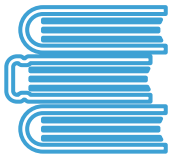

CERN

Digital Repositories at CERN

Jose Benito Gonzalez Lopez

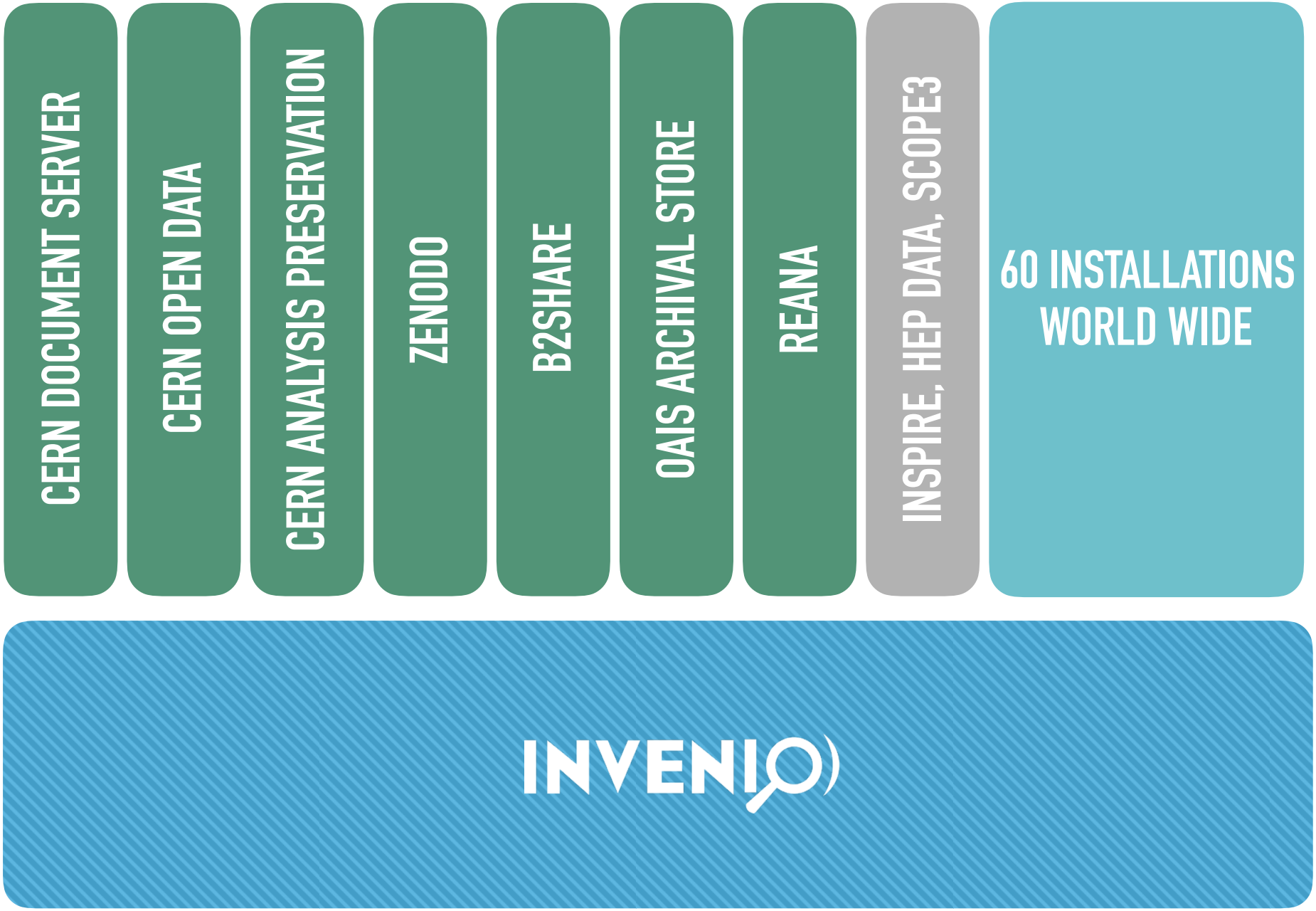
Who are we?

SW Eng. team providing DR technology



Develop software and provide services

Open: Source, Data, Science


CERN DOCUMENT SERVER
CERN OPEN DATA
CERN ANALYSIS PRESERVATION
ZENODO
B2SHARE
OAIS ARCHIVAL STORE
REANA
INSPIRE, HEP DATA, SCOPE3
60 INSTALLATIONS WORLD WIDE
INVENIO

