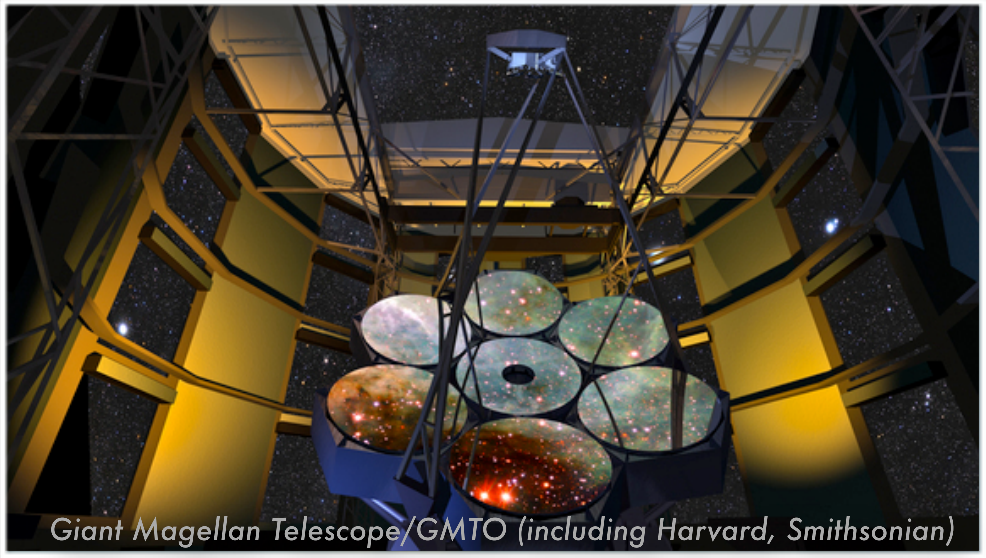
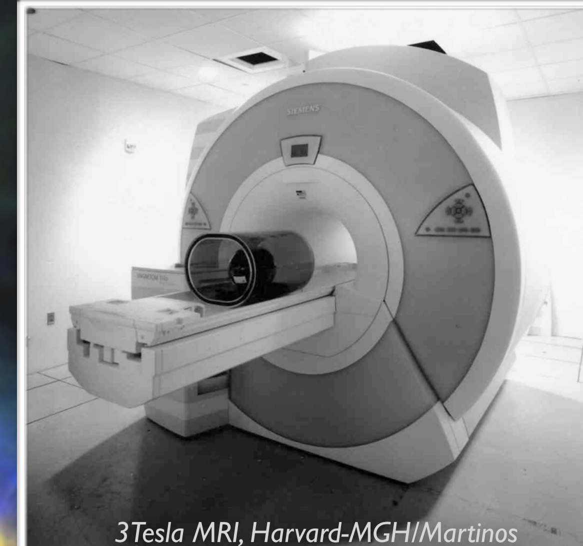
From the Universe to the Table, and Back



Giant Magellan Telescope/GMTO (including Harvard, Smithsonian)

glue
multidimensional data exploration

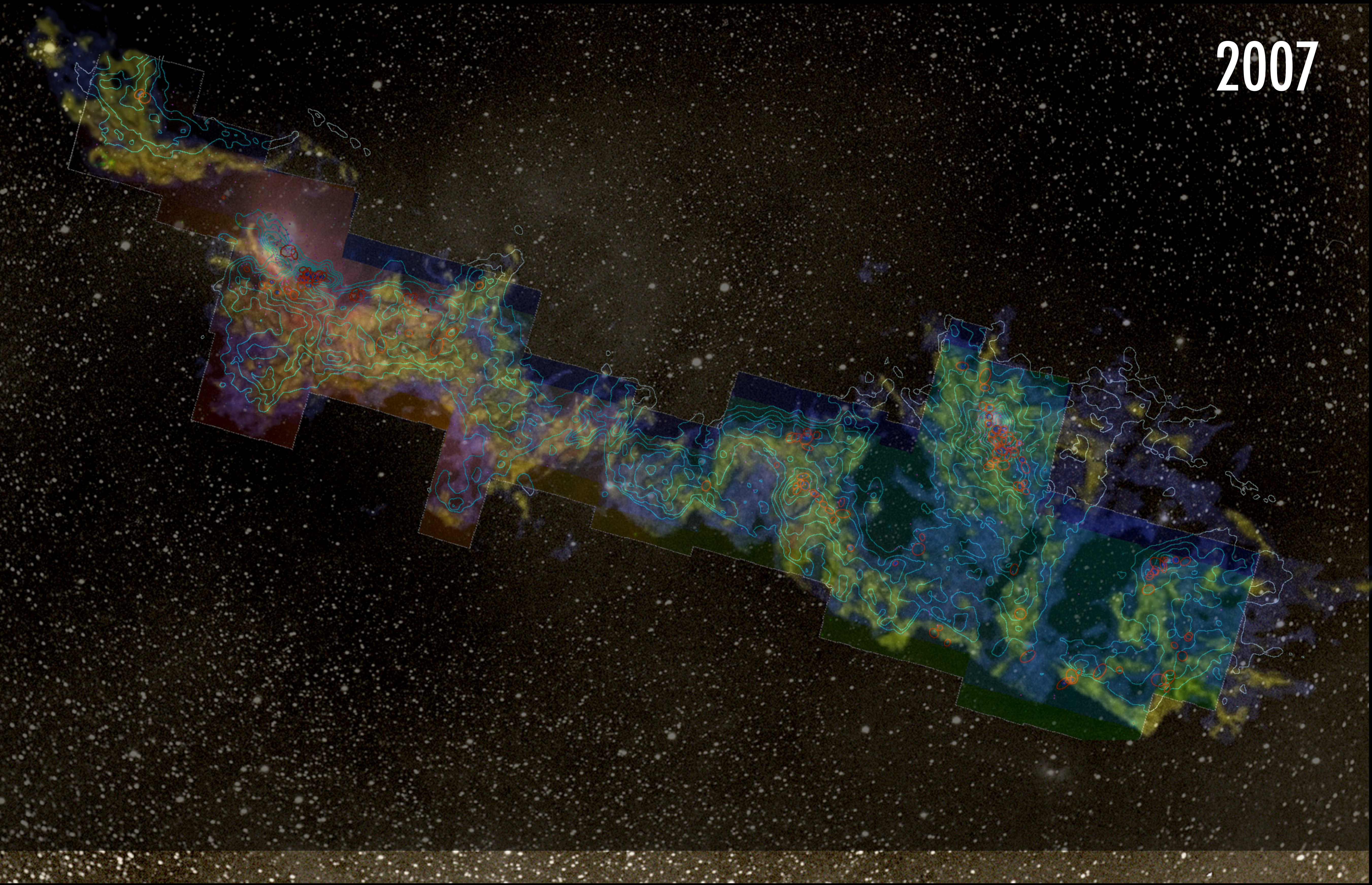


3Tesla MRI, Harvard-MGH/Martinos

Ask me about...

Alyssa A. Goodman
Professor of Astronomy
Founding Director, Initiative in Innovative Computing at Harvard

Background image courtesy of Hope Chen (GSAS student)

