

BOINC – not only calculations



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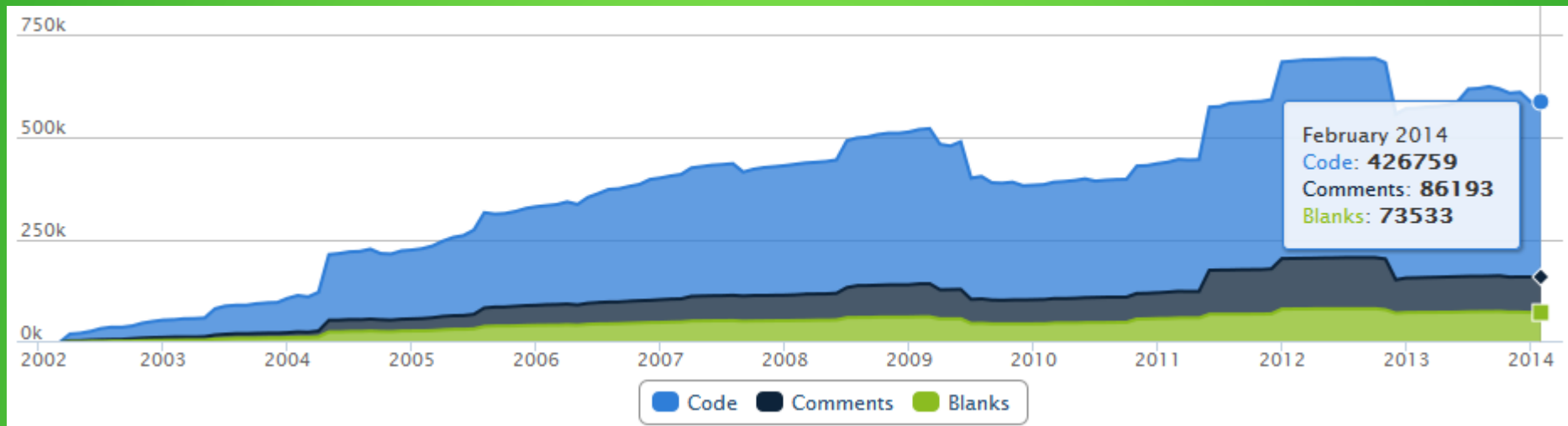
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15.02.2014

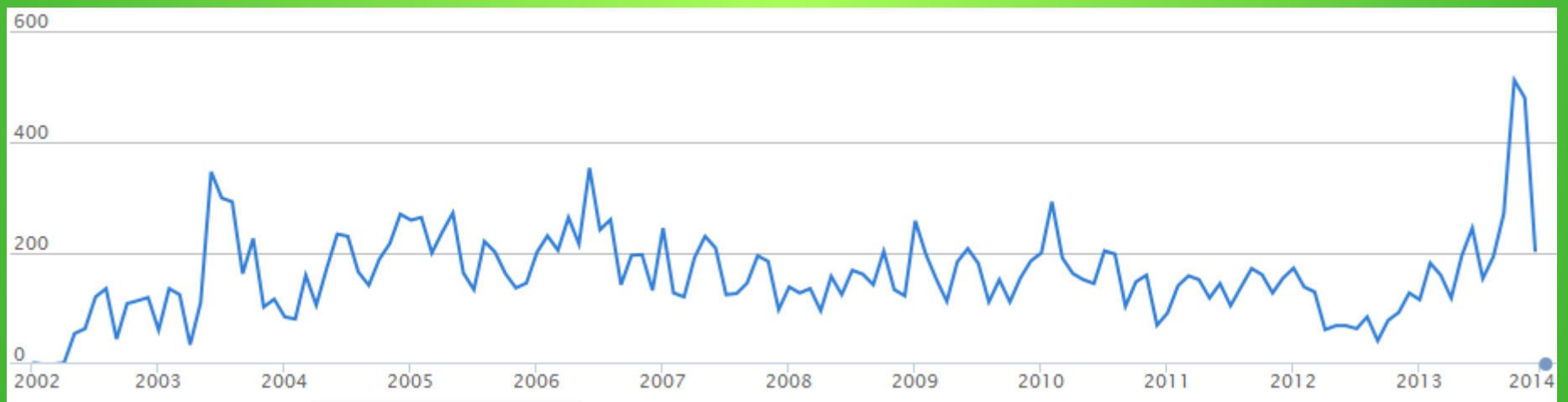
- Introduction to BOINC
- Radioactive@Home



Many people participated in the SETI@Home project, which was launched almost 15 years ago - ie 17 May 1999. At that time providing ones computing power to the scientists from big American research center was for a common user virtual adventure. Research conducted on shared computers involved (and still do) rather "popular" subject, searching in the radio waves, signals that may come from foreign civilization. The project has gained popularity and in this respect a comparison to todays "Facebook " can be quite accurate. One should remember though that this are completely different systems and SETI@Home began operations in 1999, when Internet in Poland was infancy. However, SETI@home and BOINC turned out to be a great initiative, which has already nearly two decades and unites people around the distributed computing.



