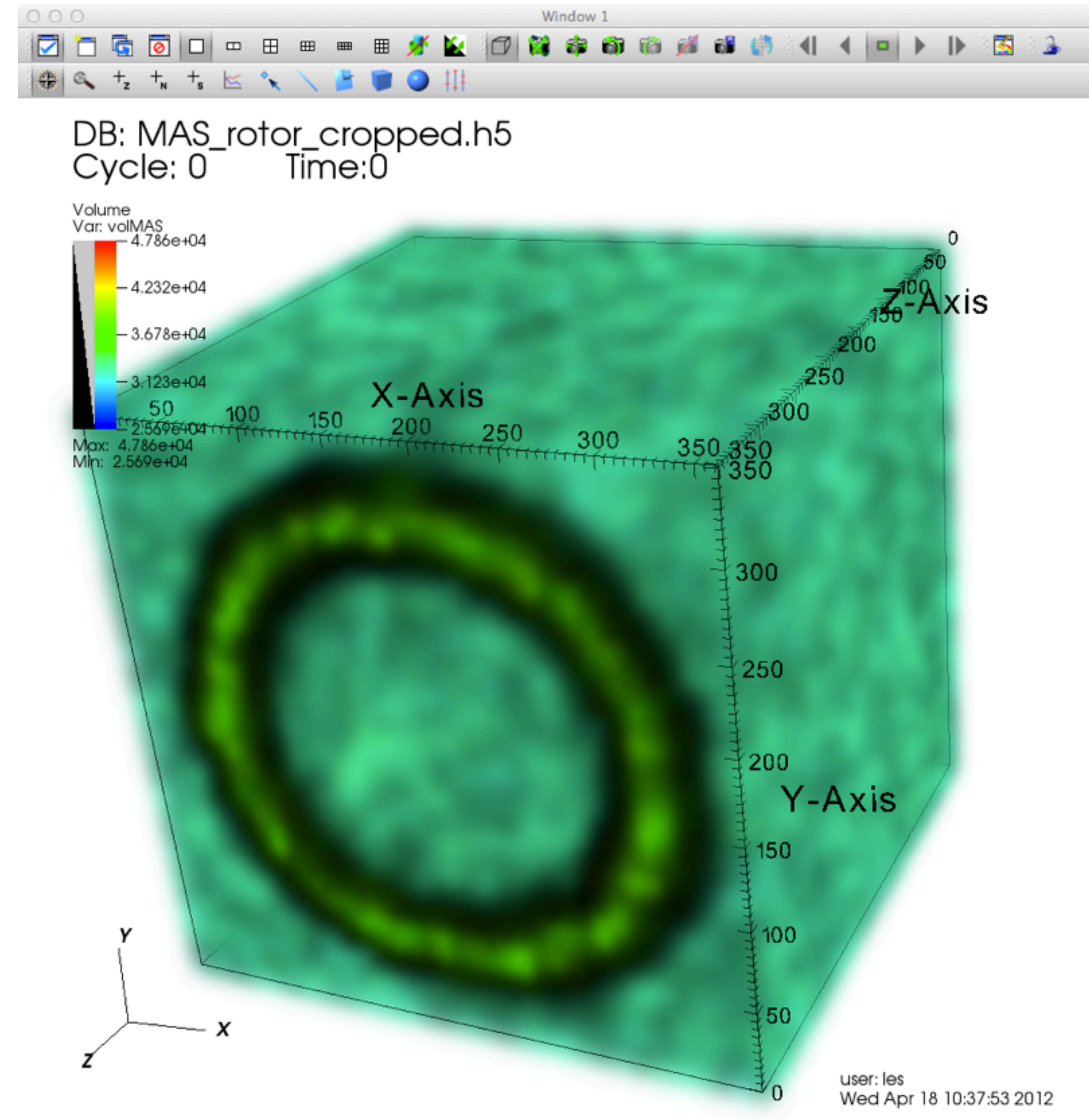# L20, April 18, VisIt camera orbit

1) Launch these programs on your computer (lab or labtop)
