

Vidojevica Progress Report 2012

**“Future science with metre-class telescopes”
Belgrade, September 18-21, 2012.**

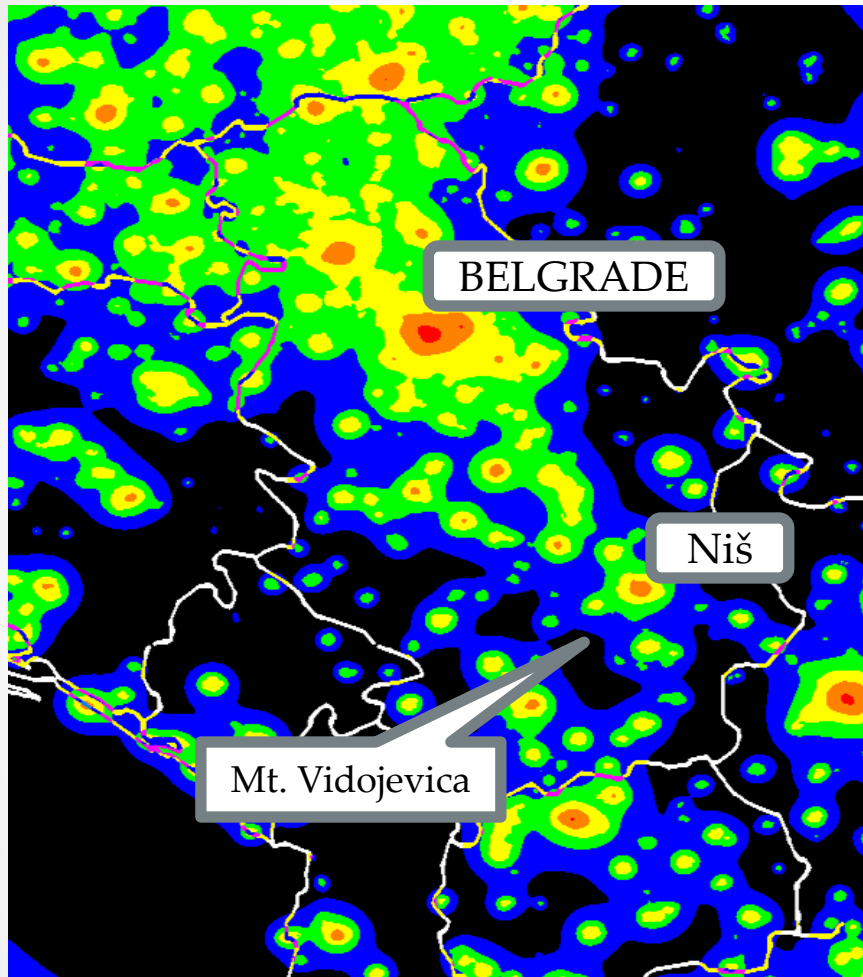
Dr. Milan Bogosavljević
Head of executive project team „Belissima“
Manager, Astronomical station Vidojevica

Overview



- Where is/ what is AS Vidojevica?
- What has been going on?
- What is happening in the very near future?
- The status of 1.5m robotic telescope “Milanković”

Astronomical Station Vidojevica



Very few remaining
dark spots in Serbia

300km south of Belgrade
(4 hours drive)

elevation 1155m

Site first noted in a survey camaping
back in ~1980's

Nearest cities:

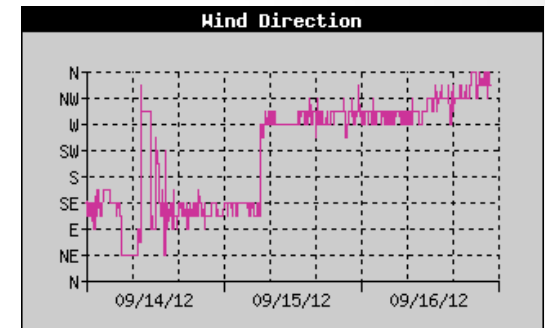
Prokuplje (15km) pop. 27,000

Nis (30km) pop. 250,000

Light pollution map, V band,
P. Cinzano et al., Copyright Royal Astronomical Society