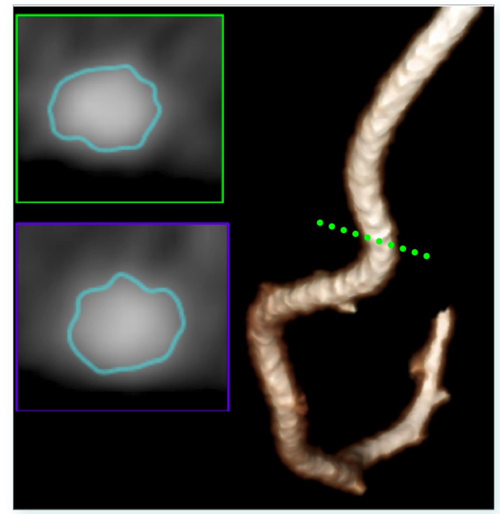


AstronomicalMedicine@IIC

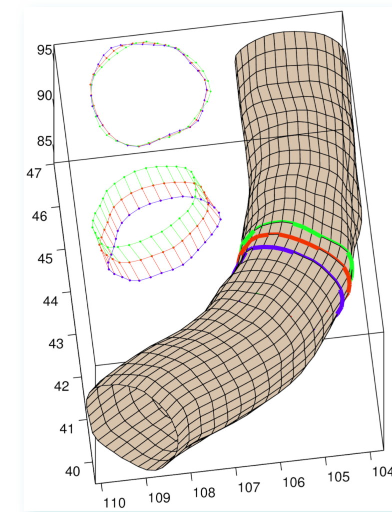
COMPLETE

2011: Patients Troubled Hearts, in 3D

Obtain patient CT data →



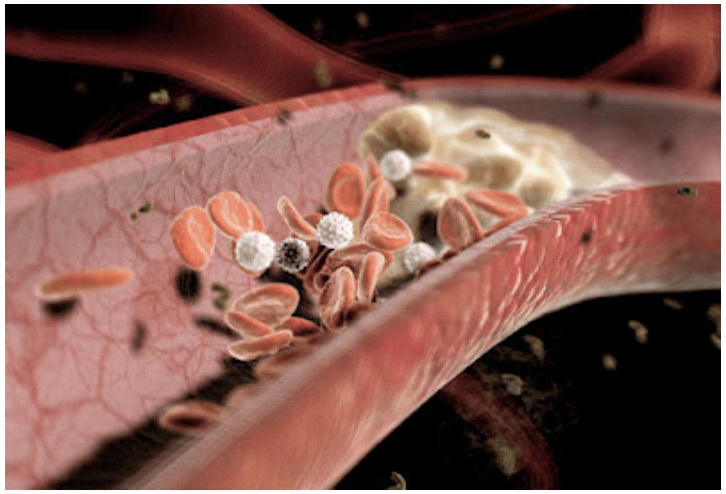
Segment arteries →



Generate patient geometries

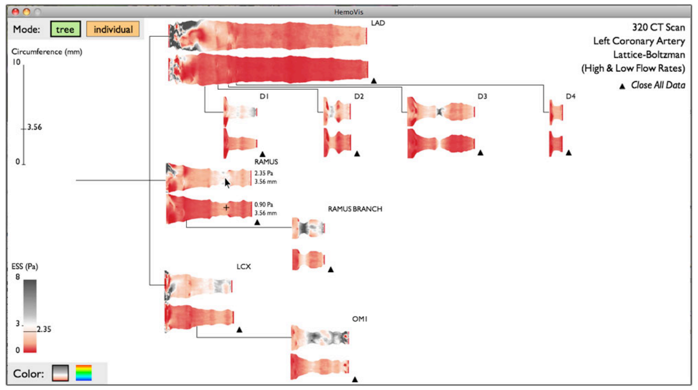
↓

Patient specific flow simulation



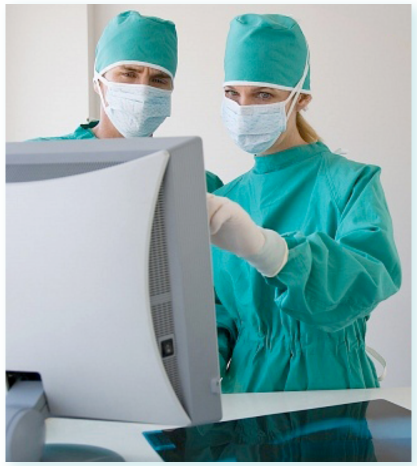
←

Visualize/analyze data



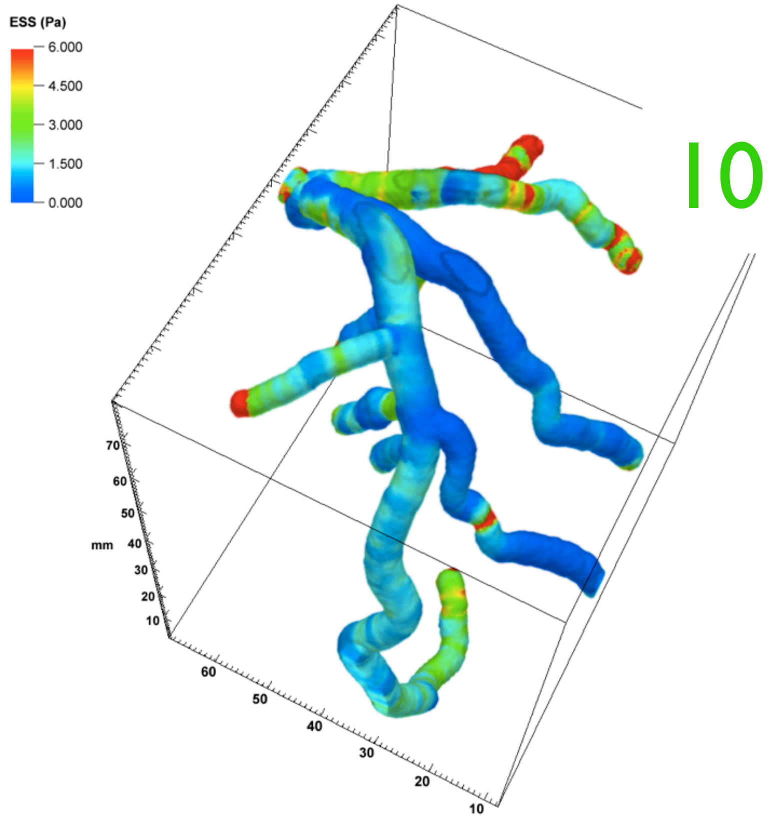
←

Clinical decision

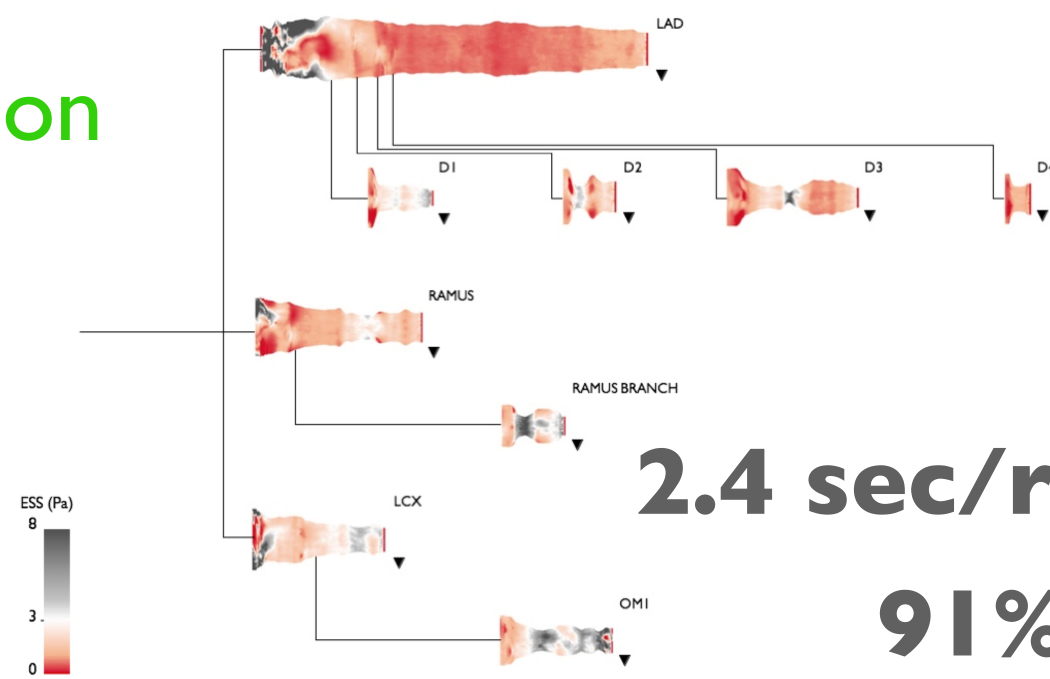


slide courtesy of Michelle Borkin, SEAS PhD student

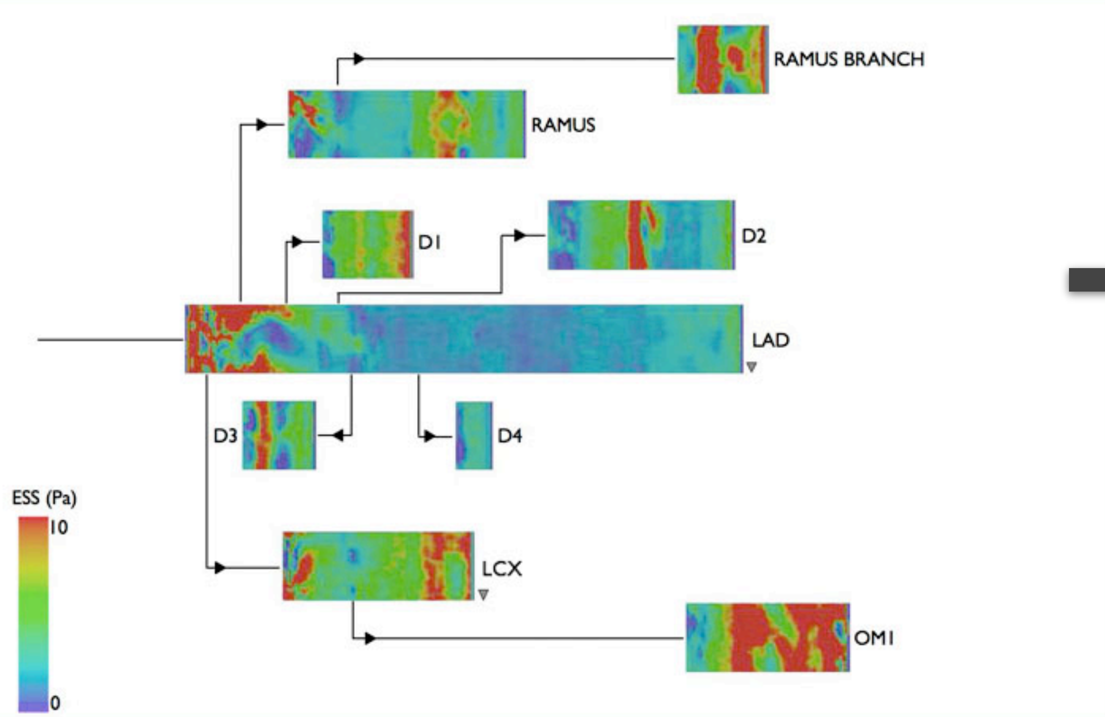
How much does good visualization matter?