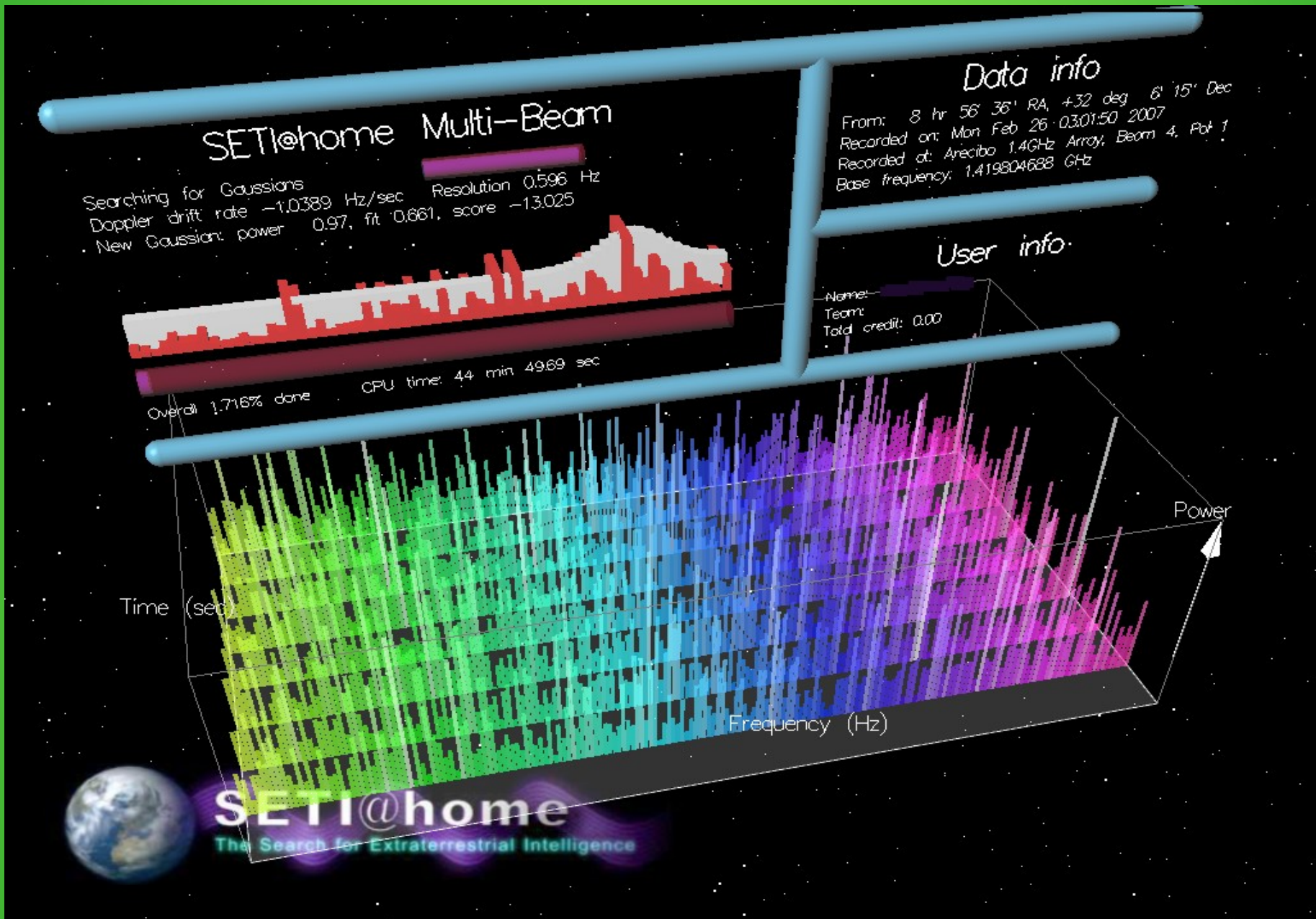
*BOINC project - lines of code (data from 5 February 2014).
 Source: www.ohloh.net.*



