

ASTROSPACE EDUCATION (ON MATERIALS OF THE FIRST IN RUSSIA INTERNATIONAL FULLDOME FESTIVAL). E. N. Tikhomirova, Cultural and educational center n.a. V.Tereshkova, Tcaikovskogo st., 3, Yaroslavl, Russia, 150000; en_tikhomirova@mail.ru

Introduction: The first in Russia International fulldome festival for planetariums "Reflections of the Universe" took place on the 21–23 of October, 2013 in Cultural and educational center named after V.Tereshkova, Yaroslavl. It was devoted to two significant anniversaries of this year. The device of planetarium was executed 90 years ago. On the 16th of June is the 50-th anniversary of V. Tereshkova's flight (she was the first woman in space). The participants of the Festival represented planetariums of Australia, Asia, America, Africa and Europe.

About the event: The main goal of the Festival is to show that modern fulldome technologies are the powerful tool for promoting of natural-science knowledge, development of educational, educational activities and innovative creativity in the culture and art sphere.

In all the planetariums of the world the need of space exploration is emphasized. Thus, influence of space exploration on the following spheres is established: preserving environment and rational use of natural resources; competitiveness increase in the world market; stimulation of economy development by creation and implementation of new materials, technical means and methods; developments of new fields of activity, ensuring national security and development of international cooperation; increase of national prestige and pride, education level, culture and spirituality.

The following issues were considered at the forum:

- development of planetariums in Russia;
- creation of fulldome programs in Russia;
- making upgrade of various working forms in classical and digital planetariums;
- availability of initial materials to create of new programs for planetariums;
- production of fulldome astronomy shows for children;
- lecturing in planetarium, including 3D-visualization, and interaction with the audience;
- licenses and using of an astronomical content.

5 categories of fulldome materials for demonstration at the festival were: fulldome shows (duration: 20 - 45 min); fulldome shortcuts, clips, exceptions (duration: 5 - 15 min); planetarium live presentations with pre-rendered fulldome animations and clips (duration: 20 - 45 min); planetarium live presentation with real-time fulldome visualization

(duration: 20 - 45 min); fulldome music show (duration: 5 - 15 min). [1]

The workshops and talks concerning to independent fulldome content production and distribution in Russia, production of high-resolution fulldome computer graphics and scientific visualization in fulldome shows, filming live capture in fulldome, circular film panorama at the All-Russia Exhibition Centre were presented at the festival. Undoubtedly such experience exchange would be useful for creation making fulldome content small groups in the planetariums.

Conclusion: "Reflections of the Universe" - the international festival of planetarium fulldome shows that was produced in Russia, CIS, and other foreign countries is planned to be hold each 2 years with support of Russian Planetarium Association, International Planetarium Society and other Russian and foreign organizations.

References: E. N. Tikhomirova, A. V. Lobanov, I. N. Trofileva, - // (Yaroslavl: Indigo, 2013) Reflections of the Universe: The Program of the First International Fulldome Festival in Russia, devoted to the 50th anniversary of the space flight of Valentina Tereshkova, the first woman in space, Yaroslavl, October 21 – 23, 2013.- 40 p. ISBN 978-5-91722-156-4.