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PhysiScope, Geneva, a new platform for sky observation

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Abstract

The PhysiScope is a public science-theatre and laboratory operated jointly by the National Center for Competence in Research MaNEP and the Physics Section since 2008 at the University of Geneva. This endeavor strives to motivate the younger generations to embrace a scientific career and introduce the general public to physics and some of its current scientific challenges. To do so, the PhysiScope offers a close and personal encounter with physics through participative and entertaining shows.

1. Introduction

Maintaining high standards and ensuring a constant renewal of its presentations are paramount to the long term durability of the PhysiScope. Hence, developing new content to convey the fascination of physics in an attractive manner deserves special attention.

The PhysiScope relies on a team of 10 assistants who develop the content and take turns presenting the shows as part of their regular teaching duties. With attendance peaking at four shows per day during several weeks each year, this makes for a busy schedule.

Now, the Physiscope has been running for the third successful year. Attendance is still increasing and since its inauguration in 2008, over 6000 visitors enjoyed a performance on physics.

2. Astronomical observation at PhysiScope

Since 2009, the PhysiScope has been equipped with an observatory which includes a 2.5 m diameter dome housing two telescopes: a 350 mm diameter Schmidt-Cassegrain telescope on an equatorial mount, and a personal solar telescope operating in the $H\alpha$ wavelength. Hence, observations can be made during day time with the observation of the Sun, or during night time with the observation of solar system objects and bright deep sky objects. The observation of the faintest objects is improved by the use of a CCD camera. Figure 1 shows the set-up on the roof of the Faculty of Science building. The observatory can welcome groups of about ten individuals, allowing physics teachers to attend with half classes.



Figure 1: View of the dome on the roof of the Science Faculty building with the telescope inside.

Night observations are taking place on a regular schedule as well as by special appointment when the weather in Geneva is good enough. Figure 2 shows a picture of M76 nebula taken with the CCD camera installed on the telescope.

During day time visits, one can experience the sun observation using the H α refractor. This allows visitors to observe sun activity directly, such as flares and sunspots.

The presence of an observatory in a structure such as the PhysiScope enables an original and diverse approach to astronomy, beyond standard observations of the sky. Indeed, these observations can be linked to other areas of physics. For example, they can be completed with an introductory physics show about colors, filters, emission and absorption spectra.



Figure 2: M76 nebula.

4. Summary and Conclusion

The PhysiScope is a public science venue designed for students and the general public to discover physics in hands on and participating fashion. It proposes original one hour journeys through different topics. Astronomy is one of the latest additions to the activities offered by the PhysiScope. Attendance is steadily increasing with classes coming very regularly to make observation.

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References

Ch. Renner: *Hands on inspiration for science*, Nature Materials, **8**, 245 (2009).