

### **The Sky in your Hands – From the planetarium to the classroom**

*Lina Canas, NUCLIO/GTTP, Porto, Portugal ([lina.canas@nuclio.pt](mailto:lina.canas@nuclio.pt))*

*Isabel Borges, Planetário Calouste Gulbenkian / Centro de Ciência Viva, Lisbon, Portugal, ([isabel.maría.borges@marinha.pt](mailto:isabel.maría.borges@marinha.pt))*

*Amelia Ortiz-Gil, Astronomical Observatory of University of Valencia, Valencia, Spain ([amelia.ortiz@uv.es](mailto:amelia.ortiz@uv.es))*

#### *Abstract*

“The sky in your hands” is a project created in 2009, during the International Year of Astronomy in Spain, with the goal to create an image of the Universe for the visually impaired audiences. Includes a planetarium show with an audio component and tactile semi-spheres where the public can touch constellations and other objects of the Universe. Following the spirit of the IYA2009, the authors of this project made all products available to everyone that wishes to use them in outreach activities and science education.

From observation and analyses of several groups of students and teachers that visited “The sky in your hands” Portuguese adaptation in Lisbon Planetarium, our team concluded that much could be done in classroom with students to make their process of learning easier and more motivating. Additionally it was noticed that for some schools it was difficult to travel with students to visit the planetarium.

With this experience in mind different resources and materials were adapted to be used in classroom. Through this adaptation all students including those visually impaired can build a simple tactile image of a constellation and, working in small groups, can use low cost, recycled materials to build these tactile models. Students can record a new audio file explaining the astronomical concepts of the model they have built and include them in a story. The groups include visually impaired and non-visually impaired students, as different skills from different students complete each other in order to accomplish the task in a more successful way. Afterwards each group presents the work to their peers.

With this poster we plan to share our experience with the community where the collaboration between informal science learning in science centers, museums or planetariums and formal learning in school improves science learning, inspires students and facilitates their understanding of the nature of science in general.