OpenSpace: An open-source astrovisualization framework

Alexander Bock¹,⁴, Emil Axelsson¹, Karl Bladin¹, Jonathas Costa¹, Gene Payne⁵, Matthew Territo⁵, Joakim Kilby¹, Masha Kuznetsova¹, Carter Emmart², and Anders Ynnerman¹

¹ Linköping University 2 American Museum of Natural History 3 Community Coordinated Modeling Center 4 New York University 5 University of Utah

Summary

OpenSpace (2017; Bock et al. 2017) is an open source interactive data visualization software designed to visualize the entire known universe and portray our ongoing efforts to investigate the cosmos (Bladin, Karl and Axelsson, Emil and Broberg, Erik and Emmart, Carter and Ljung, Patric and Bock, Alexander and Ynnerman, Anders 2017; Bock, Pembroke, et al. 2015). Bringing the latest techniques from data visualization research to the general public and scientists (Bock, Marcinkowski, et al. 2015), OpenSpace supports interactive presentation of dynamic data from observations, simulations, and space mission planning and operations over a large span of sizes (Axelsson, Emil and Costa, Jonathas and Silva, Cláudio T. and Emmart, Carter and Bock, Alexander and Ynnerman, Anders 2017). The software supports multiple operating systems with an extensible architecture powering high resolution tiled displays, planetarium domes, as well as desktop computers. In addition, OpenSpace enables simultaneous connections across the globe creating opportunity for shared experiences among audiences worldwide.

References


