

VII WORKSHOP ON ROBOTIC AUTONOMOUS OBSERVATORIES

**Torremolinos (Málaga), 16-20 Oct 2023)**

**SCIENTIFIC PROGRAM**

v.17092023

Hotel Occidental Torremolinos Playa, calle La Toja  
Urb. Los Álamos, Torremolinos (Málaga, Spain)

Sunday 15 October

18:30-20:30 Registration opens (in the Conference Hall)

Monday 16 October

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

11:00-11:10 Official Opening

11:10-11:40 The importance of robotic telescopes on our knowledge of the physics of the universe (Opening Talk) (*Franco GIOVANELLI*)

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

11:40-12:00 Cerro Armazones Observatory: an observatory dedicated for distance scale calibration (*Marek GORSKI*)

12:00-12:20 Machine learning methods used to calculate the telescope cycle time implemented in the observatory software (*Mirosław KICIA*)

12:20-12:40 Autonomous telescope and scientific infrastructure developments at TUG (*Orhan ERECE*)

12:40-13:00 Considerations on automating older telescopes: Boyden 1.5m telescope (*Hendrik VAN HEERDEN*)

**13:00-16:00 Lunch**

**Session II Science (I): Solar System (and beyond)**

16:00-16:20 Cometary outbursts and the evolution of ejected particles (*Maria GRITSEVICH*)

16:20-16:40 Interest in observing stellar occultations by transneptunian objects with telescope networks (*José Luis ORTIZ*)

16:40-17:00 *Interstellar visitors and elusive extrasolar meteorites* (*Eloy PEÑA-ASENSIO*)

17:00-17:20 The UMA-SMA Network public meteor data base  
(*Alberto CASTELLÓN*)

**Session III Telescope, Observatory Control Systems and Scheduling**

17:20-17:40 Autonomous scheduling at the TJO telescope  
(*David BAROCH LÓPEZ*)

17:40-18:00 LSST control system and synergies between LSST  
and small observatories (*Petr KUBÁNEK*)

18:00-18:20 Observatory control system (OCS) for telescopes  
at South African Astronomical Observatory (SAAO)  
(*Sunil CHANDRA*)

18:20-18:40 Persistent queues in automation: the role of NATS  
at Cerro Armazones Observatory  
(*Mikolaj KAŁUSZYŃSKI*)

**20:00-21:00 Welcome reception cocktail at the swimming pool  
area (close to beach)**

Tuesday 17 October

**Session IV Science (II): Gamma-ray Bursts**

- 09:30-09:50 *Peculiar gamma-ray bursts (Binbin ZHANG)*
- 09:50-10:10 *Evolution of the afterglow optical spectral shape of GRB 201015A in the first hour: evidence for dust destruction (Toktarkhan KOMESH)*
- 10:10-10:30 *The gamma-ray burst GRB 211211A observed with FERMI and ASIM (María Dolores CABALLERO-GARCÍA)*
- 10:30-10:50 *Prompt emission and early optical afterglow of GRB 201015A and GRB 201216C: onset of the external forward shock (Amit KUMAR ROR)*

**10:50-11:20 Coffee Break**

- 11:20-11:40 *Early observations of the extraordinarily bright GRB 221009A (Rubén SÁNCHEZ-RAMÍREZ)*
- 11:40-12:00 *Powering source of gamma ray burst associated supernovae: spin-down millisecond magnetar? (Amit KUMAR)*
- 12:00-12:20 *Robotic telescope NUTTELA-TAO: results after 3 years of operation (Maksut ZHANAT)*
- 12:20-12:40 *GRB 140102A: Insight into prompt spectral evolution and early optical afterglow emission (Rahul GUPTA)*
- 12:40-13:00 *An overview of GRB follow-ups by the Global BOOTES Network (Youdong HU)*

**13:00-16:00 Lunch**

**Session IV New HW and SW development (II)**

- 16:00-16:20 Understanding GRB progenitors using MESA  
(*Amat ARYAN*)
- 16:20-16:40 Testing the new photometric pipeline with data of recent GRBs (*Martin JELÍNEK*)
- 16:40-17:00 BLACK HOLE TOM: an automatic tool for photometric time-domain astronomy (*Przemysław. J. MIKOŁAJCZYK*)

**Session VI Education, Public Outreach and Citizen Science**

- 17:00-17:20 Using AI and ML in education of astronomy, Physics and Maths (*Fatemeh BAHRANI*)
- 17:20-17:40 EKOSLIVE: empowering citizen scientists  
(*Jasem MUTLAQ*)
- 17:40-18:00 The use of robotic telescopes in the Science-IES Project in Spain (*Javier CÁCERES*)
- 18:00-18:20 Posters presentations (sessions I-VI, 2' each)
- 18:20-18:45 Round Table only for FLI Kepler camera users  
(*Bruce GENDRE*)

