

ASCOT: AStrophysical COllaborative Toolkit

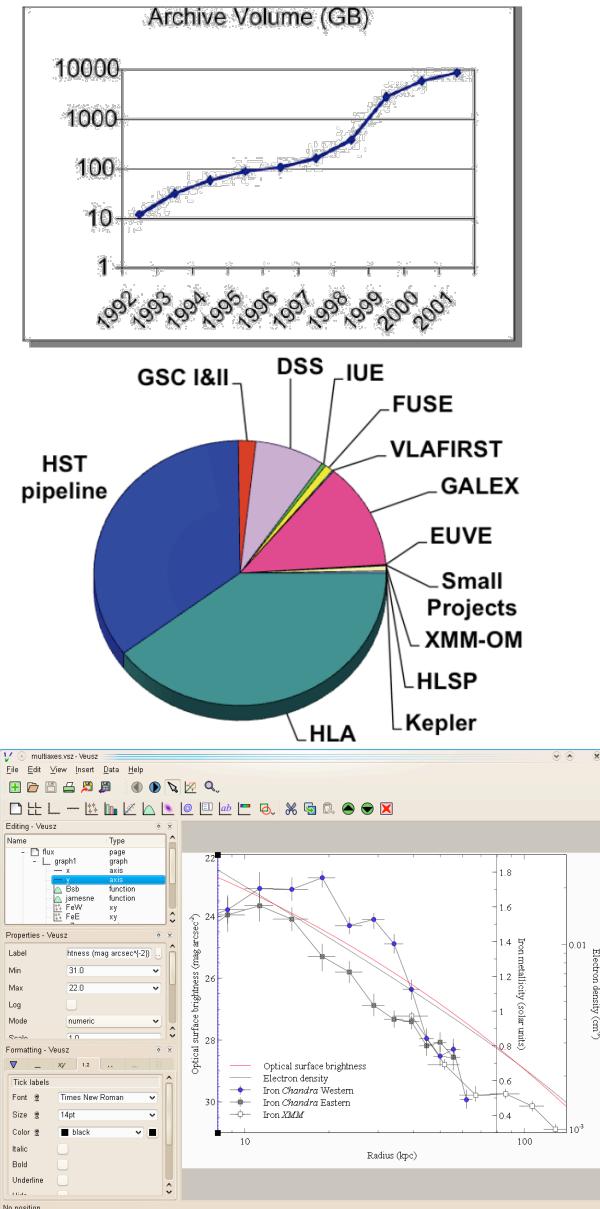
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University of Washington

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A Surfeit of Riches.....

- **Data and Analytics in Astronomy**
 - Large Heterogeneous archives
 - Distributed across US and the world
 - Common protocols but range of UIs
 - Hard to customize an interaction
 - Diversity of Powerful Tools
 - Topcat, Veusz, DS9, Data Miner
 - Rich and complex desktop applications
 - Learning curve not always shallow
 - UI not always intuitive
 - Hard to customize and adapt
 - Want to Simple Intuitive Interfaces
 - Ease of use
 - Customizable
 - Shareable



Analytics Outside of Astronomy

The image is a collage of several web-based applications and interfaces, illustrating how analytics can be applied outside of traditional astronomy:

- Embedded KML Viewer:** A map showing a globe against a starry background. It includes a compass rose and a vertical scale bar. Copyright information at the bottom reads: © 2010 Google, © 2010 Europa Technologies, US Dept of State Geographer, © 2010 Tele Atlas.
- Gmail:** An inbox titled "TOP NEWS STORY" containing a single message represented by a small thumbnail image.
- Weather:** A weather forecast for Seattle, WA. Current conditions: Cloudy at 54°F. Wind: SE at 5 mph, Humidity: 79%. Daily forecast from Thursday to Sunday: 60°/51°, 57°/47°, 57°/50°, 52°/47°.
- Google Map Search:** A map of San Francisco, California, showing major roads like 101, 80, and 280. Labels include Presidio of San Francisco, Marina District, South Beach, Alameda Naval Complex, and Potrero Hill.
- Google Calendar:** A calendar for October 2010. The 21st is highlighted as "Today (Thu, Oct 21)". Events listed for that day include: 10:30am UW LSST meeting, 12:00pm CalSim phonecon, 12:30pm esciene brown bag, 1:00pm LSST Management Phonecon, and 4:00pm Colloquium.
- Google Notebook:** A notebook titled "My Notebook" with two entries:
 - Ned and SIMBAD Ned works for < 0.5 degrees SIMBAD
 - Week 26 August: Phone cons: David Malin GEMS data
- Sci & Environment:** A news feed with the headline "Probe sweeps past". Below it, a chart shows stock performance: Dax at 6734.69 (▲ 116.89) and Cac 40 at 3916.78 (▲ 73.84). A note states "15 minute delay | Terms and Conditions".