Getting the ASV site going

60cm dome and our HQ



Phase I: completed
2010-2012

(infrastructure for
local operation of 60cm
telescope)



Scheduled AOB science observations with the ASV 60cm thus far

- **Three projects underway:**
 - Photometric lightcurves of close binary systems
(PI Gojko Djurašević)
 - Orbits of visual binary star systems
(PI Zorica Cvetković)
 - Optical observations of reference extragalactic radio sources
(PI Goran Damjanović)
- **Plus: student training, public outreach activities**

The past 12 months

- Fall 2011
 - Scheduled observations started
- Winter 2011-2012
 - Lost! Site unaccessible for ~2 months, snowed in
- Spring – summer : back to activity!
- Late summer 2012 – observations interrupted (dome problems)



MONECOM – a collaborative Balkan school project (Croatia, Greece, Serbia)

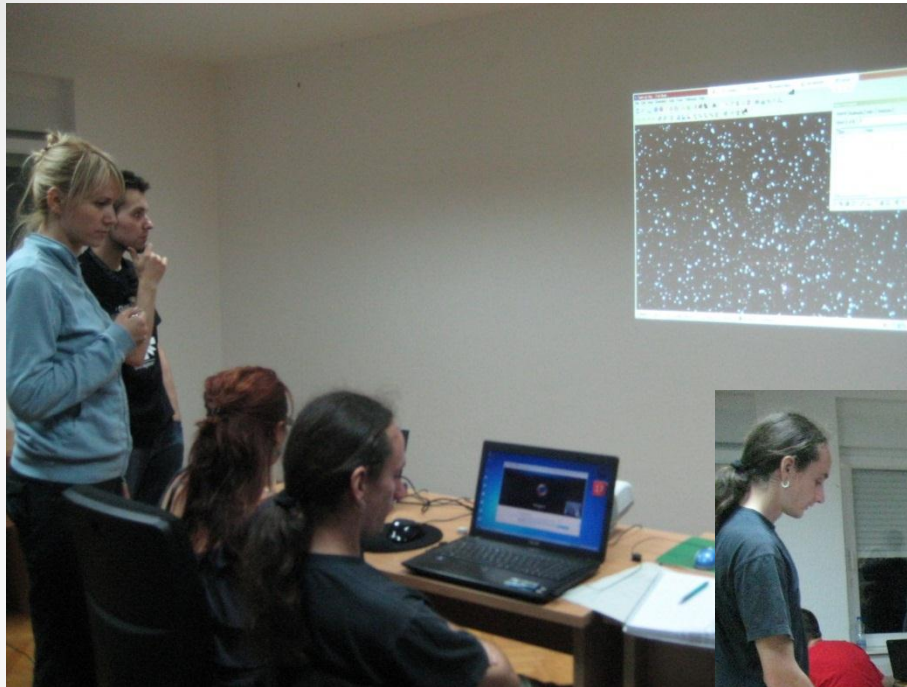


Students of Petnica Science Center observing with the 1.2m MONET/North telescope from ASV

“Real science goal” – observe Main Belt Comet objects



First SVAP – undergraduate student training




Dept. of Astronomy,
U. of Belgrade and
U. of Novi Sad
(June 2012)

CCD photometry of
optical transient sources
from Atels and Skyalert
(Catalina)



First collaborative campaign – optical photometry of AE Aqr (June 2012)



AAVSO

American Association of Variable Star Observers

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Alert Notice 458: Multiwavelength observing campaign of AE Aqr

