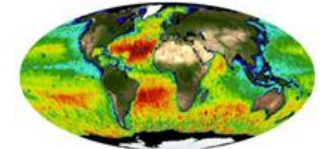


Overview of PO.DAAC Support for Aquarius/SAC-D



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JPL

Aquarius Science Team Meeting
Buenos Aires, Argentina, 2012



Jet Propulsion Laboratory
California Institute of Technology

PO.DAAC Aquarius Support

PO.DAAC <http://podaac.jpl.nasa.gov>

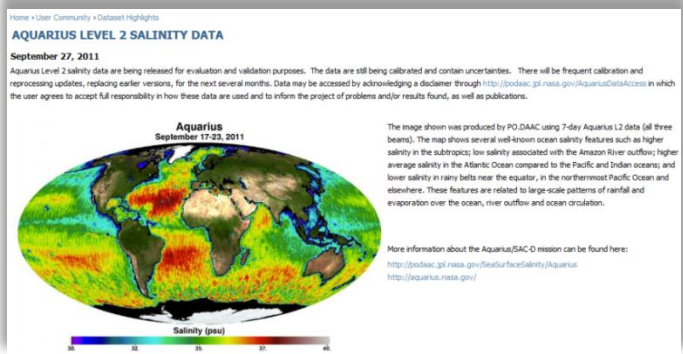
- NASA data archive center for physical oceanography
- Designated repository & distribution node for Aquarius data



Aquarius Information on PO.DAAC Website

- General information pages on Salinity, Aquarius
- Aquarius on PO.DAAC Forum
- Aquarius Data Announcements
 - Announcements & Highlights page
 - Emails to registered users list
- Coordination with Aquarius Project website

<http://podaac.jpl.nasa.gov/SeaSurfaceSalinity>
<http://podaac.jpl.nasa.gov/aquarius>



<http://podaac.jpl.nasa.gov/highlights/>

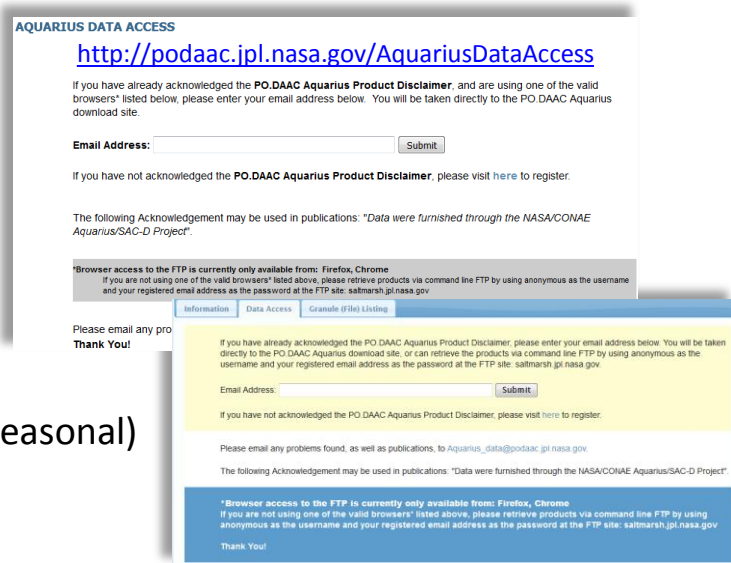
ANNOUNCEMENTS		
Date	Announcement	Description
2012-03-20	Aquarius V1.2.3 DATA SET NOW AVAILABLE	LEVEL 2 and 3 DATA FOR VERSION V1.2.3 OF THE AQUARIUS/SAC-D DATA SET NOW AVAILABLE
2012-03-14	Aquarius/SAC-D Spacecraft Safehold Event	The PO.DAAC would like to announce the availability of Level 2 and 3 data for version 1.2.3... The PO.DAAC would like to announce that the Aquarius/SAC-D spacecraft was recently in safehold. The spacecraft returned to science mode operation at 15:58 UTC today. While the...
2012-03-12	Aquarius V1.2.2 Data Now Available	LEVEL 2 and 3 DATA FOR VERSION V1.2.2 OF THE AQUARIUS/SAC-D DATA SET NOW AVAILABLE
2012-02-21	New PODAAC Aquarius Level 3 Image Browser Tool	The PO.DAAC would like to announce the availability of Level 2 data for version 1.2.2 of the... We are pleased to announce the release of PO.DAAC's new, interactive Aquarius Level 3 image browser. The tool is now available online at...
2012-02-15	Level 2 and Level 3 data for version V1.2DR of the Aquarius/SAC-D data set now available	The PO.DAAC would like to announce the availability of both Level 2 and Level 3 data for version V1.2DR of the Aquarius/SAC-D data set. The differences between V1.2DR and V1.2 result from the...
2012-02-07	PO.DAAC Workshop at 2012 Ocean Sciences Meeting, February 21	The NASA/JPL Physical Oceanography Distributed Active Archive Center (PO.DAAC) is hosting a workshop at the 2012 Ocean Sciences Meeting in Salt Lake City, UT on Feb. 21, 2012...
2012-02-01	Aquarius Level 3 V1.2 evaluation dataset is now available	The Aquarius Level 3 V1.2 evaluation dataset is now available at the PO.DAAC Level 3 derived...