CERN DOCUMENT SERVER

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CERN ANALYSIS PRESERVATION

ZENODO

B2SHARE

OAIS ARCHIVAL STORE

REANA

INSPIRE, HEP DATA, SCOPE3

60 INSTALLATIONS WORLD WIDE

INVENIO

Invenio

https://inveniosoftware.org

Invenio

elasticsearch

PostgreSQL

RabbitMQ

redis

Celery

Flask
web development, one drop at a time

Core for any digital repository

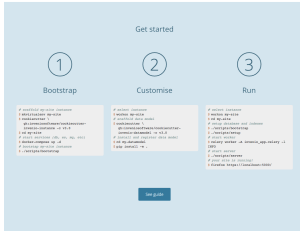
Modern & reliable technology

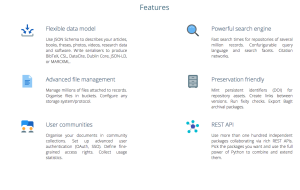
Flexible and modular

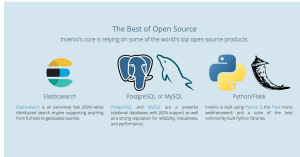
Handling **100M+** records

Develop with **PB** files in mind

Fast upload/search



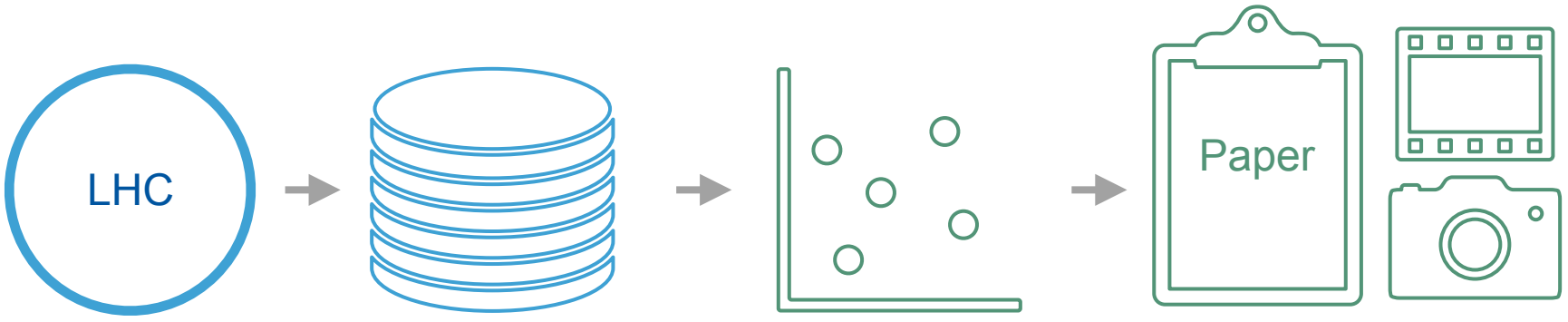




CERN | INVENIO

Invenio Services at CERN

Data at CERN



~50PB/year Raw Data Processed Data Research output

At CERN

Processed Data

Research output

CERN ANALYSIS PRESERVATION

http://analysispreservation.cern.ch

REANA

https://reana.io

CERN OPEN DATA

http://opendata.cern.ch

CERN DOCUMENT SERVER

http://cds.cern.ch

CERN | INVENIO

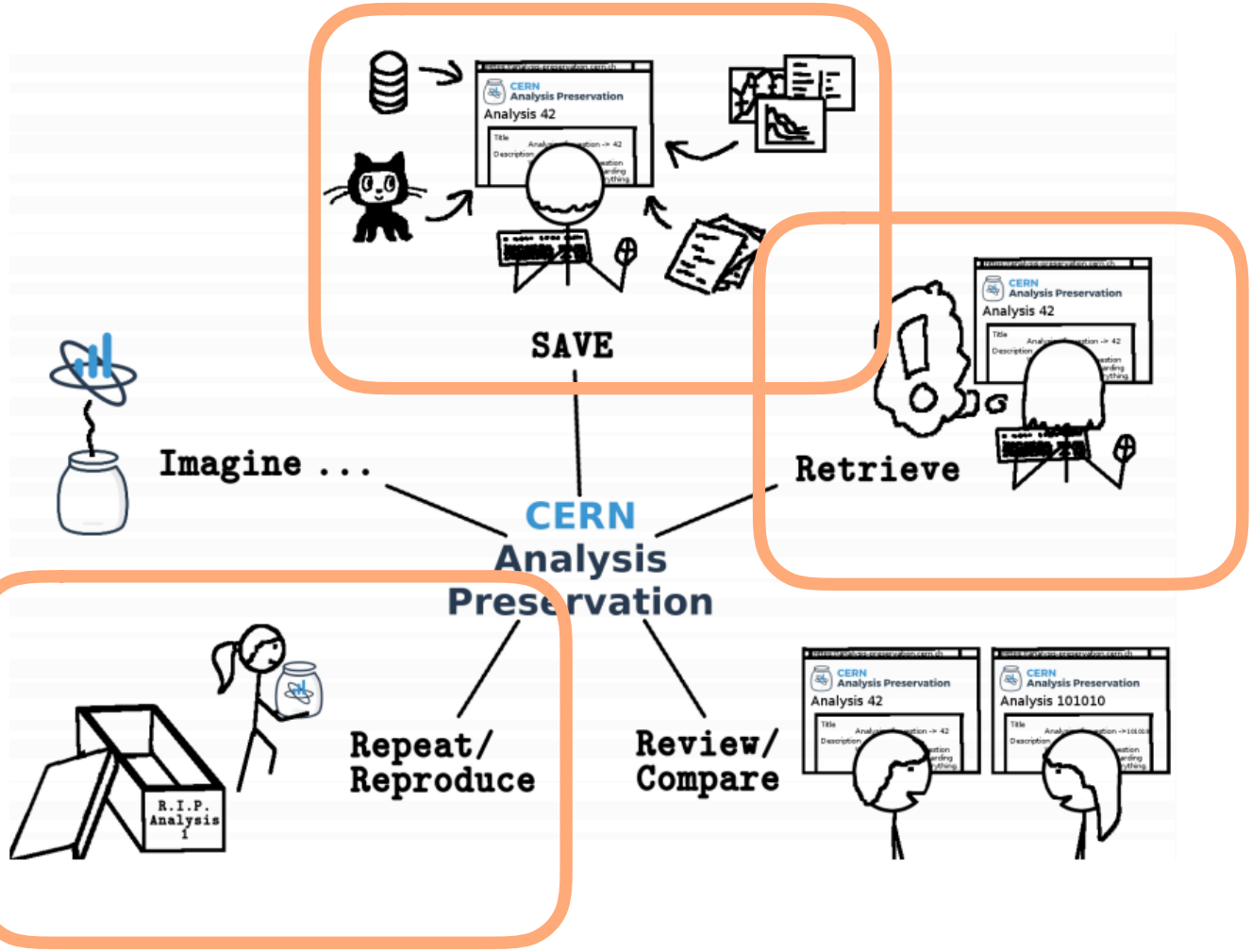
Processed Data

http://analysispreservation.cern.ch

https://reana.io

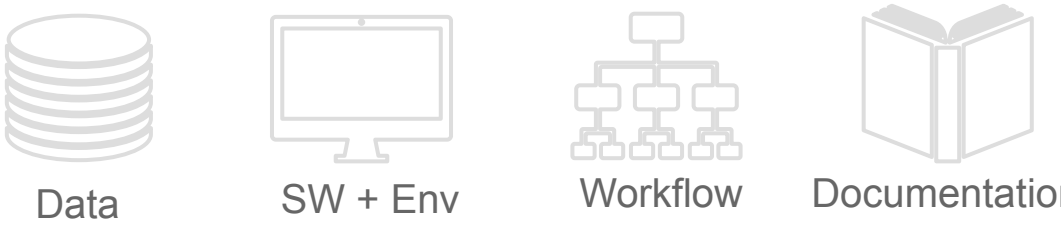
http://opendata.cern.ch

CERN Analysis Preservation



CERN Analysis Preservation

Capturing all the elements needed to understand and **rerun** an analysis even several **years**



http://analysispreservation.cern.ch

https://github.com/cernanalysispreservation

Processed Data

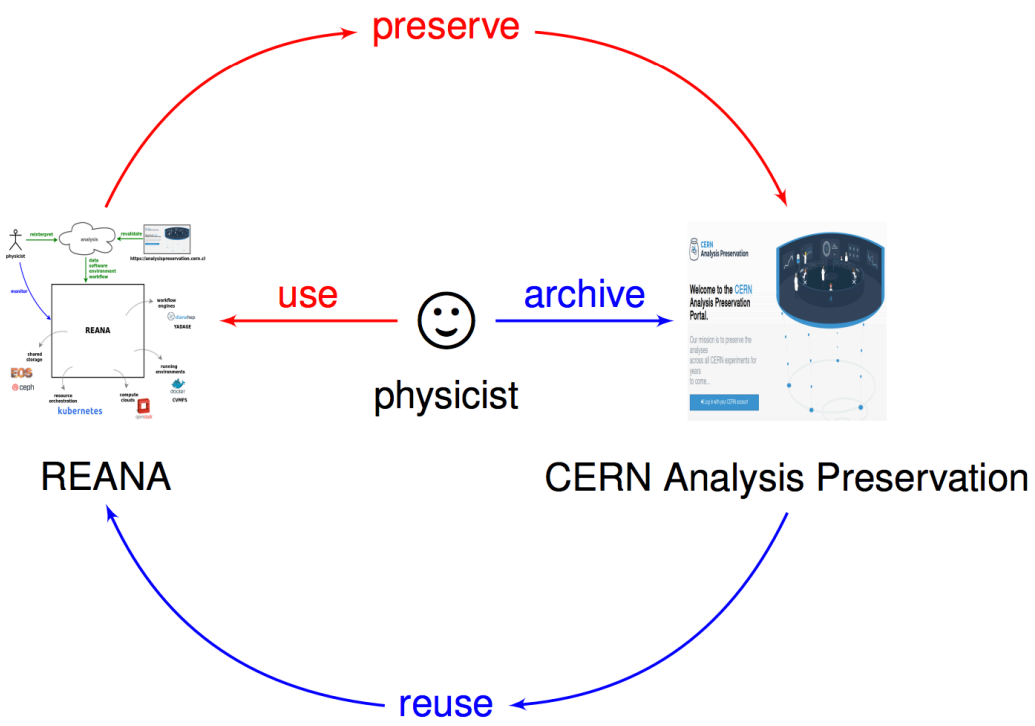
http://analysispreservation.cern.ch

https://github.com/reanahub

http://opendata.cern.ch

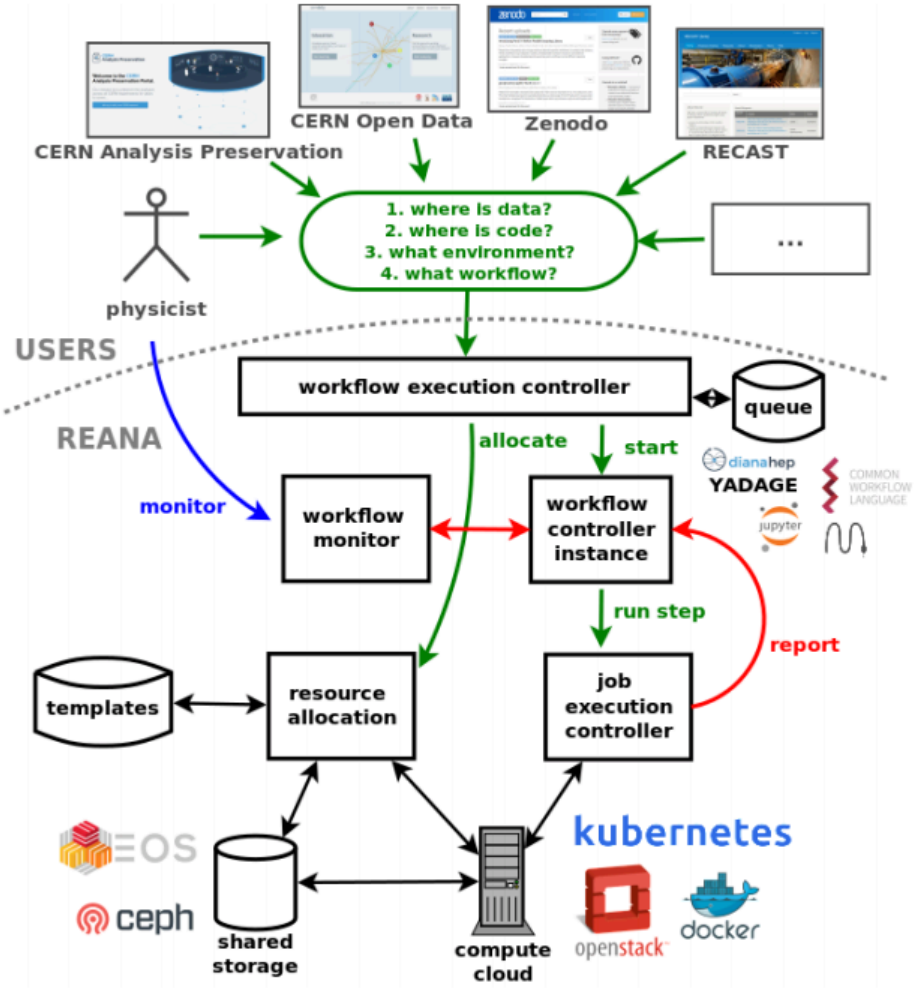
RE(usable)ANA(lysis)