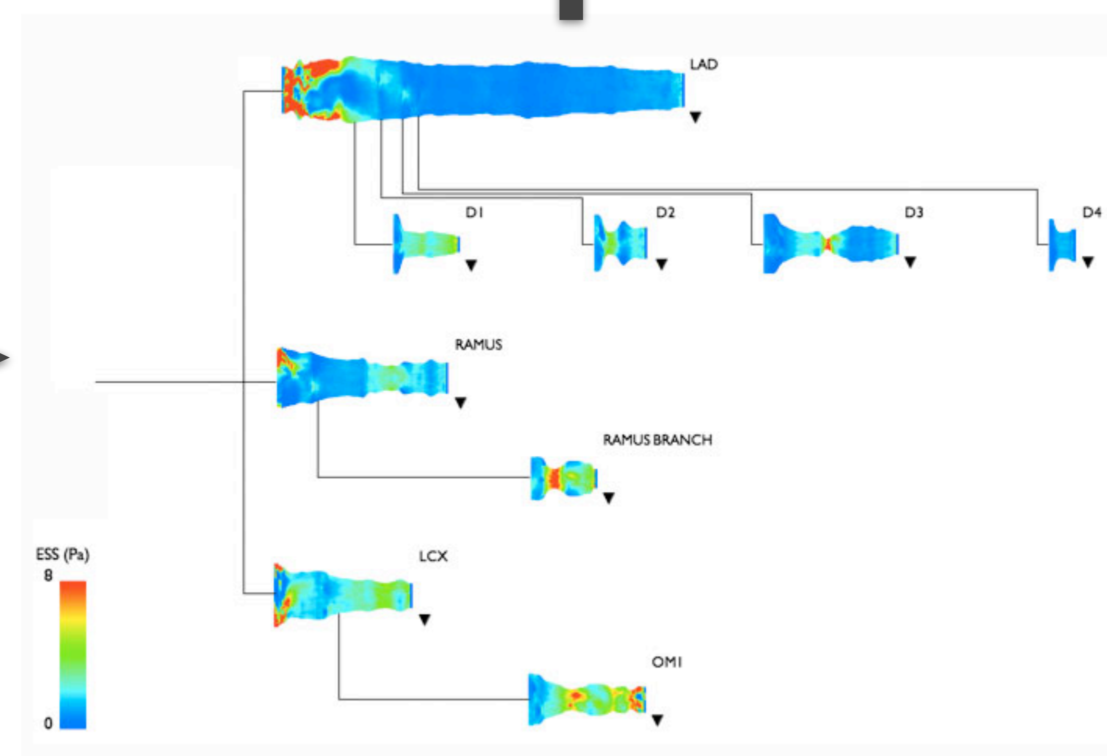


10.2 sec/region
39%



2.4 sec/region
91%

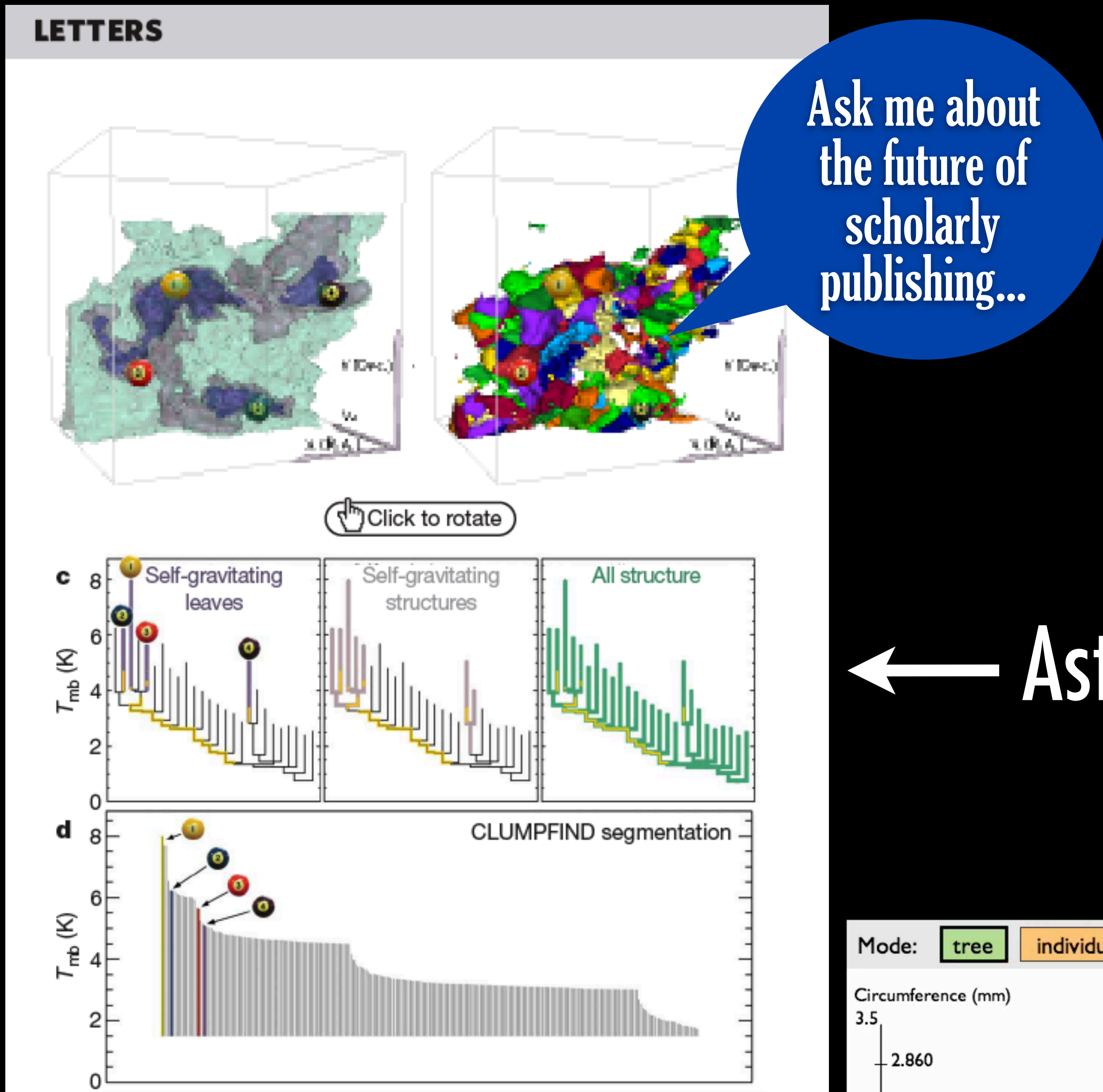




Borkin et al. 2011

TED

Interactive Linked Views

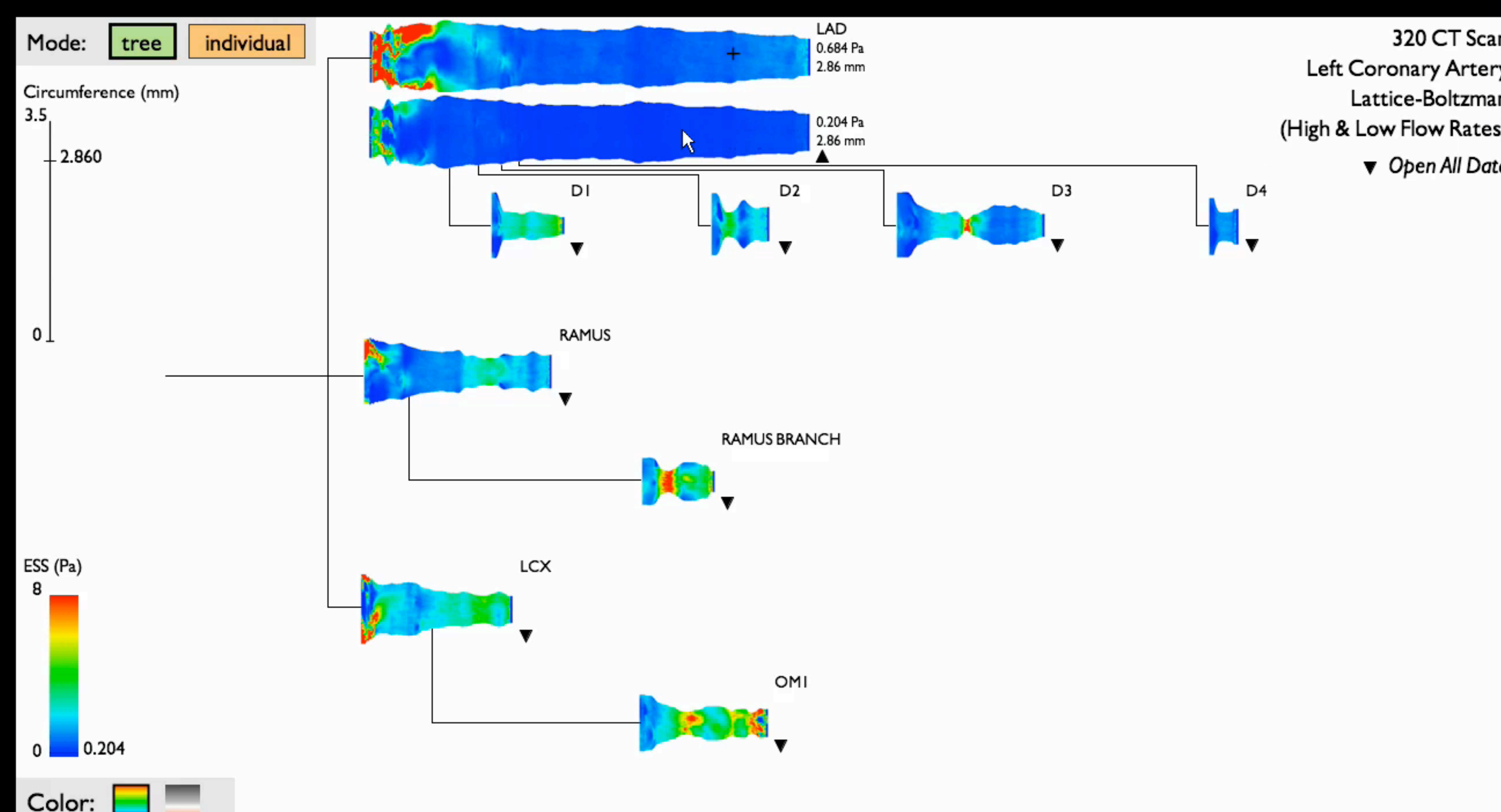


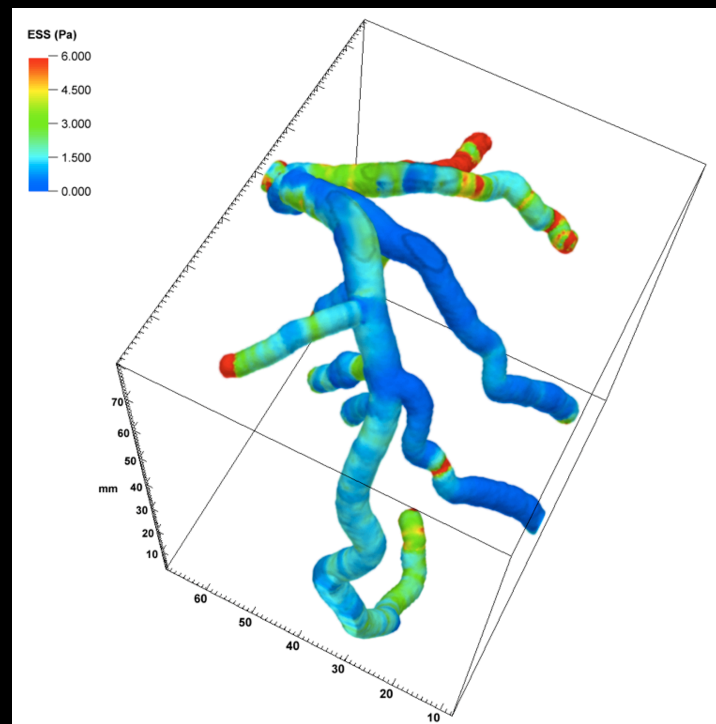
Goodman et al. 2009

