V WORKSHOP ON ROBOTIC AUTONOMOUS OBSERVATORIES

(Mazagón (Huelva), 16 - 20 Oct 2017)

FINAL SCIENTIFIC PROGRAM

05/10/2017

Parador Nacional de Mazagón “Cristóbal Colón”, Carretera de San Juan del Puerto a Matalascañas (Mazagón, Huelva, Spain)

Sunday 15 October

18:30-20:30 Registration opens (in the Conference Hall, upper floor, just above the Parador main hall)
Monday 16 October

08:30-10:00 Registration (Conference Hall)
10:00-10:30 Official Opening
10:30-11:00 Astronomical observatories: from the Prehistory to the XVIIIth Century (Opening Talk) (Miguel Ángel CASTRO)
11:00-11:30 Coffee Break
11:30-11:50 A new Era for Astronomy (John BARUCH)

**Session I New HW and SW development (I)**

11:50-12:10 Development of a cloud detection system utilizing image recognition technology (Yoichi YATSU)
12:10-12:30 Robotic Telescopes at SAO-RAS (Sergei FABRIKA)
12:40-13:00 From an automated telescope to a robotic telescope: The Virgin Island Robotic Telescope story (Bruce GENDRE)
13:15-16:00 Lunch in Mazagón (included, bus provided)

**Session II Telescope and Observatory Control Systems**

16:00-16:20 Status of MONET Telescopes (Tim-Oliver HUSSER)
16:20-16:40 The Concept of Observation Control System for Lijiang 2.4m Telescope (ChuanJun WANG)

**Session III Transient detection and classification (I)**

16:40-17:00 Observations of transient events with Mini-MegaTORTORA wide-field monitoring system with sub-second temporal resolution (Sergey KARPOV)
17:00-17:20 The Zwicky Transient Facility (Reed RIDDLE)
18:00-20:30 Optional activity (20 eur/person): Horse ride at the beach to see the Gold Tower (see Conference Poster) at the sunset at 19:50h during the low tide. Riding time: 18:30-20:15h, no previous ride experience needed. Maximum: 16 people. Those ones not taking the ride can get down to the Parador beach to grab shells, stones, etc.

21:00-22:45 Free evening (bus provided to Mazagón for dinner)
Tuesday 17 October

Session IV  Scientific results obtained at Robotic Observatories (II): Other sources

09:30-09:50 Microquasar V404 Cyg /GS 2023+338: MASTER Net optical monitoring during the June-July 2015 super-outburst (Daniil VLASENKO)

09:50-10:10 Multifrequency search for prompt emission of GRBs (Alexei POZANENKO)

10:10-10:30 MASTER investigation of ANTARES, IceCube alerts (Oleg GRESS)

10:30-10:50 Capabilities and Early Science Results from the Virgin Islands Robotic Telescope (David MORRIS)

10:50-11:20 Coffee Break

11:20-11:40 On the search of the elusive Intermediate Mass Black Holes (María D. Caballero-García)

Session V  New HW and SW development (II)

11:40-12:00 Bringing old telescopes to a new robotic life (Vicent SUC)

12:00-12:20 Robo-AO: Five Years of Robotic Science (Reed RIDDLE)

12:20-13:00 Posters presentations (sessions I-V, 3’ each)
-BOOTES-5 status (Sergiy GUZIY and Juan C. TELLO)
-Dome interior temperature monitoring system (Murat KOCAK)
-RTS2 operated 50cm autonomous telescope at MIRO (Shashikiran GANESH)
-Application made with LabVIEW to control Telescopes (Rubén MARTÍN)
-U-SmART: Small Robotic Telescopes for Universities (Patrick GEBHART)
-A 45cm monster (Martin SCHWARTZ et al.)
-Modernization Works on TUG-T60 Robotic Telescope (Murat DINDAR et al.)
Eastern Anatolia Observatory: Recent developments (Cahit YESILYAPRAK and O. KESKIN)
DAG Observatory Control System (Bulent GUÇSAV)
Introducing Observatory of Iranian Space Agency Mahdasht Space Centre (Fatemeh BAHRANI)
Upgrades and Automation at the Vatican Advanced Technology Telescope (VATT) (Scott SWINDELL et al.)
Diverse developments at OAA (Francisco ESPARTERO et al.)

13:15-16:00 Lunch in Mazagón (included, bus provided)

Session VI Scheduling

16:00-16:20 Automation and Queue Management at CSS for NEO Surveying and Follow Up (Alex GIBBS)

16:20-16:40 GlSch: observation scheduler for the GLORIA telescope network (Mª Carmen LÓPEZ CASADO et al.)