https://github.com/reanahub



RE(usable)ANA(lysis)

https://github.com/reanahub



Processed Data

http://analysispreservation.cern.ch

https://github.com/reanahub

http://opendata.cern.ch

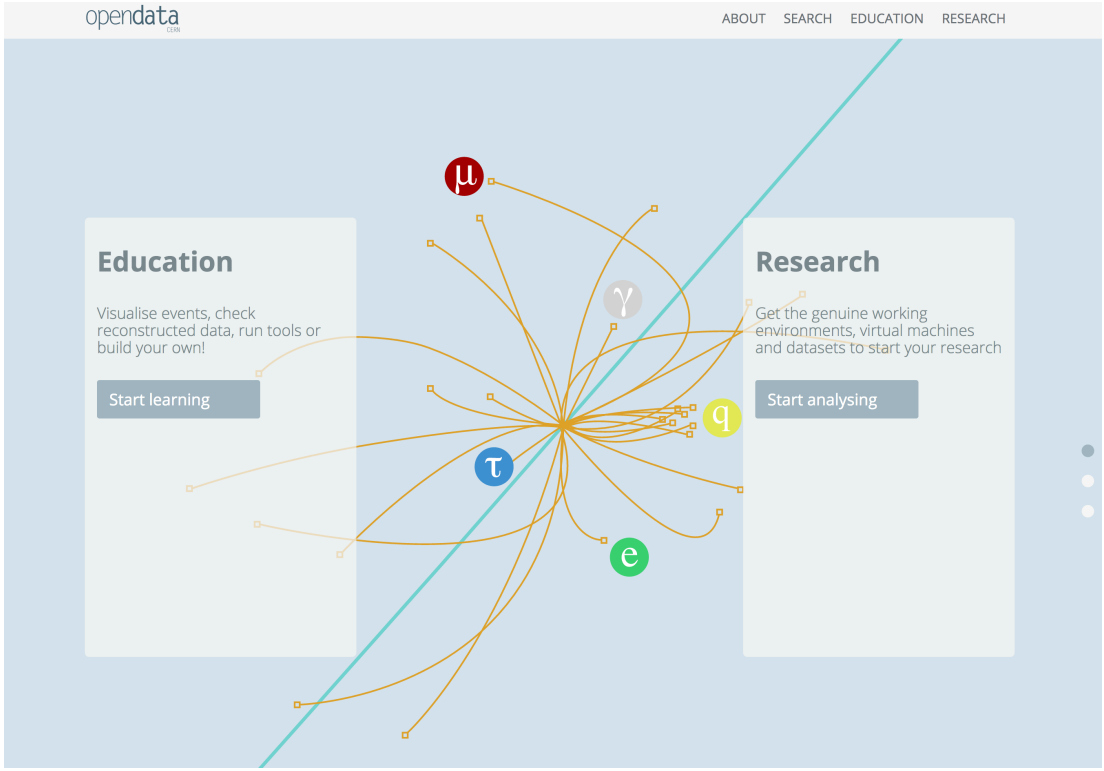
CERN Open Data Portal

Publicly-accessible site for curated releases of CERN data sets and software

LHC
and more

2016
CMS
300 TB

2017
CMS
~1 PB



http://opendata.cern.ch

https://github.com/cernopendata

BTag primary dataset in AOD format from RunA of 2011 (/BTag/Run2011A-12Oct2013-v1/AOD) 2016

/BTag/Run2011A-12Oct2013-v1/AOD CMS collaboration

Cite as: CMS collaboration (2016). BTag primary dataset in AOD format from RunA of 2011 (/BTag/Run2011A-12Oct2013-v1/AOD). CERN Open Data Portal. DOI: 10.7483/OPENDATA.CMS.N372.QF6S

Collection: CMS-Primary-Datasets Collision Energy: 7TeV Experiment: CMS Accelerator: CERN-LHC Parent Dataset: /BTag/Run2011A-v1/RAW

Description

BTag primary dataset in AOD format from RunA of 2011. Run period from run number 160404 to 173692.

Notes

This dataset contains all runs from 2011 RunA. The list of validated runs, which must be applied to all analyses, can be found in

None

Characteristics

Dataset: **11759539** events **489** files **1.8 TB** in total

System Details

Global tag: FT_53_LV5_AN1

Recommended release for analysis: CMSSW_5_3_32

How were these data selected?

Dataset defined for the calibration of b-quark tag algorithms. Events stored in this primary dataset were selected because of the presence of at least two high-energy jets, where one of them is tagged as a b-quark jet with a soft muon from the b-quark decay in the event.

Data taking / HLT

The collision data were assigned to different RAW datasets using the following HLT configuration.

Export

JSON

The collision data were assigned to different RAW datasets using the following HLT configuration.

Data processing / RECO
This primary AOD dataset was processed from the RAW dataset by the following step:
Step: RECO
Release: CMSSW_5_3_12_patch1
Global tag: FT_R_53_LV5::All
Configuration file for RECO step reco_2011A_BTag

HLT trigger paths
The possible HLT trigger paths in this dataset are:
HLT_BTagMu_DiJet110_Mu5
HLT_BTagMu_DiJet20_Mu5
HLT_BTagMu_DiJet40_Mu5
HLT_BTagMu_DiJet70_Mu5

How were these data validated?

During data taking all the runs recorded by CMS are certified as good for physics analysis if all subdetectors, trigger, lumi and physics objects (tracking, electron, muon, photon, jet and MET) show the expected performance. Certification is based first on the offline shifters evaluation and later on the feedback provided by detector and Physics Object Group experts. Based on the above information, which is stored in a specific database called Run Registry, the Data Quality Monitoring group verifies the consistency of the certification and prepares a json file of certified runs to be used for physics analysis. For each reprocessing of the raw data, the above mentioned steps are repeated. For more information see:

CMS data quality monitoring: Systems and experiences

The CMS Data Quality Monitoring software experience and future improvements

The CMS data quality monitoring software: experience and future prospects

How can you use these data?

You can access these data through the CMS Virtual Machine. See the instructions for setting up the Virtual Machine and getting started in

How to install the CMS Virtual Machine

Getting started with CMS open data

File Indexes

Filename	Size	Download	EOS Link

File Indexes

Filename	Size	Download	EOS Link
CMS_Run2011A_BTag_AOD_12Oct2013-v1_00000_file_index.txt	122 Bytes		
CMS_Run2011A_BTag_AOD_12Oct2013-v1_20000_file_index.txt	59.5 kB		

First Previous 1 Next Last

Datasets

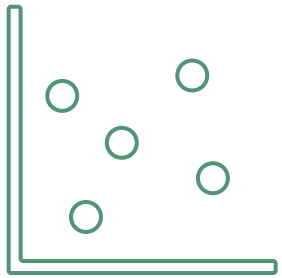
Filename	Size	Download	EOS Link
802CF580-BB46-E311-8D89-00261894388D.root	886.7 MB		
00376186-543E-E311-8D30-002618943857.root	3.9 GB		
0080432E-043E-E311-B4CB-00248C0BE01E.root	2.8 GB		
00867474-453E-E311-A450-003048FFD7C2.root	3.9 GB		
02012C2B-323E-E311-897E-003048FFD736.root	2.2 GB		
02116E88-003E-E311-A1A9-0025905964BA.root	4.2 GB		
0216066B-3A3E-E311-ABD0-003048FFD732.root	3.9 GB		
02477509-3D3E-E311-A230-00261894389A.root	3.9 GB		
02581093-3E3E-E311-8235-00248C55CC3C.root	3.9 GB		
0297C037-2D3E-E311-83A2-00259059649C.root	4.2 GB		

