 08 22.520 02 19.1 +33 40 105M C180Y	4 21 USA F51	C5032 x	PANSTARRS
P/2021 R1	2021 09 04.355 23 47.0 -05 03 166M C180Y	4 0.1 20 USA F51	C5030 x	PANSTARRS
C/2021 R2	2021 09 05.339 23 31.7 +18 33 153M C180Y	4 0.1 20 USA F52	C5031 x	PANSTARRS
P/2021 R3	2021 09 05.319 21 39.1 +03 10 158E C180Y	4 0.2 20.5 USA F51	C5036 x	PANSTARRS
P/2021 R4	2021 09 06.402 00 23.2 +27 47 140M C150L	2 0.3 20.5 USA G96	C5034 x	Wierzchos
P/2021 R5	2021 09 09.286 00 34.2 +10 33 154M C150L	2 0.2 19 USA G96	C5035 x	Rankin
P/2021 R6	2021 09 12.459 02 35.2 -06 52 132M C150L	2 0.1 20 USA G96	C5045 x	Groeller
C/2021 R7	2021 09 05.426 00 57.7 +17 23 142M C180Y	4 0.1 21.5 USA F52	C5050 x	PANSTARRS
C/2021 S1	2021 09 27.570 06 54.2 +57 39 86M C 50D	2 0.2 18.5 USA T05	C5047	ATLAS
C/2021 S3	2021 09 24.561 05 23.0 -20 37 100M C180Y	4 0.1 19.5 USA F52	C5051	PANSTARRS
C/2021 S4	2021 09 29.772 01 20.2 +14 40 162M C104D	2 0.1 20 CHN D29	C5052 x	Tsuchinshan
C/2021 T1	2021 10 02.208 23 53.0 +44 30 138E C150L	2 0.2 19 USA G96	C5053 x	Lemmon
C/2021 T2	2021 10 02.376 04 12.4 +46 16 116M C150L	2 0.2 19.5 USA G96	C5054	Fuls
P/2021 T3	2021 10 02.404 01 24.1 -28 45 145M C180Y	4 0.2 20.5 USA F51	C5056 x	PANSTARRS
C/2021 T4	2021 10 07.349 04 02.7 +12 02 132M C150L	2 0.1 20 USA G96	C5063 x	Lemmon
P/2021 U1	2021 10 18.352 02 49.9 +40 11 145M C150L	2 0.2 20 USA G96	C5058 x	Wierzchos
P/2021 U3	2021 10 24.313 06 26.8 -11 29 109M C 28D	2 0.2 18.5 CHL W94 A	C5064	Attard-Maury
C/2021 U4	2021 10 31.300 02 40.2 -11 31 154M C150L	2 0.1 19.5 USA G96	C5065 x	Leonard

彗星発見の位置 2011年～2021年



発見した位置の太陽離角

• アマチュア

•	太陽の東側	太陽の西側
• 30° 以下	0	2
• 60° 以下	1	13
• 90° 以下	2	11
• 120° 以下	3	9
• 150° 以下	1	12
• 180° 未満	2	8
• 計	9個	55個

• 赤は日本人を含む

• ビックサーバイ等

•	太陽の東側	太陽の西側
• 30° 以下	0	0
• 60° 以下	1	25
• 90° 以下	18	54
• 120° 以下	33	99
• 150° 以下	45	118
• 180° 未満	55	105
• 計	152個	401個

ビックサーベイ等はどこを
掃天しているか

The NEO Confirmation Page

<https://minorplanetcenter.net//iau/NEO/ToConfirmRA.html>

や

The Possible Comet Confirmation
Page

https://minorplanetcenter.net//iau/NEO/pccp_tabular.html

を試してみる



- Processing ([Info](#))

The NEO Confirmation Page (RA Ordered)

Please ensure you are familiar with the [notes at the bottom of this page](#).

