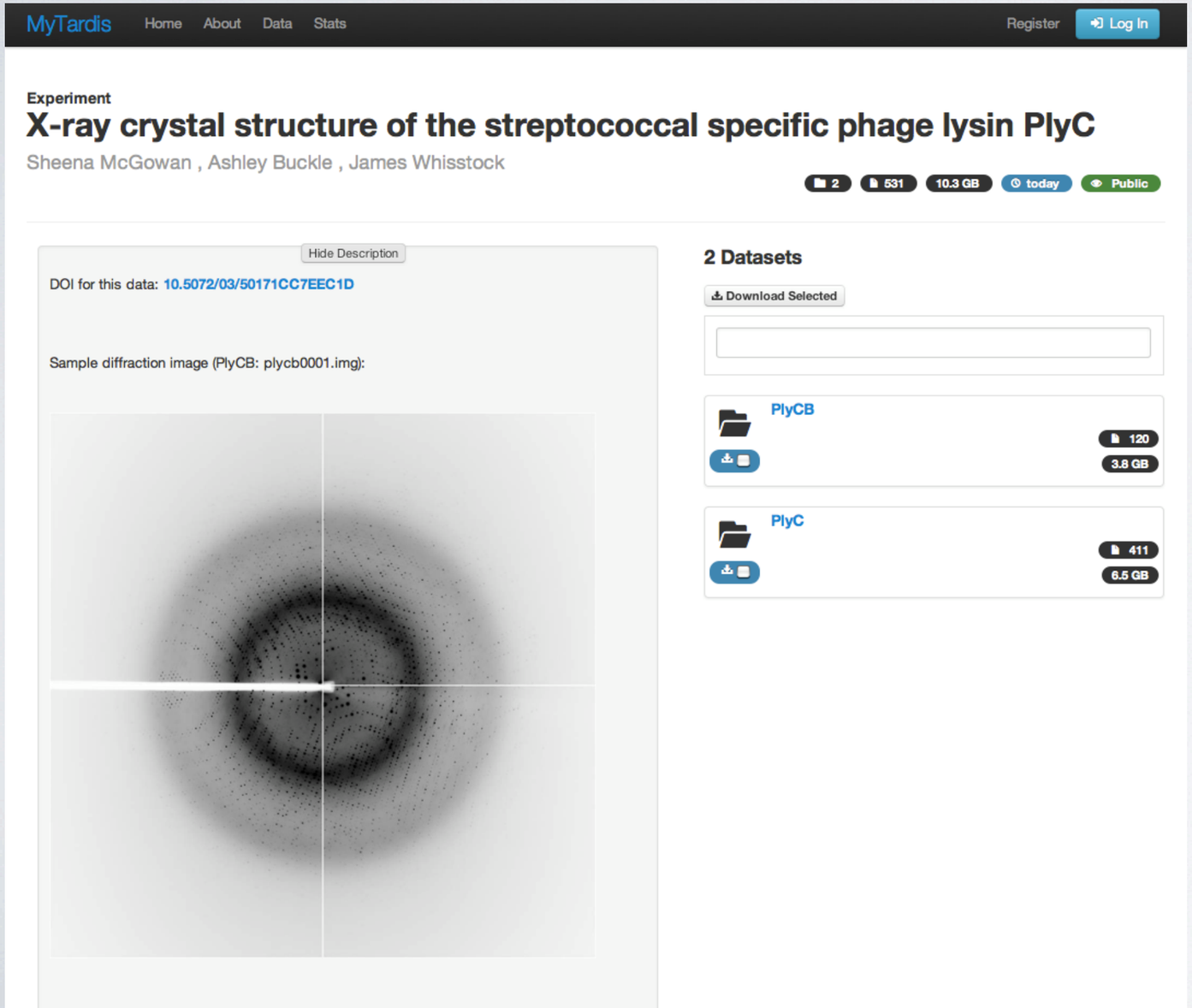
mytardis

Connecting scientific instrument data to people



- Solving the problem of archival, archival and citation of raw data
- Easy sharing, access and publication of terabyte datasets
- More than 2 million files, 20 terabytes collected automatically for access - and growing
- 18 code contributors (python, github.com/mytardis)

Contact
steve.androulakis@gmail.com

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Search

Experiment

X-Ray Diffraction Data

Steve Androulakis

1 3 54.0 MB 28th September 2012 Public

Describe

Toggle Full Description

A test of diffraction data such as that from the macromolecular beamlines at the Australian ...

Description Metadata Sharing Transfer Datasets

Share

Institution Monash University

Licensing This experiment data is licensed under Creative Commons Attribution 3.0 Australia (CC BY 3.0).