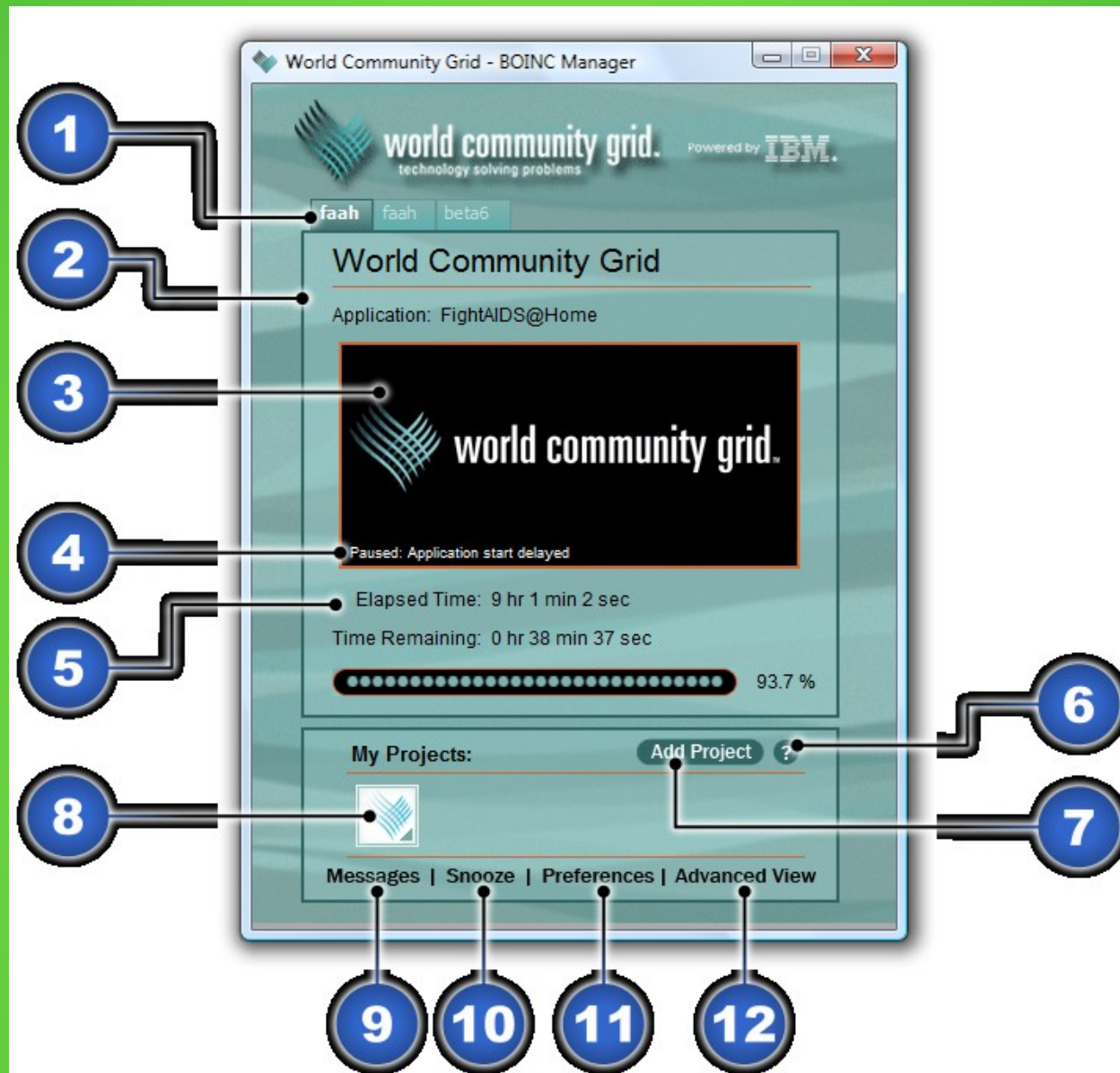
BOINC project - commits per month (data from 5 February 2014). Source: www.ohloh.net.

The Berkeley Open Infrastructure for Network Computing (BOINC) is an open source middleware system for volunteer and grid computing. It was originally developed to support the SETI@home project before it became useful as a platform for other distributed applications in areas as diverse as mathematics, medicine, molecular biology, climatology, and astrophysics. The intent of BOINC is to make it possible for researchers to tap into the enormous processing power of personal computers around the world.

BOINC has been developed by a team based at the Space Sciences Laboratory (SSL) at the University of California, Berkeley led by David Anderson, who also leads SETI@home. As a high performance distributed computing platform, BOINC has about 596,224 active computers (hosts) worldwide processing on average 9.2 petaFLOPS as of March 2013.



SETI@Home screensaver



BOINC Manager (simplified view).

