PRESENTING DATA AND TELLING STORIES

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Planetary Visions Limited

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Climate Change Initiative

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EO Science for Society

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Presenting the Unfamiliar

Leverage what the audience already knows about the world

- Natural colour – where possible (backgrounds)
- Three dimensions – make it physical
- Realism – atmospheric haze, clouds, lighting, sound
- Immersive – no edges, not just data but a view of the world/our world/the world we live in
- Human scale – computer graphics as well as data visualisation

High quality

- will be compared with CGI from feature films, tv, advertising, computer games
- required for uptake in tv news, documentaries

Data colours

- Intuitive – meaningful colours, easily understood
- Perceptual – unambiguous, unbiased, consistent with human visual system (HSV, not RGB)
- Distinct – different colours for different parameters in data comparisons

Presenting the Unfamiliar

Tell a story

- Importance of story (narrative) in science communication to the public
- Lead with cause-and-effect in specific cases, rather than abstract ideas, make it personal
- Opposite to the way an academic paper is usually structured
- Narrative approach gives increased comprehension, interest, engagement, citations

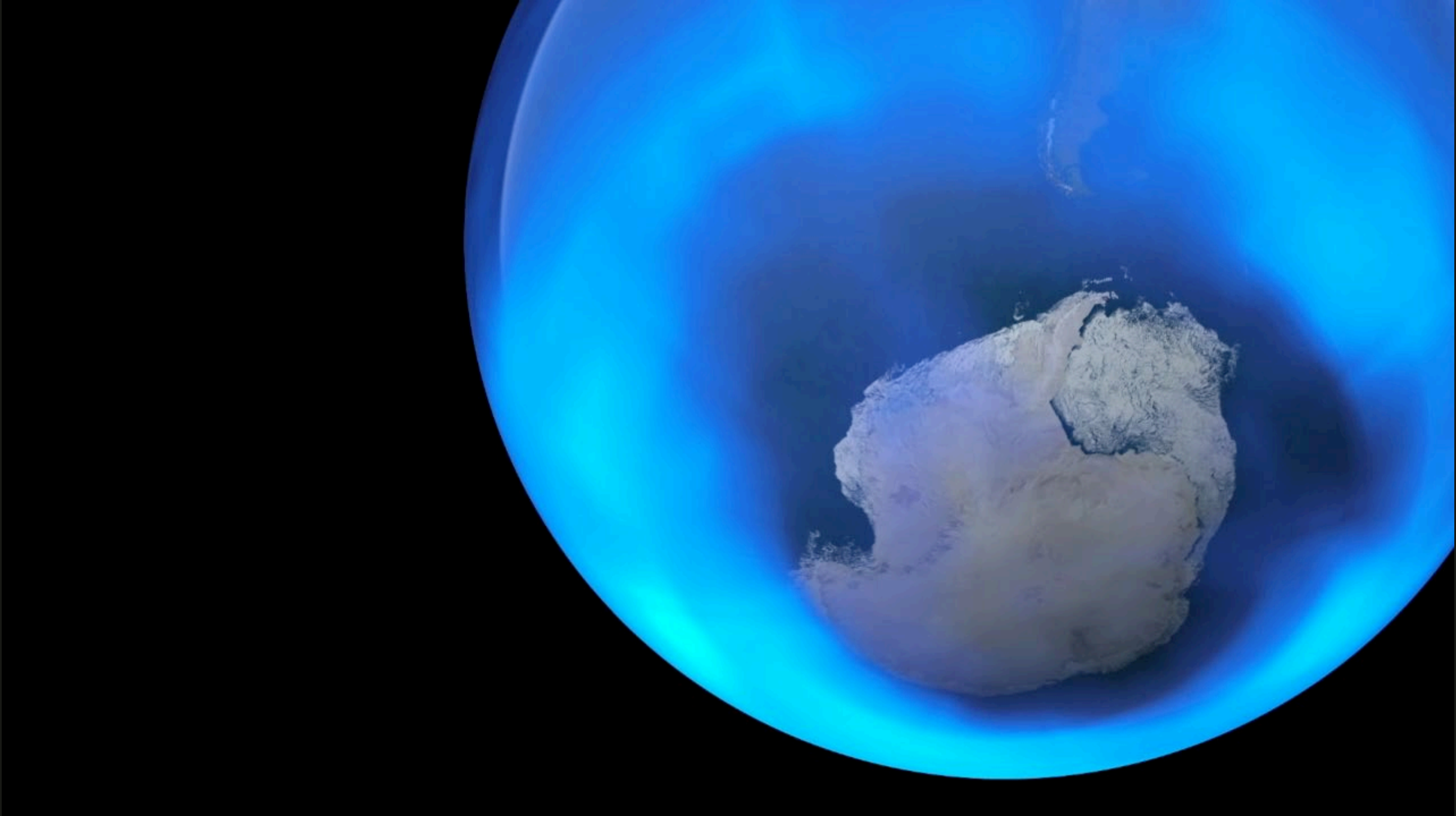
Dahlstrom, M. F. (2014). Using Narratives and Storytelling to Communicate Science with Nonexpert Audiences, *Proc. National Academy of Sciences* **111** (Supplement 4) 13614-13620

