

ArAS Second Advanced School of Astrophysics (ArAS SfA-Adv2)

October 22 - 27, 2022

Arrival Friday, Oct. 21, Excursion Or Departure Thursday, Oct. 27

Saturday (22 October) Opening Ceremony / Celestial Mechanics

07:30-09:00 Breakfast & Logistics (Hadia Selim - LOC Chair)

09:00-11:00 Registration

11:00-12:00 Opening Ceremony (ArAS President, NRIAG President, ArAS SfA Director, LOC Chair)

12:00-12:30 Break

12:30-14:30 Methods of observing space debris - Prof. Igor Molotov

14:30-16:00 Lunch

16:00-17:00 Celestial Mechanics and Space Occupation - Dr. Elbaz Abuelmagd

17:00-18:00 Practical session: Applications of the restricted three-body problems: habitable zones in space

18:00-18:30 Q&A session

18:30-20:00 Dinner

20:00-23:00 Observations using Kottamia Telescope

Sunday (23 October) Cosmic Distance Ladder

09:00-10:00 Dynamical parallax - Prof . Mohamed Nouh

10:00-11:00 Photometric and astrometric analysis for open clusters - Dr. Yasser Hassan Hendy

11:00-11:30 Break

11:30-14:30 Practical Session: Photometric and astrometric analysis of the old open cluster M67 using Kottamia faint imaging spectro-polarimeter and Gaia space telescope - Dr. Yasser Hassan Hendy

14:30-16:00 Lunch

16:00-18:00 Practical Session: Dynamical parallax - Prof . Mohamed Nouh

18:00-18:30 Q&A session

18:30-20:00 Dinner

20:00-21:00 Public Lecture: The Universe in 45 minutes - Prof. Raid M Suleiman

Monday (24 October) Cosmic Distance Ladder

09:00-10:00 Standard Candle Approach to Distance Measurement - Prof. Mohamed AbdelSabour

10:00-11:00 Practical session 1: Standard Candle Approach to Distance Measurement - Prof. Mohamed AbdelSabour

11:00-11:30 Break

11:30-14:30 Practical session 2: Standard Candle Approach to Distance Measurement - Prof. Mohamed AbdelSabour

14:30-16:00 Lunch

16:00-18:00 Practical Session: Space Debris - Dr. Mourad Ghachoui

18:00-18:30 Q&A session

18:30-20:00 Dinner

20:00-23:00 *Observations using Kottamia Telescope*

Tuesday (25 October) Spectroscopy

09:00-11:00 RR Lyrae variable stars - Dr. [Katrien Kolenberg \(remote\)](#)

11:00-11:30 Break

11:30-12:30 Spectrophotometry : main results of campaign measurements at the Oukaimeden (Morocco) and OHP (France) observatories - Dr. [Abdelmajid Benhida \(remote\)](#)

12:30-14:00 Lunch

14:00-15:30 Astronomical Spectroscopy The instrument and the observation- [Francois Cochard \(remote\)](#)

15:30-16:00 Break

16:00-18:30 **Practical session:** Data reduction /DEMETRA [Francois Cochard \(remote\)](#)

18:30-20:00 Dinner

20:00-23:00 Observations using Kottamia Telescope

Wednesday (26 October) Spectroscopy

09:00-10:00 Modeling by Least Square in spectroscopy - Dr. Fouad Sefyani

10:00-11:00 Spectropolarimetry - Dr Philippe Mathias ([remote](#))

11:00-11:30 Break

Practical session:

11:30-13:00 Spectral reduction using AudeLa Dr. Abdelmajid Benhida & Dr. Fouad Sefyani

13:00:14:00 Modeling spectral line by Least Square - Fouad Sefyani

14:00-15:00 Lunch

15:00:16:00 Q&A session - Discussion with students

16:00-17:00 Closing Ceremony

18:30-20:00 *Dinner*