Source: wcg.wikia.com

| BoincTasks - [Combined [Tasks][Connected: 3]] | | | | | | | | | | |
|---|-----------------------------------|-----------------------------------|-------------------------|---------|--------------|------------------|------------------|---------------------|---------------------|--|
| File View Computers Show Projects Extra Window Help | | | | | | | | | | |
| Projects Tasks Transfers Messages History | | | | | | | | | | |
| Project | Application | Name | Elapsed Time | CPU % | v Progress | Time Left | ^3 Deadline | Status | ^2 Computer | |
| SETI@home | 6.08 setiathome_enhanced (gpu) | 31 <Tasks> | 19:09:22 (01:05:15) | 5.677 | 100.000 | - | 19-12-2009 23:40 | Ready to report | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.228_2 | 00:00:02 (00:00:01) | 50.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.161_3 | 00:00:02 | 100.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.185_2 | 00:00:02 | 100.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.158_2 | 00:00:01 | 100.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.136_2 | 00:00:01 | 100.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 18au09ab.2473.23548.5.10.196_2 | 00:00:01 | 100.000 | 100.000 | - | 20-12-2009 20:21 | Computation error | fred core duo vista | |
| SETI@home | 5.28 setiathome_enhanced | 12 <Tasks> | 01d,15:31:08 (22:51:43) | 57.851 | 100.000 | - | 25-12-2009 02:58 | Ready to report | fred core duo vista | |
| Einstein@Home | 3.11 Arecibo Binary Pulsar Search | p2030_53835_34797_0034_G35.34-... | 04:24:21 | 84.378 | 01:11:46 | 01:11:46 | 16-11-2009 09:55 | Waiting to run | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (gpu) | 4 <Tasks> | 01:08:46 | 68.636 | 01:13:11 | 01:13:11 | 22-12-2009 11:34 | Waiting to run | fred core duo vista | |
| SETI@home | 5.28 setiathome_enhanced | 02ap07ac.25621.267746.11.10.168_0 | 01:24:59 (01:08:27) | 80.545 | 56.872 | 01:29:05 | 25-12-2009 03:13 | Running | fred core duo vista | |
| SETI@home | 5.28 setiathome_enhanced | 02ap07ac.25621.267746.11.10.174_1 | 00:52:29 (00:38:45) | 73.833 | 28.368 | 03:52:21 | 25-12-2009 03:13 | Running | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 01ap07aa.9961.15205.9.10.31_0 | 00:07:55 (00:00:55) | 11.579 | 23.760 | 00:50:30 | 21-12-2009 15:37 | Running | fred core duo vista | |
| SETI@home | 6.08 setiathome_enhanced (gpu) | 521 <Tasks> | | | 32d,13:21:45 | 19-12-2009 03:18 | Ready to start | fred core duo vista | | |
| SETI@home | 5.28 setiathome_enhanced | 160 <Tasks> | | | 50d,02:21:56 | 25-12-2009 03:03 | Ready to start | fred core duo vista | | |
| rosetta@home | 2.00 Rosetta Mini | 4 <Tasks> | 09:18:54 (08:38:49) | 92.828 | 100.000 | - | 21-11-2009 20:25 | Ready to report | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 8 <Tasks> | 21:37:20 (20:22:42) | 94.247 | 100.000 | - | 22-12-2009 11:05 | Ready to report | i7 camera | |
| SETI@home | 6.08 setiathome_enhanced (gpu) | 26 <Tasks> | 05:00:58 (00:26:53) | 8.932 | 100.000 | - | 27-12-2009 13:36 | Ready to report | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ad.15896.9479.6.10.200_1 | 02:25:12 (02:15:40) | 93.434 | 89.639 | 00:16:42 | 22-12-2009 15:58 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ad.15896.9479.6.10.178_1 | 02:22:23 (02:13:45) | 93.937 | 87.924 | 00:19:26 | 22-12-2009 15:58 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ad.15896.9479.6.10.171_1 | 01:34:06 (01:31:04) | 96.776 | 57.205 | 01:05:19 | 22-12-2009 15:58 | Running | i7 camera | |
| rosetta@home | 2.00 Rosetta Mini | mix_score12_correct_B_rlb1dzo_... | 02:02:12 | 56.618 | 01:30:44 | 01:30:44 | 22-11-2009 14:27 | Waiting to run | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ad.15896.9479.6.10.168_1 | 01:33:56 (01:28:53) | 94.624 | 55.613 | 01:08:55 | 22-12-2009 15:58 | Running | i7 camera | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 07ap07aa.10328.18886.6.10.20_1 | 00:07:15 (00:00:45) | 10.345 | 53.917 | 00:06:39 | 27-12-2009 13:36 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ad.15896.9479.6.10.128_1 | 01:25:17 (01:20:28) | 94.352 | 49.578 | 01:17:29 | 22-12-2009 15:58 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ac.18343.9888.7.10.5_1 | 01:16:41 (01:12:46) | 94.892 | 44.767 | 01:22:30 | 22-12-2009 11:43 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ac.18343.9888.7.10.3_1 | 01:12:00 (01:07:42) | 94.028 | 41.104 | 01:27:41 | 22-12-2009 11:43 | Running | i7 camera | |
| SETI@home | 6.08 setiathome_enhanced (cuda) | 07ap07aa.10328.18886.6.10.15_0 | 00:02:57 (00:00:26) | 14.689 | 20.372 | 00:13:23 | 27-12-2009 13:36 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 01ap07ac.18343.9888.7.10.30_0 | 00:14:59 (00:12:59) | 86.652 | 7.692 | 01:44:47 | 22-12-2009 11:43 | Running | i7 camera | |
| SETI@home | 5.28 setiathome_enhanced | 678 <Tasks> | | | 45d,13:36:19 | 18-11-2009 04:20 | Ready to start | i7 camera | | |
| rosetta@home | 2.00 Rosetta Mini | 8 <Tasks> | | | 01d,00:03:20 | 22-11-2009 14:27 | Ready to start | i7 camera | | |
| SETI@home | 6.08 setiathome_enhanced (gpu) | 1488 <Tasks> | | | 15d,11:14:16 | 25-11-2009 04:50 | Ready to start | i7 camera | | |

