WP11: Time domain astronomy

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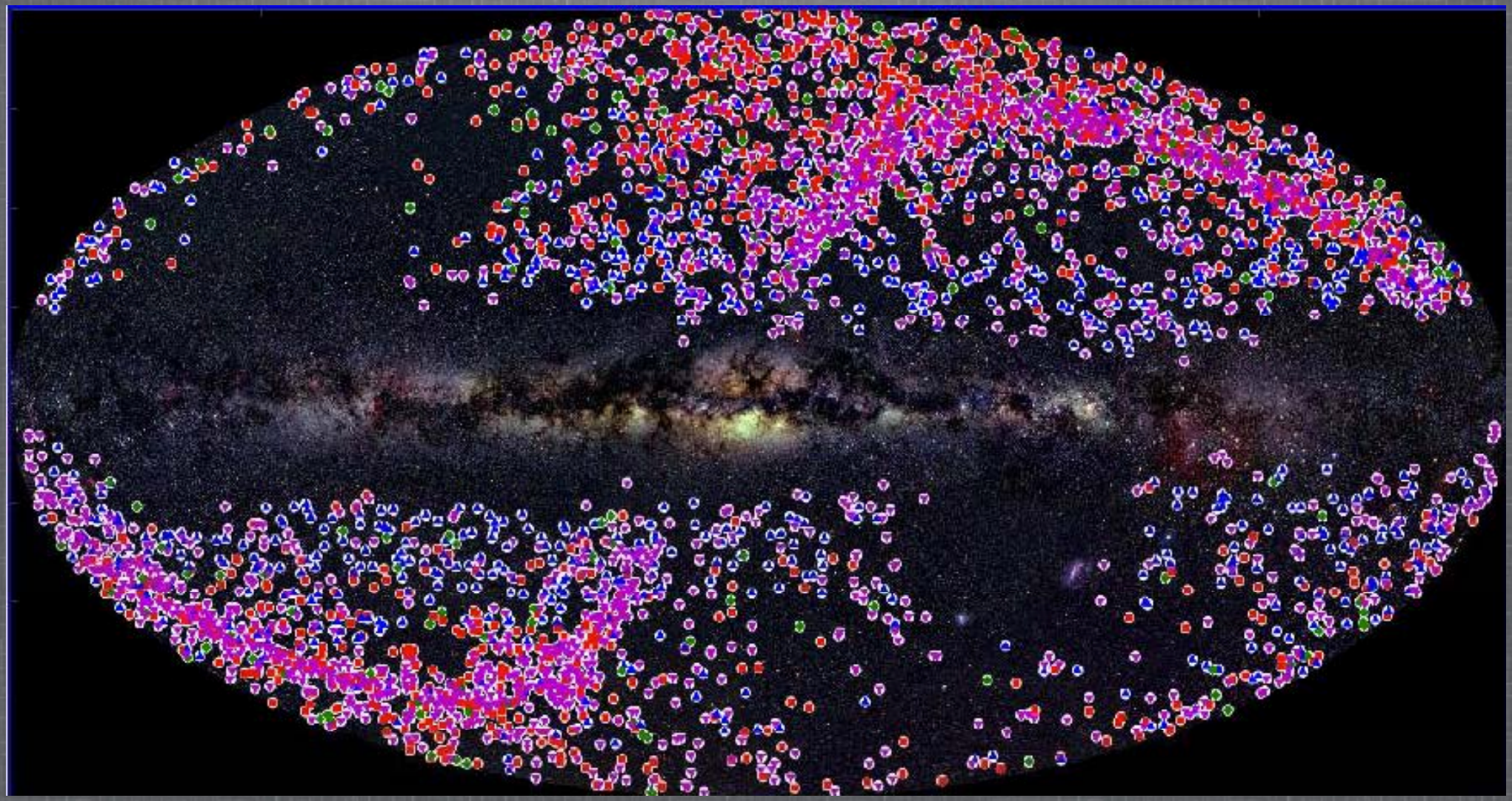
New and upgraded European facilities (e.g. OGLE-IV, LOFAR, GAIA) will discover many thousands of new transient and variable objects.

Without proper, ground based follow-up observations, much of the scientfic potential will be lost.

Therefore a need for rapid response observations, rapid data analysis and rapid distribution of knowledge obtained.

Transient detections by CRTS survey



lack of follow-up = missed scientific opportunities

give a new purpose for life of small (<2m) European telescopes, professional and amateur

transients/variable stars follow-up is a perfect task given the patchy weather conditions in Europe

the more telescopes in the network, the more chance one of them wi able to observe the transient before it disappears

encourage/help robotisation of the telescopes - quicker response to alerts

provide technical and scientific support for all stages of data process

provide centralised photometric calibration facility and data centre

encourage scientific/educational projects related to transients

Coordinate the development of scientfic programm
and facility cooperation through annual workshops
Develop standards and identify and develop softwa
tools that can help provide homogenous data qualit
Identify, assess and assist to enable observing
facilities to participate through short visits to facilitie
that will help setup common software systems and
deliver training.

close collaboration with Gaia Science Alerts, who need a dedicated follow-up network for alerts verification from 2014

three workshops held in Cambridge (2010, 2011) and Bologna (2012

ist of potential partners has about 40 entries

active tests on-going on about 10 telescopes (Italian, Swiss, UK, Dan Polish)

more info: http://www.ast.cam.ac.uk/ioa/research/gaaws

Telescopes for Gaia

File Edit View Insert Format Data Tools Help All changes saved

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Size [m]