Administrators Mister Mytardis

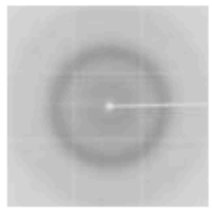
Download All ZIP TAR

Publish

1 Dataset

Download Selected

Just start typing to filter datasets based on description



Diffraction Dataset

3 54.0 MB

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and Provide..

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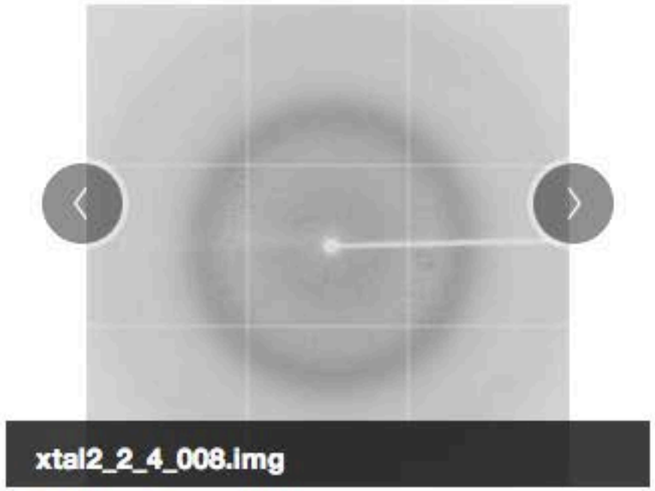
Dataset

Diffraction Dataset

From the experiment: X-Ray Diffraction Data

1 3 54.0 MB

Preview Images



3 Files

Download Selected Files

Search: Enter part or all of a filename, then press ent

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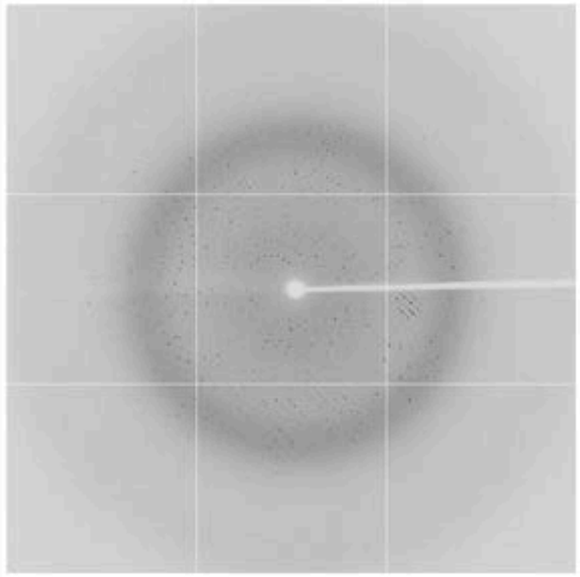
- xtal2_2_4_008.img (18.0 MB)
- xtal2_2_4_006.img (18.0 MB)
- xtal2_2_4_036.img (18.0 MB)

xtal2_2_4_008.img (18.0 MB)

TRD datafile	
Preview Image	
Detector Distance	299.947815 mm
Detector S/N	928
Direct Beam X-Pos	157.942017 mm
Direct Beam Y-Pos	160.654007 mm
Exposure Time	1.0 s
Image Size X	3072.0 px
Image Size Y	3072.0 px
Two Theta	0.0 °

Public Access

Step 1: Change Public Access:

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Sharing

Users

Users who have a share in this experiment:

Username	Name	Permissions
mytardis	Steve Androulakis	Read Edit Owner
oded	Oded Kleifeld	Read
bosco	Bosco Ho	Read
synchrotron	Synchrotron Test	Read Edit Owner

Change User Sharing

Groups

Groups who have a share in this experiment:

There are currently no groups with access to this experiment.

Change Group Sharing

Links

This experiment is private. A temporary link can be created by its owner(s) and privately shared for dir

Temporary access links provide full access to recipients regardless of an experiment's public status.

Temporary Link	Expiry	Granted By
Right click.. copy link	15th November 2012	mytardis
Right click.. copy link	7th December 2012	mytardis

Create New Temporary Link

User Sharing

Oded Kleifeld [oded] *(oded.kleifeld@monash.edu)* Read Edit Delete

Bosco Ho [bosco] *(Bosco.Ho@monash.edu)* Read Edit Delete

Synchrotron Test [synchrotron] *(Tom.Caradoc-Davies@synchrotron.org.au)* Read Edit Owner Edit Delete

Add new user

Username:

Permissions:

View Only

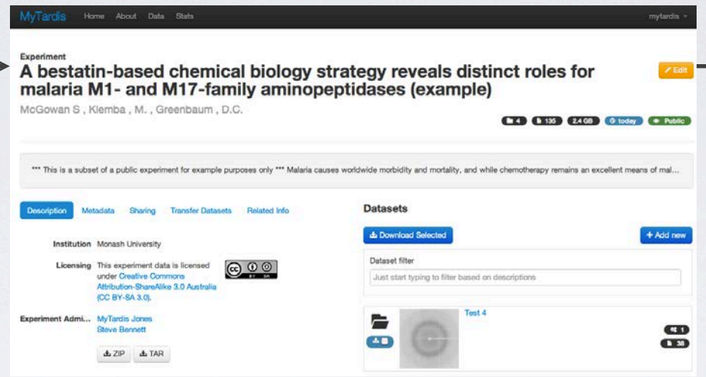
Owners have the ability to change access controls and share experiments with others.

+ Add User

capturing data at its origin

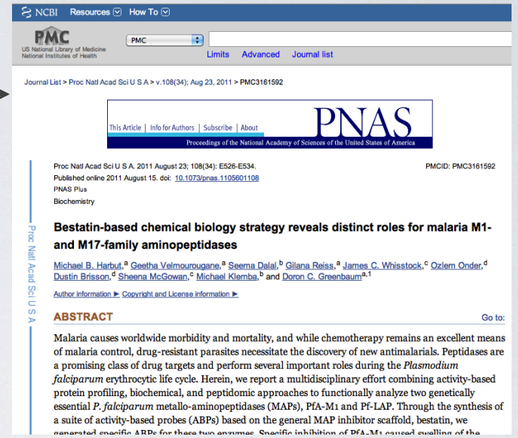
Australian Synchrotron

MyTardis @ Monash University



Make Public

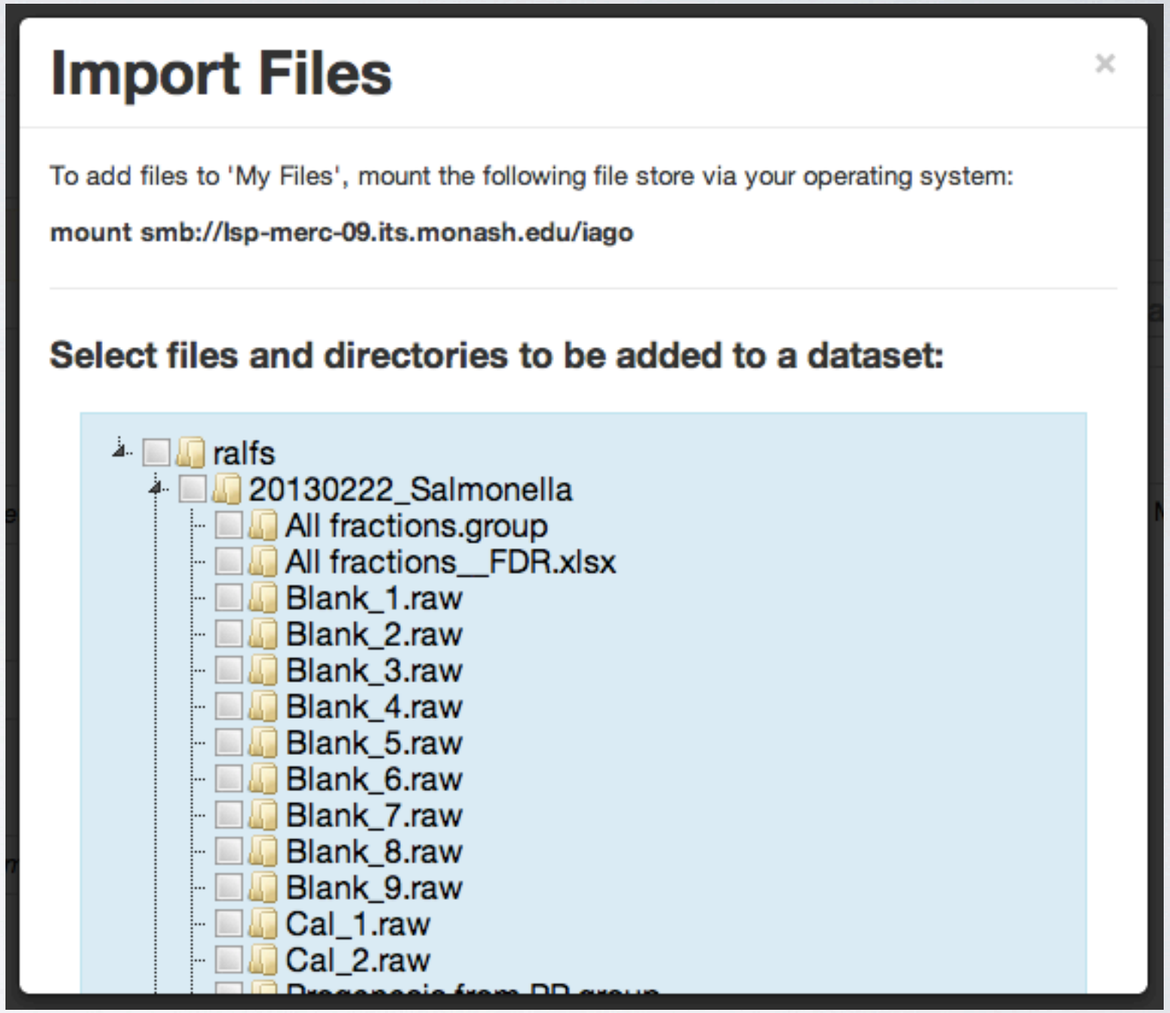
Cited In Papers

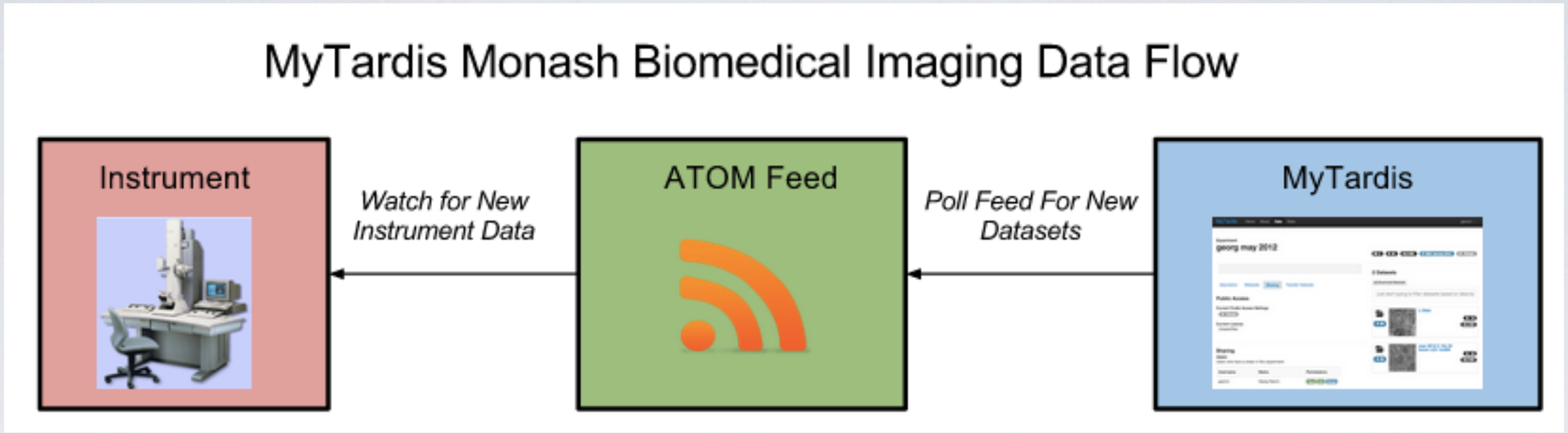


- Our scientists regularly generate large amounts of data at the Australian Synchrotron, so in collaboration, we connected their instruments to MyTardis for automatic capture of data.

- 4 nodes were established around Australia, servicing 8 universities. However, Monash University have recently made a deal with the Australian Synchrotron to store and mediate access to all users' data (starting with MX), regardless of their originating institution.

- 3rd party transfer between lab’s network storage drive and MyTardis
- User begins transfer via MyTardis
- User receives email when transfer has completed and metadata extracted / processed





Users of the Hitachi H7500 TEM have their data automatically collected in the web by MyTardis.

MyTardis stores their data privately with sharing options for collaborators and eventual publication.

Data is available for download within the CVL desktop.

Supporting Bioformats

http://www.openmicroscopy.org/site/support/bio-formats/supported-formats.html

Burleigh	.img
Canon DNG	.cr2, .crw
Cellomics	.c01
cellSens VSI	.vsi
DeltaVision	.dv, .r3d
DICOM	.dcm, .dicom
ECAT7	.v
EPS (Encapsulated PostScript)	.eps, .epsi, .ps
Evotec/PerkinElmer Opera Flex	.flex, .mea, .res
FEI	.img
FEI TIFF	.tiff
FITS (Flexible Image Transport System)	.fits
Gatan Digital Micrograph	.dm3
Gatan Digital Micrograph 2	.dm2
GIF (Graphics Interchange Format)	.gif
Hamamatsu Aquacosmos NAF	.naf
Hamamatsu HIS	.his
Hamamatsu ndpi	.ndpi
Hamamatsu VMS	.vms
Hitachi S-4800	.txt, .tif, .bmp, .jpg
ICS (Image Cytometry Standard)	.ics, .ids