[Problems?](#) [Comments?](#)

[See this list in discovery order](#)

Select object(s) from the current list of objects needing confirmation (NEO prob, [class](#), discovery date, rough current position and magnitude given):

☐ All objects with $V =$ to , with Decl. between ° and °, with an NEO probability of % to %

☒ or just the objects selected below:

- | | | | | | |
|--------------------------|---------|-----|---|---------------------|--|
| ☐ | C6E8K72 | 42 | 2 | [2021 Nov. 05.2 UT. | R.A. = 00 42.7, Decl. = +28 11, $V = 22.1$] Updated Nov. 11.68 UT |
| ☐ | P21oat1 | 100 | 1 | [2021 Nov. 06.3 UT. | R.A. = 01 22.6, Decl. = +02 25, $V = 22.0$] Updated Nov. 11.70 UT * [1 nighter] |
| ☐ | P11oMv3 | 98 | 1 | [2021 Nov. 11.3 UT. | R.A. = 01 43.6, Decl. = +31 34, $V = 21.4$] Updated Nov. 12.14 UT * |
| ☐ | P11oMr0 | 98 | 1 | [2021 Nov. 11.3 UT. | R.A. = 01 43.6, Decl. = +32 13, $V = 20.7$] Updated Nov. 12.12 UT * |
| ☐ | P11oNNY | 36 | 3 | [2021 Nov. 11.3 UT. | R.A. = 01 58.1, Decl. = +32 13, $V = 21.7$] Updated Nov. 12.15 UT |
| ☐ | P11oQjo | 47 | 3 | [2021 Nov. 11.4 UT. | R.A. = 02 01.4, Decl. = -01 40, $V = 22.1$] Updated Nov. 12.22 UT |
| ☐ | C6GDFG2 | 100 | 1 | [2021 Nov. 08.3 UT. | R.A. = 02 08.5, Decl. = +32 21, $V = 22.3$] Updated Nov. 11.68 UT * [1 nighter] |
| ☐ | P11o0s1 | 100 | 1 | [2021 Nov. 11.3 UT. | R.A. = 02 11.2, Decl. = +12 23, $V = 22.5$] Updated Nov. 11.95 UT * [1 nighter] |
| ☐ | P11o0s1 | 100 | 1 | [2021 Nov. 11.3 UT. | R.A. = 02 11.2, Decl. = +12 23, $V = 22.5$] Updated Nov. 11.95 UT * [1 nighter] |

- [Processing](#) ([Info](#))

The Possible Comet Confirmation Page

Please ensure you are familiar with the [notes at the bottom of this page](#).

The objects listed on this page may be comets. All reports of new cometary activity should be made using the following [web form](#) (Reports of activity for known comets made to the above web form will be ignored.)

New reports of cometary activity must be made using this web form in order to be considered for inclusion in any resulting MPEC announcing cometary status.

IF YOU DO NOT DETECT CLEAR COMETARY ACTIVITY, DO NOT CLAIM THAT AN OBJECT IS A COMET.

We will be operating a "reputation based" system for judging whether claims are valid. If you report cometary activity for an object later shown to be asteroidal, you may find that future reports of cometary activity by your observing station will be ignored by the MPC.

[Go to the NEOCP](#)

Page last updated on Nov. 12.256 UTC.

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[Reset form](#)

Select object(s) from the current list of possible comets needing confirmation (NEO desirability score, discovery date, rough current position and magnitude given, as well as number of observations, arc, nominal H and number of days since it was observed):

☐ All objects with $V =$ to , with Decl. between ° and °, with an NEO desirability score of % to %

☒ or just the objects selected below: [Deselect All](#) [Select All](#)

