

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
On Track - Undergraduate Space Education (3)

Author: Prof. Ilias Fernini

Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), United Arab Emirates,
ifernini@sharjah.ac.ae

Prof. Hamid Al Naimiy

Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST), United Arab Emirates,
alnaimiy@sharjah.ac.ae

Prof. Mashhoor Wardat

University of Sharjah, United Arab Emirates, malwardat@sharjah.ac.ae

Mr. Marwan A. Shwaiki

Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), United Arab Emirates,
mshwaiki@sharjah.ac.ae

Dr. Mubasshir Shaikh

Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), United Arab Emirates,
mshaikh@sharjah.ac.ae

Dr. Antonios Manousakis

Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), United Arab Emirates,
amanousakis@sharjah.ac.ae

THE SHARJAH ACADEMY FOR ASTRONOMY, SPACE SCIENCES, AND TECHNOLOGY SPACE
SCIENCES EDUCATION AND OUTREACH PROGRAM

Abstract

The Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST) has a unique space sciences education and outreach program in the MENA region. The planetarium, the astronomical observatories, and the space sciences research laboratories are the program's central units. The planetarium unit operates the largest planetarium (209 seats) in the region and 30 space educational exhibitions. Using the planetarium's sophisticated sky projection instruments, space sciences are showcased through modern visualization techniques in an unforgettable experience. Quarterly space general education workshops are organized for the UAE science school teachers and the students. For each of these two categories, hands-on space activities are introduced to expose space sciences teaching and learning methods. Teachers are presented with the best methods to showcase the importance of STEM in space activities as the UAE has started a decadent space exploration program with the Emirates Mars Hope and the UAE 2024 Lunar Rover. A summary of these workshops and their outcomes will be presented.

The second SAASST unit operates several astronomical observatories. The Sharjah Optical Observatory runs a bi-weekly open house public outreach program where the public observes the sky using the observatory's telescopes. Special observing sessions are also organized for eclipses or planetary conjunctions. These events are more than just observing the Moon, the Sun, or planets, but are tools to educate the general public and present it with the right astronomical knowledge. A short live remote observing session will be conducted during this paper presentation.

The third SAASST unit is related to the research laboratories. SAASST operates several laboratories: CubeSat, Radio Astronomy, Artificial Intelligence, Meteorite, Space Weather, High Energy Astrophysics, and Planetary Sciences. A six-to-eight-week research internship program allows high school and university

students to integrate one of these laboratories and use several onsite world-class instruments like the 40-m radio interferometer or the CADI ionosonde. Bi-weekly lectures are organized by the research assistants to initiate the students to the research being accomplished at SAASST. We will present a short virtual trip of the laboratories to showcase the high level of SAASST research capabilities, allowing students to achieve a high literacy rate in space sciences education.