

Theofanis Matsopoulos

Planetarium Film Creator - Visual Science Communicator

Activities

- Creation of Planetarium Documentaries
- Creation of Giant Screen – TV Documentaries
- Planetarium OTG (Portable Digital Planetarium in Greece)
- Photography - Cinematography
- Astrophotography

Planetarium Documentaries

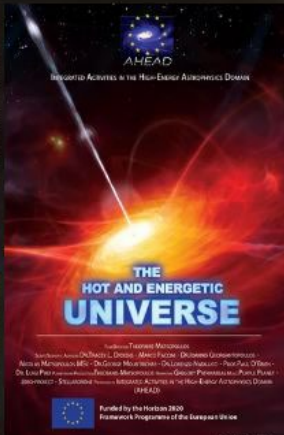
- 17 Full-Dome Documentaries
- 8 of them are co-produced with (ESA, ESO, HUBBLE, AHEAD, Newcastle University)
- 13 International Awards
- Translations in more than 30 languages
- The documentaries are presented in more than 1500 planetariums worldwide



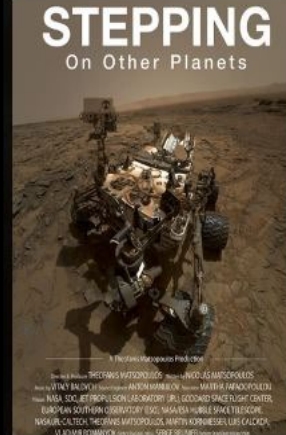
From Earth To The Universe



An Immortal Telescope



The Hot and Energetic Universe



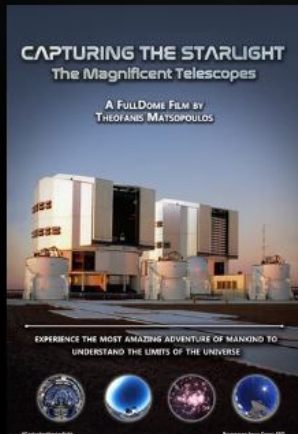
Stepping On Other Planets



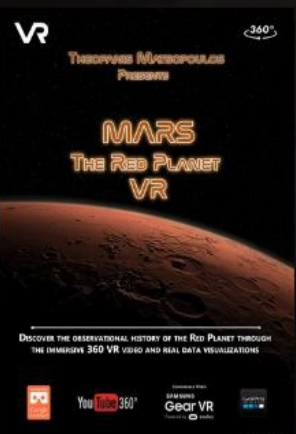
The Sun: Our Living Star



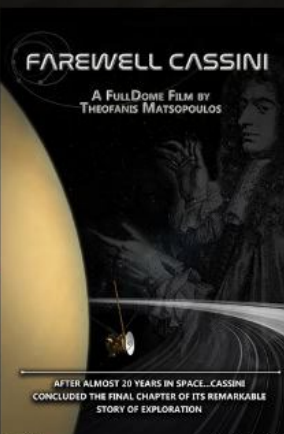
Europe to The Stars



Capturing The Starlight



Mars VR 360



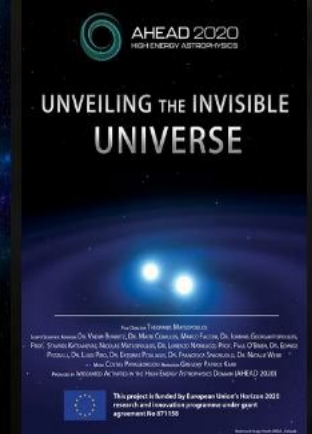
Farewell Cassini



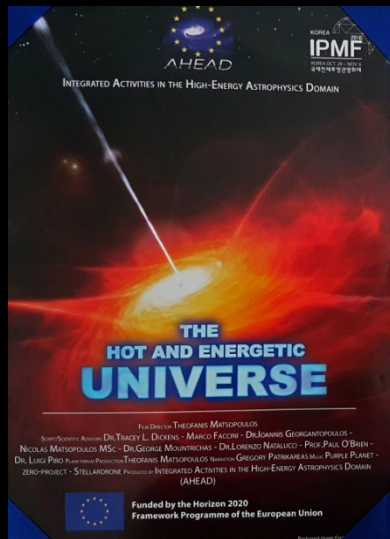
The Earth's Climate



Europe's Cosmic Quest



Unveiling the invisible Universe





Planetarium Documentaries

Difficulties

- Very high resolution (17.000.000 pixels)
- Very high image quality (12 bit, 30 – 60 fps)
- Immersive audio (5.1 / 7.1 surround – Dolby Atmos)
- High – End Computers required to create 3D graphics (Workstations - Render Farms)