First Previous 1 2 3 4 5 Next Last

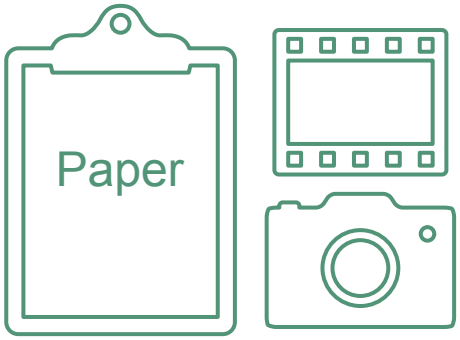
Disclaimer

The open data are released under the Creative Commons CC0 waiver. Neither CMS nor CERN endorse any works, scientific or otherwise, produced using these data. All releases will have a unique DOI that you are requested to cite in any

At CERN

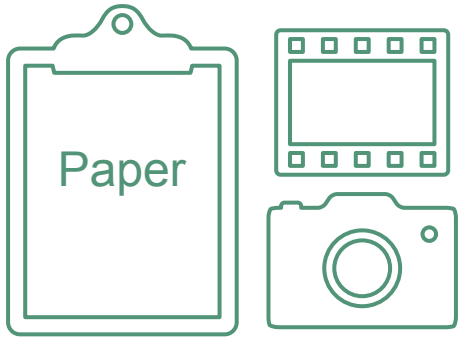


Processed Data



Research output

CERN ANALYSIS PRESERVATION	REANA	CERN OPEN DATA	CERN DOCUMENT SERVER
http://analysispreservation.cern.ch	https://reana.io	http://opendata.cern.ch	http://cds.cern.ch



Research output

CERN DOCUMENT SERVER

http://cds.cern.ch

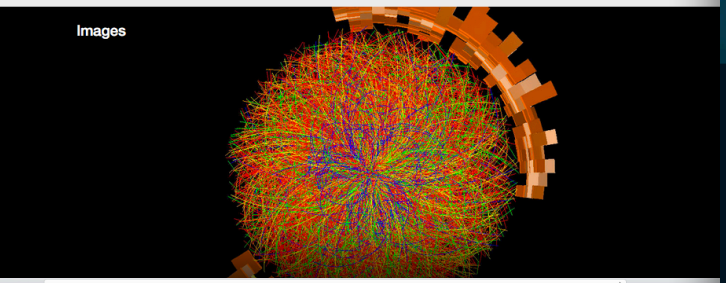
CDS Search About Log in

CERN Document Server

Search more than 1.000.000 records

Type and press enter to search

Articles	Books	Recent uploads
Why do you need a personal computer ?	Why do you need a personal computer ?	Why do you need a personal computer ?
Encyclopedia of physics	Encyclopedia of physics	Encyclopedia of physics
Protecting quantum logic operations by continuous application of external fields	Protecting quantum logic operations by continuous application of external fields	Protecting quantum logic operations by continuous application of external fields
Philosophical Aspects of Quantum Information Theory	Philosophical Aspects of Quantum Information Theory	Philosophical Aspects of Quantum Information Theory
Experimental Realization of Deutsch's Algorithm in a One-way Quantum Computer	Experimental Realization of Deutsch's Algorithm in a One-way Quantum Computer	Experimental Realization of Deutsch's Algorithm in a One-way Quantum Computer



CDS LHC Search About Log in

Search

Found 38390 results. previous 1 2 3 4 5 6 7 8 9 next Sort by: Best match asc.

year

Authors

- Aad, Georges (530)
- Chatrchyan, Serguei (286)
- Khachatryan, Vardan (217)
- Aaij, R (157)
- Aaij, Roel (153)
- Bottura, L (64)
- Baer, Howard (59)
- Adam, Jaroslav (55)
- Ellis, Jonathan Richard (55)
- Heinemeyer, S (40)

Languages

- eng (37796)
- fre (358)
- ita (33)
- rus (29)
- ger (17)
- chi (10)
- spa (7)
- pol (4)
- por (3)
- jpn (1)

Topic

- Particle Physics - Phenomenology (11453)
- Detectors and Experimental Techniques (11156)

Accelerators and Storage Rings

Second order chromaticity correction of LHC V 6.0 at collision
1999-10-01
No summary

Accelerators and Storage Rings

Experience with different constructions of superconducting co…
1998-11-11 ljspeert, Albert
No summary

Accelerators and Storage Rings

Electrical insulation of superconducting cables and coils in LH…
1997-04-23
No summary

Accelerators and Storage Rings

Status of the Cold Mass of the Short Straight Section for the L…
1998-05-26 Peyrot, M et al.
In the framework of the LHC (Large Hadron Collider) R&D program, CERN and CEA-Saclay have collaborated to develop and construct two quadrupole magnet prototypes which have been successfully cold-teste d. This collaboration has been extended as part of French special contribution to the LHC project. The previous…

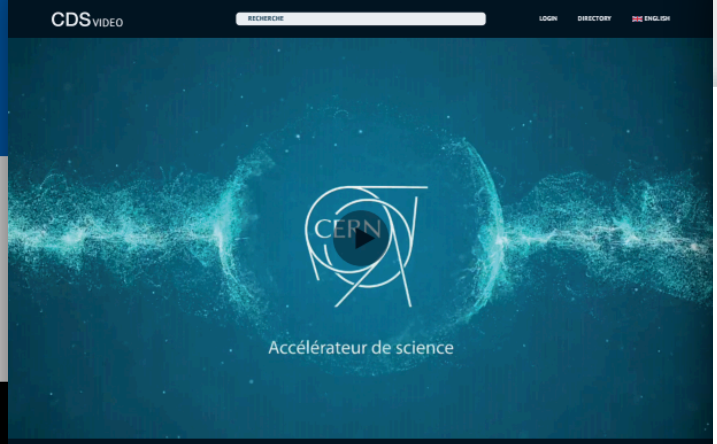
Accelerators and Storage Rings

Measurement and Effects of the Magnetic Hysteresis on the L…
2008-08-28 White, S M et al.
The superconducting orbit corrector magnets (MCBC, MCBY and MCBX) in the Large Hadron Collider (LHC) at CERN will be used to generate parallel separation and crossing angles at the interaction points during the different phases that will bring the LHC beams into collision. However, the field errors generated by the…

Accelerators and Storage Rings

Tune scan studies for the LHC at injection energy
2000-05-22 Schmidt, F
The choice of a working point in the betatron tune diagram is very important for the design of a collider like the LHC: to a great extent the performance of the collider depends on the…

CDS VIDEO RECHERCHE LOGIN DIRECTORY ENGLISH



RECENT

MOST RECENTLY ADDED VIDEOS

THE GLOBE OF SCIENCE | LHC OPERATIONS A DAY IN THE CONTROLE CENTER | ACCELERATING SCIENCE

CHANNELS

MOS RECENTLY UPDATED CHANNELS

SEARCH …

CERN VIDEO PRODUCTION | PRESS OFFICE SELECTION | EXPERIMENTS

ALICE DETECTOR | LOREM IPSUM | ACCELERATORS

LOREM DOLOR IPSUM | SOME VIDEOS | AT LHC IP2

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Home > Multimedia & Outreach > Photos

Photos

16 Jan 2013. *A view of the Large Magnet*
180

(© CERN Geneva)

Search 17,325 records for:

Add to Search

search also CERN PhotoLab Archive of unscanned pictures (1952-

Latest additions:

2017-11-14 16:55

Automnales Pictures at Pale
14-11-2017
Keywords: Miscellaneous

CERN-PHOTO-201711-279

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Detailed record - Similar records

2017-11-14 08:56

Safety Training Course: Terri
Cours de formation de Sécuri
10-10-2017
Keywords: TSO, HSE, Safety
Photo

CERN-HSE-PHO-2017-007

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Detailed record - Similar records

