V WORKSHOP ON ROBOTIC AUTONOMOUS OBSERVATORIES

(Mazagón (Huelva), 16 - 20 Oct 2017)

SCIENTIFIC PROGRAM

v.18092017

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

09:00-11:00 Registration opens (Conference Hall)

11:00-11:30 Official Opening

11:30-12:20 Astronomical observatories: from the Prehistory to the XVIIIth Century (Opening Talk) (Miguel Ángel CASTRO)

12:20-12:40 A new Era for Astronomy (John BARUCH)

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

12:40-13:00 Development of a cloud detection system utilizing image recognition technology (Yoichi YATSU)

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

16:00-16:20 Robotic Telescopes at SAO-RAS (Sergei FABRIKA)

16:20-16:40 From an automated telescope to a robotic telescope: The Virgin Island Robotic Telescope story (Bruce GENDRE)

16:40-17:00 Our experiments with robotic observations at Mount Abu IR Observatory (Shashikiran GANESH)

**Session II Telescope and Observatory Control Systems**

17:00-17:20 Status of MONET Telescopes (Tim-Oliver HUSSER)

17:20-17:40 The Concept of Observation Control System for Lijiang 2.4m Telescope (ChuanJun WANG)

18:15-20:45 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. A 2 hr ride, 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.

20:15-22:00 Free evening (bus provided to Mazagón for dinner)
Tuesday 17 October

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

09:30-9:50 Optimized strategies for the search of electromagnetic counterparts to Gravitational Wave Alerts (Youdong HU)

09:50-10:10 Prospects for searching for Gravitational Waves electromagnetic counterparts at other wavelengths (Binbin ZHANG)

10:10-10:30 GRB prompt and LIGO/VIRGO follow up by MASTER Global Robotic Net (Vladimir LIPUNOV)

10:30-10:50 LIGO/Virgo search in O2 and strategy for EM counterparts in O3 (Alexei POZANENKO)

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 IV 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-IV, 5’ each)
- Dome interior temperature monitoring system (Murat KOÇAK)
- RTS2 operated 50cm autonomous telescope at MIRO (Shashikiran GANESH)
- 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 GUCAV)*
-Diverse developments at OAA *(Francisco ESPARTERO et al.)*

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

**Session V  Scheduling**

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

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

**Session VI  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 BHARANI)*

18:15-20:45 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. A 2 hr ride, 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.

21:00-23:00 Free evening (bus provided to Mazagón for dinner)
Wednesday, 18 October

**Session VII  Scientific results obtained at Robotic Observatories (III): 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

**Session VIII  Transient detection and classification**

11:20-11:40 MASTER 1500 optical transients (Nataly TYURINA)

11:40-12:00 Observations of transient events with Mini-MegaTORTORA wide-field monitoring system with sub-second temporal resolution (Sergey KARPOV)

12:00-12:40 Exploring the transient sky with the Fly’s Eye Camera System (László MÉSZÁROS)

12:40-13:00 The Zwicky Transient Facility (Reed RIDDLE)

13:15-19:00 Lunch in El Rocio and Guided visit to Doñana National Park (4 hr, 15-19 h), Bus departures at 13:15 from Parador and arrival to Parador is expected at 19:30.

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

Session IX 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 Antarctic astronomical scientific expedition in China (Xioayang LI)

10:30-11:00 Posters Presentations (session VI) (5’ each)
- Some techniques for the study of meteors (Alberto CASTELLÓN)
- Photometry of 2012 DR30 and 2002 GZ32 (Mattia GALLIAZZO)
- An application for the automated classification of variable stars from the ROTSE IIId Archive (Cahit YESILYAPRAK)
- Contact Binaries Towards Merging - CoBiToM project (2012-2017) (Kosmas GAZEAS)
- Blazar Optical Sky Survey - BOSS project (2013-2017) and the long-term blazar monitoring (Kosmas GAZEAS)

11:00-11:30 Coffee Break

Session X Balloons and satellites

11:30-11:50 Pointing System for the Balloon-Borne Astronomical Payloads (Nirmalk KAIPACHERY)

11:50-12:10 The Slewing Mirror Telescope of UFFO-pathfinder: the first space telescope using motorized mirror system for observation of early photons from GRBs (Soomin JEONG)

12:10-12:30 '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.)
12:30-12:35 Posters Reports (session X) (5’ each)
   - A micro-satellite for ultraviolet transient exploration (Yoichi YATSU)

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

Session XI Space Surveillance and Tracking

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

17:45-22:30 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

10:00-13:00 Guided visa to INTA Defence’s Ministry campus, 5 km away (including BOOTES-1 and Pi-of-the-Sky stations) IMPORTANT: Passport number needed not later than Sep 25.

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

Session XII Summary

16:00-17:00 Frontier Research in Astrophysics: an updated review (Closure Talk) (Franco GIOVANNELLI and Lola SABAU-GRAZIATI)

17:00-17:15 Concluding Remarks (Ferhat Fikri ÖZEREN)

17:15 Adjourn

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