



Current status of amateur observations of minor bodies in the CIS countries

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Golden age



The second-half of the 20th century became gold age for astronomy in the USSR. The new, state-of-the-art observatories was built, soviet scientists had the leading positions in many directions of astronomical science, including search and study of new asteroids and comets. Nauchniy and Simeiz observatories are widely known entire the World.

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Golden age



In spite of the Crimea-Nauchnij observatory was stopped all observation of minor bodies of Solar system in 1992.

But, Nauchnij observatory, in the present time, still have 15 place in the list of the **most prolific discovery sites** in the World. On this site discovered more than 11% of all new asteroids from 1966 to 1992.

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Golden age



Most prolific discovery sites (on Sep. 4 2009, MPC)

Rank	Discoveries	Between	Site name
1	107582	1980-2009	Lincoln Laboratory ETS, New Mexico
2	22680	1981-2009	Steward Observatory, Kitt Peak-Spacewatch
3	15340	1999-2007	Palomar Mountain/NEAT
4	13475	1998-2008	Lowell Observatory-LONEOS
5	6540	1949-2007	Palomar Mountain
6	6415	1998-2009	Catalina Sky Survey
7	5500	1995-2006	Haleakala-AMOS
8	5463	1976-2005	European Southern Observatory, La Silla
9	2968	2004-2009	Mt. Lemmon Survey
10	2442	1991-2002	Oizumi
11	1745	1975-2007	Siding Spring Observatory
12	1392	2001-2009	LPL/Spacewatch II
13	1376	1995-2001	Visnjan
14	1285	1966-1992	Crimea-Nauchnij
15	1215	1982-2002	Peking Observatory, Xinglong Station

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Twilight



With the disintegration of the USSR the work on search and study of new asteroids and comets was practically stopped because of cessation of financing and producing of photographic plates.

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Twilight



With other side, at this time we seen revolution in astronomical equipment. The photographic plates was replaced by new, more sensitive CCD cameras. From this time, **amateur astronomers** could be involved for the comet and asteroids search with the respectively **small telescopes**.

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Amateurs rising



The first large amateur observatory (MPC code A50), which observes minor planets, is located 150 km southwest from Kyiv in a small town of Andrushivka, Ukraine.



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Amateurs rising



It is currently equipped with 2 automated 600-cm reflectors and now is the CIS leader according to the number of observations.



