



MacOS

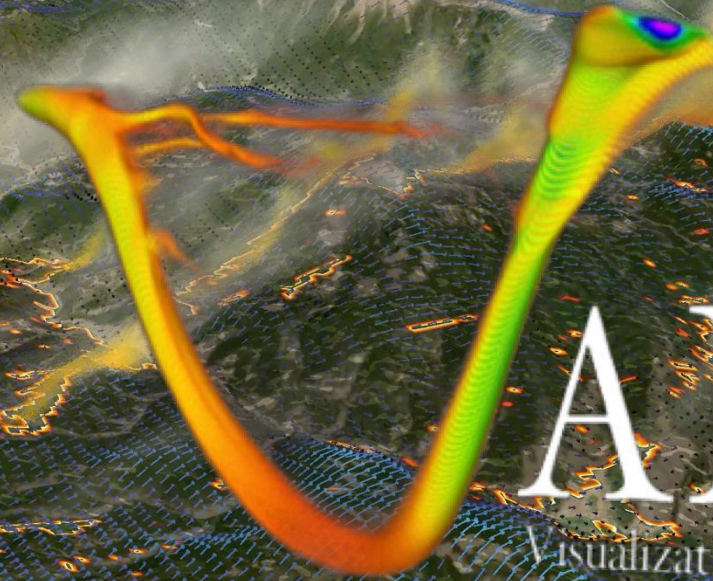


Linux



Windows

www.vapor.ucar.edu



APOR

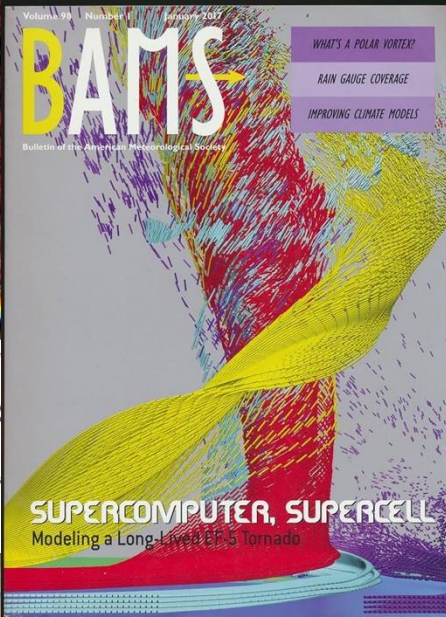
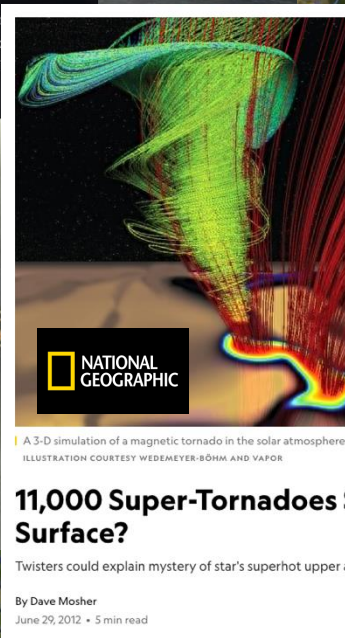
Visualization & Analysis Platform

