

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

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PROMOTING STEM THROUGH THE SHARJAH ACADEMY FOR ASTRONOMY, SPACE
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Abstract

The Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST) is becoming the primary hub for all space sciences research in the United Arab Emirates, in particular, and in the Middle East, in general. Students from high schools and universities now have a unique opportunity to see the importance of STEM in all space sciences fields through several research laboratories and centers at SAASST. Presently, SAASST is operating six laboratories/centers. First, the "Meteorite Center" hosts the UAE Meteor Monitoring Network (UAEMMN), sponsored by the UAE Space Agency, and a machine learning unit to search for meteorites. Second, the "Radio Astronomy Laboratory" is operating a 20.1 MHz Decametric Radio Array for Sun and Jupiter's observations. It has recently installed a 40-meter radio interferometer to observe the universe at 1.4 GHz. Third, the center hosts a "GIS and RS Center" as part of a close collaboration between the University of Sharjah and SAASST. The fourth laboratory is the "Space Weather and Ionospheric Laboratory" with two central systems: a GNSS and a CADI Ionosonde system to study the upper Earth's ionosphere. The fifth laboratory is the "CubeSat Laboratory," where students are developing the SHARJAH-SAT-1, an X-ray CubeSat to observe the Sun and stars in the X-ray domain. Last, a "High-Energy Astrophysics Laboratory" dedicated to compact stellar objects such as white dwarfs, neutron stars, and black holes. Also, SAASST has an "Astronomical Optical Observatory" equipped with a 45 cm telescope for deep-sky observations, an 18 cm telescope for planets and Moon observations, and a 10 cm solar telescope. In this paper, we will highlight each laboratory and expose out its primary objectives, research staff, and, most importantly, the students' research projects conducted in these laboratories.