Astro

Med

Borkin et al. 2011

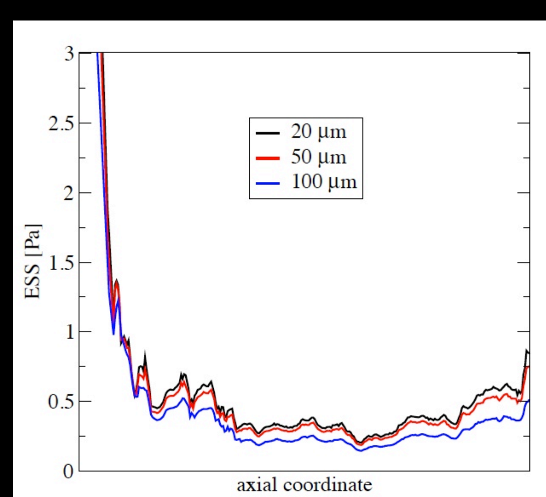




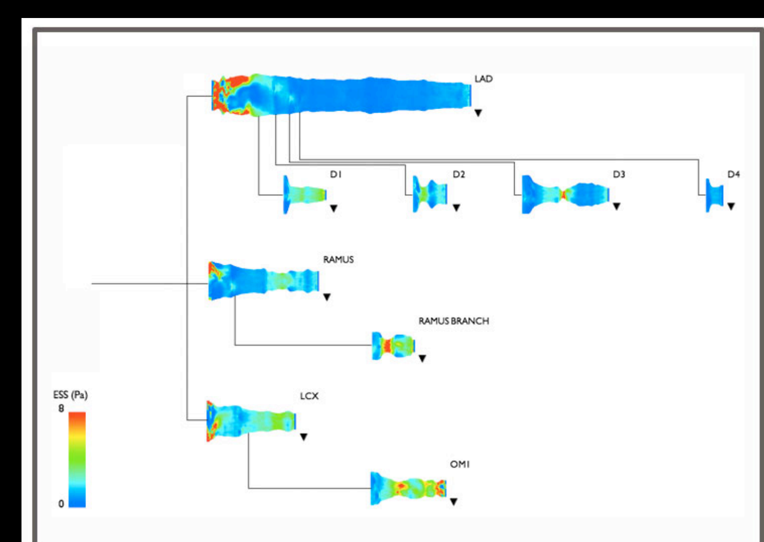
3D

2D

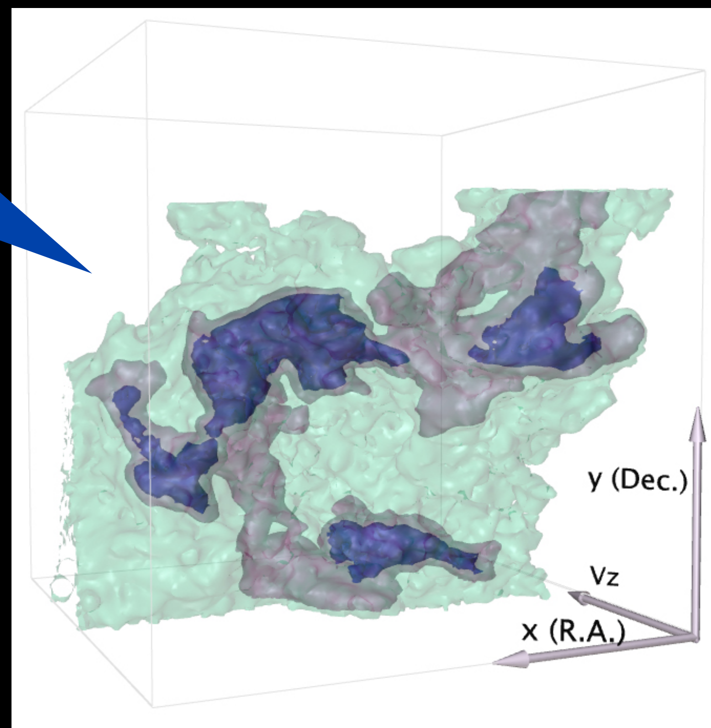
Statistics



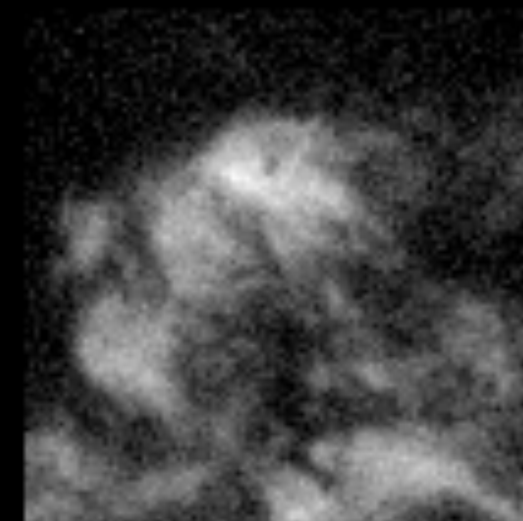
Data Abstraction



Ask me about “3D selection”