Session VII Scientific results obtained at Robotic Observatories (II): Galactic sources

16:40-17:00 2MASS J16211735 + 4412541 A cataclysmic variable in disguise (Staszek ZOLA)

17:00-17:20 V404: MASTER Optical Polarization Variability Detection (Daniil VLASENKO)

17:20-17:40 Light curves comparison: robotic observatory versus non-robotic one (Fatemeh BAHRANI)

18:00-20:45 Optional activity (20 eur/person): Horse ride at the beach to see the Gold Tower (see Conference Poster) at the sunset at 19:50h during the low tide. Riding time: 18:30-20:30h, no previous ride experience needed. Maximum: 16 people. Those ones not taking the ride can get down to the Parador beach to grab shells, stones, etc.

21:00-22:45 Free evening (bus provided to Mazagón for dinner)
Wednesday, 18 October

08:00-15:00 Guided visit to Doñana National Park (4 hr, 0830-1230 h), Bus departures a 08:00 from Parador and Arrival to Parador is expected at 15:00 (after lunch).

Session VIII Scientific results obtained at Robotic Observatories (III): Gravitational Waves

16:00-16:20 Optimized strategies for the search of electromagnetic counterparts to Gravitational Wave Alerts (Youdong HU)

16:20-16:40 Prospects for searching for Gravitational Waves electromagnetic counterparts at other wavelengths (Binbin ZHANG)

16:40-17:00 GRB prompt and LIGO/VIRGO follow up by MASTER Global Robotic Net (Vladimir LIPUNOV)

17:00-17:30 Coffee Break

17:30-17:50 LIGO/Virgo search in O2 and strategy for EM counterparts in O3 (Alexei POZANENKO)

Session IX Transient detection and classification (II)

17:50-18:10 MASTER 1500 optical transients (Nataly TYURINA)

18:10-18:30 Exploring the transient sky with the Fly’s Eye Camera System (László MÉSZÁROS)

20:30-22:30 Free evening (bus provided to Mazagón for dinner)
Thursday 19 October

Session X Developments in Antarctica

09:30-09:50 The AST3 controlling and operating system for automatic sky survey at Dome A, Antarctica (Yi HU)

09:50-10:10 Below -75° C, Overwintering 2015, Dome Concordia, Antarctica (Markus WILDI)

10:10-10:30 Chinese antarctic astronomical telescopes (Xioayan LI)

10:30-10:50 Posters Presentations (session VII) (3’ each)
- Some techniques for the study of meteors (Alberto CASTELLÓN)
- Double-station meteor observations with Mini-MegaTORTORA and FAVOR wide-field cameras (Sergey KARPOV)
- Photometry of 2012 DR30 and 2002 GZ32 (Mattia GALIAZZO)
- An application for the automated classification of variable stars from the ROTSE IIIId Archive (Cahit YESILYAPRAK)

10:50-11:20 Coffee Break

Session XI Balloons and satellites

11:20-11:40 Pointing System for the Balloon-Borne Astronomical Payloads (Nirmalk KAIPACHERY)

11:40-12:00 'Satellite-in-a-Box': the SMOS approach (or how to pack your space mission monitoring in a mobile device) (José María CASTRO CERÓN et al.)

12:00-12:05 Posters Reports (session XI) (3’ each)
- A micro-satellite for ultraviolet transient exploration (Yoichi YATSU)

12:05-13:00 Frontier Research in Astrophysics: an updated review (Franco GIOVANNELLI and Lola SABAU-GRAZIATI)

13:15-16:00 Lunch in Mazagón (included, bus provided)
Session XII Space Surveillance and Tracking

16:00-16:20 Optical observations in ESA's SSA programme
(Beatrix JILETTE)

16:20-16:40 ISON Network Tracking of Space Debris: current status and achievements (Igor MOLOTOV)

16:40-17:00 Automated extraction of satellite trails from wide angle CCD imagery (Grant PRIVETT)

17:00-17:20 The BOOTES Network: science and SSA applications (Alberto J. CASTRO-TIRADO)

18:00-22:30 Visit to Palos village and Wharf of Carabels AND Conference Dinner at old Winery “El Lobito” in Moguer village

23:00-24:00 Traditional AstroRob after-dinner bath at the sea (lantern needed to go down to the beach; 179 wooden steps)
Friday 20 October

09:30-12:45 Guided visa to INTA Defence’s Ministry campus, 5 km away (including ESAt where BOOTES-1 and Pi-of-the-Sky stations are located)

12:45-13:00 Concluding Remarks at ESAt (Ferhat Fikri ÖZEREN)

13:15-16:00 Lunch in Mazagón (included, bus provided, stopping at Parador after leaving INTA)

16:00-19:00 Free afternoon

19:00-20:00 Optional activity (5 eur/person). Yoga at sunset (sunset time at 19:45) at Parador’s mirador

20:30-22:30 Free evening (bus provided to Mazagón for dinner)