<http://podaac.jpl.nasa.gov/announcements>

PO.DAAC Aquarius Support

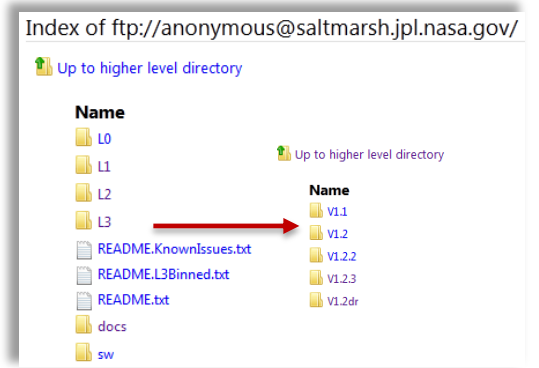
Aquarius Data at PO.DAAC

- Operational ingest of source granules from NASA/GSFC provider
- Versions: 1.1 , 1.2, 1.2dr, 1.2.3, 1.3, ...
- Products:
 - Level 0, 1A, 2 (all versions), Level 3 (since v1.2)
 - L3: Binned, Mapped SSS & Wind Speed (Daily, 7-day, Monthly, Seasonal)
- Entire time series available for all versions & products
- File Format: HDF5
- Data Reader Software in Matlab, IDL
- Documentation: Aquarius Data Users Guide (v3.5)



Aquarius Data Access

- Data Evaluation stage
- Simple Registration for the purposes of acknowledging the disclaimer
- Browser access to FTP site (except Safari)
- <ftp://saltmarsh.jpl.nasa.gov/>
- Future: Public access, also via Web-services (OpenDAP, THREDDS)



PO.DAAC Aquarius Support

Data Discovery

- Faceted Search of Dataset Metadata
- By: keyword, mission, platform, parameter, sensor, collection spatio-temporal attributes
- Exposure of key descriptive dataset metadata with access links

<http://podaac.jpl.nasa.gov/datasetlist?search=aquarius>

Online Tools

- Aquarius Level 3 Browser
- Future (once Public access)
 - L2 subsetter (HITIDE, Data Miner)
 - L3 subset/visualization (POET, LAS)

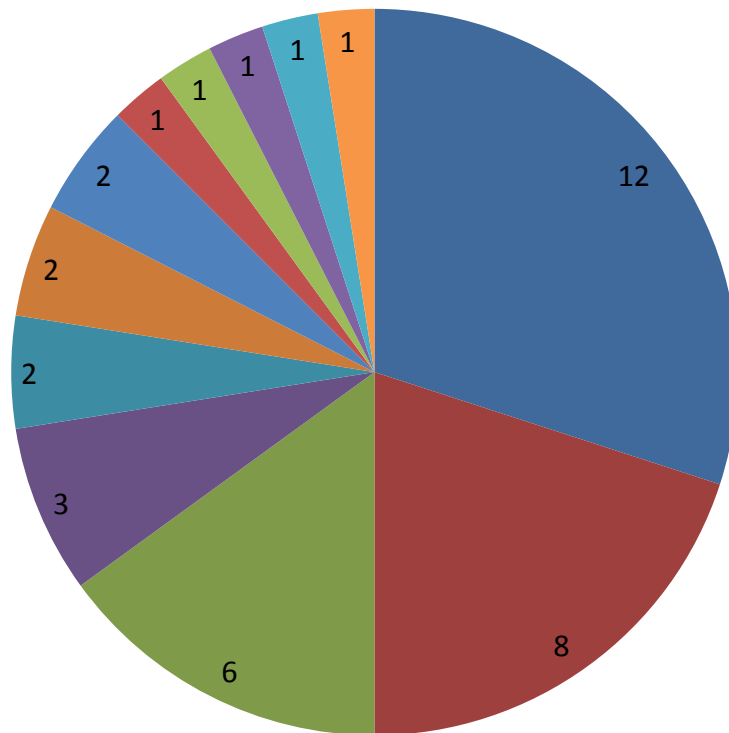
<http://podaac.jpl.nasa.gov/aquarius/gallery>