VisIt

2) Open any *.h5 file you wish and display with
Plots/Volume

3) Note the min & maximum values and estimate
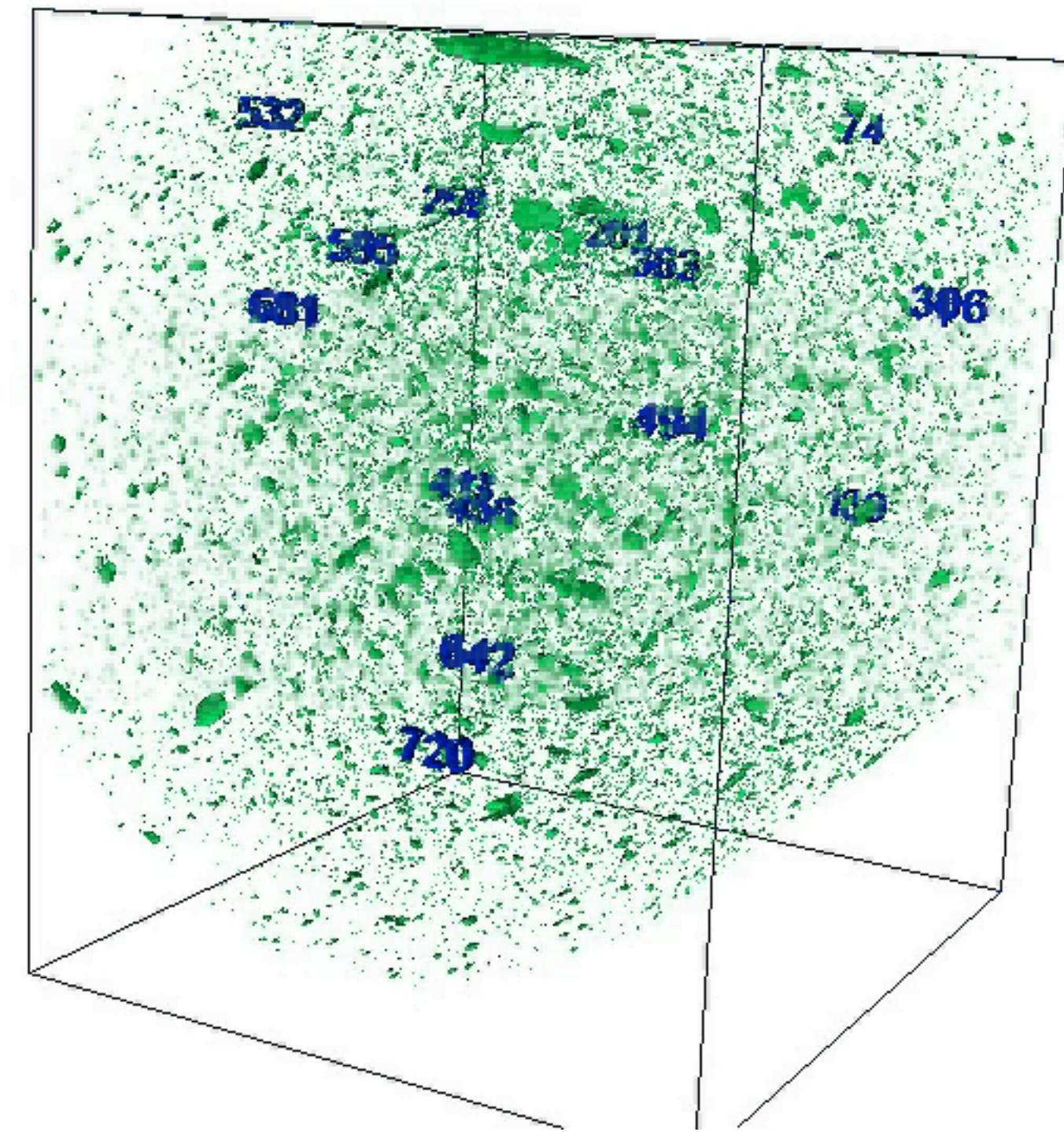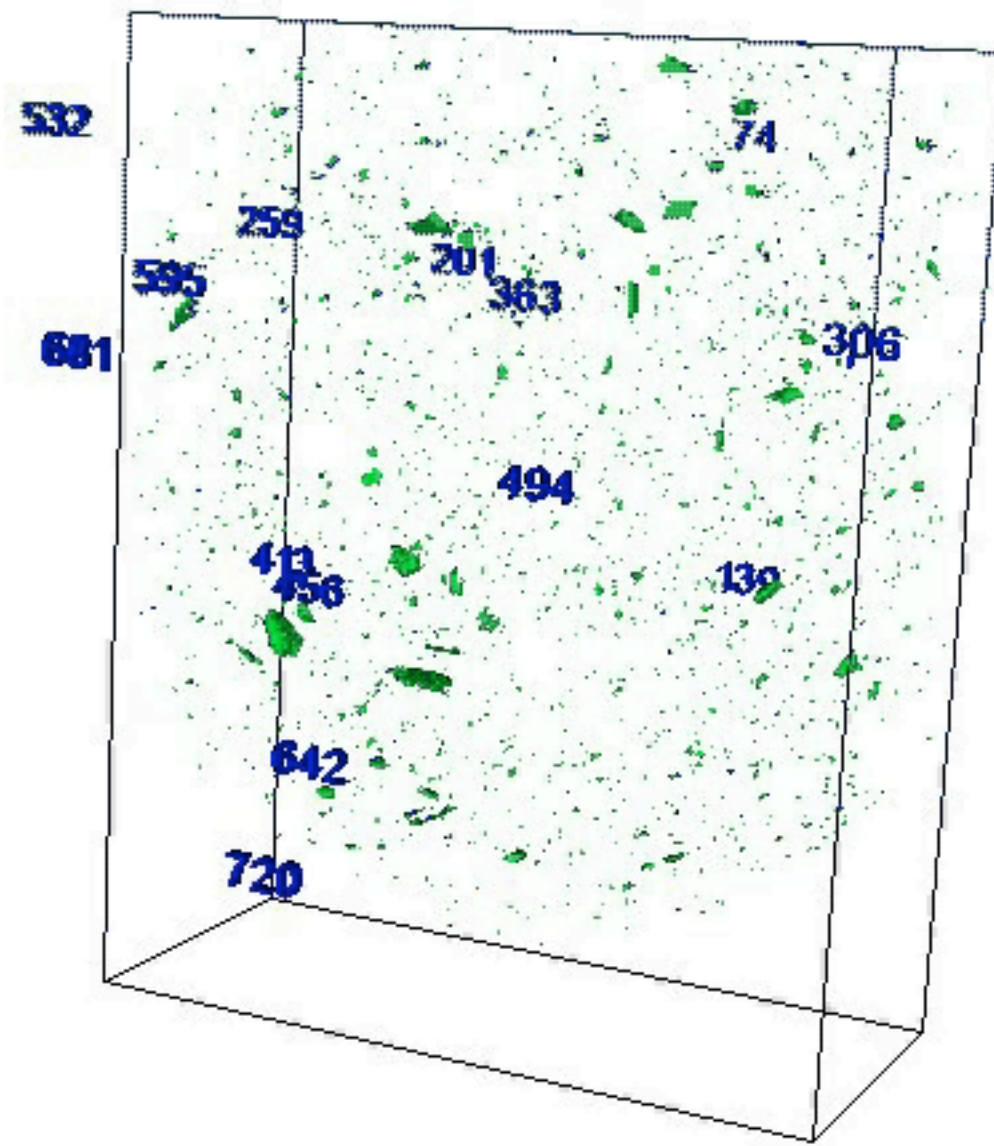a good value for an isosurface

