Under One Dome

Istanbul University Science Faculty E.C.A. Planetarium Istanbul, Turkey astronomi.fen.istanbul.edu.tr/tr





A. Talat Saygac and Sinan Alis
saygac@istanbul.edu.tr
salis@istanbul.edu.tr
Istanbul University, Science Faculty
Department of Astronomy and Space Sciences
Istanbul, Turkey

A new planetarium has recently been inaugurated in Istanbul. The city has a few planetariums installed before and still operational, but the most recent one is somewhat different.

The Astronomy Department of Istanbul University is the oldest in the country. The department was founded in 1933 and has had its observatory since 1935. Due to light pollution, the observatory lost its efficiency starting in the 1970s. However, research and education activities still are ongoing intensively.

In 2012, most of the department's buildings, located in the central campus of Istanbul University in Beyazit, were demolished for a reconstruction process. A planetarium was in mind and necessary arrangements were done in the construction plans. In July 2013, the new buildings were ready, together with the planetarium.

Foundation funds the equipment

The dome, building, and the seats were provided by Istanbul University. The missing parts were projectors, the sound systems, and the entryway decoration. After a few years of searching, the Elginkan Foundation (www.elginkan.com.tr/en) decided to donate 122.000 euros in order to equip planetarium with the necessary systems.

Following the donation, several months of work were required to make planetarium ready. Projection and sound systems were designed and installed by Ertech, Inc. (eng.ertechsim.com) , as well as lighting solutions. Finally, the inauguration took place on 25 December 2017 with the participation of the rector of Istanbul University, the dean of the science faculty, and the chief executive officer of the Elginkan Foundation.

The Elginkan Foundation is the charitable arm of the Elginkan Community, a family owned and operated conglomerate of major companies throughout Turkey and beyond. E.C.A. (www.eca.com.tr), which focuses on heating and cooling, is the leading company and the best-known brand of the community, so the planetarium is called the Istanbul University Science Faculty E.C.A. Planetarium.

Access to the planetarium is very easy, as the astronomy department is situated in the central campus of Istanbul University, which itself is located in the very center of the city. This planetarium is quite different than other planetariums in Turkey because this is the first planetarium within an astronomy department.

Istanbul University Astronomy Department is one of the most active institutes in public outreach. Several public events are organized regularly throughout the year, working together with the astronomy club of the department.

The new planetarium will be used in public outreach activities, regular school visits, and education of the astronomy students. A typical public event consists of a talk given by a faculty member, night sky observations with telescopes, a visit to the historical telescope and astronomical equipment collection named after Wolfgang Gleissberg, and now shows/presentations in the planetarium.

Obviously, the public outreach activities by the astronomy department have become complex, which brings new loads and duties to the members of the department. It is being discussed at the moment to figure out the best way of operation.

During regular school visits in the daytime, visitors have chance to observe the sun at two different wavelengths and two atmosphere layers, the photosphere and chromosphere.

With help from active astronomy club

Every last Friday of the month a public event is organized together with astronomy club students and responsible faculty members. The Astronomy Club of the Istanbul University is the most active and the most well-known student club in Turkey (http://www.amatorastronomlarkulubu.com). The members of the club gain a significant amount of experience during these events. Some of those students are then hired by high schools and related educational institutions in order to maintain astronomy related activities.

Istanbul University Science Faculty E.C.A. Planetarium aims to reach 12,500 people in 2018. State Office of Education of Istanbul helps us to advertise the planetarium and to inform teachers and principals.

The planetarium is the first and the only one in Turkey to have 4K resolution. It is equipped with 10 Sony-SXRD projectors and uses video mapping techniques to construct the fulldome

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Figure 1. Department of Astronomy and Space Sciences of Istanbul University. The astronomy complex contains two domes for telescopes and one dome for the planetarium. The greenish dome is the historical observatory, which was founded in 1935. The other smaller dome houses a 0.4m student education and research telescope (aka. IST40), whereas the slightly larger dome is the planetarium.
Figure 2. Inauguration ceremony of the Istanbul University Science Faculty E.C.A. Planetarium.
Figure 3. For a typical visit, 70 people/students can be accommodated as half of the group visits the historical telescope and the Gleissberg astronomical equipment collection while the other half see the offered show in the planetarium. For the moment, the planetarium is open for visits (individuals and schools) only on Tuesdays, Wednesdays, and Thursdays. Necessary information for appointment and shows can be obtained in the website astronomi.istanbul.edu.tr/bilimtoplum (it is only in Turkish for the moment).
All photos courtesy the Istanbul University Science Faculty E.C.A. Planetarium.

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image. However, its capacity is modest, with 39 seats. There are two "C" shaped rows of seats with fixed positions and at an angle that makes it possible to view fulldome.

Stellarium and Stellarium Console softwares are used for the night sky presentations and astronomy courses.

The dome diameter is seven meters and it is also equipped with a 7+1 sound system. With the required isolation, it is ensured that outside noise can not disturb the audiences during the show.

Plans to train new planetarians

It is also planned that our planetarium will be a center for the training of planetarians. With small groups, people interested in becoming a planetarian can request training. This includes astronomical basics, celestial coordinate systems, usage of the projection and sound systems, video mapping, and all necessary knowledge to run a planetarium.

We believe that such trainings will help our students to find jobs in planetariums and in science centers. It is also expected that new planetariums will be commissioned by several municipalities in the forthcoming days, which will create a demand for trained people.

Istanbul University Science Faculty E.C.A. Planetarium has several licensed shows (each of them 4K resolution) on different topics. Most of the shows are in English now, but we have started to translate and dub them into Turkish. Any show is welcome to be part of our program.

We would like to thank the International Planetarium Society, the European Southern Observatory, Brno Planetarium, Paul Bourke, Google Lunar XPRIZE, Fiske Planetarium, and AHEAD Horizon 2020 for their support and sharing their shows with us. ☆

A. Talat Saygac and Sinan Alis are faculty members of the astronomy department and are working intensively to improve public outreach activities as well as planetarium operations.