www.github.com/NCAR/VAPOR

vapor@ucar.edu

pearse@ucar.edu

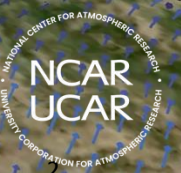




VAPOR

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Use case

Geophysical Visualization

In this tutorial

The GUI

The Python API

Key concepts

Renderer

Camera

VAPOR
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Use case

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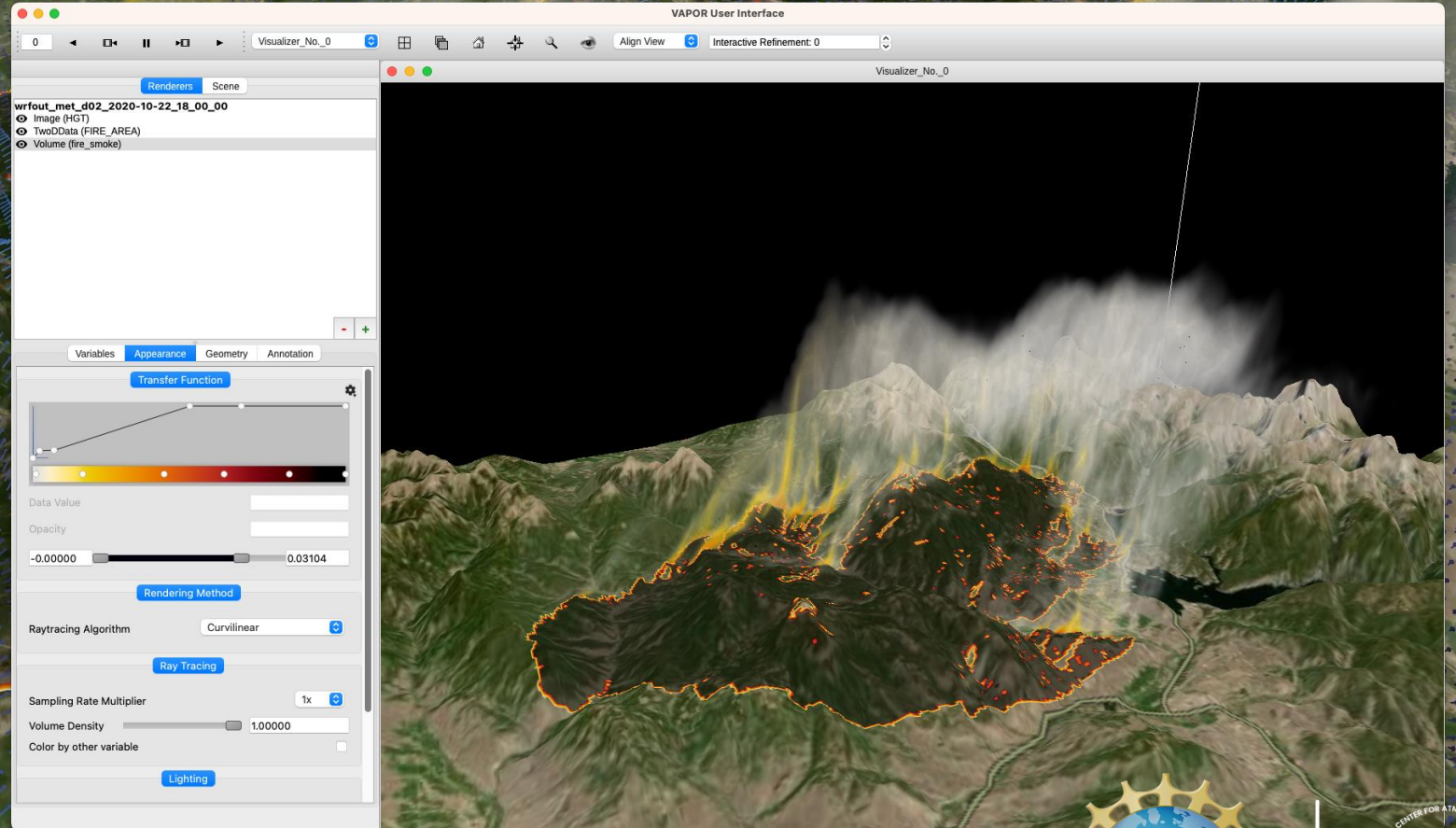
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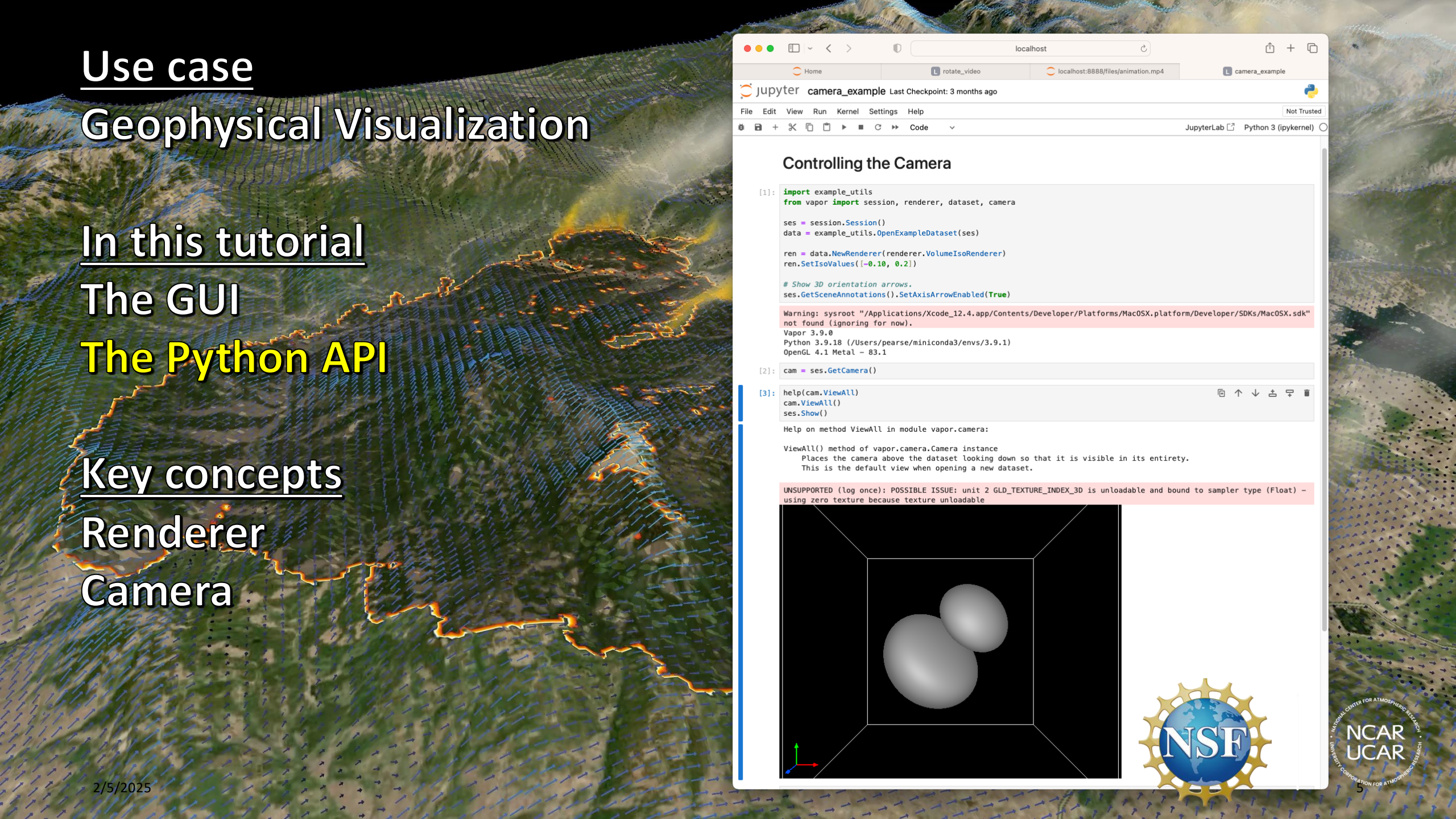
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2/5/2025