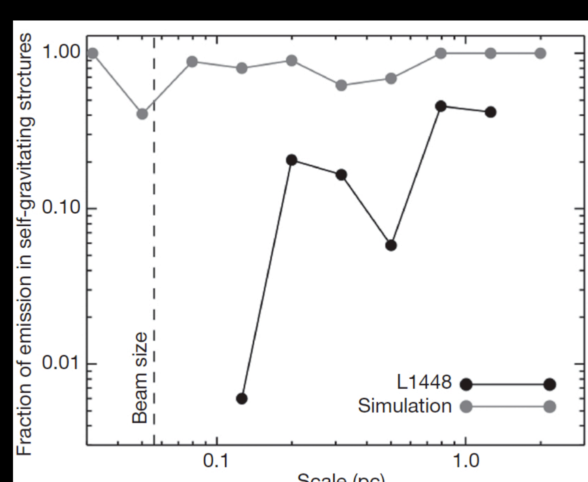


3D

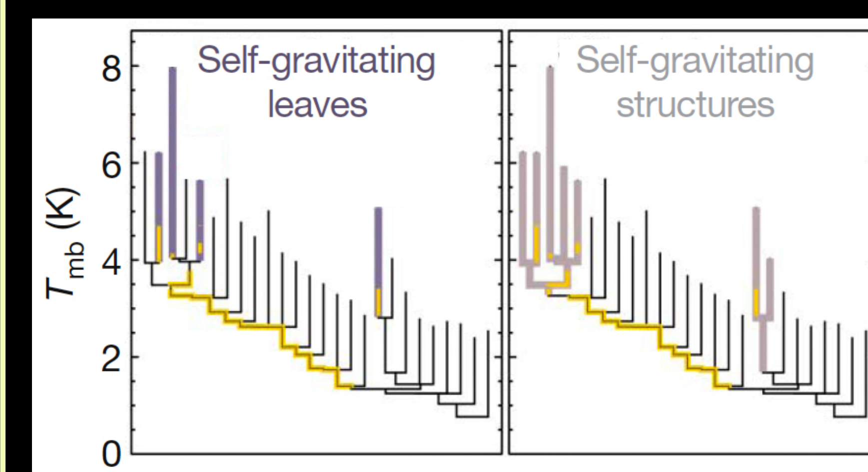


2D

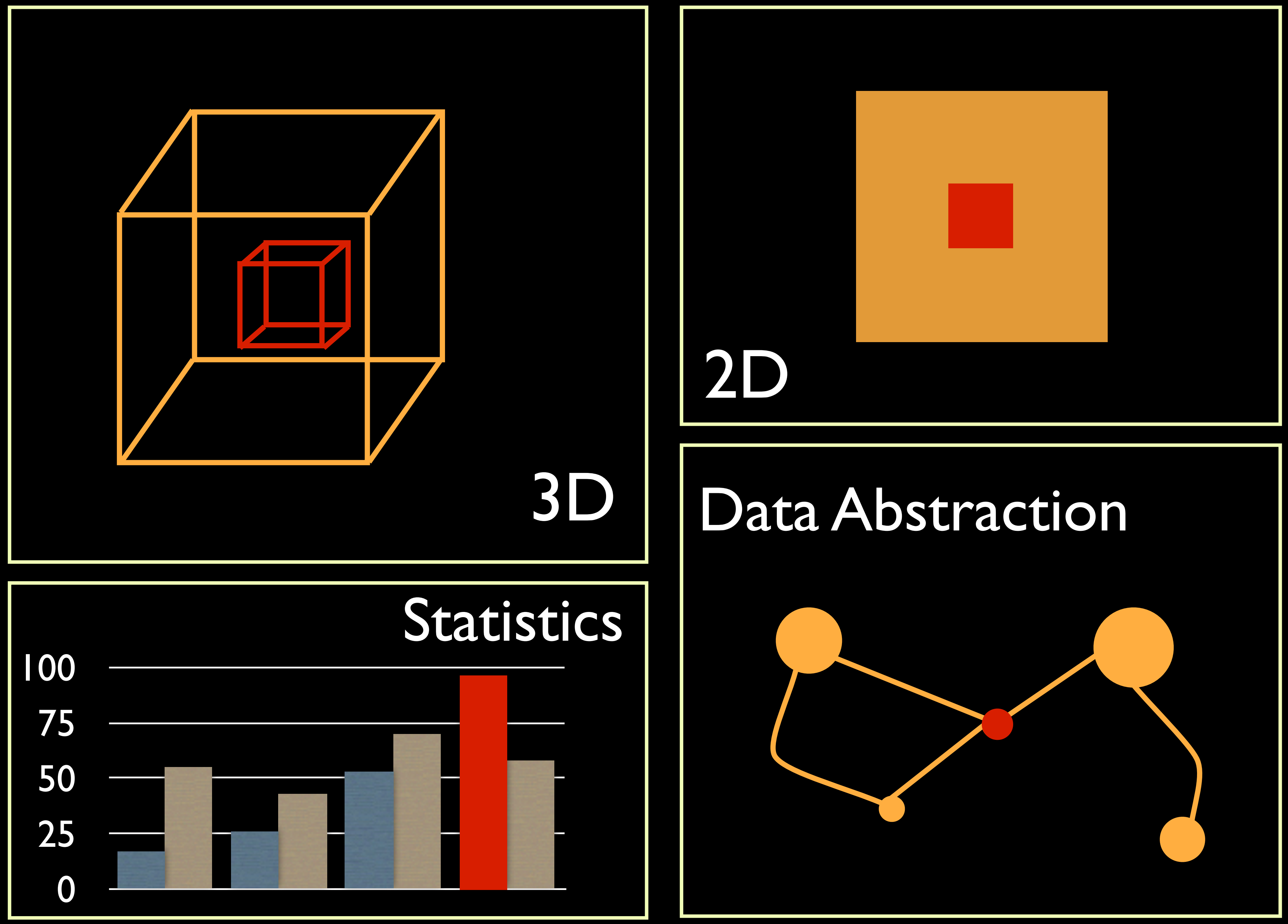
Statistics



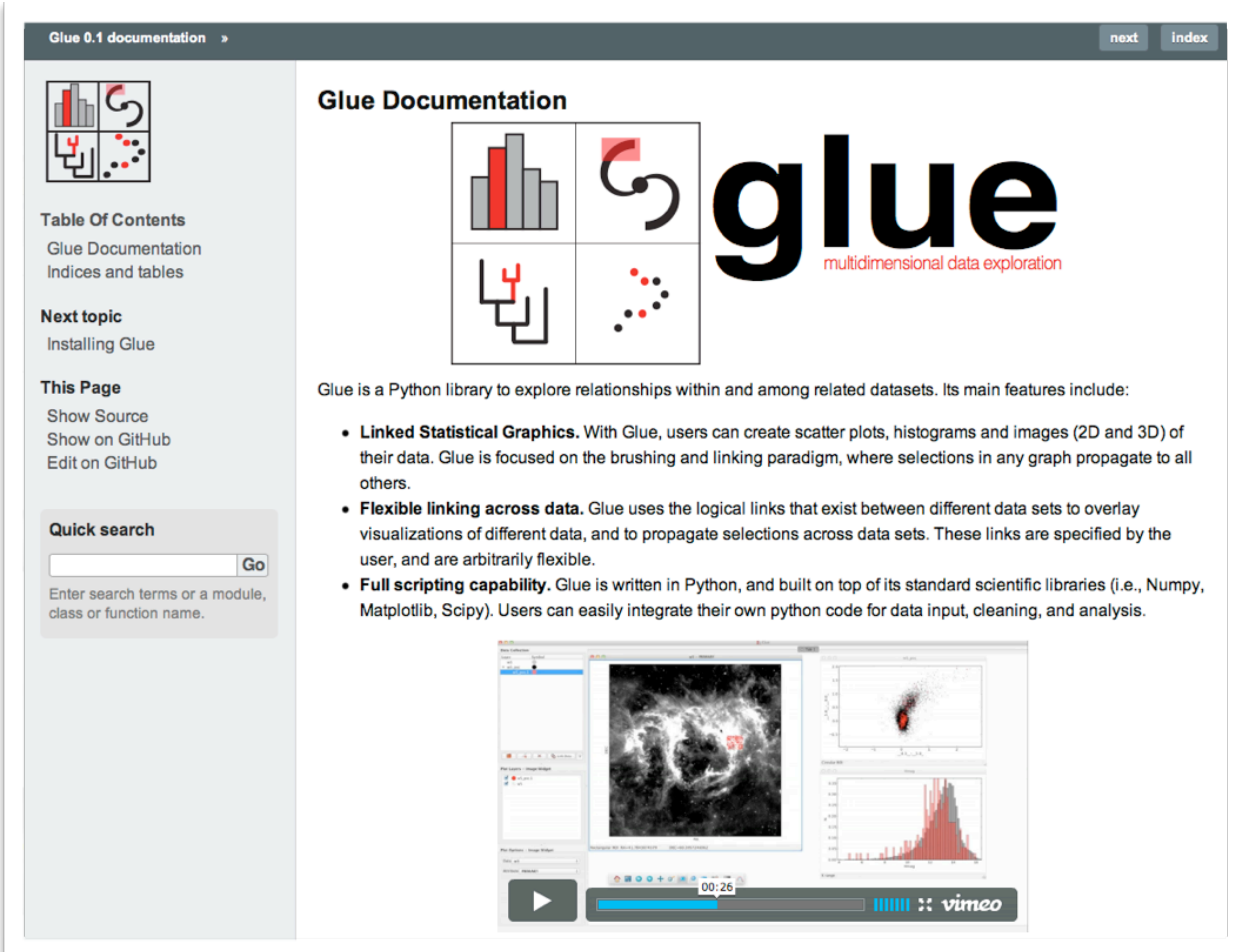
Data Abstraction



“Linked Views”