BOINC Manager (advanced view).

Source: boinc.berkeley.edu

Radioactive@Home

On March 11th 2011 the Fukushima 1 atomic powerplant suffered major damage due to earthquake and tsunami that followed. Major concern about safety of atomic energetics among BOINC@Poland users caused the beginning of new project for BOINC platform Radioactive@home, which was started on April 16th 2011. Developing detector prototype for gamma radiation lasted a couple of weeks and were finished by the test in ghost town of Prypiat where the Chernobyl disaster took place. Today every user that has a computer, detector and internet access can join the project that creates a virtual map of radiation enveloping the entire world.



NUCLEAR FALLOUT MAP

- 3000 RADS
- 1500 RADS
- 750 RADS



MAR 12 11:03:15 ZULU

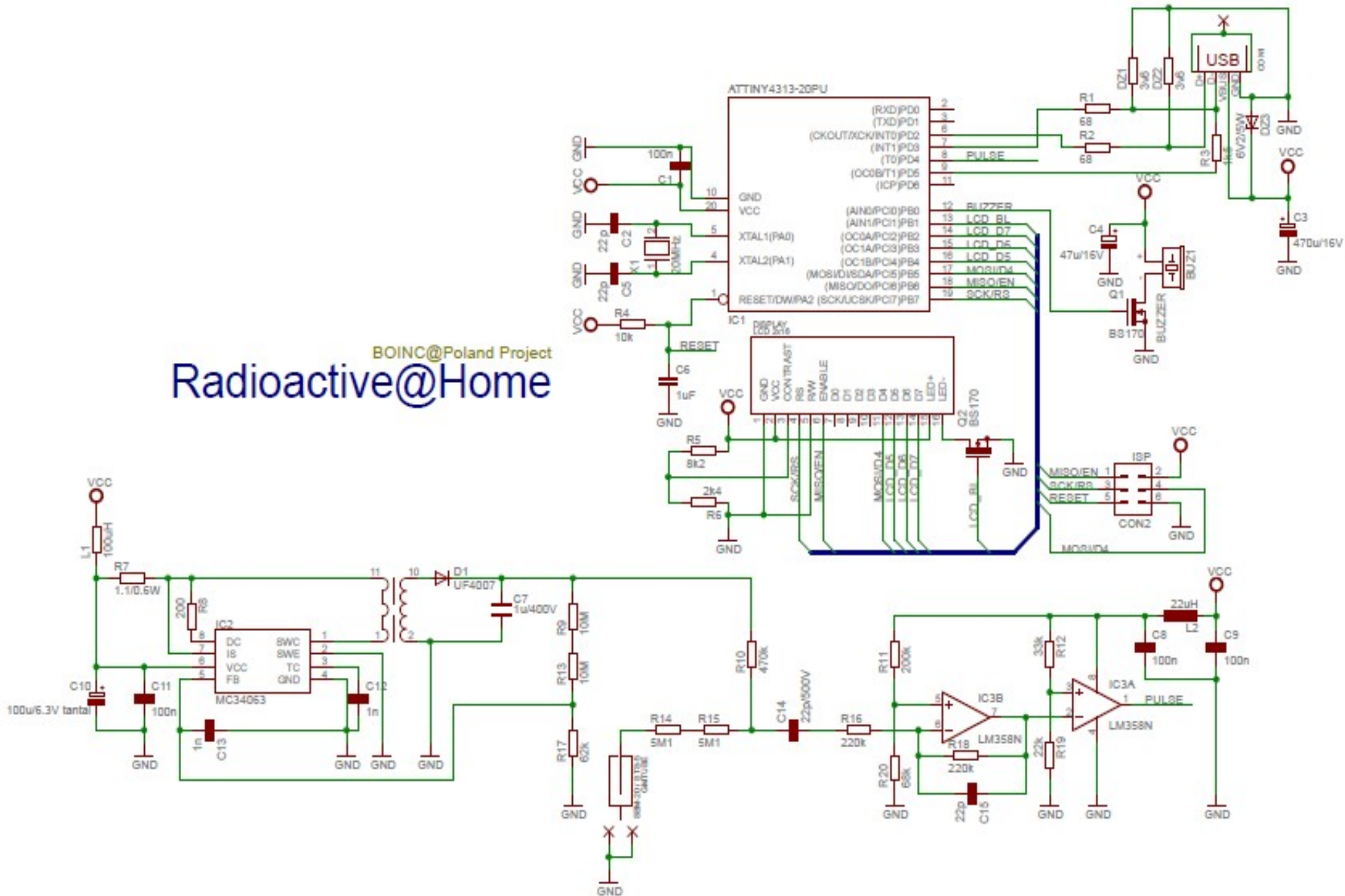


*One version of the gamma-ray detector system used in
Radioactive@Home*



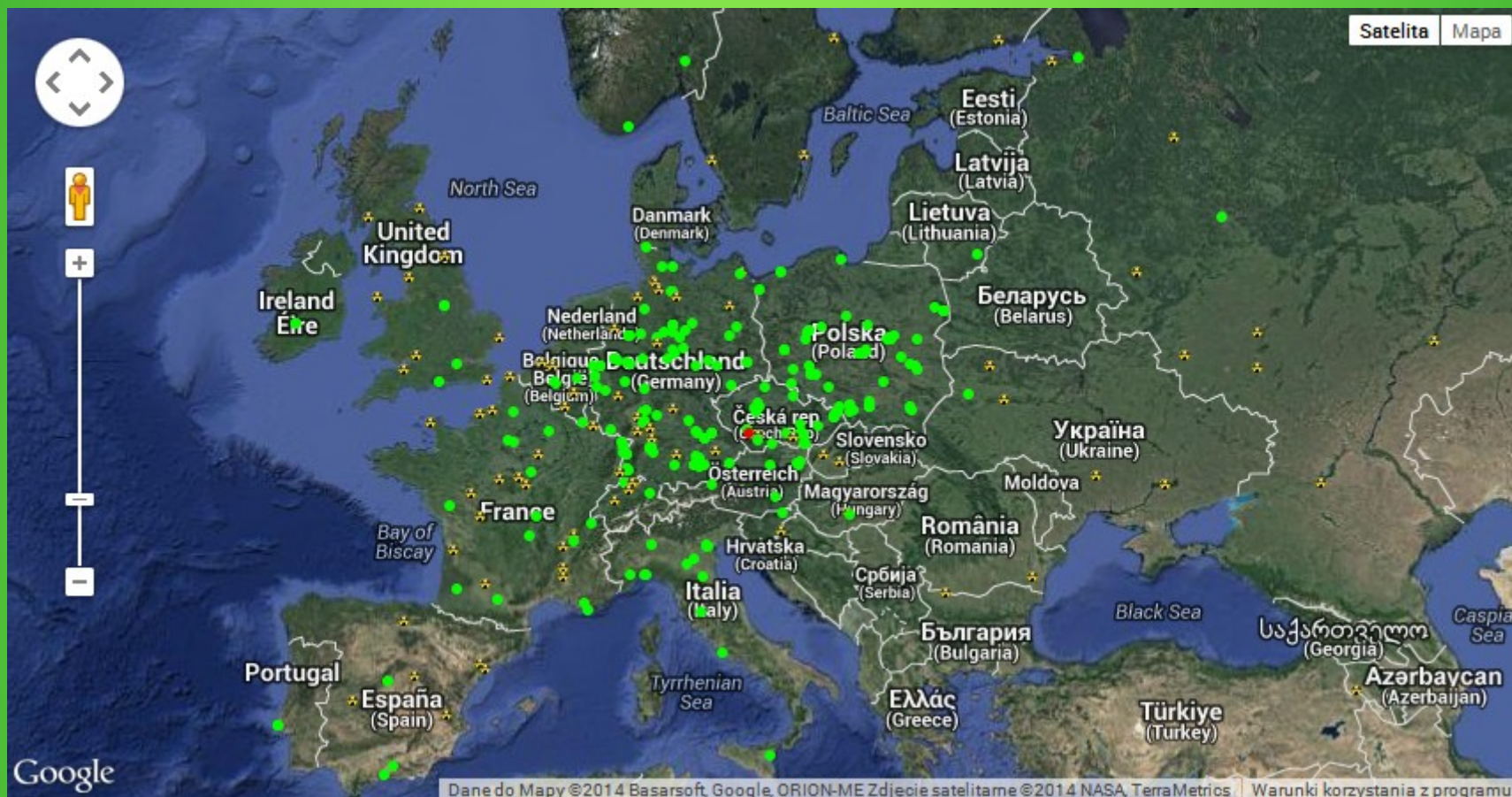
Radiation detector in the housing.