localhost

Home rotate_video localhost:8888/files/animation.mp4 camera_example

jupyter camera_example Last Checkpoint: 3 months ago

File Edit View Run Kernel Settings Help

Not Trusted

JupyterLab Python 3 (ipykernel)

Controlling the Camera

```
[1]: import example_utils
      from vapor import session, renderer, dataset, camera

      ses = session.Session()
      data = example_utils.OpenExampleDataset(ses)

      ren = data.NewRenderer(renderer.VolumeIsoRenderer)
      ren.SetIsoValues([-0.10, 0.2])

      # Show 3D orientation arrows.
      ses.GetSceneAnnotations().SetAxisArrowEnabled(True)
```

Warning: sysroot "/Applications/Xcode_12.4.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk" not found (ignoring for now).
Vapor 3.9.0
Python 3.9.18 (/Users/pearse/miniconda3/envs/3.9.1)
OpenGL 4.1 Metal - 83.1

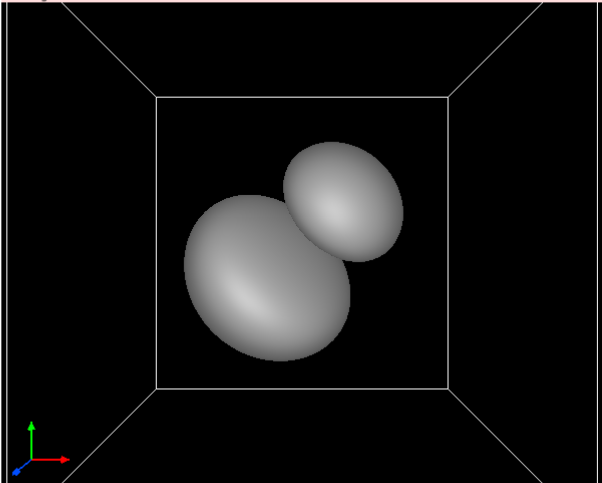
```
[2]: cam = ses.GetCamera()
```

```
[3]: help(cam.ViewAll)
      cam.ViewAll()
      ses.Show()
```

Help on method ViewAll in module vapor.camera:

ViewAll() method of vapor.camera.Camera instance
Places the camera above the dataset looking down so that it is visible in its entirety.
This is the default view when opening a new dataset.