Datafile Metadata

For the file: **test9.dm3 (2.2 MB)**

Bioformats Information

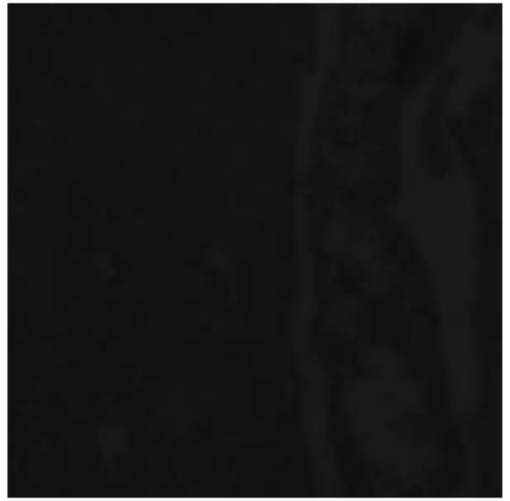
Preview Image	
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Image Attribute	Indexed = false (true color)
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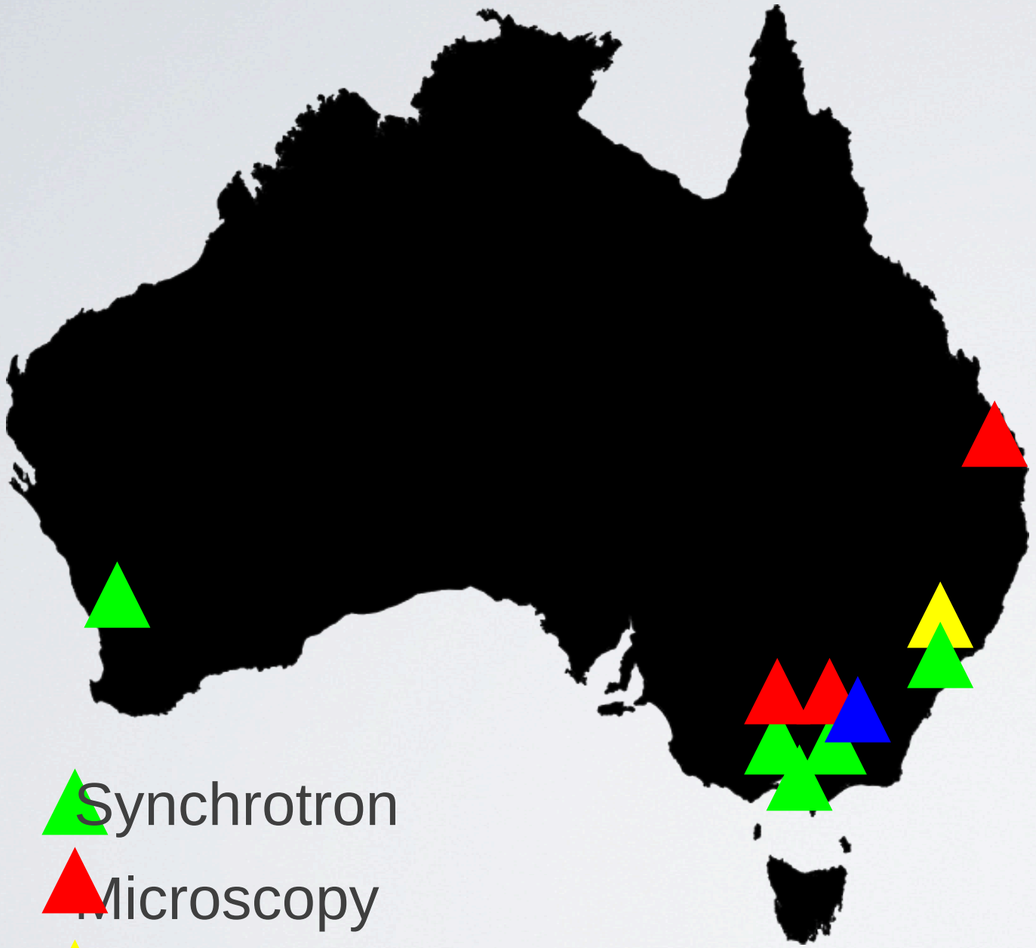
Growth