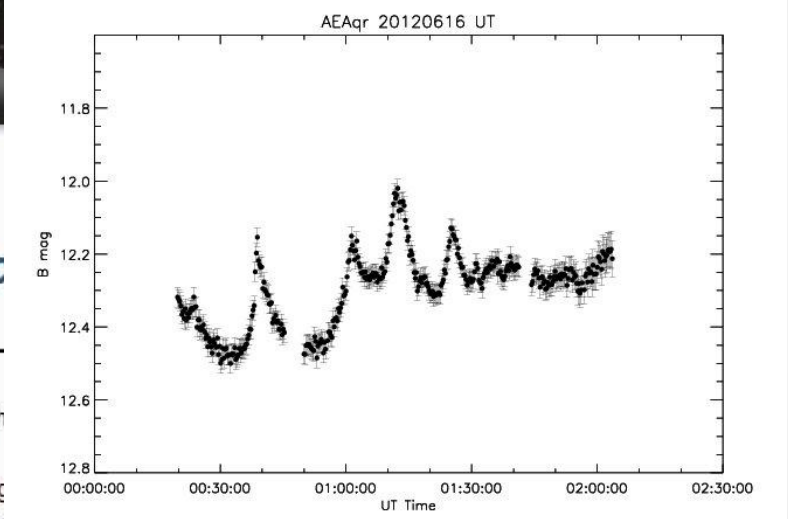
NOTE: Table of MAGIC observations revised 14 and 15 May 2012 per Dr. Christopher Mauche

11 May 2012: Dr. Christopher Mauche, Lawrence Livermore National Laboratory, and colleagues have requested AAVSO observations in support of their upcoming multiwavelength observations of intermediate polar cataclysmic variable AE Aqr with the Swift satellite, the MAGIC (Major Atmospheric Gamma Imaging Cherenkov) telescope on La Palma, Canary Islands, and telescopes at other ground-based observatories in Serbia, Crete, and La Palma. Their goal is to study the extreme high-energy (gamma-ray) and high-energy (x-ray) behavior of this complex system. AAVSO observations will be critical to the success of this campaign.

The MAGIC observations are scheduled for 2012 May 16 - June 1 and (pending approval) June 13 - 19. The table below gives UT times of MAGIC observations for each date. Swift observations correlated with the MAGIC times will be carried out each day as well, and ground-based photometry has been scheduled.

REVISED TIMETABLE AS OF 15 MAY 2012
2012 May

AEAqr 20120616 UT



B mag

UT Time

Phase II: the 1.5m telescope

- A „general“ design for photometry and low-resolution spectroscopy
 - FOV ~ 30 arcmin
 - Focal length $\sim f/8$, 12 meters, 60 microns per arcsecond
 - Nasmyth and-or Cass foci
 - One CCD and one low-res spectrograph permanently mounted
- Time allocation strategy:
 - AOB key science projects %
 - Collaborative long-term campaign %
 - Follow-up of optical transients (Targets of opportunity) %
 - Instrument development / testing %
 - Training %

Modes of operation

- On-site observing
- Full remote control
- Robotic que-scheduled observations
- Telescope status real-time on-line available for short-response observation requests
- Long-term goal: integration in a network of robotic telescopes with automated data reduction

Currently, ASV maintained by AOB staff (traveling to site)

To be implemented:

- Local technical staff daytime crew
- Nighttime support person
- Organized visits for the public

Current status: the tender is on!

- Funds for telescope purchase secured („in the bank“)
 - ~70% FP7 project „Belissima“
 - ~30% Serbian funds
- Suppliers bidding (August 2012 – current)
- Funds for telescope infrastructure
 - Serbian funds – still working on signature!
 - Next item: detailed design of the building and dome

Timeline (was in 2011)

- January 2012 – contracts signed
- Summer 2012 – building design
- Summer/Fall 2012 – dome ordered
- Winter 2012 – construction p
- Spring 2013 – construction b
- Fall 2013 – factory accept