“Multidimensional Data Exploration” using “Linked Views”



Glue 0.1 documentation »

next index

Table Of Contents

- Glue Documentation
- Indices and tables

Next topic

- Installing Glue

This Page

- Show Source
- Show on GitHub
- Edit on GitHub

Quick search

Go

Enter search terms or a module, class or function name.

Glue Documentation

glue

multidimensional data exploration

Glue is a Python library to explore relationships within and among related datasets. Its main features include:

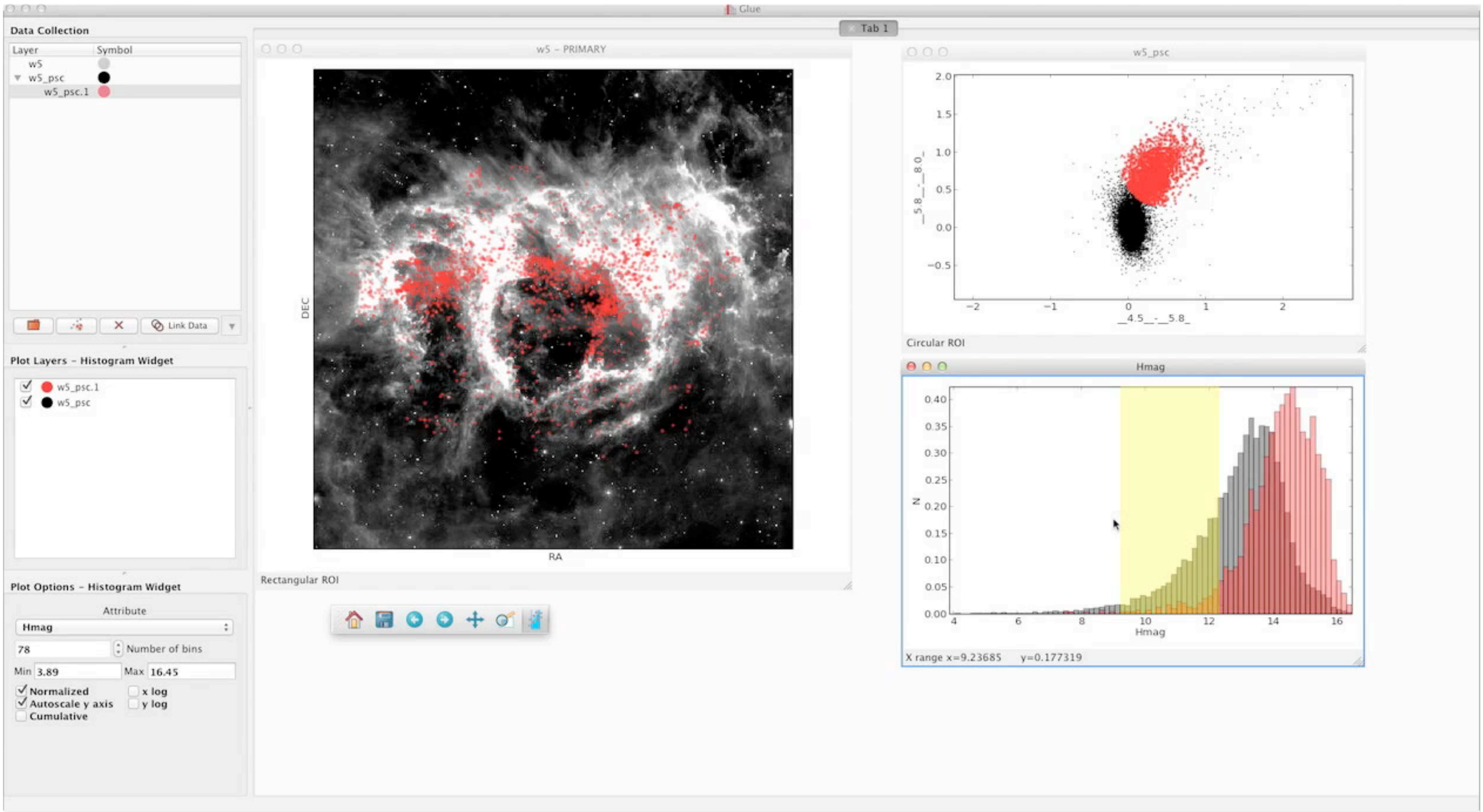
- **Linked Statistical Graphics.** With Glue, users can create scatter plots, histograms and images (2D and 3D) of their data. Glue is focused on the brushing and linking paradigm, where selections in any graph propagate to all others.
- **Flexible linking across data.** Glue uses the logical links that exist between different data sets to overlay visualizations of different data, and to propagate selections across data sets. These links are specified by the user, and are arbitrarily flexible.
- **Full scripting capability.** Glue is written in Python, and built on top of its standard scientific libraries (i.e., Numpy, Matplotlib, Scipy). Users can easily integrate their own python code for data input, cleaning, and analysis.

00:26

vimeo

*Glue collaboration: **Beaumont**, Borkin, Goodman, Pfister, Robitaille*

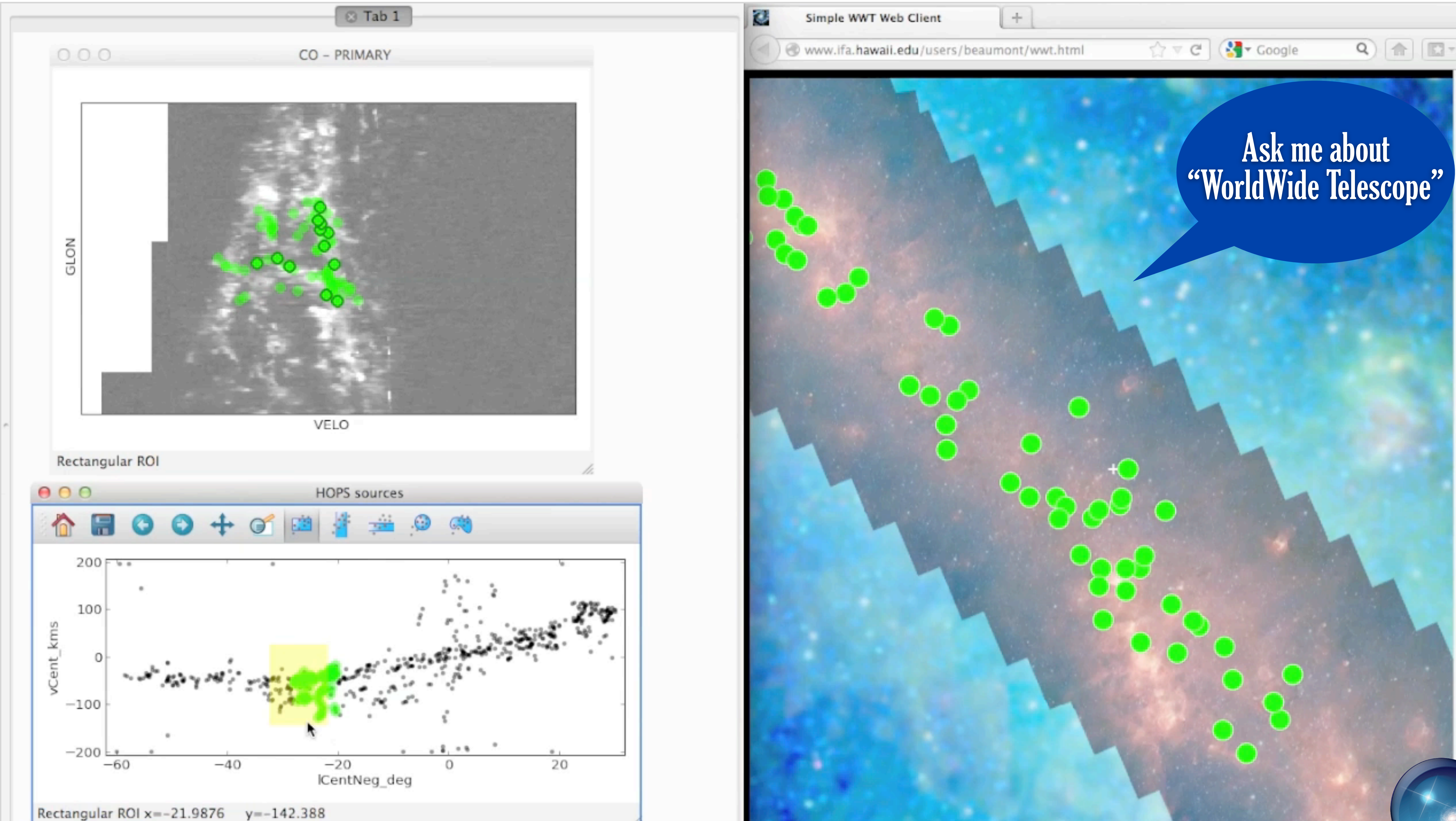
“Multidimensional Data Exploration” using “Linked Views”