2017-11-10 17:09

Automnales Inauguration at
10-11-2017
Keywords: Palexpo, Automna

CERN-PHOTO-201711-278

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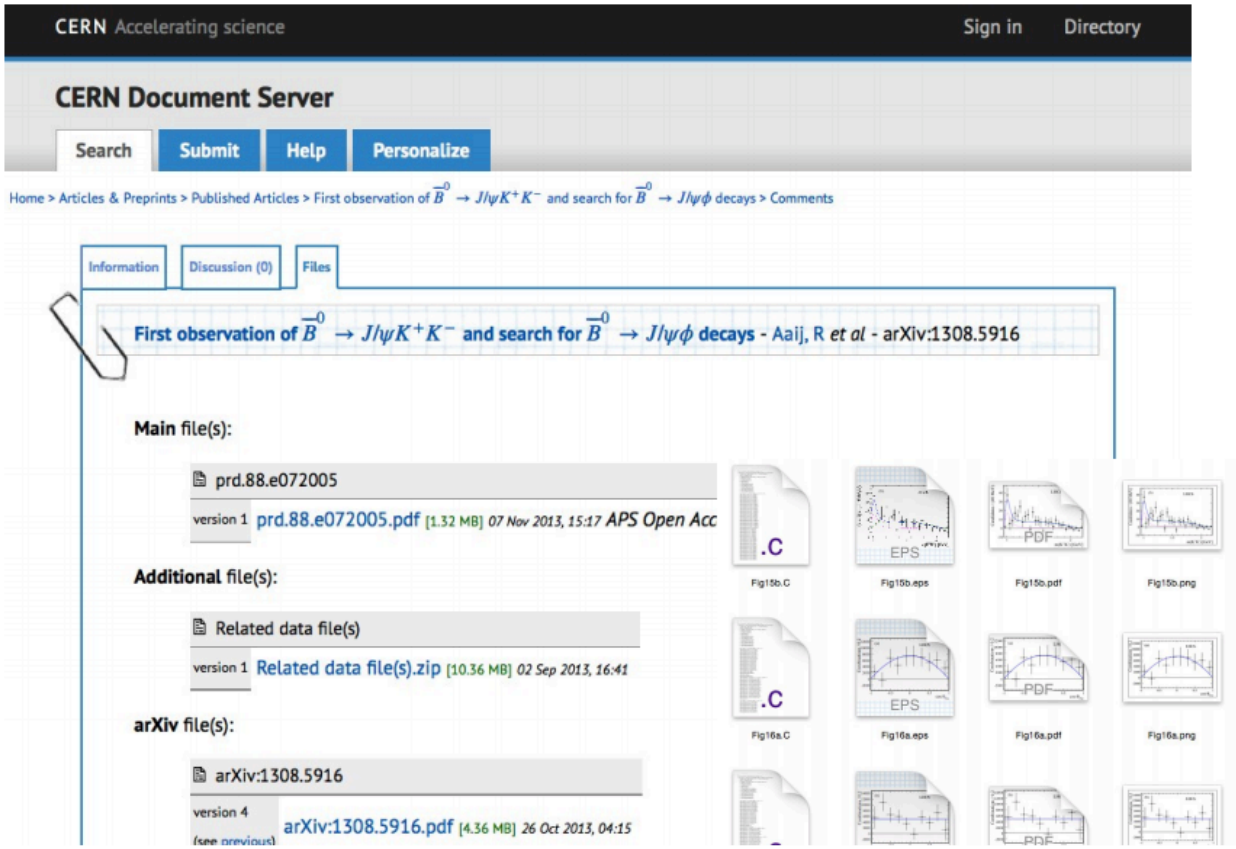
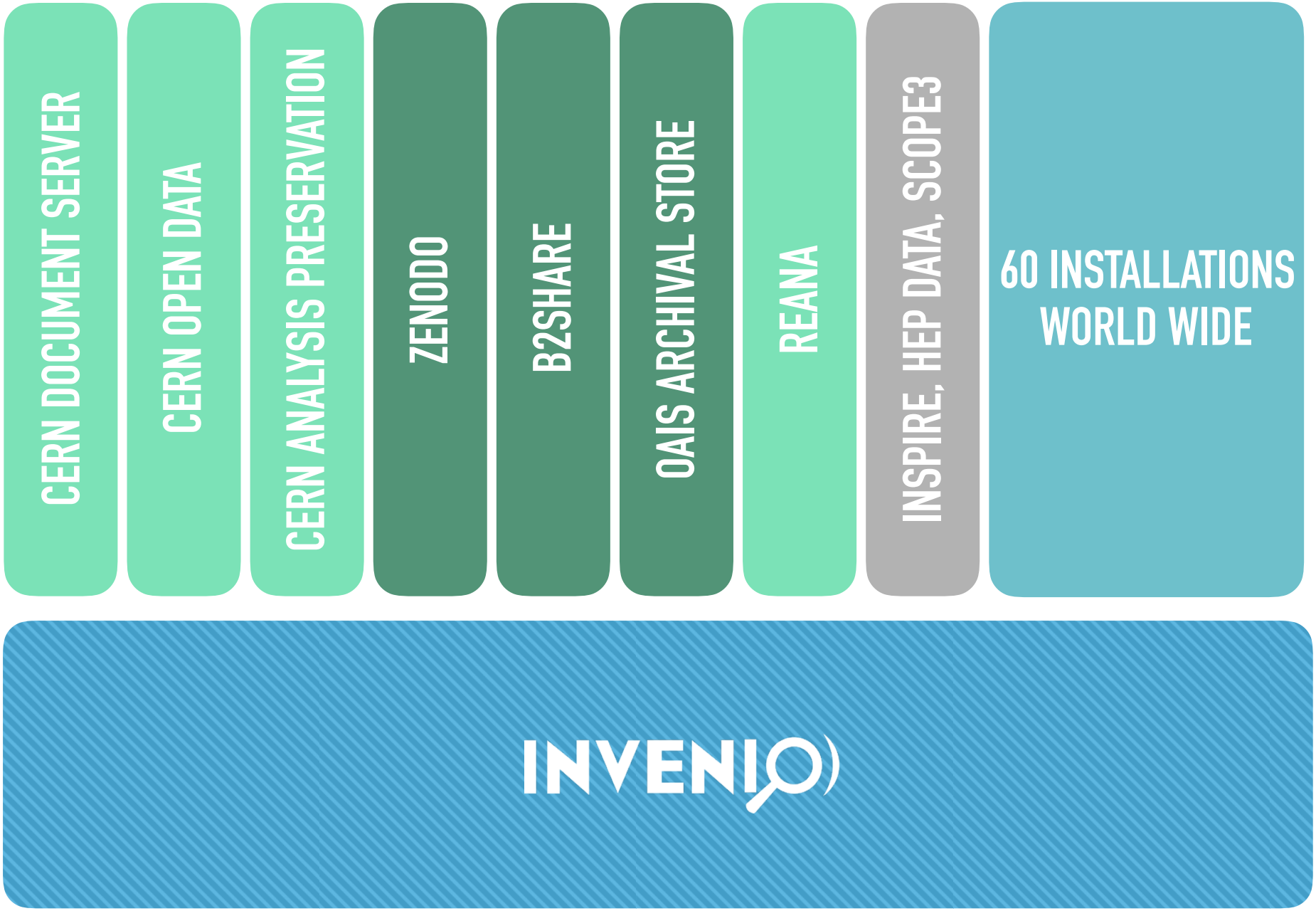
Detailed record - Similar records