Corner, A., Shaw, C. and Clarke, J. (2018). Principles for effective communication and public engagement on climate change: A Handbook for IPCC authors. *Oxford: Climate Outreach*

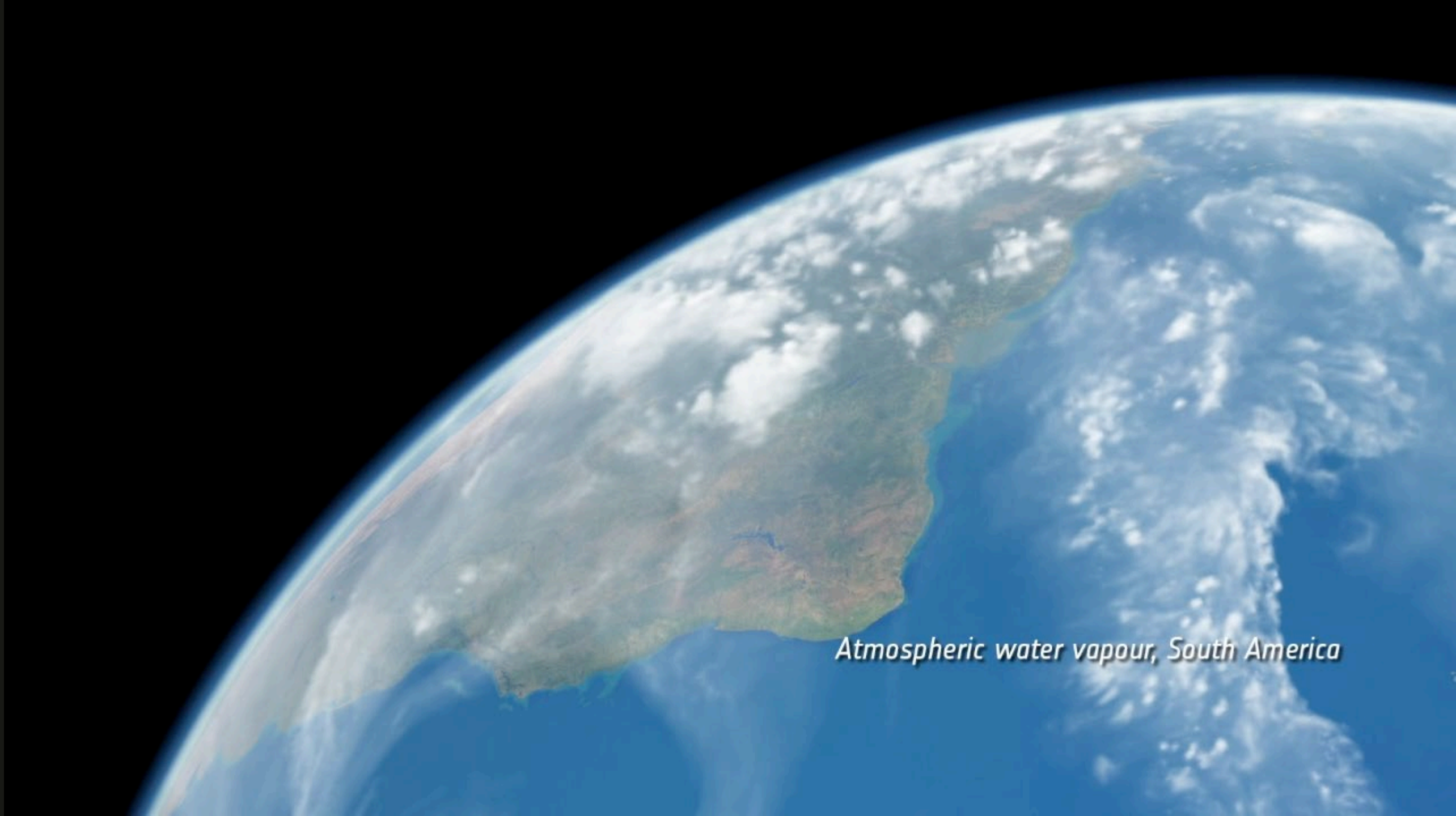
Rapley, C. G. et al (2014). Time for Change? Climate Science Reconsidered, *Report of the UCL Policy Commission on Communicating Climate Science*