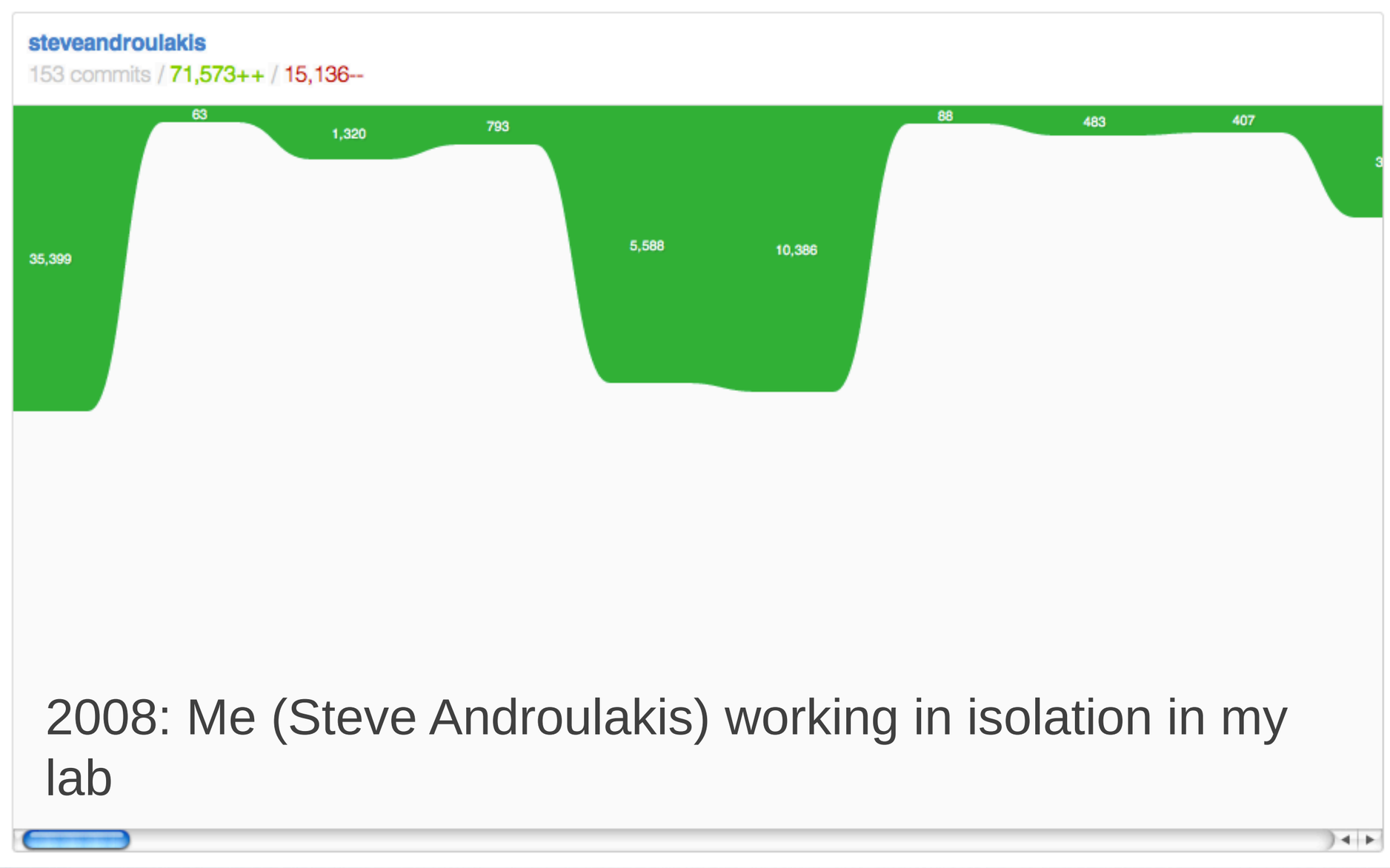
Synchrotron

Microscopy

Neutron Source

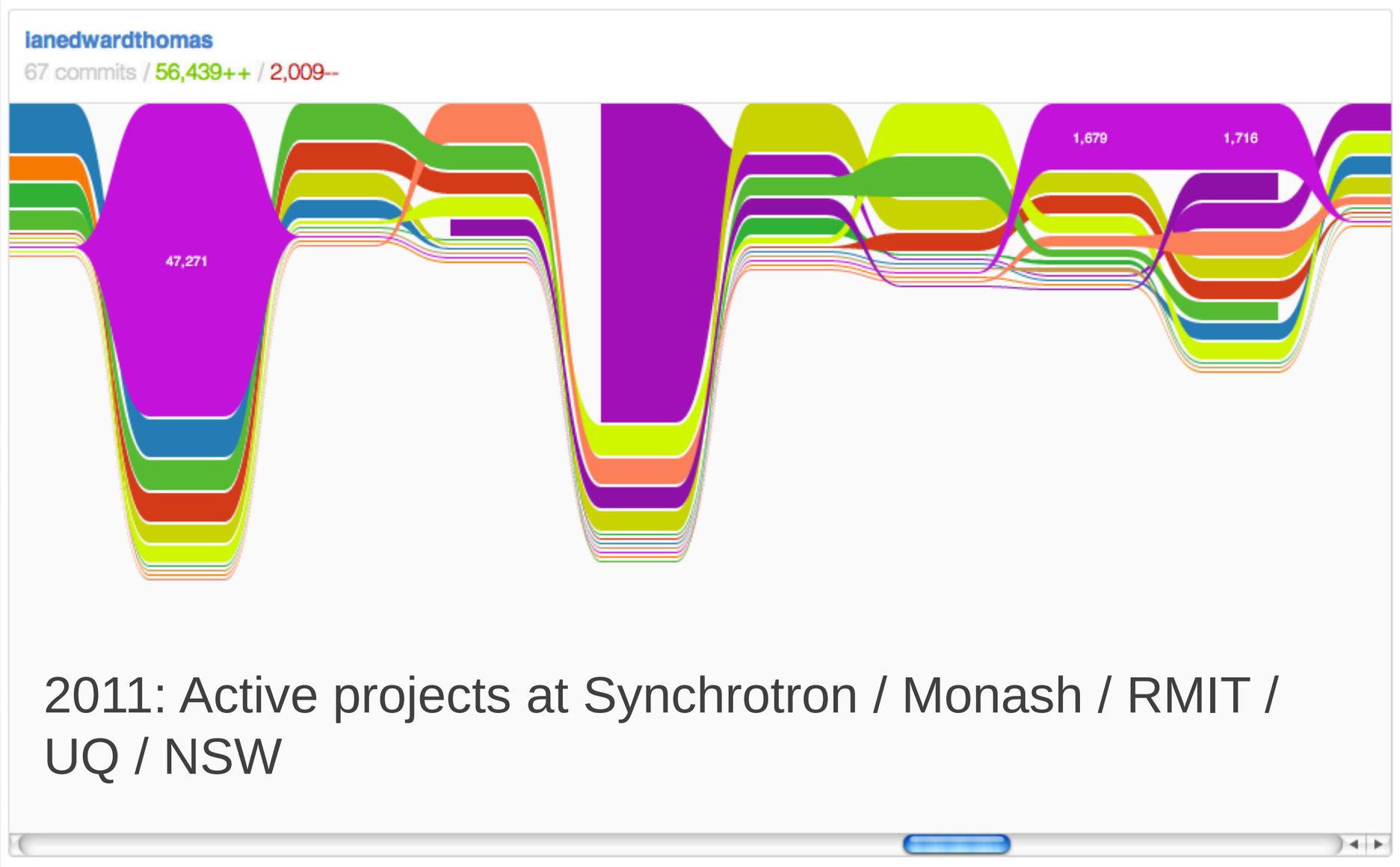
Medical Imaging

Github: Contributions over time



2008: Me (Steve Androulakis) working in isolation in my lab

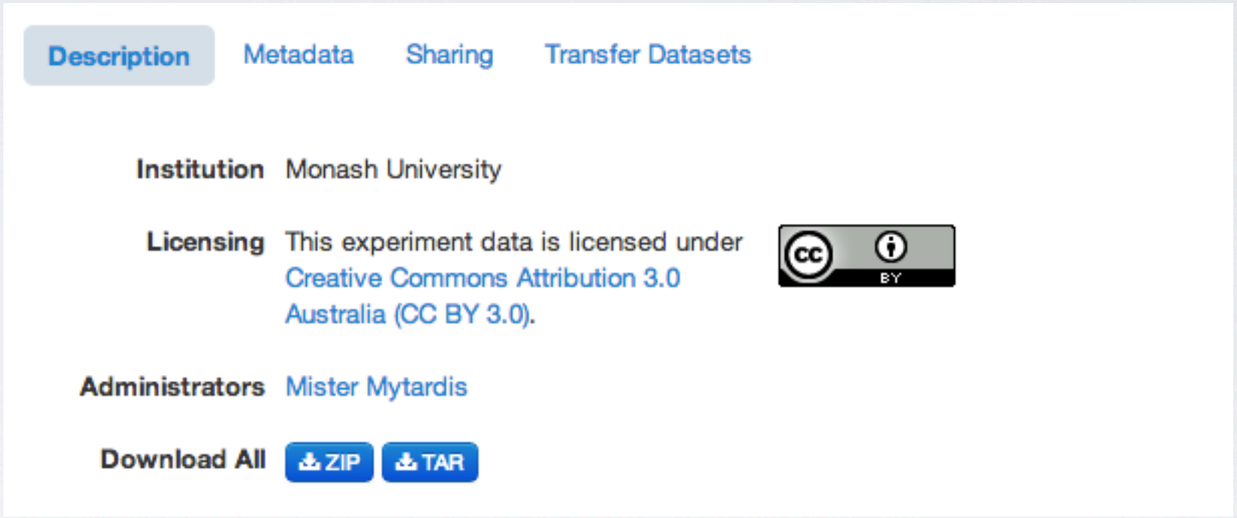
Github: Contributions over time



2011: Active projects at Synchrotron / Monash / RMIT / UQ / NSW

Not so good

no interactivity or social-ness



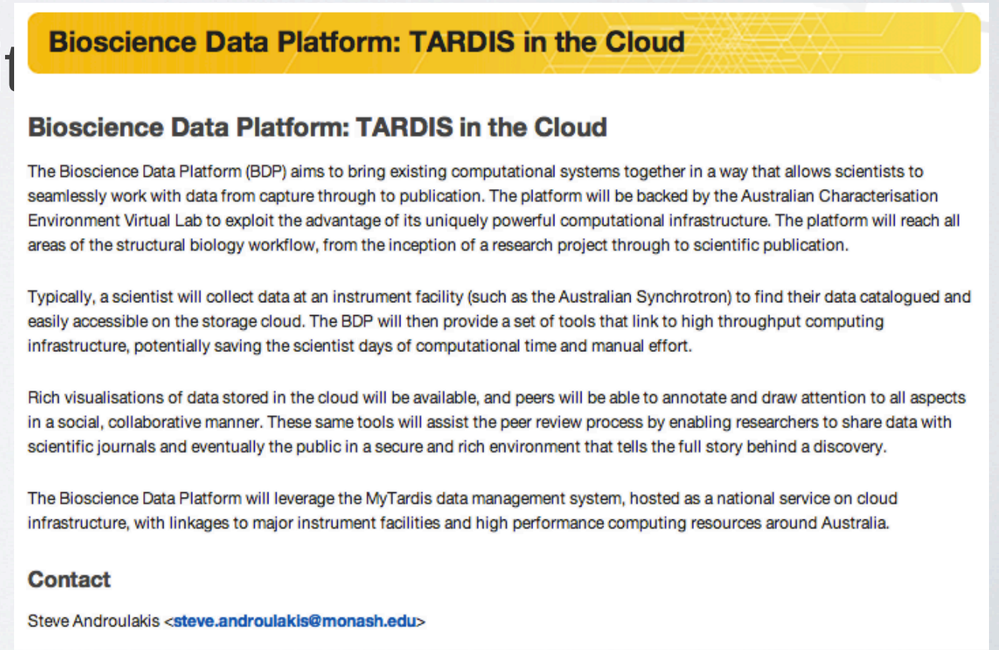
“Just let me get the files”

Steve Androulakis
@bdp_tardis

Bioscience data platform

- A new, federally funded research project following on from MyTardis
- Collaboration between Monash University and RMIT until 2014
- NeCTAR is federal government group establishing a Research Cloud
- BDP Focuses on 3 areas:
- Building a federated index of MyTardis data
- Connecting data to supercomputing resources for processing
- Providing interactive, rich publications online wit the ability to manipulate data