UNSUPPORTED (log once): POSSIBLE ISSUE: unit 2 GLD_TEXTURE_INDEX_3D is unloadable and bound to sampler type (Float) - using zero texture because texture unloadable



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Data Source:

wrfout_met_d02_2020-10-22_18_00_00

Renderer Name:

Barb

Contour

Flow

Image

IsoSurface

Model

Particle

Slice

TwoDData

Volume

WireFrame

Barb Renderer

Displays an array of arrows with the users domain, with custom dimensions that are defined by the user in the X, Y, and Z axes. The arrows represent a vector whose direction is determined by up to three user-defined variables.

Barbs can have a constant color applied to them, or they may be colored according to an additional user-defined variable.



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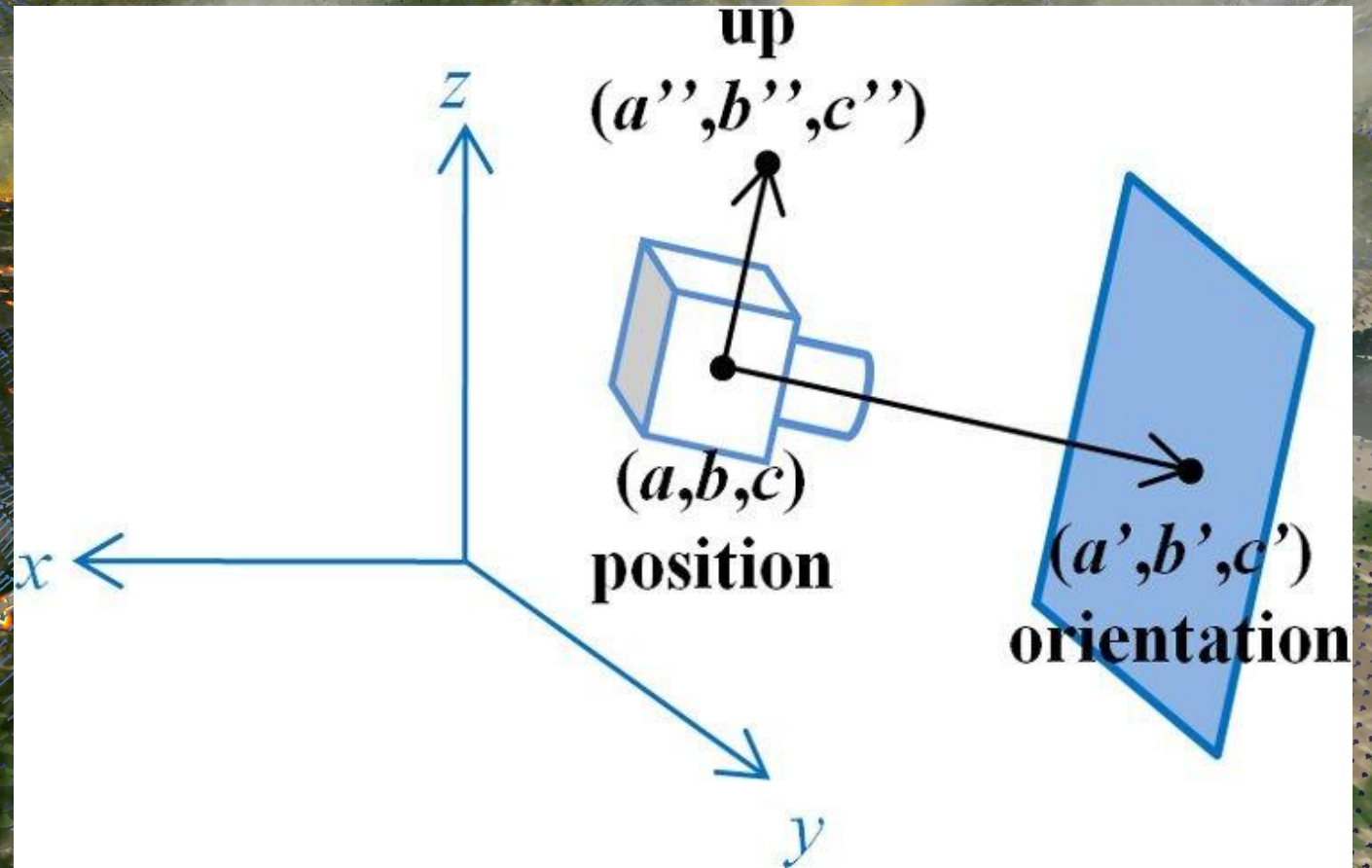
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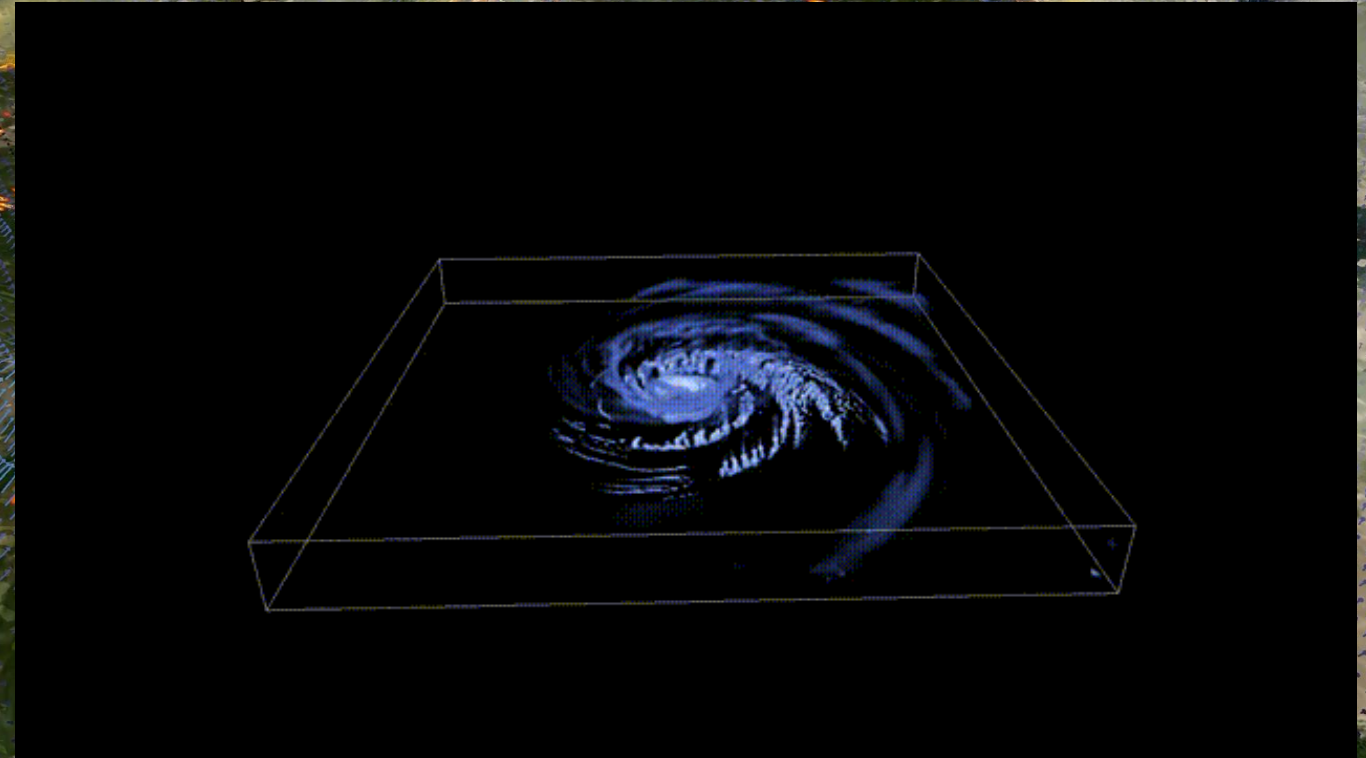
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Looking for UX feedback

See attached Google Form
if you'd like to suggest
changes to VAPOR, its
PythonAPI,
documentation, or
anything else