BOINC@Poland Project
Radioactive@Home

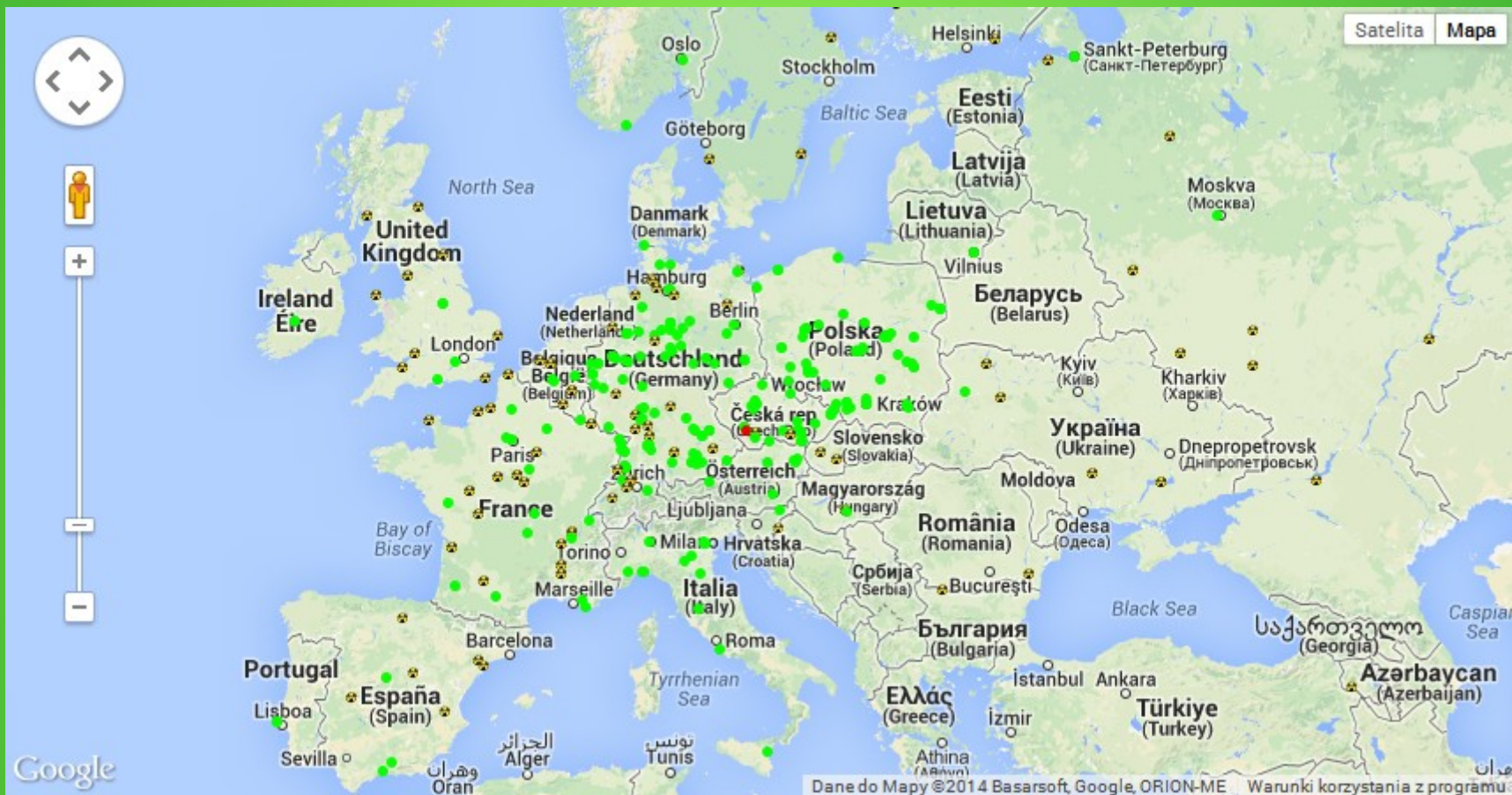




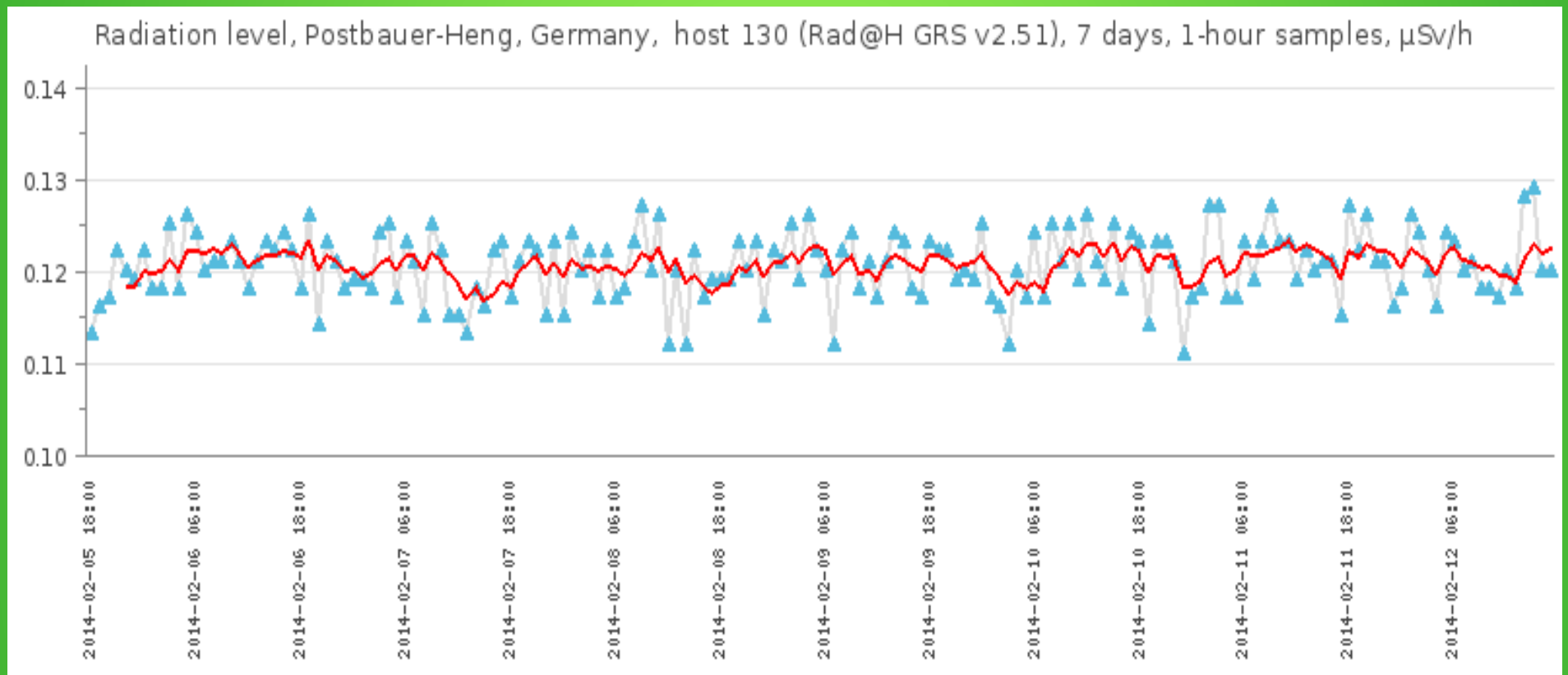
Map of radiation sensors located in World (color version).



Map of radiation sensors located in Europe (color version).



Map of radiation sensors located in Europe (grayscale version).



Sample statistics of radiation from one of the locations.

Site: www.radioactiveathome.org



Strona Główna Projekt Dołącz Forum Detektor

Radioactive@Home

- › Informacje
- › Sprzęt
- › Kontakt
- › Mapa czujników
- › Wiedza





Projekt Radioactive@Home

tworzony przez członków drużyny BOINC@Poland ma za zadanie stworzyć globalną mapę

Fundacja BOINC Polska

Opublikowano: poniedziałek, 02, lipiec 2012 14:04 |  |  | Odsłony: 525

W dniu dzisiejszym oficjalnie wystartowała Fundacja BOINC Polska, została wpisana do Krajowego Rejestru Sądowego dn. 19.06.2012 pod numerem: 0000424120.

Fundacja została założona przez członków drużyny BOINC@Poland i jednym z jej celów statutowych jest opieka nad projektami przetwarzania rozproszonego w Polsce.

Jako, że zespół tworzący projekt Radioactive@Home jest całkowicie złożony z osób zaangażowanych m.in. w proces tworzenia fundacji, z dniem dzisiejszym przechodzimy pod jej opiekę.

Przetwornica DC/DC 400v z użyciem dławika.

Opublikowano: czwartek, 29, marzec 2012 19:01 |  |  | Odsłony: 4024

Ponieważ dostępność, oraz wykonanie transformatora użytego w aktualnym bloku przetwornicy może sprawić problemy, postanowiłem zaprojektować kompatybilną przetwornicę przy użyciu dławika.

[Czytaj więcej: Przetwornica DC/DC 400v z użyciem dławika.](#)

Nowy projekt czujnika

Thank you for your attention!

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