- User support services: podaac@podaac.jpl.nasa.gov
- Help-Desk System: catalog, assign, track status, report



Breakdown of Aquarius User Inquiries to PO.DAAC Help-Desk

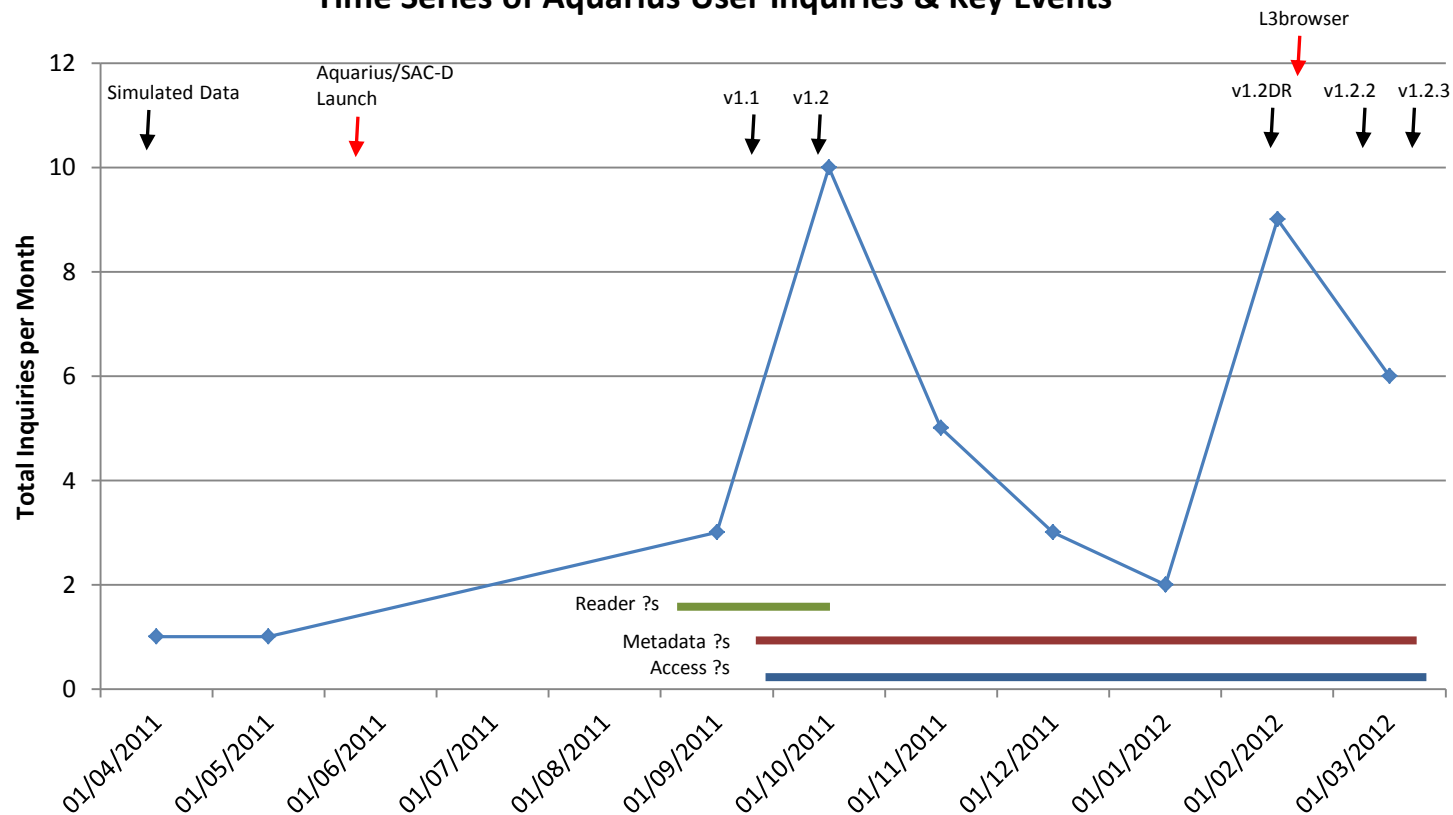
Total = 40, from 4/14/2011 - 3/31/2012



- FTP Access (Browser compatibility, temporary login issue, Filezilla, cmd line)
- Metadata & data interpretation (flags, variables, value ranges)