glue
multidimensional data exploration

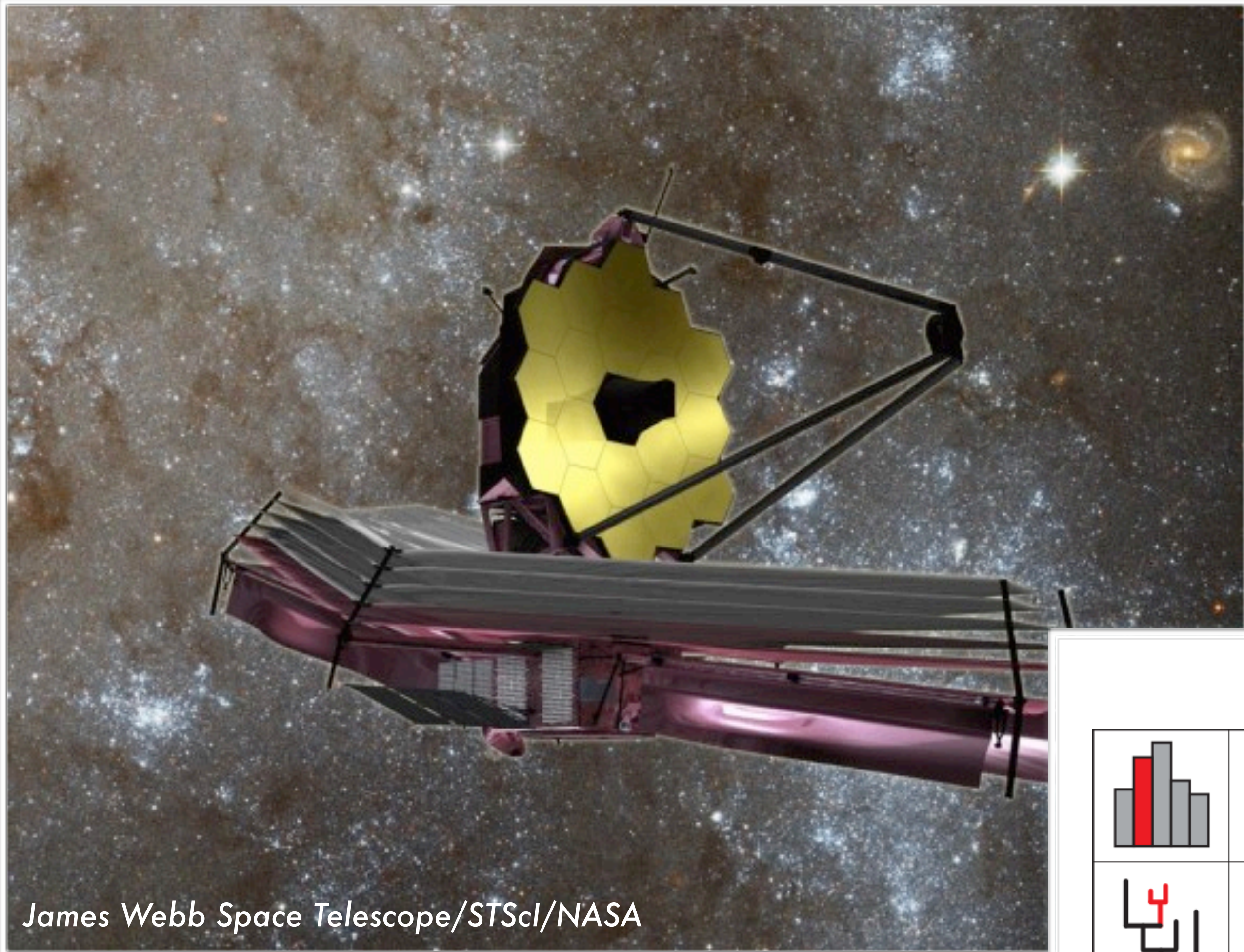
Glue collaboration: ***Beaumont****, Borkin, Goodman, Pfister, Robitaille*

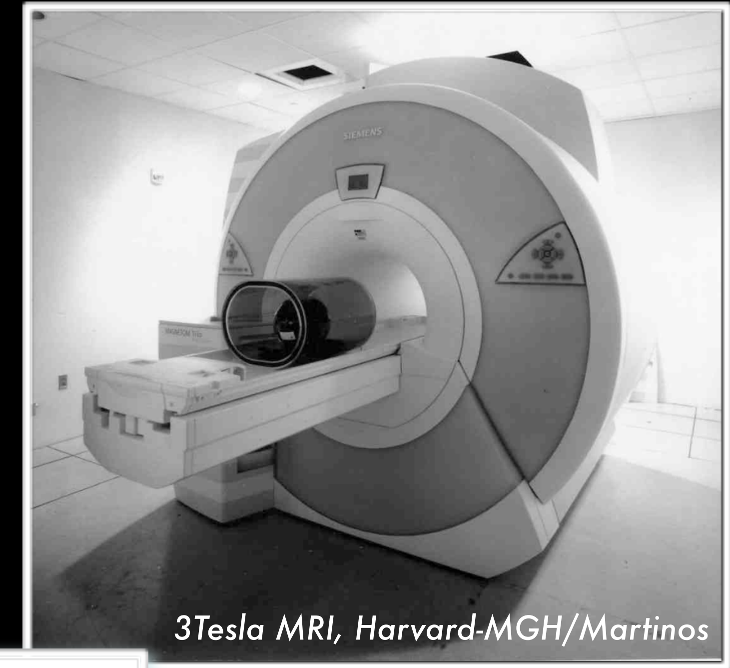
“Multidimensional Data Exploration” using “Linked Views”



glue

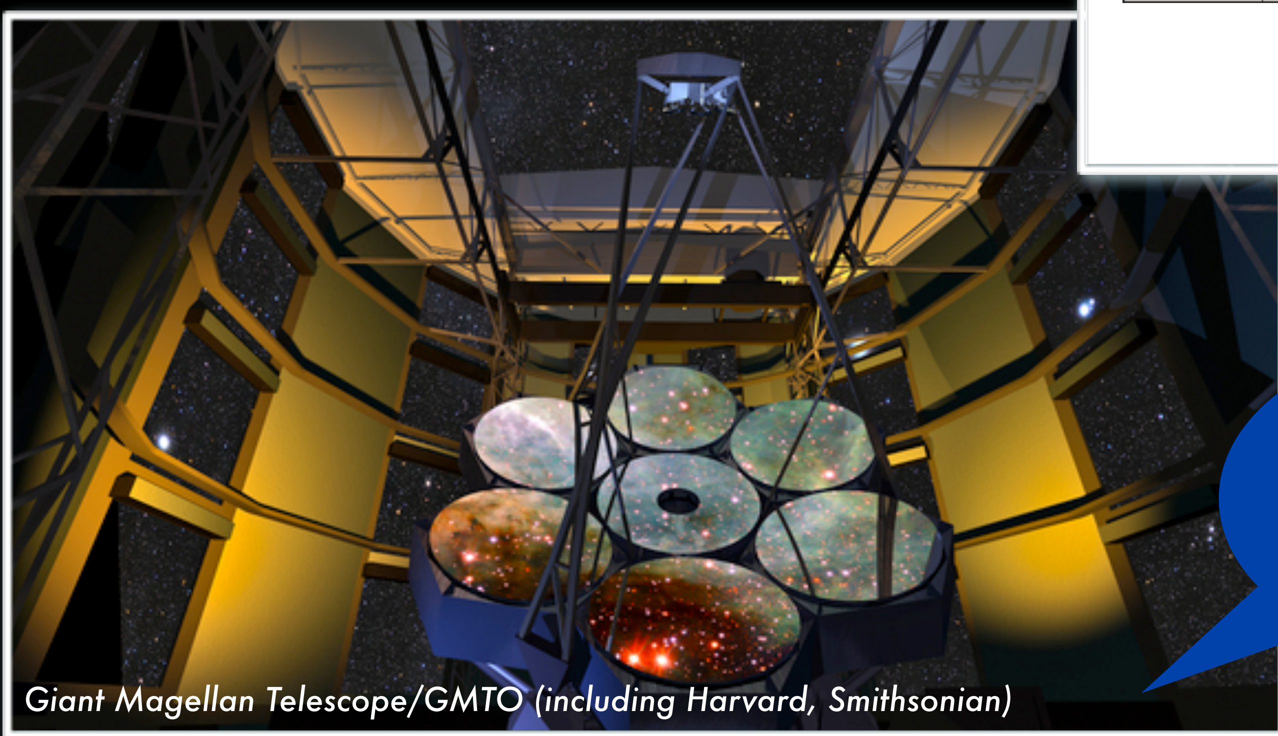
Glue collaboration: ***Beaumont****, Borkin, Goodman, Pfister, Robitaille*