Full HD TV
1920 x 1080

IMAX laser projector
3840 x 2160

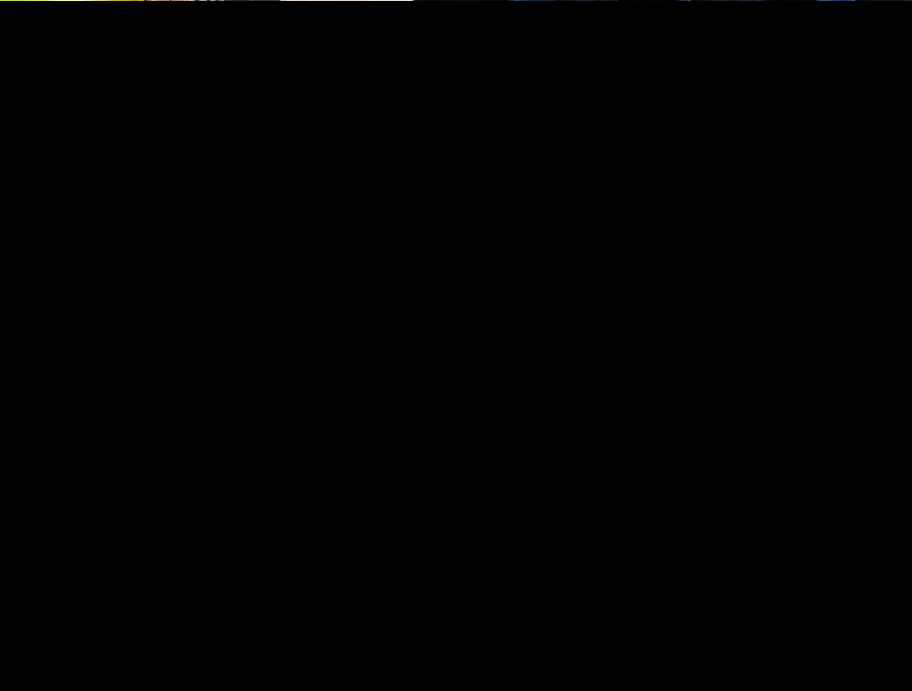
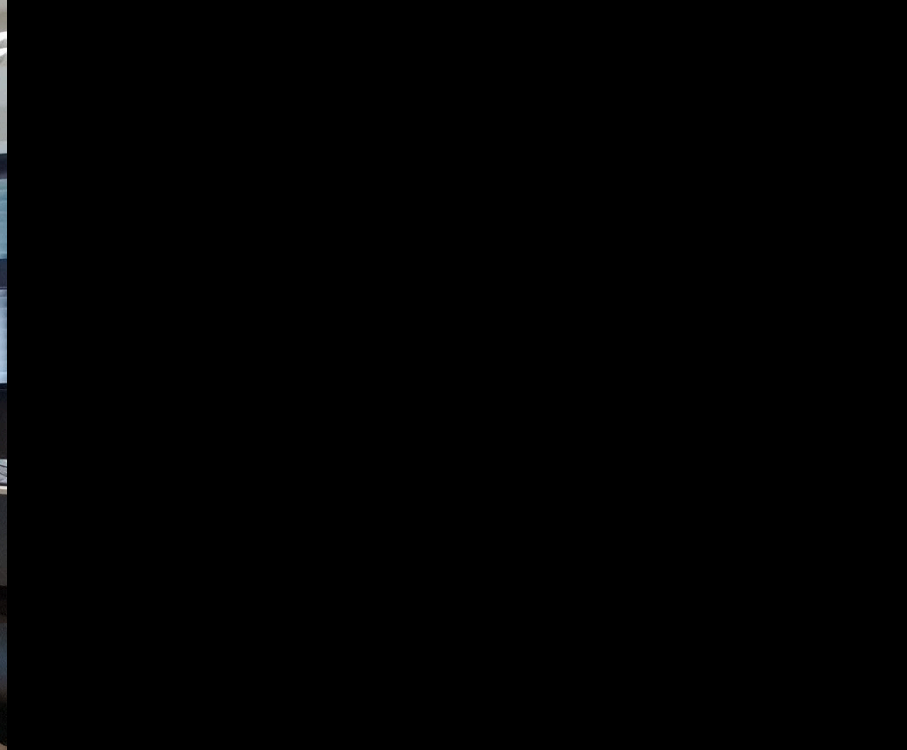
4K Fulldome
4096 x 4096