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Amateurs rising

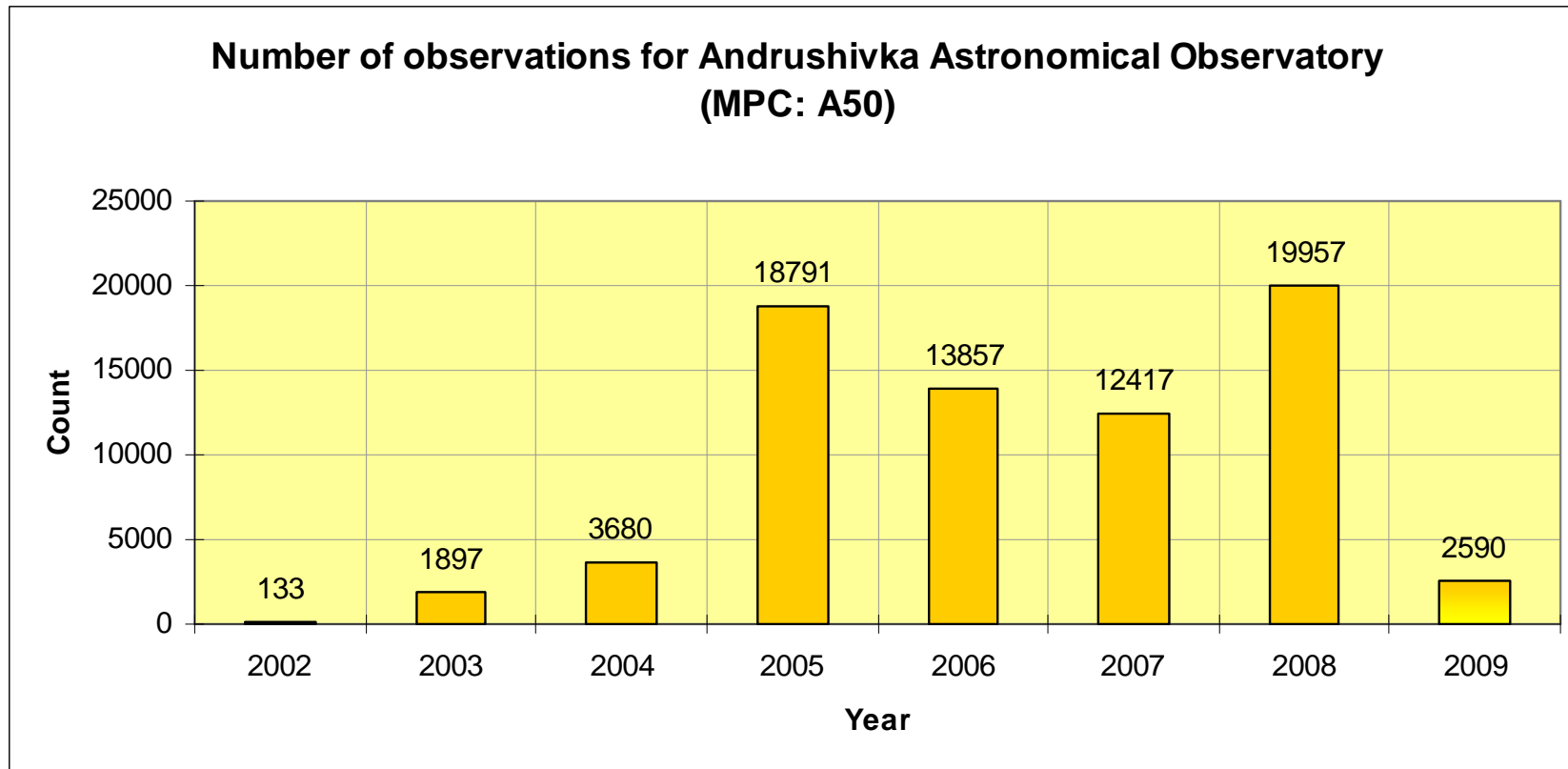


In aggregate, more than 100 new asteroids have been discovered here and some 73 000 measurements made. A50 enters top 20 observatories and is ranked 9 among the non-professional surveys by the number of observations in 2008. This site has discovered 2 NEO – 2007 QA2 and 2008 KB12.

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Amateurs rising



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Amateurs rising



The Astrotel-Caucasus Observatory (MPC code 114) is the next state-of-the-art amateur observatory located in North Caucasus near the Special Astrophysical Observatory.



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Amateurs rising



It is equipped with the fully automated 300-mm Corrected Ritchey-Chretien telescope with CCD, while a 400-cm reflector is to be put into operation soon.



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Amateurs rising



Since the beginning of the operation, this observatory discovered more than 80 asteroids, among them are another 2 near-earth asteroids - 2009 HZ67 and 2009 OS5. Also on this site discovered one Centaur – 2009 QV38 and one Jupiter Trojans - 2009 SC14.