- Three-act structure in drama: beginning, middle, end / setup, confrontation, resolution
- Sequence of shots – picture package – 1 min, 2 min, 3 min

See Through the Data



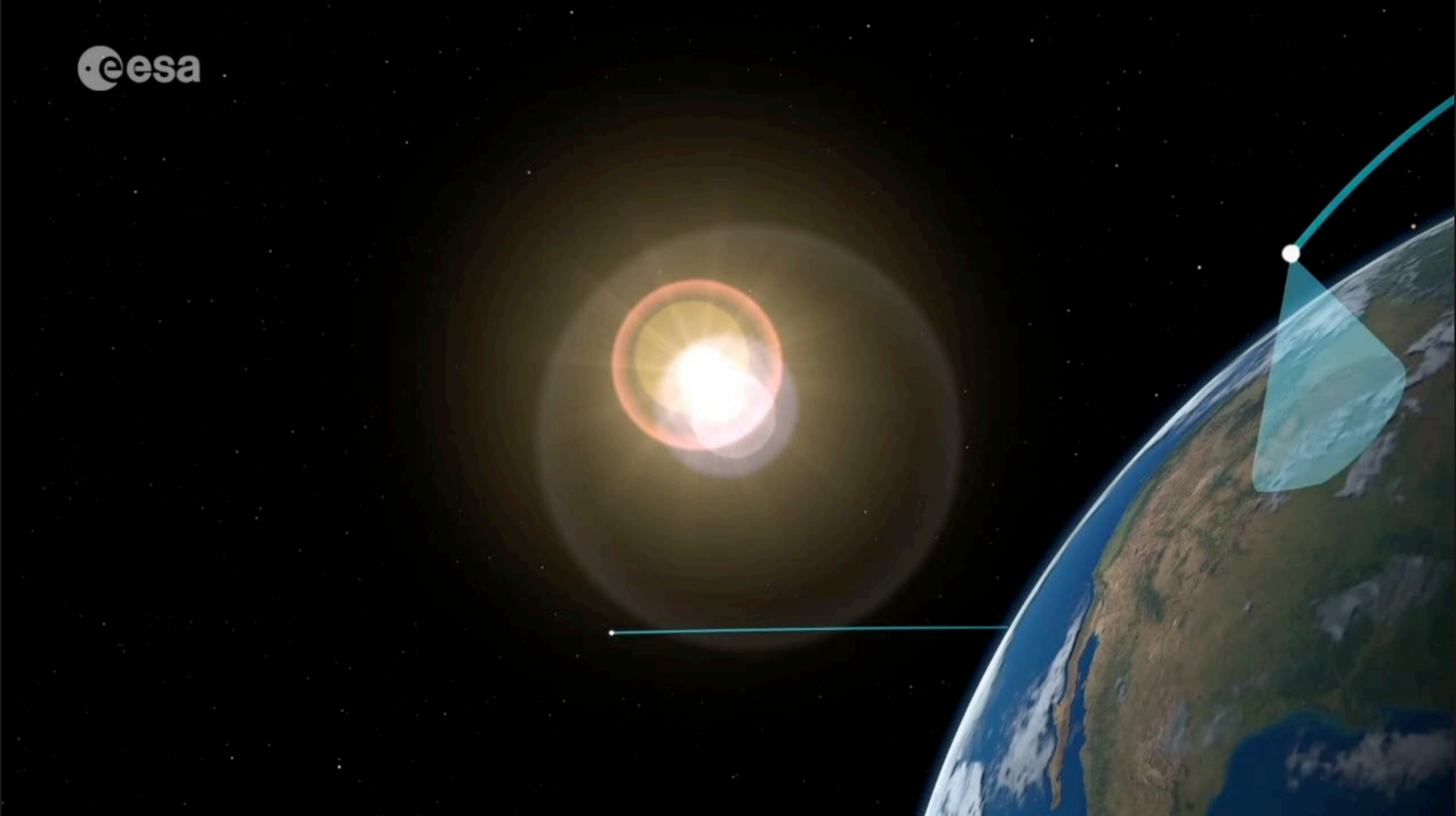
Make it Flow



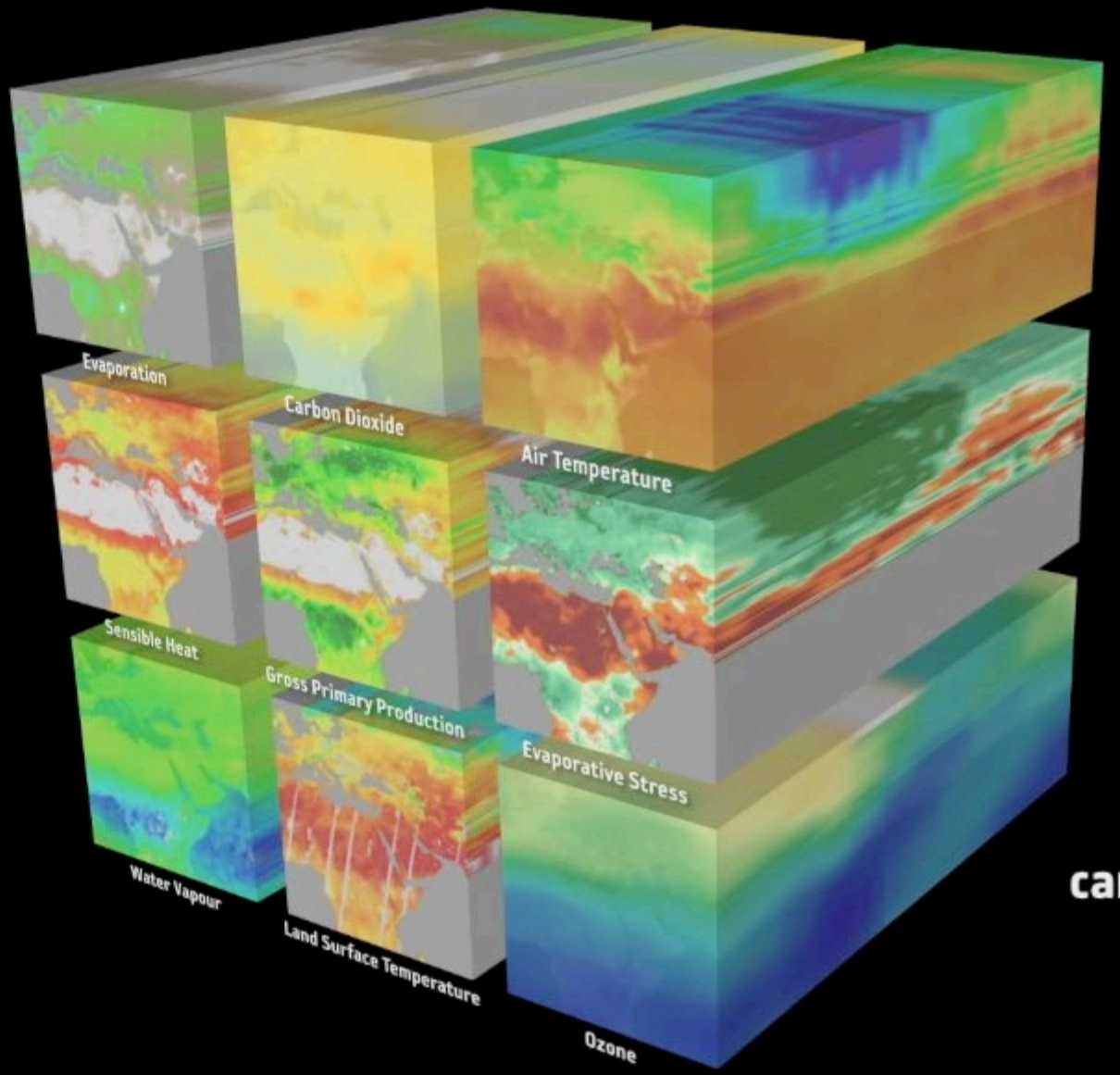
Atmospheric water vapour, South America

Sweat the Small Stuff

How Do They Do That?


esa

Get the Idea?