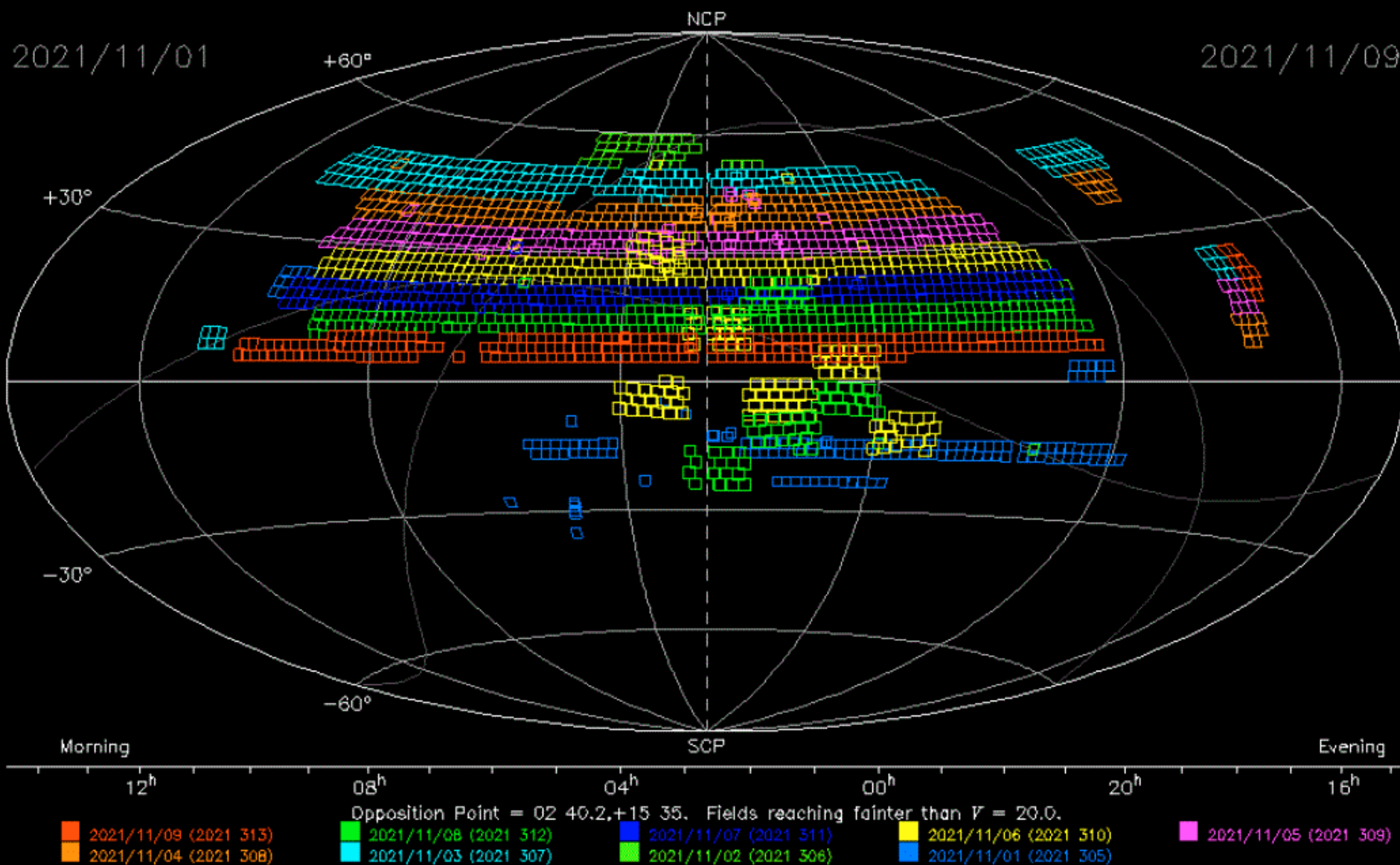
Sky Coverage Plots をしてみる

<https://minorplanetcenter.net/iau/SkyCoverage.html>

ビックスーバイがどこを掃天している
か知ることができる

SKY COVERAGE

Plot prepared 2021/11/10.405 by the Minor Planet Center



アマチュアの発見ストーリー

ドイツの Stefan Beck 氏が収集した
アマチュアの発見者の情報サイト

Comet discoverers & Comet
discoveries by amateurs

[https://www.cometchaser.de/discoverystories/Comet-
discoverers.html](https://www.cometchaser.de/discoverystories/Comet-discoverers.html)

にアマチュアの彗星発見ストーリーなど
参考になることが書かれている

C/2011 W3

C/2011 W3 (Lovejoy): Discovered on 2011 Nov. 27, by [Terry Lovejoy](#) using a 0.2-m reflector and CCD in the course of his routine comet searching from Thornlands, Australia. This is his third comet discovery. The comet is a member of the Kreutz group but seems intrinsically faint. Thus a bright comet at perihelion or a survival of it seems questionable. The comet will remain a southern hemisphere object close to the sun. At discovery it was at 13^m , $q=0.005$ AU, $T=2011$ Dec. 16. CBET 2931, MPEC 2011-X16 (Maik Meyer <http://www.comethunter.de>)