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Amateurs rising

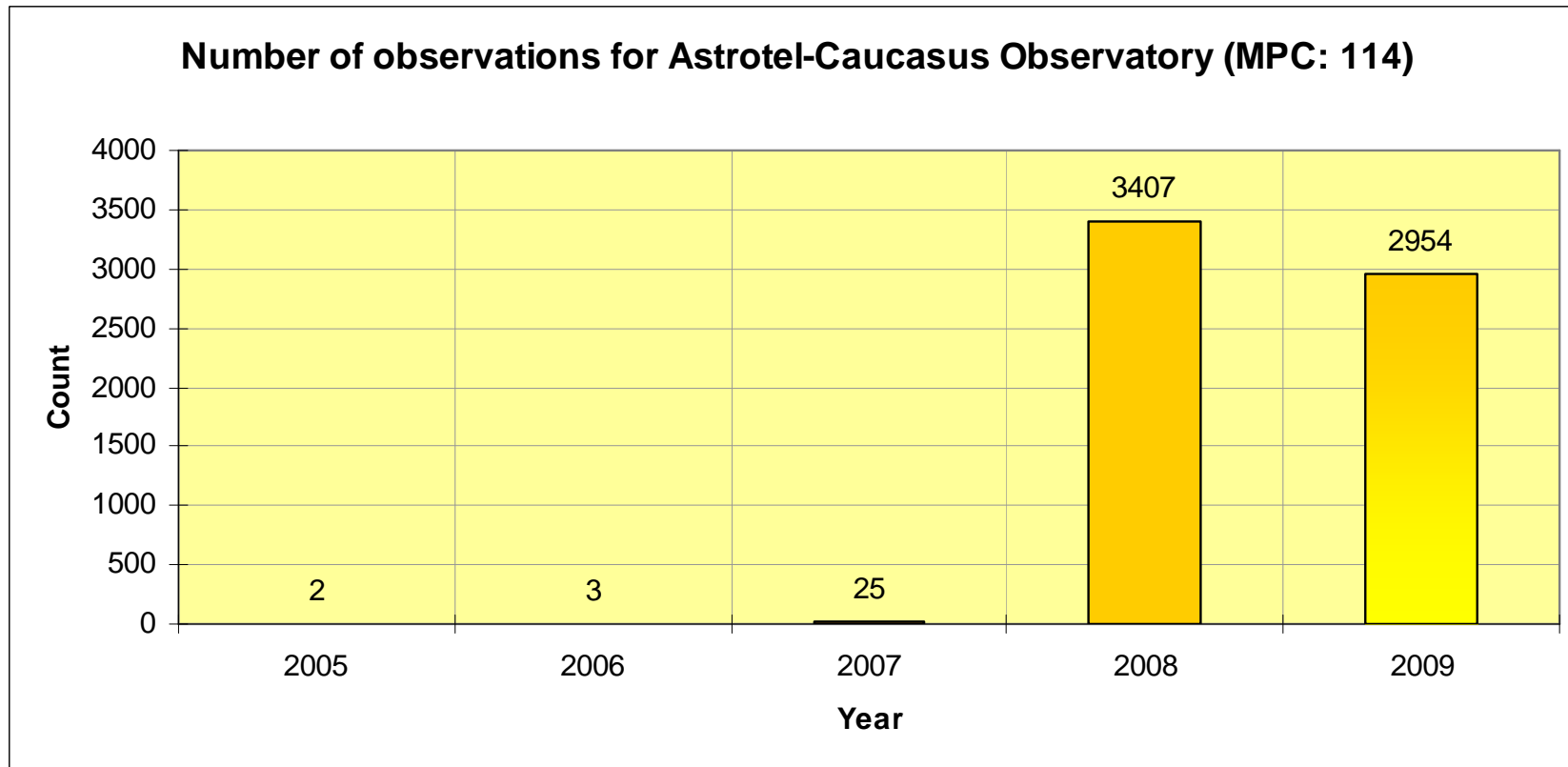


It should be emphasized here that one of the discoveries - 2008 VS3 – was caught by the 106-mm refractor. This is a good demonstration of the fact that any amateur telescope can discover asteroids. Also other, Astrotel-Maidanak observatory equipped with 360-mm Ritchey-Chretien is started test observations recently.