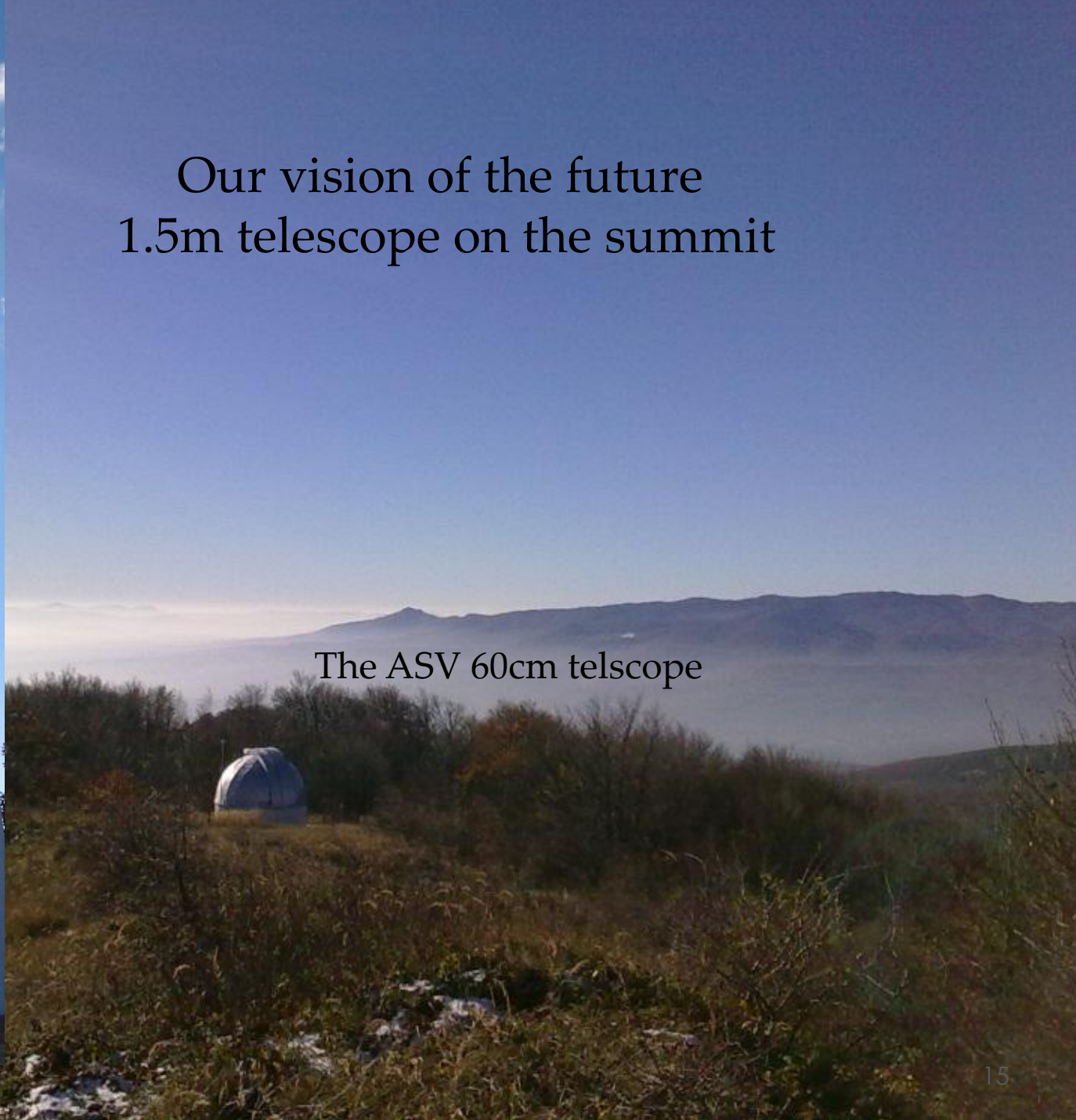
Timeline (2012)

- End of 2012 – contracts signed, telescope ordered
- Summer 2013 – building & infrastructure design
- Summer/Fall 2013 – dome ordered
- Winter 2013 – construction permits
- Spring 2014 – construction begins on site
- Fall 2014 – factory acceptance tests for the telescope





Our vision of the future
1.5m telescope on the summit



The ASV 60cm telescope

Thank you for your attention



● Vidojevica in winter time...