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Telescope/obse name	Location	Longitude (+ for E, - for W)	Latitude (+ for N, - for S)	Altitude [m]	Size [m]	Field-of-view, [deg^2]	Limit DEC	Limit HA	instruments	CCD size [arcsec/pix]	limiting magnitude (R or equivalent)	filters	spectral range	spectral resolution	time available for alerts follow-up
5	Besancon Obs	France				2				spectropolarime						
6	Ondrejov	Czech Rep.	14.78	49.92	524	2		-20	no	Coude spectrograph				4000 - 9000 A	10 000	upon request from the GAIA Alerts WG
7	Asiago	Padova, Italy	11.57	45.84	1352	1.82	8.7'x8.7'			AFOSC	0.52" (2x2bin)	V~21 at S/N~10 with 10min	UBVRI	370-950	200-5000	7-10 nights per month during the period August to April.
8	Danish 154	La Silla, Chile	-70 44 08	-29 15 14	2340	1.54	13.7x13.7 arcmin			DFOSC only camera in use		18		n/a	n/a	upon request from the GAIA Alerts WG pending the internal agreement of 3 participants, Ondrejov, Chareles University, Brno University total quota 90 nights per year.
9	Loiano	Bologna, Italy	11.33	44.26	785	1.5	13'x12.6'	-5 -- +70 optimal		BFOSC	0.58"	V~22 in 30min, V~6-7 in 2-3 sec; in spectroscopy V~18 in 30min, V~5-6 in 10sec	UBVRI, Gunn	370-850	200-2000, 4200 in echelle mode	2-3 nights/month (August 2011-January2012) , 5 nights/months afterwards
10	Maidanak	Uzbekistan				1.5										
11	Toppo di Castelgrande	Italy				1.5				photometry/LDS						
12	Vienna	Austria				1.5										
13																From Geneva: upon request

UPLOADING THE FOLLOW-UP DATA

http://gaia020.ast.cam.ac.uk:5000 (temporary site)

Gaia Science Alerts Follow-u

gaia020.ast.cam.ac.uk:5000/uploader/

Follow-up Data Uploading Form

Event ID: ivo://nvo.caltech/voev

Hash tag: 536(**********

MJD OBS: 55772.332731

Exposure time: 300

Filter: V

Sextractor catalog: Choose File 110621_V4.cat

Submit

Skyalert.org

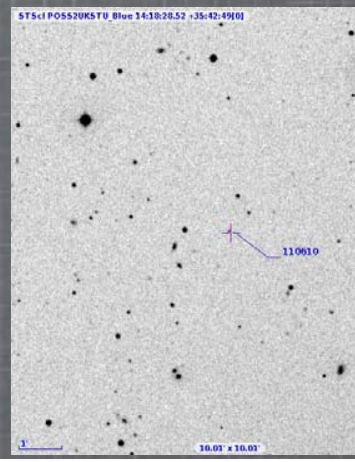
Sponsored by the National Science Foundation

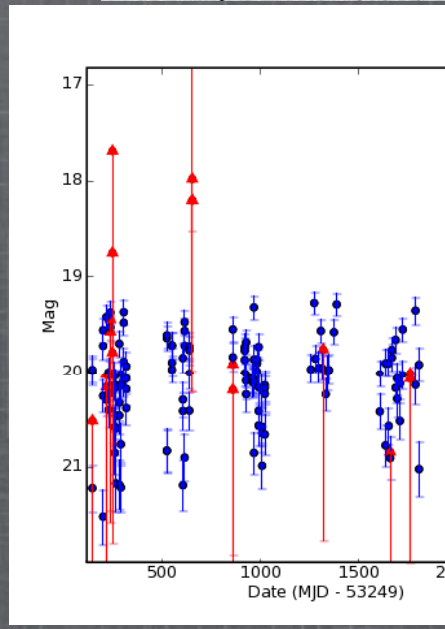
Browse Event Streams | Browse Skyalert Feeds | my Feeds and Alerts

Portfolio ivo://nvo.caltech/voeventnet/catot#1111181120424127237

From the CRTS stream.
Catalina Real-time Transient Survey
Position is 118.19689,12.37233 ± 0.0012
This portfolio initiated 2011-11-18 05:32:05
Also available is the JSON representation of this portfolio.

Your unique access name/pass
(provided by Cambridge)





follow-up test exa
by Giuseppe Altavilla,

ESULT OF CALIBRATIONS

****

31.111.70.231 from hashtag 536 **********
ech/voeventnet/catot#1106101350644123477

best matching filter (data will be stored as in this filter)

1917 +/- 0.0142 mag — calibrated magnitude

93 mag — zero point

0.99 f_{null} = 0.00 | SDSS g ZP = -29.51 σ = 0.34 f_{null} = 0.00 | SDSS r ZP = -28.66 σ = 0.25 f_{null} = 0.03 | SDSS i ZP = -28.25 σ = 0.64 f_{null} = 0.00

SEXTRACTOR FIELDS:

ion of barycenter (J2000) [deg]
f barycenter (J2000) [deg]

re magnitude vector [mag]
r vector for fixed aperture mag. [mag]

aperture magnitude [mag]
r for automatic aperture mag. [mag]