We’re ramping up our **visualisation** capability...

ACCESS
Australian Earth System Simulator
National Research Infrastructure
access-nri.org.au

Visualisation services and tools for ACCESS models

Owen Kaluza owen.kaluza@anu.edu.au or @OwKal on ACCESS Hive

- In house visualisation specialist in the Model Evaluation and Diagnostics (MED) team.
- Complemented by domain specific and general visualisation expertise throughout the ACCESS community and NCI Vizlab
- MED software projects improving visualisation tools for ACCESS-NRI models

Initial goals

- **Collect a library of tools and techniques - visualisation recipes**
- **Produce some showcase visualisation examples**

Soon...

- **Provide specialist advanced visualisation services (3D modelling/4D animations, cinematic visualisation)**
- **Improve visualisation tools and develop new ones**

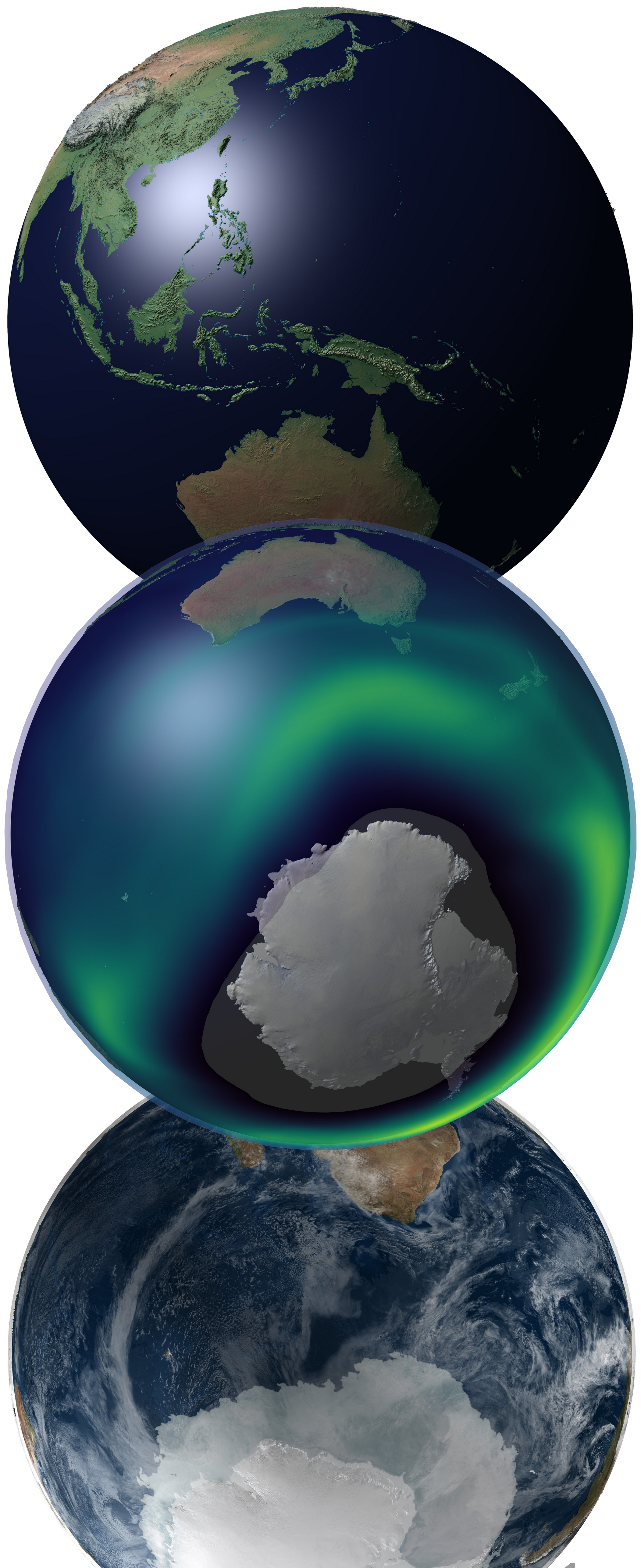
Advanced visualisation?

Illustrate aspects of the data that are difficult to translate to 2D and use our brain’s capability to explore/analyse in 3D environments while increasing accessibility and impact to the wider public

- **Interactivity (3D, adjusting parameters)**
- **Time varying : Animations (4D)**
- **Complex 3D models, fly throughs, higher dimensional data**
- **Advanced lighting, and rendering, volume rendering, ray tracing**
- **VR and other specialist vis hardware**
- **Cinematic Scientific Visualisation**

Cinematic scientific visualisation?