- https://www.nectar.org.au/bioscience-data-platform-tardis-cloud


Bioscience Data Platform: TARDIS in the Cloud

Bioscience Data Platform: TARDIS in the Cloud

The Bioscience Data Platform (BDP) aims to bring existing computational systems together in a way that allows scientists to seamlessly work with data from capture through to publication. The platform will be backed by the Australian Characterisation Environment Virtual Lab to exploit the advantage of its uniquely powerful computational infrastructure. The platform will reach all areas of the structural biology workflow, from the inception of a research project through to scientific publication.

Typically, a scientist will collect data at an instrument facility (such as the Australian Synchrotron) to find their data catalogued and easily accessible on the storage cloud. The BDP will then provide a set of tools that link to high throughput computing infrastructure, potentially saving the scientist days of computational time and manual effort.

Rich visualisations of data stored in the cloud will be available, and peers will be able to annotate and draw attention to all aspects in a social, collaborative manner. These same tools will assist the peer review process by enabling researchers to share data with scientific journals and eventually the public in a secure and rich environment that tells the full story behind a discovery.

The Bioscience Data Platform will leverage the MyTardis data management system, hosted as a national service on cloud infrastructure, with linkages to major instrument facilities and high performance computing resources around Australia.

Contact

Steve Androulakis <steve.androulakis@monash.edu>

thanks

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- steve.androulakis@monash.edu

- Resources
  - bioscience-data-platform.posterous.com
  - github.com/bioscience-data-platform
  - github.com/mytardis/mytardis
  - Twitter: @bdp_tardis