CDS

Also used for small data



https://cds.cern.ch/record/2293032/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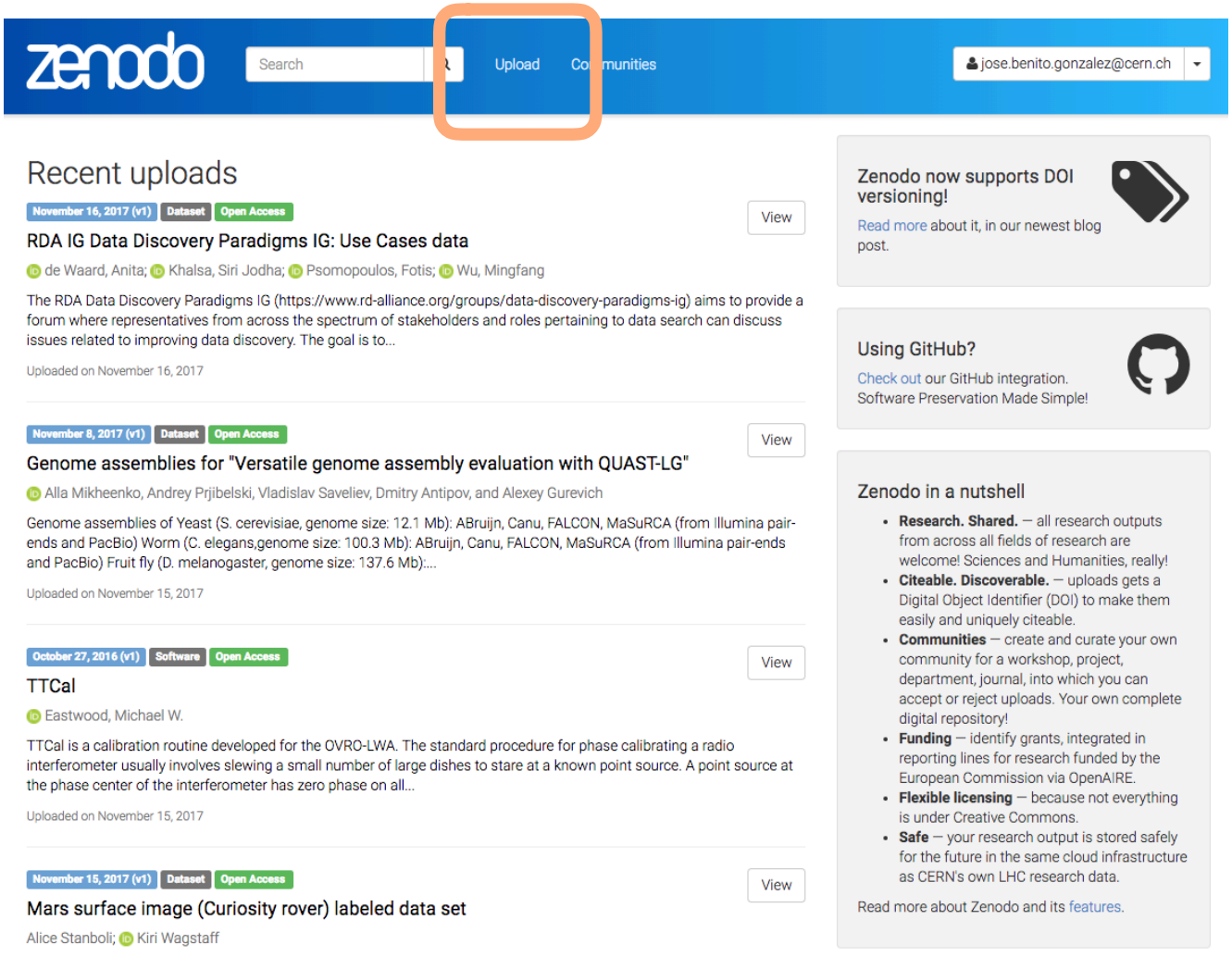
Running on latest Invenio tech

Using CERN Computing Centre

Using EOS Storage Technology

Zenodo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November 16, 2017 (v1) Dataset Open Access
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RDA IG Data Discovery Paradigms IG: Use Cases data
de Waard, Anita; Khalsa, Siri Jodha; Psomopoulos, Fotis; Wu, Mingfang
The RDA Data Discovery Paradigms IG (https://www.rd-alliance.org/groups/data-discovery-paradigms-ig) aims to provide a forum where representatives from across the spectrum of stakeholders and roles pertaining to data search can discuss issues related to improving data discovery. The goal is to...
Uploaded on November 16, 2017
November 8, 2017 (v1) Dataset Open Access
View
Genome assemblies for "Versatile genome assembly evaluation with QUAST-LG"
Alla Mikheenko, Andrey Prjibelski, Vladislav Saveliev, Dmitry Antipov, and Alexey Gurevich
Genome assemblies of Yeast (S. cerevisiae, genome size: 12.1 Mb): ABruijn, Canu, FALCON, MaSuRCA (from Illumina pair-ends and PacBio) Worm (C. elegans,genome size: 100.3 Mb): ABruijn, Canu, FALCON, MaSuRCA (from Illumina pair-ends and PacBio) Fruit fly (D. melanogaster, genome size: 137.6 Mb):...
Uploaded on November 15, 2017
October 27, 2016 (v1) Software Open Access
View
TTCal
Eastwood, Michael W.
TTCal is a calibration routine developed for the OVRO-LWA. The standard procedure for phase calibrating a radio interferometer usually involves slewing a small number of large dishes to stare at a known point source. A point source at the phase center of the interferometer has zero phase on all...
Uploaded on November 15, 2017
November 15, 2017 (v1) Dataset Open Access
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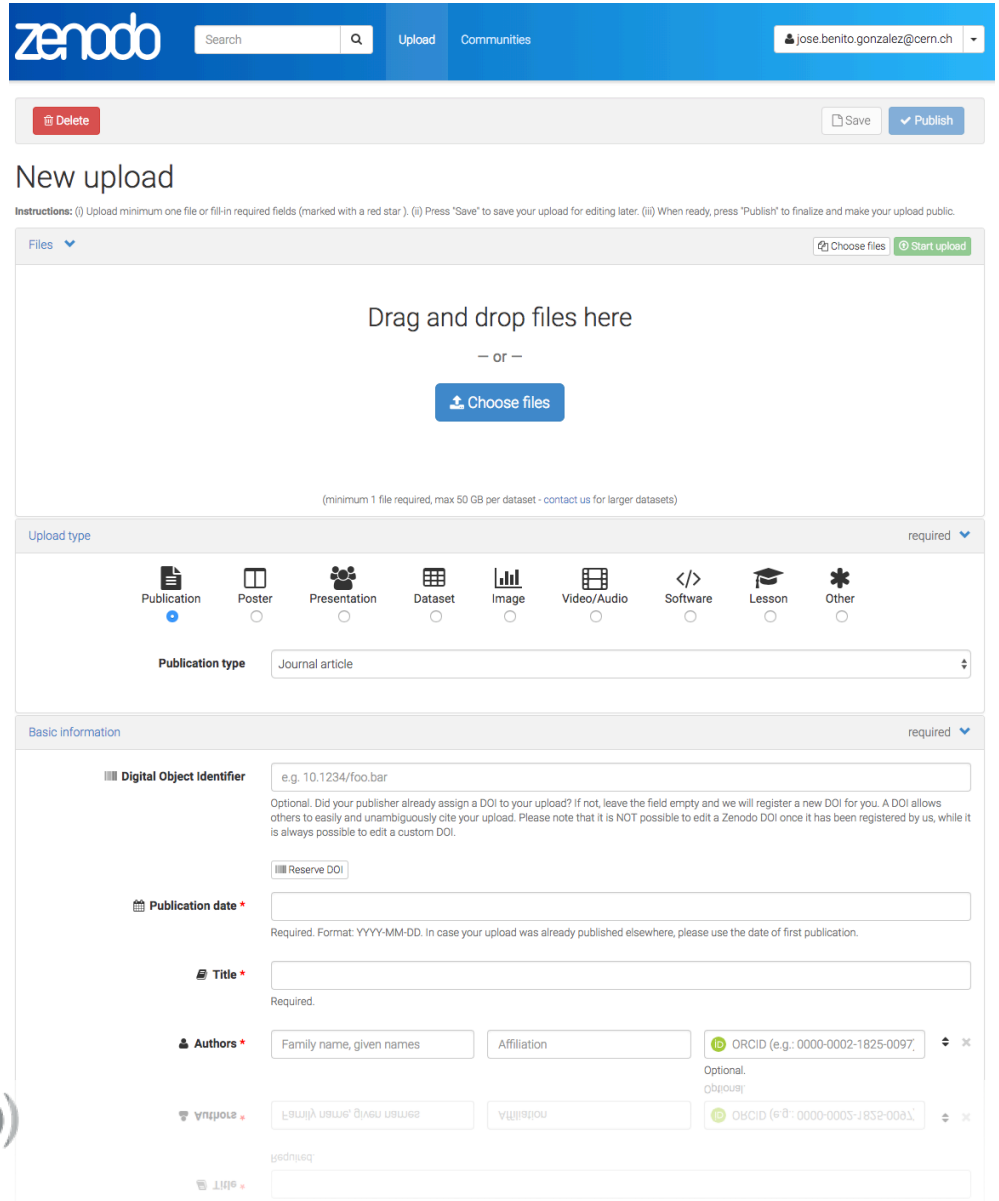
Mars surface image (Curiosity rover) labeled data set
Alice Stanboli; Kiri Wagstaff
This data set consists of 6691 images that were collected by the Mars Science Laboratory (MSL, Curiosity) rover by three
Zenodo now supports DOI versioning!
Read more about it, in our newest blog post.
Using GitHub?
Check out our GitHub integration.
Software Preservation Made Simple!
Zenodo in a nutshell
Research. Shared. — all research outputs from across all fields of research are welcome! Sciences and Humanities, really!
Citeable. Discoverable. — uploads gets a Digital Object Identifier (DOI) to make them easily and uniquely citeable.
Communities — create and curate your own community for a workshop, project, department, journal, into which you can accept or reject uploads. Your own complete digital repository!
Funding — identify grants, integrated in reporting lines for research funded by the European Commission via OpenAIRE.
Flexible licensing — because not everything is under Creative Commons.
Safe — your research output is stored safely for the future in the same cloud infrastructure as CERN's own LHC research data.
Read more about Zenodo and its features.