- Reader software for Aquarius HDF5 (Matlab: 4, IDL:1, Fortran: 1)
- General comments
- Data applications: estuarine studies
- Access/registration process
- Dataset completeness (simulated)
- Rendered imagery availability (Browse)
- THREDDS Access
- Aquarius user list
- Data file (.md5)
- Documentation

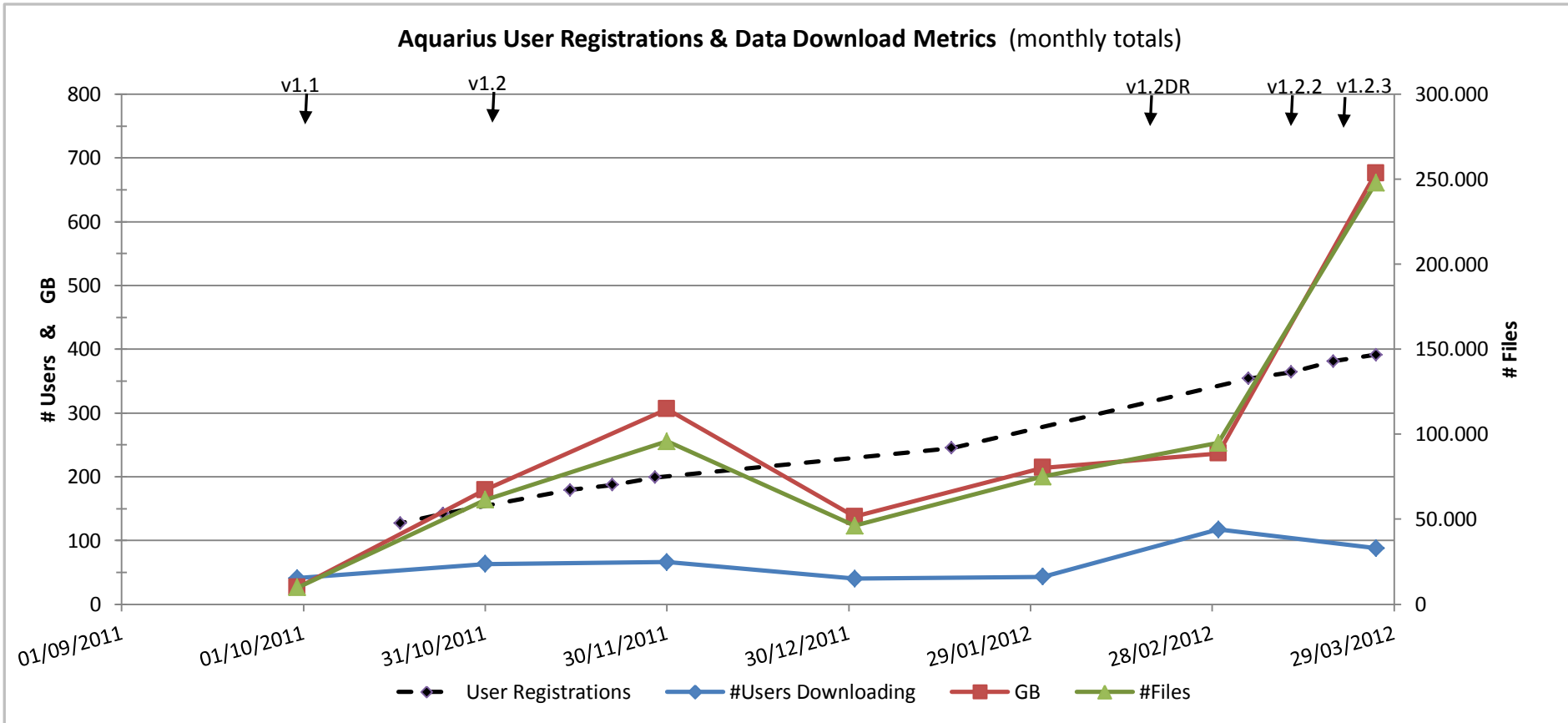
PO.DAAC Support of Aquarius Data Users (2/2)