James Webb Space Telescope/STScI/NASA


3Tesla MRI, Harvard-MGH/Martinos

glue
multidimensional data exploration

NASA

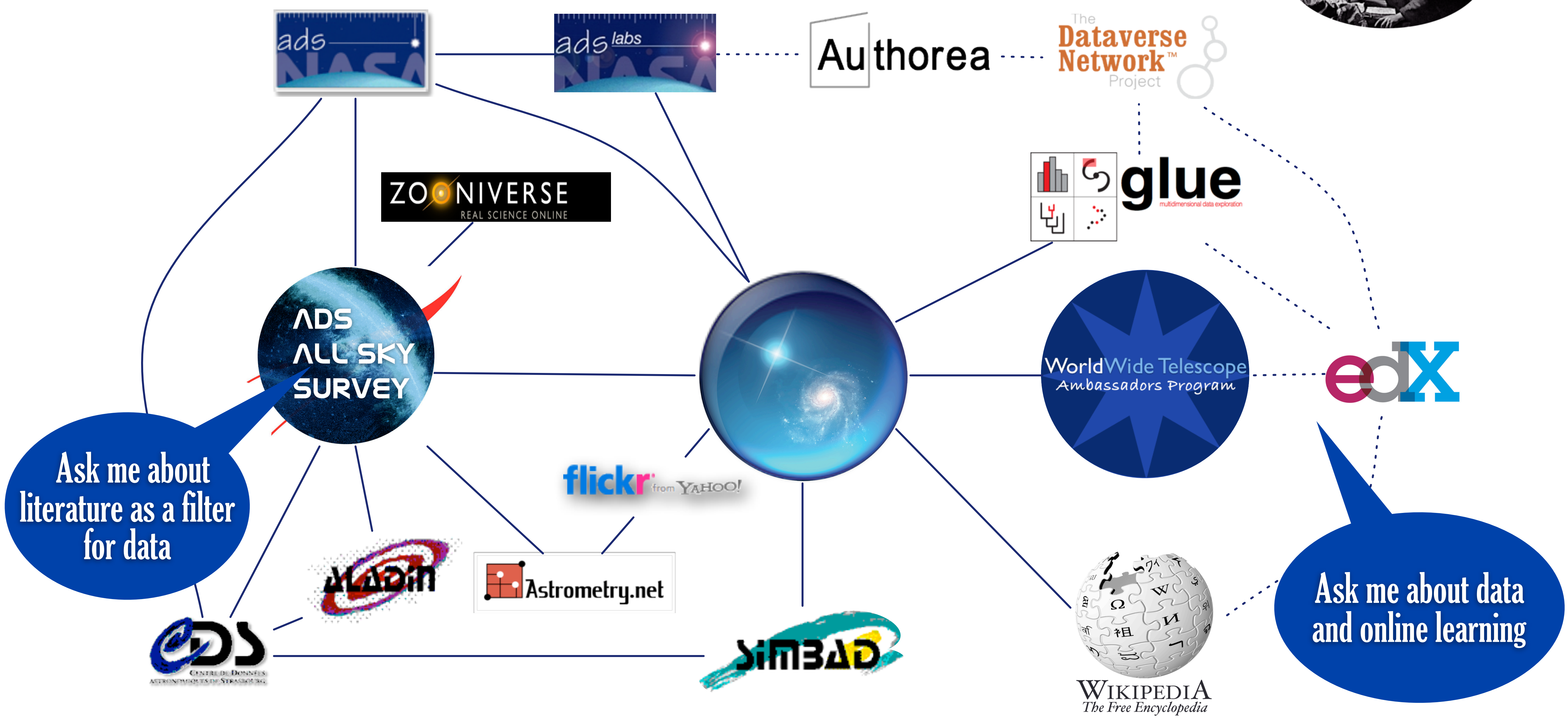

Giant Magellan Telescope/GMTO (including Harvard, Smithsonian)

Ask me about data sharing and big facilities


MEG, Harvard-MGH/Martinos

SEAMLESS ASTRONOMY

Linking scientific data, publications, and communities



https://www.cfa.harvard.edu/~agoodman/seamless/

Supported by Microsoft Research, NSF, NASA, Harvard, Smithsonian

Made possible by MANY collaborators, listed at projects.iq.harvard.edu/seamlessastronomy

Experience WWT at **worldwidetelescope.org**

Evolution

ASTROPHYSICAL JOURNAL

AN INTERNATIONAL REVIEW OF SPECTROSCOPY AND ASTRONOMICAL PHYSICS

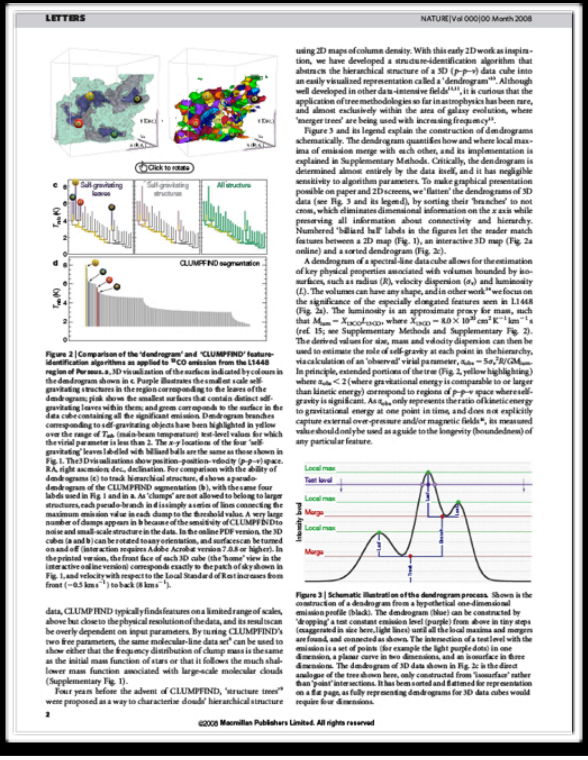
VOLUME I JANUARY 1895 NUMBER 1

ON THE CONDITIONS WHICH AFFECT THE SPECTRO-PHOTOGRAPHY OF THE SUN.

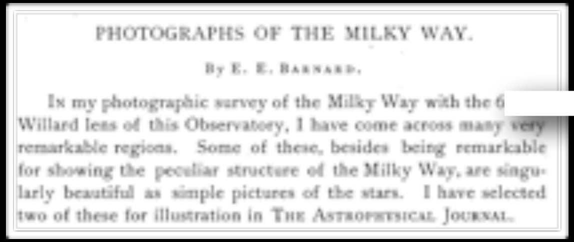
By Albert A. Michelson.

The recent developments in solar spectro-photography are in great measure due to the device originally suggested by Janssen and perfected by Hale and Deslandres, by means of which a photograph of the Sun's prominences may be obtained at any time as readily as it is during an eclipse. The essential features of this device are the simultaneous movements of the collimator-slit across the Sun's image, with that of a second slit (at the focus of the photographic lens) over a photographic plate. If these relative motions are so adjusted that the same spectral line always falls on the second slit, then a photographic image of the Sun will be reproduced by light of this particular wave-length.

Evidently the process is not limited to the photography of the prominences, but extends to all other peculiarities of structure which emit radiations of approximately constant wave-length; and the efficiency of the method depends very largely upon the *contrast* which can be obtained by the greater enfeeble-



1665 ..230 yr... 1895 ...114 yr... 2009 ...4 yr... 2013



PHOTOGRAPHS OF THE MILKY WAY.

By E. E. Barnard.

In my photographic survey of the Milky Way with the 6 Willard lens of this Observatory, I have come across many very remarkable regions. Some of these, besides being remarkable for showing the peculiar structure of the Milky Way, are singularly beautiful as simple pictures of the stars. I have selected two of these for illustration in The Astrophysical Journal.