Zenodo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Files
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Start upload
Drag and drop files here
– or –
Choose files
(minimum 1 file required, max 50 GB per dataset - contact us for larger datasets)
Upload type
required
Publication
Poster
Presentation
Dataset
Image
Video/Audio
Software
Lesson
Other
Publication type
Journal article
Basic information
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Affiliation
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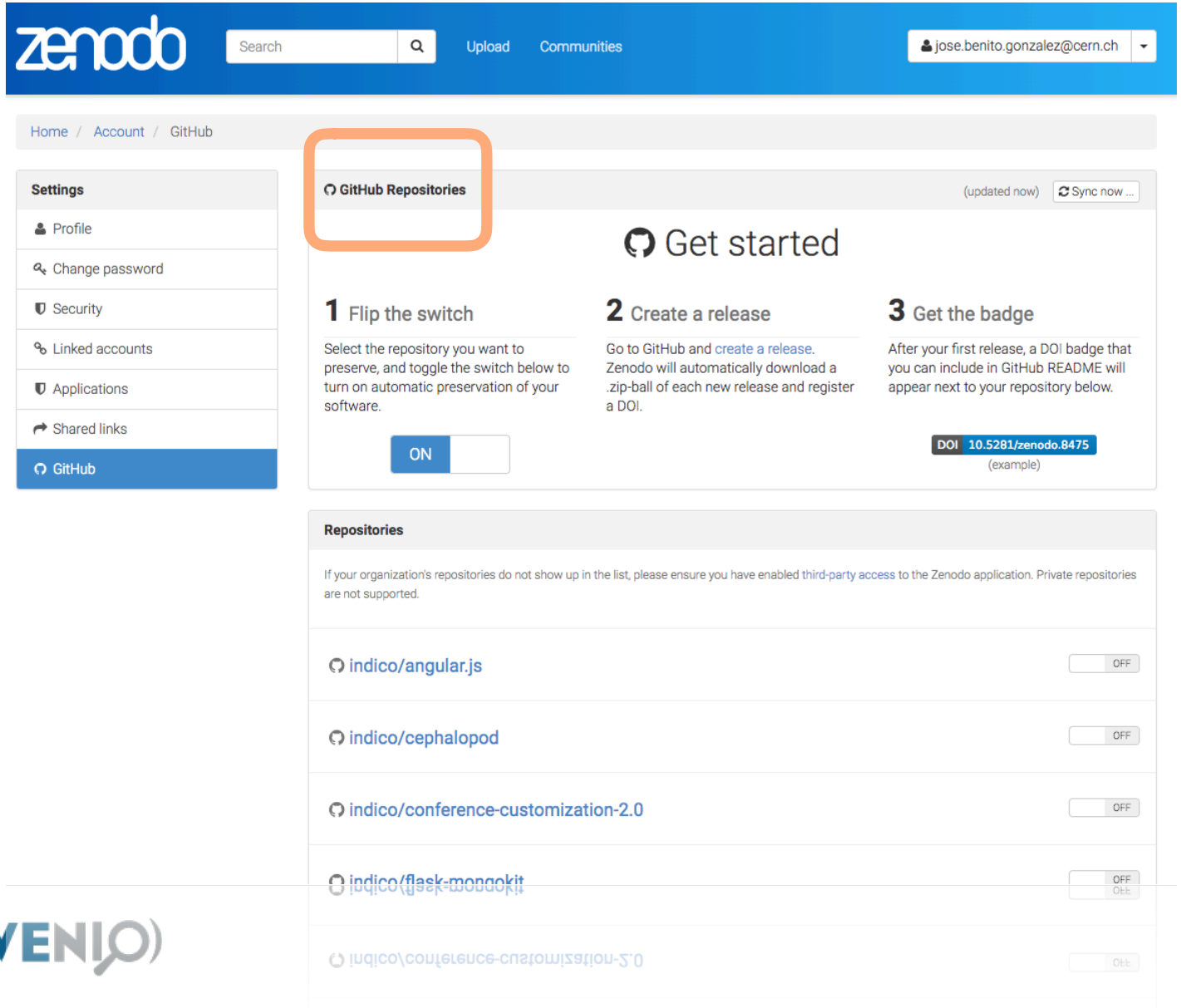
Zenodo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Shared links
GitHub
GitHub Repositories
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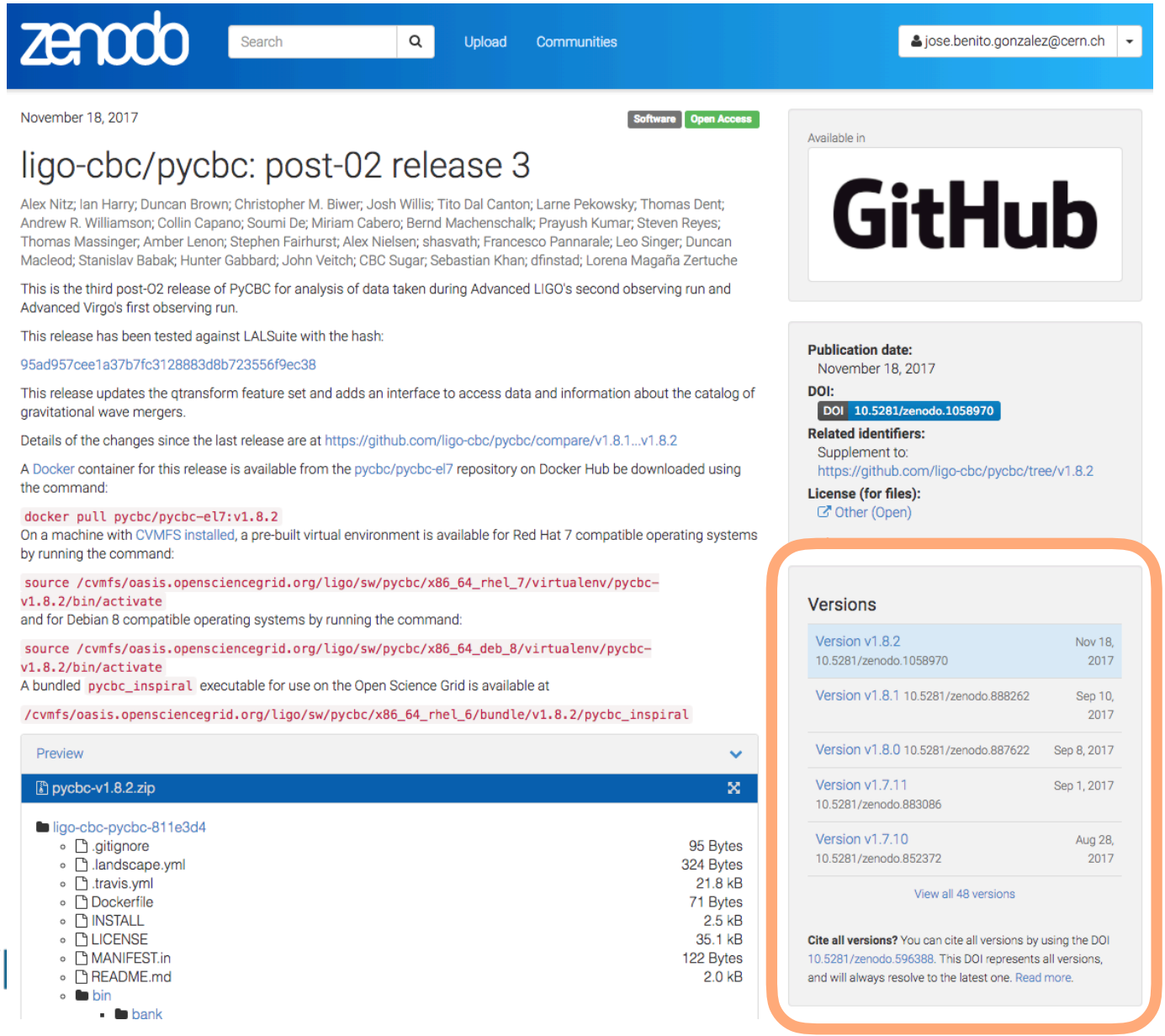
Sync now ...
Get started
1 Flip the switch
Select the repository you want to preserve, and toggle the switch below to turn on automatic preservation of your software.
ON
2 Create a release
Go to GitHub and create a release. Zenodo will automatically download a .zip-ball of each new release and register a DOI.
3 Get the badge
After your first release, a DOI badge that you can include in GitHub README will appear next to your repository below.
DOI 10.5281/zenodo.8475
(example)
Repositories
If your organization's repositories do not show up in the list, please ensure you have enabled third-party access to the Zenodo application. Private repositories are not supported.
indico/angular.js
OFF
indico/cephalopod
OFF
indico/conference-customization-2.0
OFF
indico/flask-mongokit
OFF