QuickTime Player File Edit View Share Window Help

Ascot Stop Recording Google

http://sky.astro.washington.edu:8081/container/ http://arxiv.h/0609165v2 http://www...ement=True http://www...ement=True ecohaus | Kitchen Projects MacPorts Guide #19397 (scip... - MacPorts Re:[Fink-be...ilding open Apple Yahoo! Google Maps YouTube >>

Viewport Sky | toggle

Image © 2007 DSS Consortium
Image © 2007 SDSS

Monoceros

RA 6h53m06.59s Dec - 6°34'22.78"

80°00'00.00" arcdegrees

Name Resolve | toggle

Enter object or RA and DEC Go e.g. "M67" or "190 00 00 -11 37 21.2"

Data Query | toggle

Dataset Name:
 SDSS Stars SDSS Galaxies
Catalog: SDSS
Query String:

Submit

Viewport Bounds
ra between -75.5518 and 160.7827 and
dec between -25.0000 and 59.5996

Plot | toggle

Dataset: X Axis: Y Axis:
 Plot
Selection Color: red Select Zoom Info

Data Gadget | toggle

DataGadget v0.1

Dataset Selector | toggle

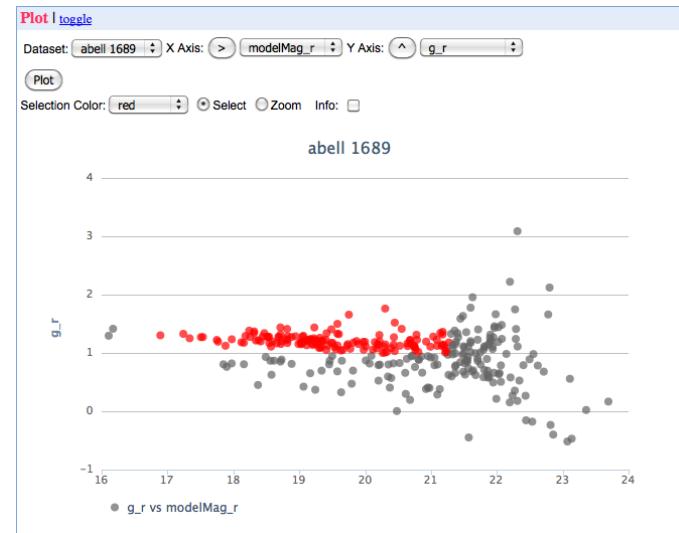
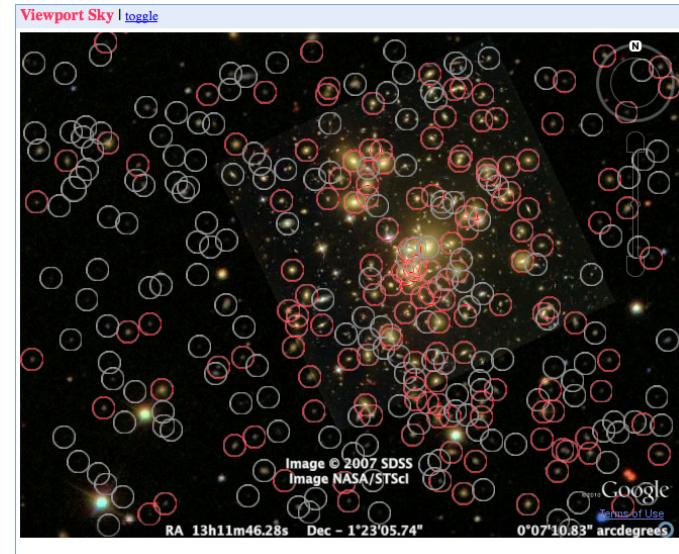
Plot | toggle

Dataset: X Axis: Y Axis:
 Plot
Selection Color: red Select Zoom Info

Data Table | toggle

ASCOT: A Collaborative Gadget Framework

- **Browser-based Exploration**
 - Fast inter-gadget communication
 - Event driven (register and unregister)
 - Compact and efficient (data gadget)
 - No client download
- **Customizable**
 - Embed in web pages or gadget servers
 - User selects tools (configurable)
 - Name spaces so we choose which components interact
- **Shareable**
 - Scales to a few thousand points
 - Share interface or share view (future)
 - Cloud-based applications



Collaborative Astronomy (ASCOT)

- **Social Networking Tools in Astronomy**
 - Intuitive and responsive interface
 - Customizable access to data and analytics
 - Scalable through cloud services
 - Sharable
- **Alpha Release**

<http://ssg.astro.washington.edu/research.shtml>

Please send us feedback