8K Fulldome
8192 x 8192



EVANS & SUTHERLAND

DIGISTAR



Planetarium Documentaries

Funding

- Organizations – Institutions fund their own productions (ESA, ESO, NSF-NOIRLab, NOA)
- E.U. funds Scientific Teams (AHEAD, BID4BEST) e.g. Horizon 2020
- Self financing my own productions
- Budget spans from 30K to 200K euro

Planetarium Documentaries

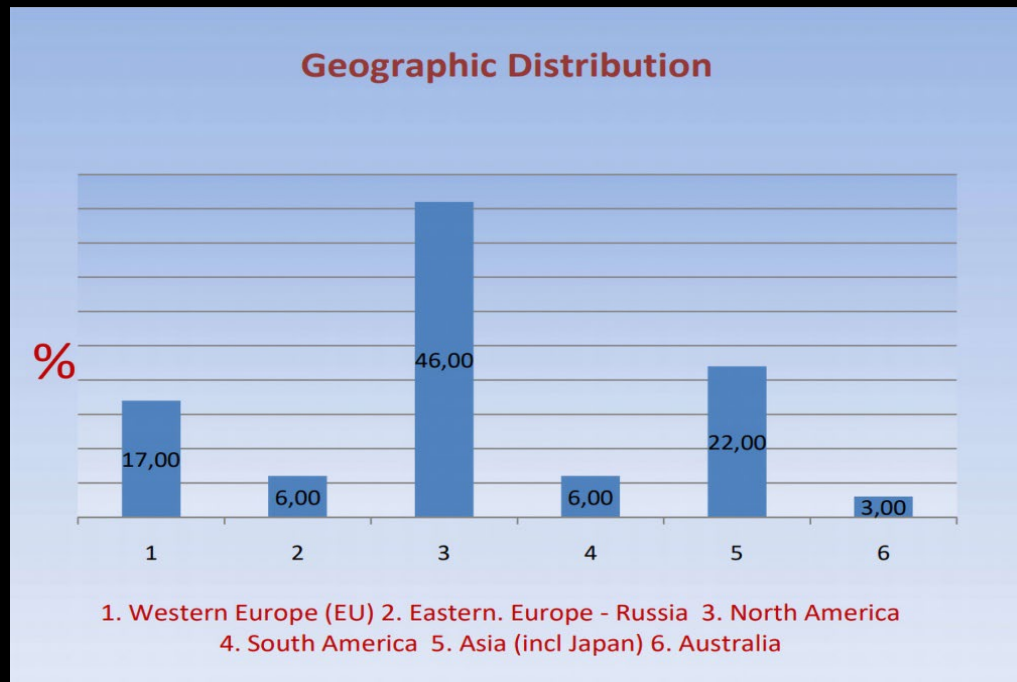
Purpose

- Institutions & Scientists want to promote their research to the public providing documentaries for free.
- E.U. funded projects impose scientists to invest in public outreach
- Planetariums are one of the best ways to approach large audiences via immersive experience

Planetarium Documentaries

Impact to the Community

- Example: The free E.U. funded planetarium documentary “Unveiling the Invisible Universe” reached about 5 million viewers since 2021.



Thank you

- www.matsopoulos.com
- www.eso.org/public
- www.noirlab.edu/public
- www.ahead.astro.noa.gr
- www.bid4best.org