Two views of the same data set.

The lefthand view is a laptop-friendly *.bov that only reads in part of the 3.5GB data file.

The righthand view was generated on HPC with more of the data.

The VisIt Python program is A01.py and is stored on

HPC in /projects/lbutler/students/les/A01.py and is listed on today's handout.

Our to-do list:

1) Run VisIt on laptop on a *.h5 data set.

2) Use these new plots and operators:
  Pseudocolor (see A01.py line 5): in the plot panel under "Add"
  Resample (lines 6-14) in the plot panel under "Operators/Geometry"
  Isosurface (lines 15-19) in the plot panel under "Operators/Slicing"

3) Use these controls:
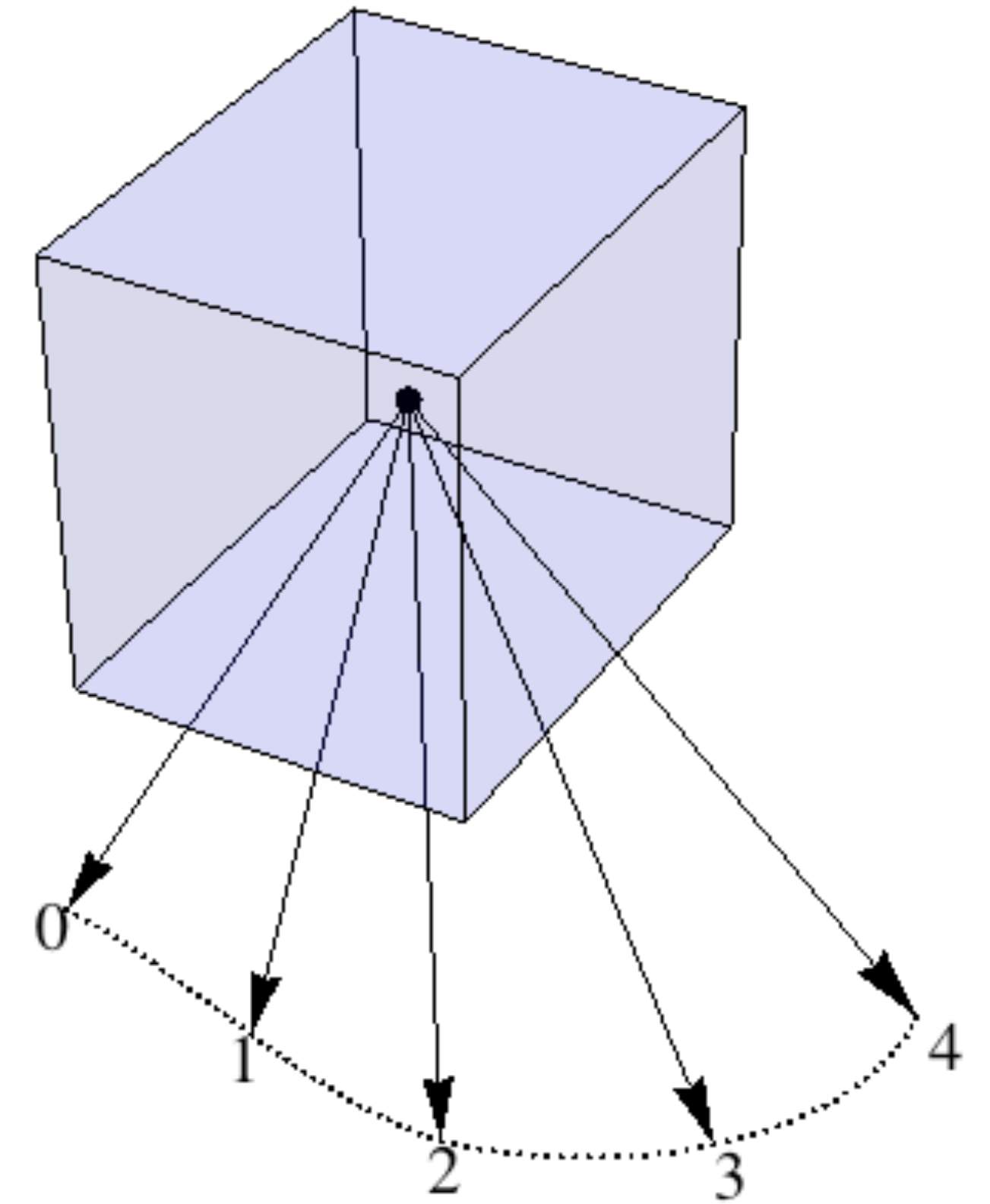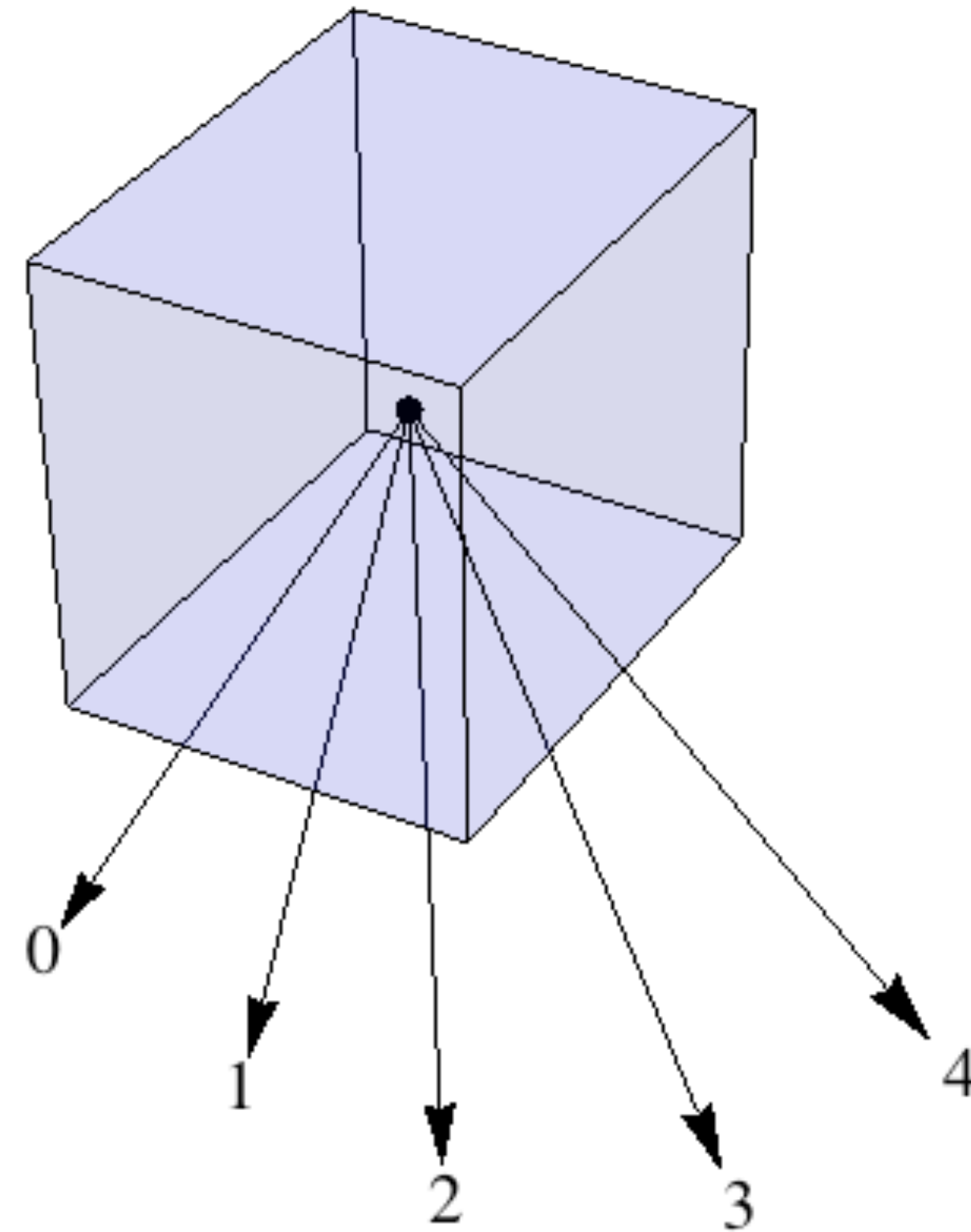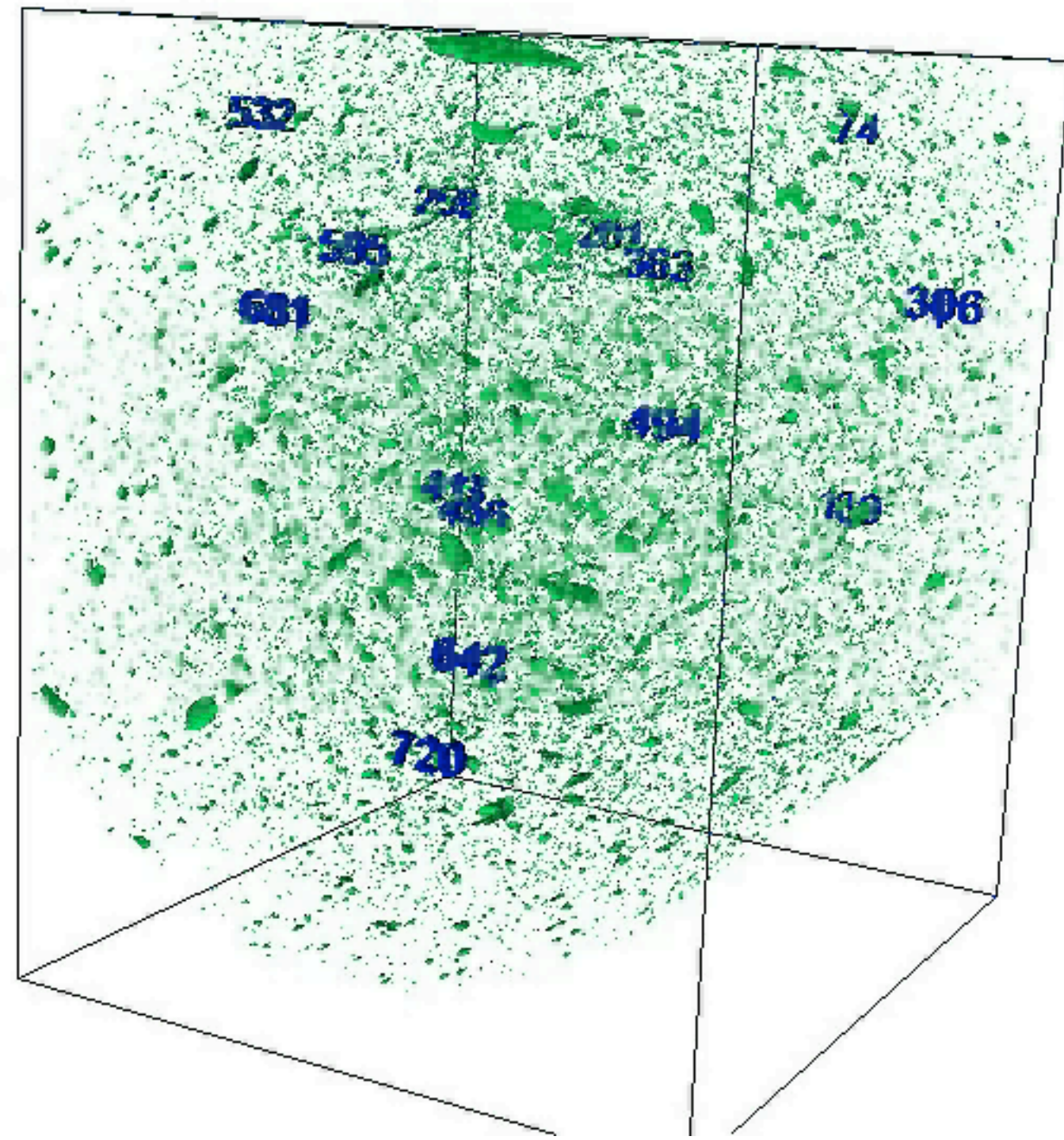 Controls/Annotation/Objects/3D Text (lines 67-81)
  Controls/View/3D view (lines 54-64, 83-121)

4) Use a VisIt/Python command "EvalCubicSpline" (lines 130-144)
5) Use a Python text file read command (lines 46-50)
6) Turn off extra plot features (lines 22-29).

We manually select several camera view points, and then use "EvalCubicSpline" to get as many interpolated camera view points as we need.

To test **parts** of a Python program on your laptop, use the VisIt Commands windows.

To test a **complete** Python program, use your laptop or desktop. This is best done
with one-on-one instruction.   Let's do this as needed next week.
1) Use Mac Terminal or Windows CMD
2) Navigate to the directory with your Python program.
3) Run VisIt from the command line:
  In Windows CMD
  visit.ext -cli -s scriptname.py   or   visit.ext -cli -nowin -s scriptname.py
The no-window option (-nowin) does not create an on-screen display.

  In Mac Terminal
    /Applications/VisIt.app/Contents/MacOS/VisIt -cli -s scriptname.py

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