Copyright: Amy & Sarah Lovejoy



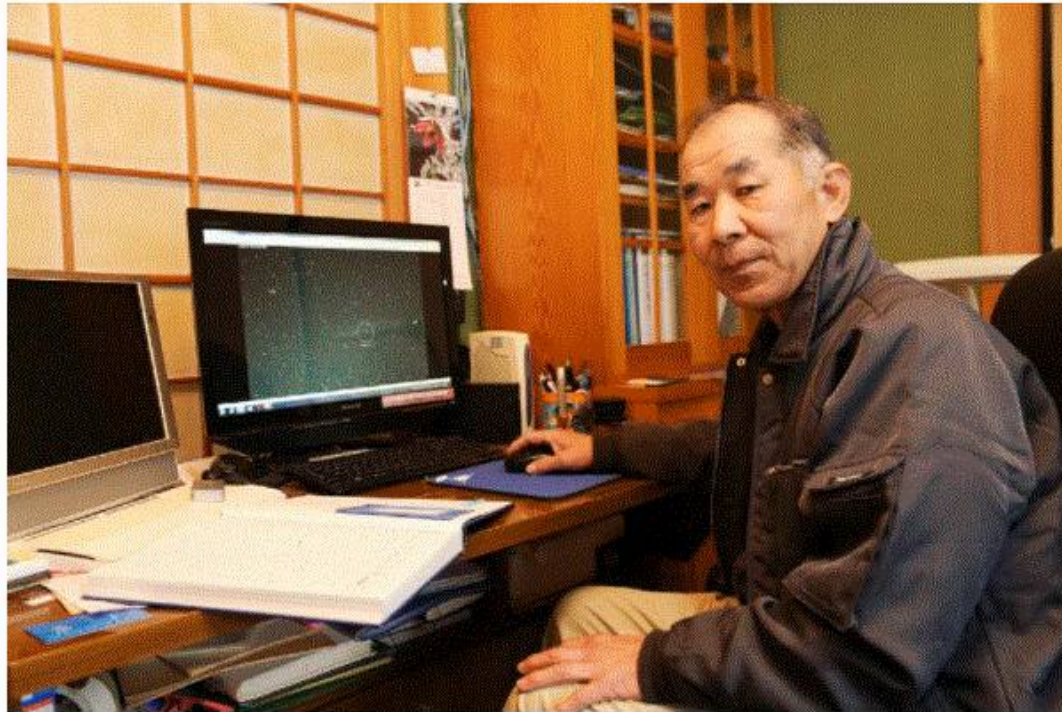
Discovery images. Copyright © 2011 by Terry Lovejoy (Thornlands, Queensland, Australia)

A great site showing the appearance of this Great Comet can be found at Cometography.com



Masuyuki Iwamoto - C/2013 E2 (Iwamoto)

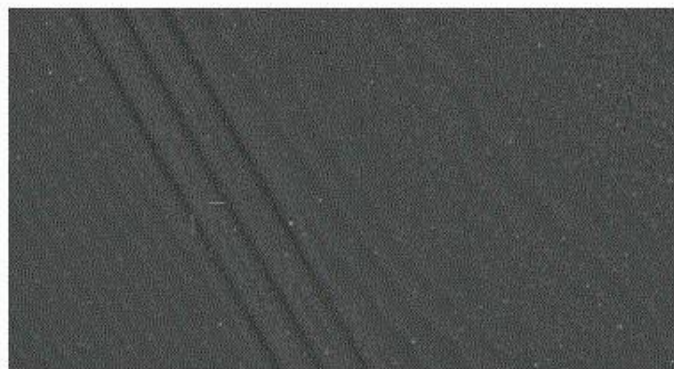
CBET 3439 announced the discovery of a new comet by Masuyuki Iwamoto (Awa, Tokushima-ken, Japan) on CCD images taken on March 10th and 11th using a 100 mm f/4 lens and a Canon EOS 5D DSLR camera.



Copyright: AstroArts/Hiroshi Ando <http://www.astroarts.co.jp>



Discovery images: one color, one black/white. The dark lines are the power lines in the background of the discoverer. See the image below.



Discoverer with his instrument. Copyright Hideo Nishimura