



Analysis of Astronomical Data using VR: the Gaia catalogue in 3D

Emanuel Ramírez, Juan González Núñez, José Hernandez,
Jesús Salgado, Alcione Mora, Uwe Lammers,
Deborah Baines, Bruno Merín, Guido de Marchi,
Christophe Arviset

Why a Virtual Reality visualization tool?

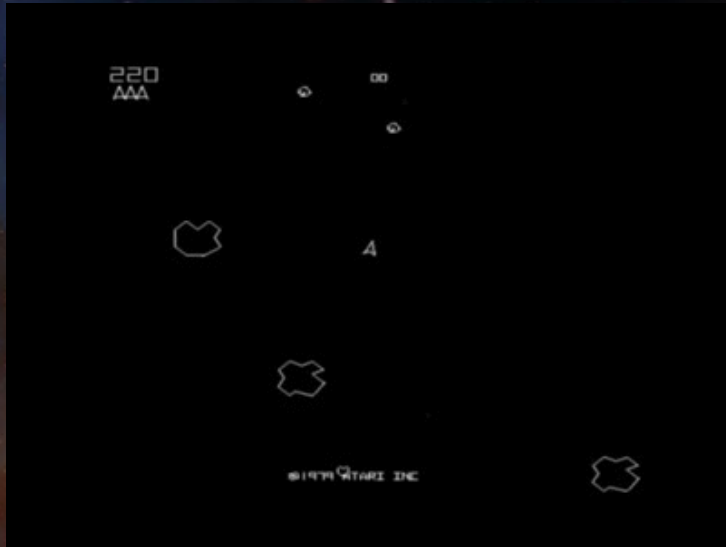
- The parallax effect allows us to measure the distance to stars and therefore knowing their true 3D positions in the Galaxy
- A Virtual Reality visualization allows users to study the actual 3D distribution of the stars directly with their senses
- It brings new possibilities to interact with the data in more intuitive ways



Project status

- Proof of concept project developed on the ESDC during the summer of 2016
- Early 2018 new development began to test how virtual reality can be included in a scientific data analysis workflow.
- Integration with other astronomical tools and the Gaia archive.
- Hand-tracking interaction with the data.

Technical specs



SAMP



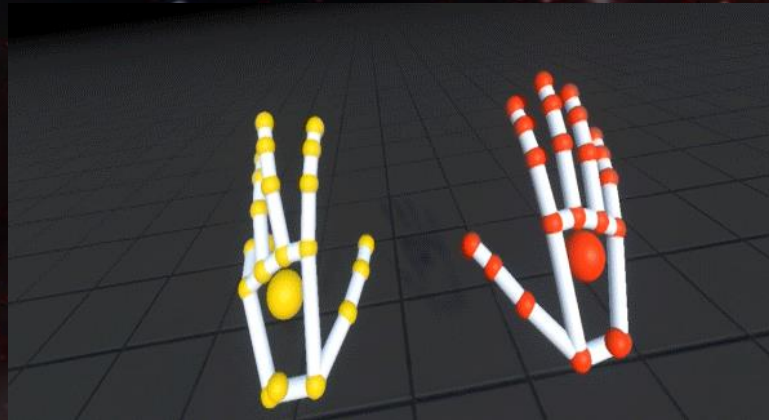
Topcat, Gaia Archive ...

The Pleiades as you used to see them..



Conclusions and future work

- Aim to release this application as a science tool
- For future work investigating an Augmented Reality version.
- Improved interaction with sources and selection



Come and try it in the ESA demo booth!