Taking visualisation to the next level
Media quality visual output, using filmmaking techniques and tools (cinematography, lighting, and composition) and visual effects software such as Blender and Houdini



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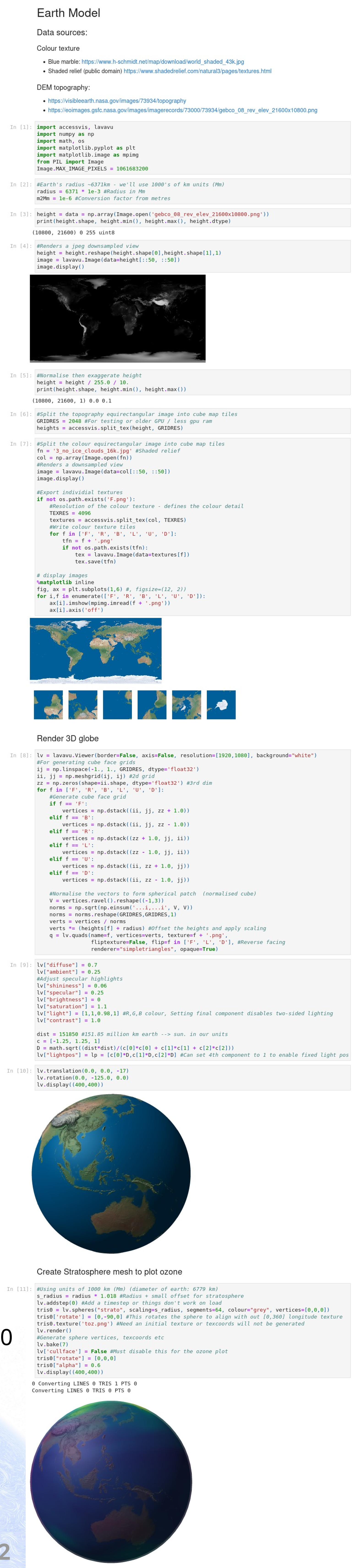

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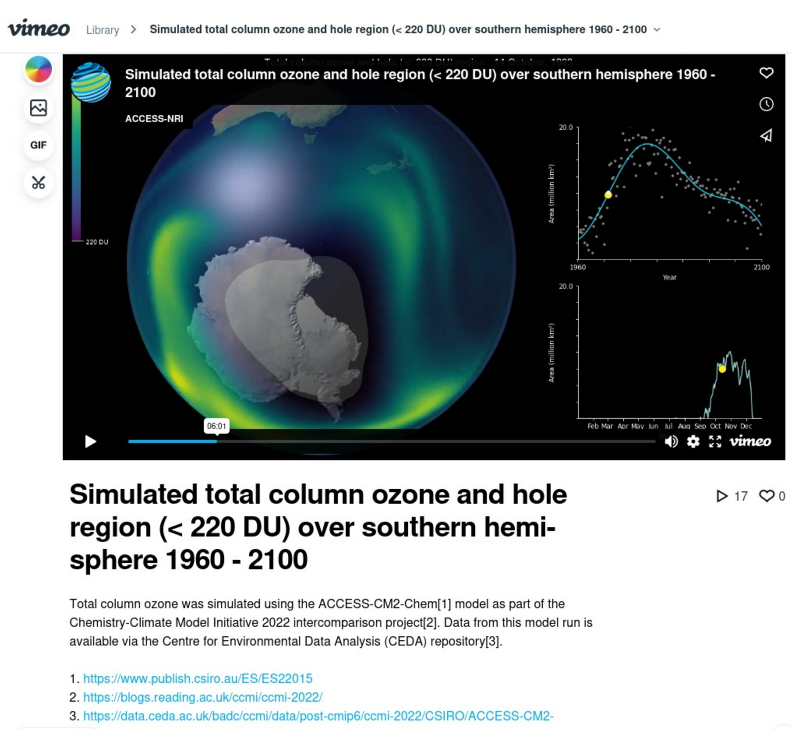
Watch this space...

Check out our Vimeo channel for visualisation projects as we release them...
https://vimeo.com/accessnri



Projects in the works

- *Ozone layer recovery* 3D vis of Ozone simulation 1960 - 2100
- *Sea ice* Recreating animations of sea ice in 4D
- *Aus400* Tackling a high res model with advanced visualisation techniques
- *Circulation of the Southern Ocean*Exploring ocean currents

Image credits
1. NASA/Goddard Space Flight Center Scientific Visualization Studio. The Blue Marble data is courtesy of Reto Stockli (NASA/GSFC)
2. NASA SVS Perpetual Ocean https://svs.gsfc.nasa.gov/3827
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