Each stream of spatial data can be thought of as a data 'cube', with dimensions of latitude, longitude and time

Where Next?

Interactivity

- ESA-CCI Climate from Space app (tablet, desktop, web cfs.climate.esa.int with Ubilabs GmbH)
- Interactive video

Integration of data visualisation with long-form story telling

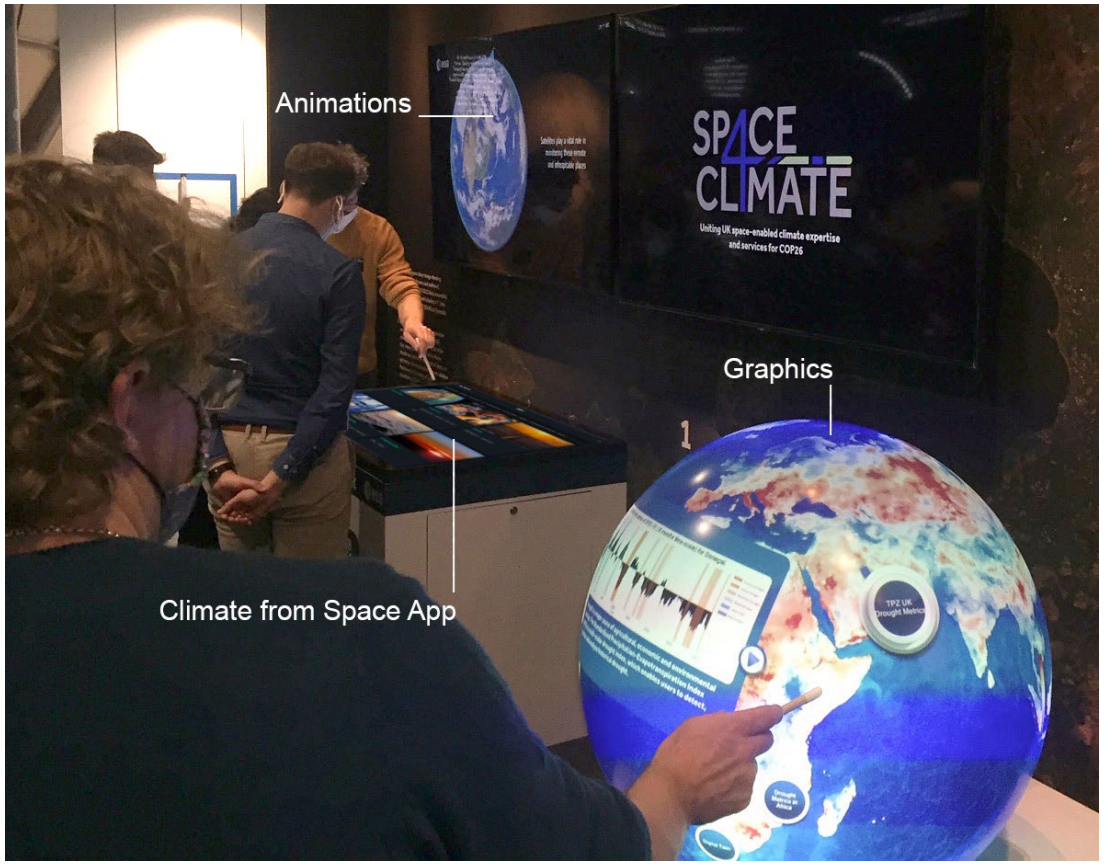
- Multimedia journalism (“scrollytelling”)
- ESA-EdukEO (with Lobelia Earth S.L.)

Immersion

- 360 degree video, Planetarium domes
- 3D video, headsets

Physical Globes

- phi-Experience half-sphere (ESRIN)
- Pufferfish sphere (COP26)
- NOAA Science on a Sphere



Finger on the Pulse


sea level
ozone
greenhouse gases
cloud
aerosols

Understanding sea ice break-ups and their consequences

NERSC & Lobelia Earth team

Sea ice cracks and break-ups appear due to storms and strong winds. It is a naturally occurring phenomenon, but is it getting worse due to climate change? And what about its consequences? Dig into how much is currently understood and into the most recent research within the Digital Twin Ocean precursor project about this topic in an interactive story.