Time Series of Aquarius User Inquiries & Key Events



Aquarius Data Usage Monitoring

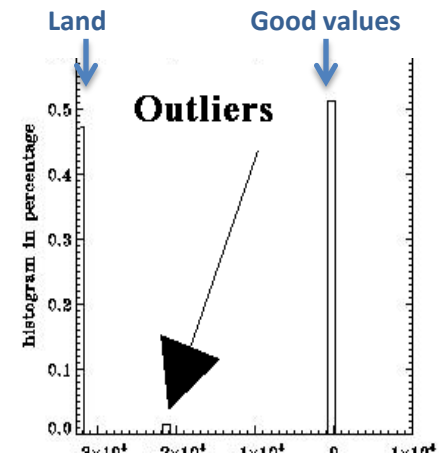
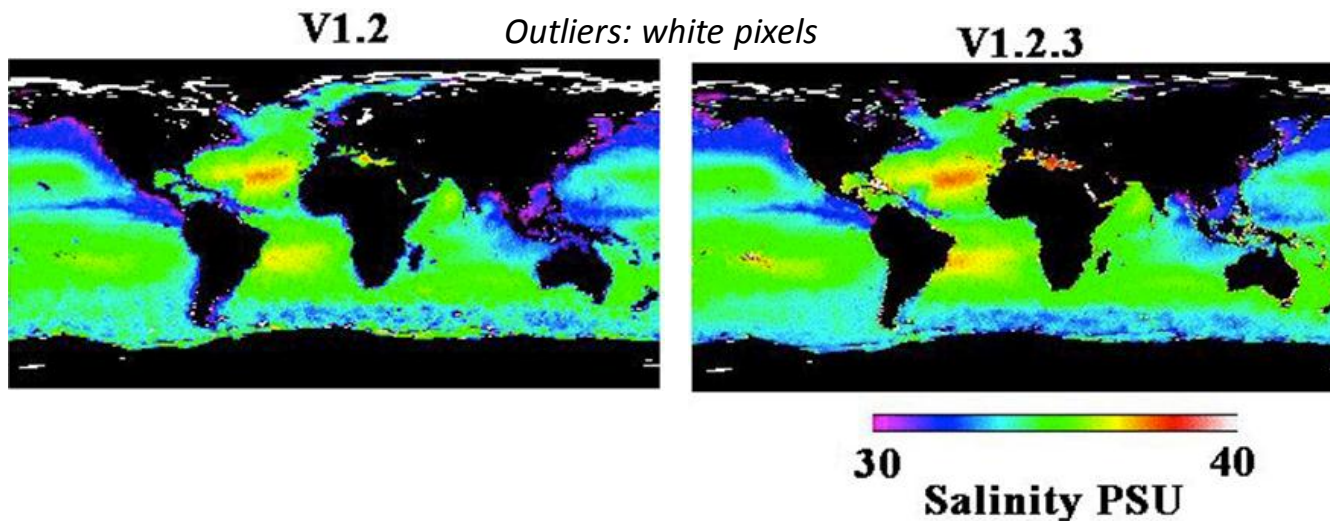
- Tracking of Aquarius user registrations: 407 users (as of 4/2/2012)
- PO.DAAC DMAS: advanced monitoring and reporting functionality (Data: granule, dataset, collection; User: IP)



- by dataset Level/Type: steady usage of L2 products; heightened interest in L3 products, especially mapped SSS
- by dataset version: shows all available versions of L2 products & L3 products still actively used

Aquarius L3 Data Quality Aspects

- Most users choose level 3 products for their applications
- Application of flags to level 2 data to create level 3 products will impact a large community of users
- Simple outlier analysis: Outliers defined as salinity values < 0 and > 45 PSU



- Outlier interpretation ?
- Current L3 metadata attributes: include max, min values, suggested range (\neq actual data range)
- Should use metadata to define suggested range of salinity values for users
- Suggest using metadata to define what flags have been applied at level 2 to get to Level 3 data

Discussion Points

PO.DAAC is hosting and providing timely access to the full range of Aquarius data sets and a variety of data monitoring and user support services and tools

Continue working closely with GSFC to ensure the timeliness and integrity of data transfers for distribution in addition to providing quality documentation and user support services, especially in light of continued growth of the Aquarius data collection and user community