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Amateurs rising



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Amateurs rising

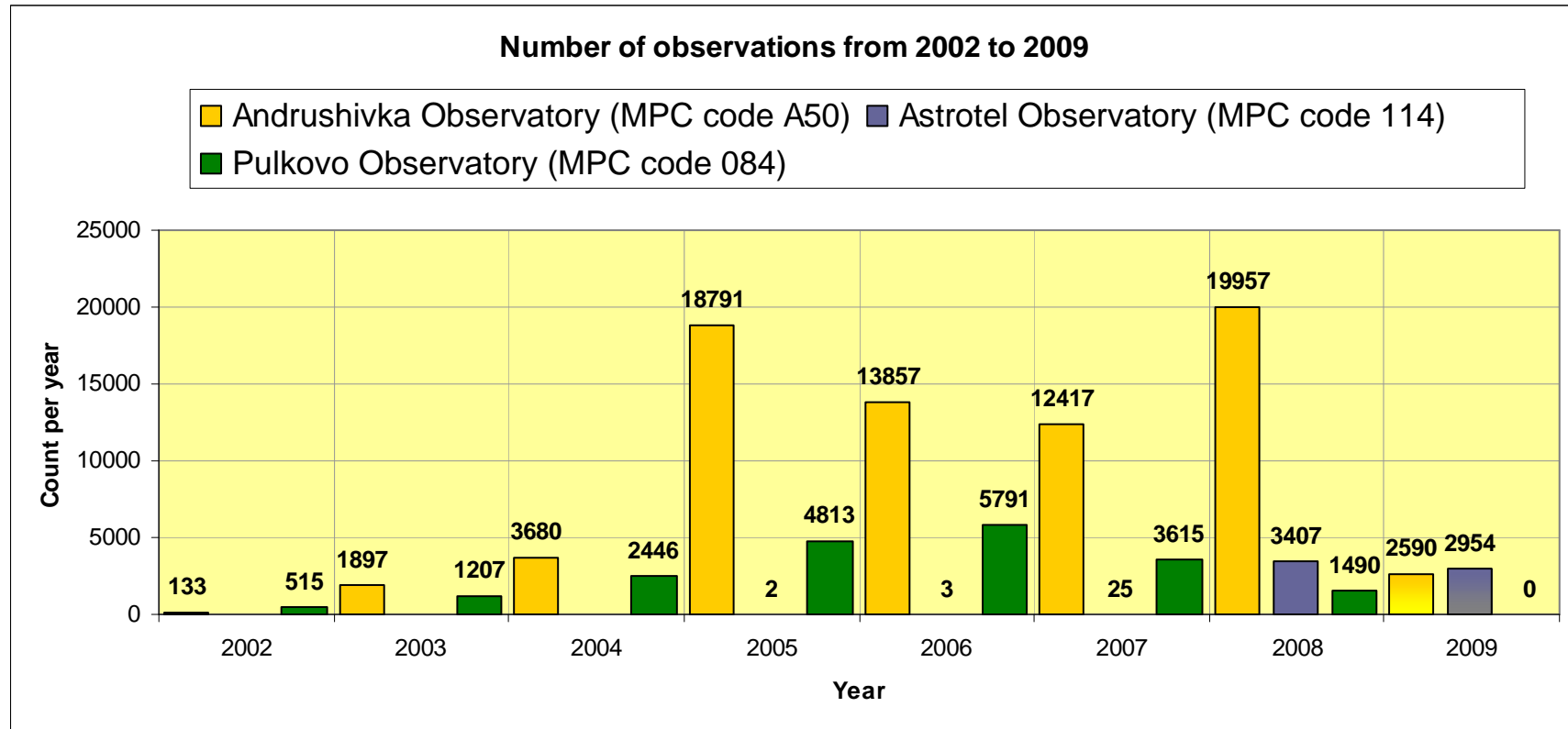


For the comparison, one of the major professional observatories which study asteroids on territory of CIS – Pulkovo observatory. In last seven years Pulkovo observatory inferior to amateur Andrushivka observatory by overall amount of observations in the several times.

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Amateurs rising



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Remotely observation



In recent years a new direction of astronomical observations - remote access to distant telescopes - is rapidly developed. Most of these observatories are located in the USA and Australia, but many amateurs from rest of the world have access to them.

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Remotely observation



Some observers from the CIS countries remotely use Tzec Maun observatory located in the New Mexico on the height of 2 220 meters above sea level. More than 20 new Main-belt asteroids have been discovered by CIS amateurs in this way, one of them has been already numbered and named.

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Remotely observation



Using the remote telescopes, a group of CIS amateurs have initiated the project for recovering of the short-period comets. Orbit refinement, photometric modeling, and lightcurve determination are the main goals of this project.

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Remotely observation



As the first result of the project activity, 5 periodic comets have been rediscovered recently, and P/2002 JN16 (LINEAR) has been numbered to 221P/LINEAR.

Designation	Recovered	Last observed	Mag.
69P/NEAT	May 19 2009	May 25 2006	19.5m
43P/Wolf-Harrington	May 24 2009	May 14 2005	20.0m
89P/Russell 2	May 24 2009	Nov 28 2002	17.9m
126P/IRAS	May 27 2009	Mar 01 1997	19.2m
P/2002 JN16 (LINEAR)	June 01 2009	Sep 01 2002	20.2m

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Coordination



There is an intention to coordinate the observations of asteroids and comets by CIS amateur astronomers under the auspices of the **International Scientific Optical Network (ISON)**. ISON is non-government project aimed on the development of observational astronomy in the CIS countries and many amateurs are already involved in this work.

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Thank you!

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