Wednesday, 18 October

**09:00-18:00 Excursion Day**  
**(bus provided)**

Thursday 19 October

**Session VII New HW and SW development (III)**

09:30-09:50 The BOOTES Global Network of Robotic Telescopes  
(*Alberto J. CASTRO-TIRADO*)

09:50-10:10 *Observations of AST3-3 telescopes in Yaoan*  
(*Tianrui SUN*)

10:10-10:30 OAUJ-CD500 - A new Krakow robotic telescope  
(*Staszek ZOLA*)

10:30-10:50 Automation of al Khatim Observatory (m44)  
(*Mohammad ODEH*)

**10:50-11:20 Coffee Break**

11:20-11:40 Towards a fully robotic solar observatory at the  
University of Göttingen (*Sven MARTENS*)

11:40-12:00 Early emission of short optical transients  
(*Siyu WU*)

**Session VIII Science (III): Multimessenger Astronomy (I)**

12:00-12:20 Multi messenger astronomy: latest results from  
the fink broker (*Roman LE MONTAGNER*)

12:20-12:40 GOTO: A robotic kilonova hunter  
(*Felipe JIMÉNEZ-IBARRA*)

12:40-13:00 GERRY: a code to calculate the probability of  
detecting EM counterparts in GW follow-up  
campaigns (*David O'NEILL*)

**13:00-16:00 Lunch**

**Session IX Science (IV): Multimessenger Astronomy (II)**

16:00-16:20 Coordinates network (GCN): NASA's next generation time-domain and multimessenger astronomy alert system (*Leo P. SINGER*)

16:20-16:40 Rapid follow-up of gravitational wave events with a robotic meter-class optical telescope (*Vishwajeet SWAIN*)

**Session X Space Surveillance and Tracking**

16:40-17:00 Scheduling multi-sensor networks for space surveillance and tracking (*Francesc VILARDELL SALLÉS*)

17:00-17:20 Further space debris observations with the BOOTES Global Network (*Irene M. CARRASCO-GARCÍA*)

17:20-17:40 Automatic identification of fast-moving objects in Sky survey data (*Hai JIANG*)

17:40-18:00 *Determination of space debris orbit by using the sensors of the Spanish Ministry of Defense* (*Manuel Ángel SÁNCHEZ PIEDRA*)

18:00-18:20 New realities of the ISON project (*Igor MOLOTOV*)

**19:00-20:30 "The search for extraterrestrial life" (Public Conference)** (*Paul GABOR*)



Friday 20 October

**Session XI New HW and SW development (IV)**

- 09:30-09:50 MOSES: < 3 m/s RV precision with the 1.2m MONET/N telescope (*Tim-Oliver HUSSER*)
- 09:50-10:10 MORISOT: enabling fully robotic spectroscopy at the MONET/s telescope (*Leon MEERWART*)
- 10:10-10:30 The sky quality at the zadko observatory: how it impacts the scientific activities (*Bruce GENDRE*)
- 10:30-10:50 Management of a multi-user robotic observatory (*John MOORES*)

**10:50-11:20 Coffee Break**

- 11:20-11:40 Advanced weather control system for robotic observatories with enhanced sensor redundancy (*Francesc DOMENE*)
- 11:40-12:00 Affordable, redundant communication links for remote observatories (*Chris JOHNSON*)
- 12:00-12:20 Sky brightness measurements with an all-sky camera (*Karsten Johann SCHIMPF*)
- 12:20-12:40 Pipelines in planning and data reduction of wide field optical surveys (*Alexei POZANENKO*)
- 12:40-13:00 Posters presentations (sessions VII-XII, 2' each)

**13:00-16:00 Lunch**

**Session XII Future Research**

- 16:00-16:20 Robotic network of telescopes for stellar occultations (*Rodrigo LEIVA*)

- 16:20-16:40 The Intelligent Observatory (*Nicolas ERASMUS*)
- 16:40-17:00 Software components of The Intelligent Observatory (*Carel VAN GEND SONG*)
- 17:00-17:20 Towards integration automatic VLBI tracking Network (*Zhong CHEN*)
- 17:20-17:40 Towards a unified BOOTES Global Network: real-time observations management (*Ignacio PÉREZ-GARCÍA*)

**Session XIII Summary**

- 17:40-18:00 The new Spanish Space Agency (Closure Talk) (*Álvaro GIMÉNEZ*)
- 18:00-18:15 Concluding Remarks (*Ferhat Fikri ÖZEREN*)
- 18:15 Adjourn

**19:45-22:30 Conference Dinner (bus provided)**

**23:00-24:00 Traditional AstroRob after-dinner bath at the Mediterranean sea**