Some Issues

- Crawl Instability
- Documentation
 - Keep user guide current and matching file metadata
 - User-friendlier metadata field descriptions
- Challenge Posed by Aquarius Data version proliferation will increase also as the time series grows:
 - maintenance/resource implications

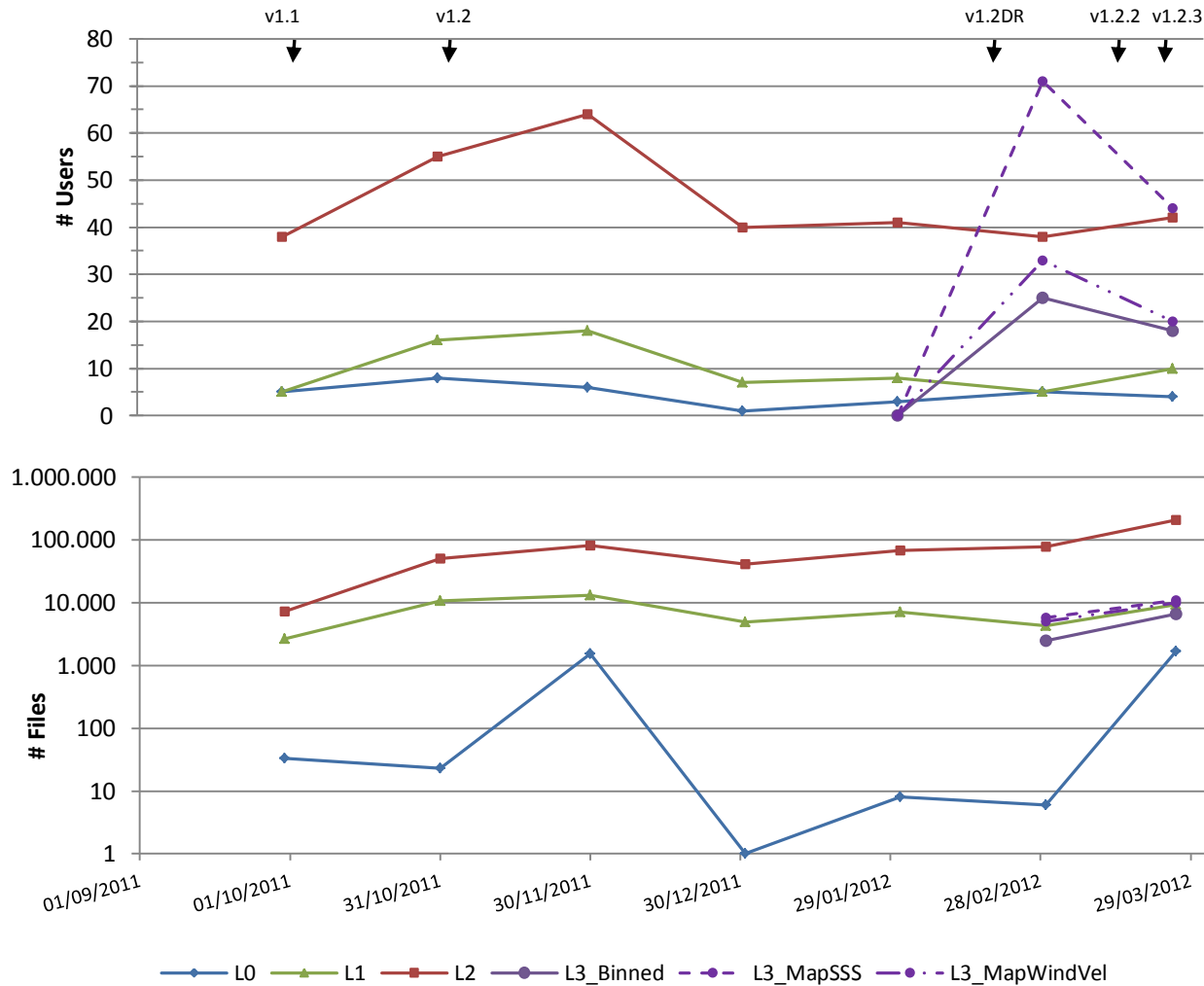
Planning/Coordination

- Continue supporting all versions or retire some? Timelines?
- Proactive approach to documentation and crawl interface aspects

BACKUP SLIDES

Aquarius Data Usage Monitoring (2/2)

Monthly Total Users & Files Downloaded by Product Level/Type



- Additional breakdowns by version: show all available versions of L2 products & L3 products still actively used