Zenodo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November 18, 2017
Software
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ligo-cbc/pycbc: post-02 release 3
Alex Nitz; Ian Harry; Duncan Brown; Christopher M. Biwer; Josh Willis; Tito Dal Canton; Larne Pekowsky; Thomas Dent; Andrew R. Williamson; Collin Capano; Soumi De; Miriam Cabero; Bernd Machenschalk; Prayush Kumar; Steven Reyes; Thomas Massinger; Amber Lenon; Stephen Fairhurst; Alex Nielsen; shasvath; Francesco Pannarale; Leo Singer; Duncan Macleod; Stanislav Babak; Hunter Gabbard; John Veitch; CBC Sugar; Sebastian Khan; dfinstad; Lorena Magaña Zertuche
This is the third post-O2 release of PyCBC for analysis of data taken during Advanced LIGO's second observing run and Advanced Virgo's first observing run.
This release has been tested against LALSuite with the hash:
95ad957cee1a37b7fc3128883d8b723556f9ec38
This release updates the qtransform feature set and adds an interface to access data and information about the catalog of gravitational wave mergers.
Details of the changes since the last release are at https://github.com/ligo-cbc/pycbc/compare/v1.8.1...v1.8.2
A Docker container for this release is available from the pycbc/pycbc-el7 repository on Docker Hub be downloaded using the command:
docker pull pycbc/pycbc-el7:v1.8.2
On a machine with CVMFS installed, a pre-built virtual environment is available for Red Hat 7 compatible operating systems by running the command:
source /cvmfs/oasis.opensciencegrid.org/ligo/sw/pycbc/x86_64_rhel_7/virtualenv/pycbc-v1.8.2/bin/activate
and for Debian 8 compatible operating systems by running the command:
source /cvmfs/oasis.opensciencegrid.org/ligo/sw/pycbc/x86_64_deb_8/virtualenv/pycbc-v1.8.2/bin/activate
A bundled pycbc_inspiral executable for use on the Open Science Grid is available at
/cvmfs/oasis.opensciencegrid.org/ligo/sw/pycbc/x86_64_rhel_6/bundle/v1.8.2/pycbc_inspiral
Preview
pycbc-v1.8.2.zip
ligo-cbc-pycbc-811e3d4
.gitignore 95 Bytes
.landscape.yml 324 Bytes
.travis.yml 21.8 kB
Dockerfile 71 Bytes
INSTALL 2.5 kB
LICENSE 35.1 kB
MANIFEST.in 122 Bytes
README.md 2.0 kB
bin
bank
Available in
GitHub
Publication date:
November 18, 2017
DOI:
DOI 10.5281/zenodo.1058970
Related identifiers:
Supplement to:
https://github.com/ligo-cbc/pycbc/tree/v1.8.2
License (for files):
Other (Open)
Versions
Version v1.8.2 10.5281/zenodo.1058970 Nov 18, 2017
Version v1.8.1 10.5281/zenodo.888262 Sep 10, 2017
Version v1.8.0 10.5281/zenodo.887622 Sep 8, 2017
Version v1.7.11 10.5281/zenodo.883086 Sep 1, 2017
Version v1.7.10 10.5281/zenodo.852372 Aug 28, 2017
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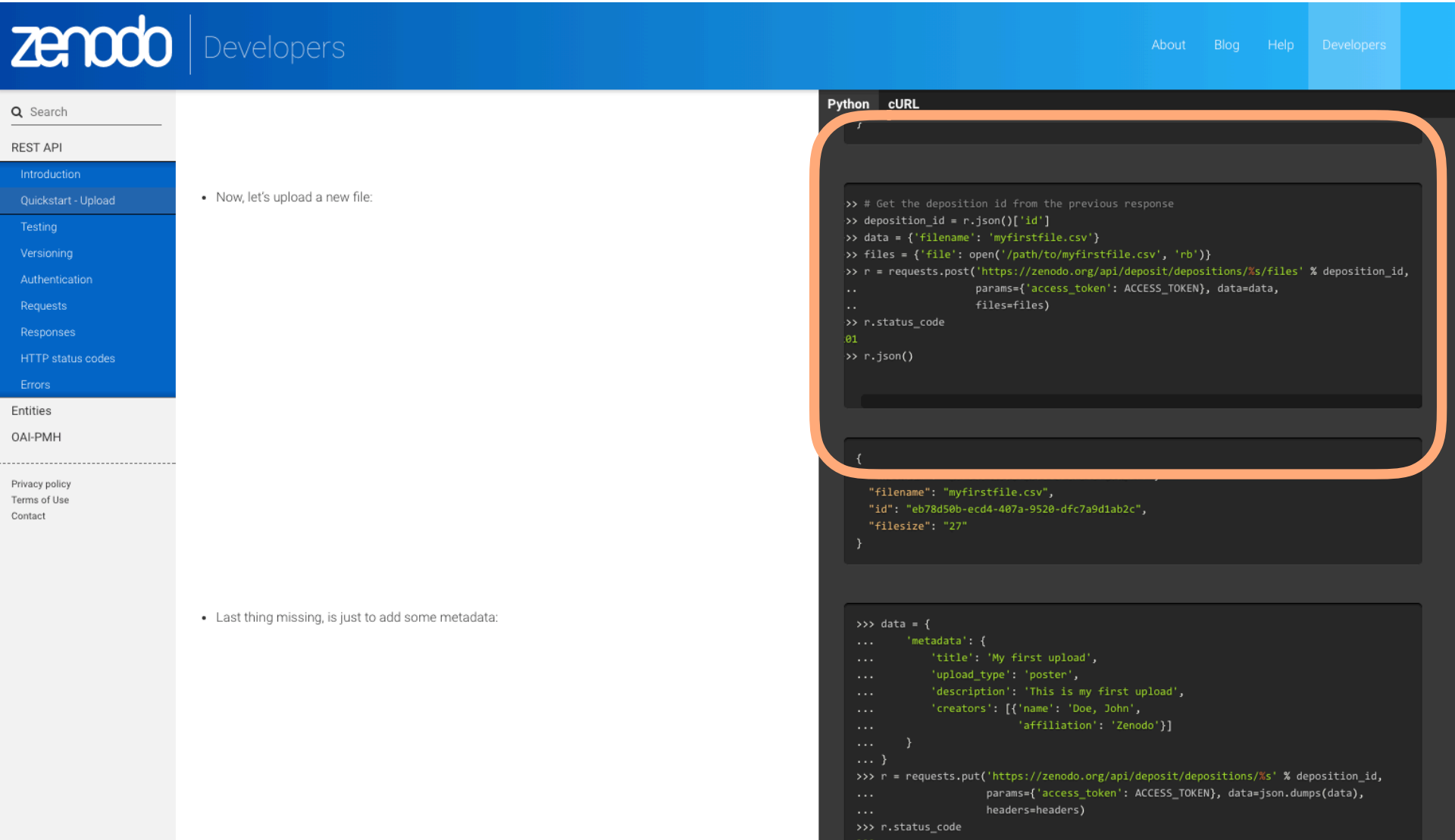
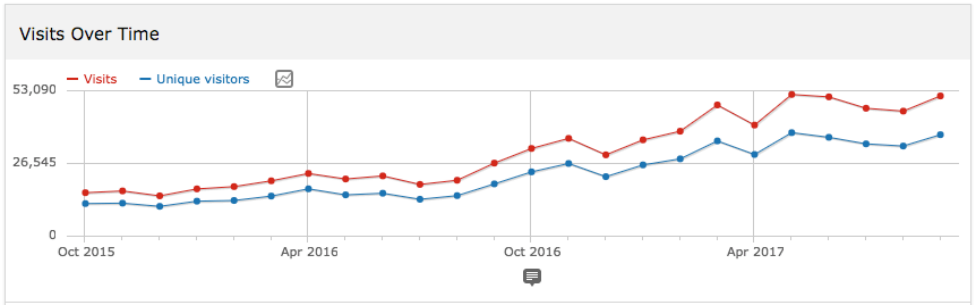
http://developers.zenodo.org/

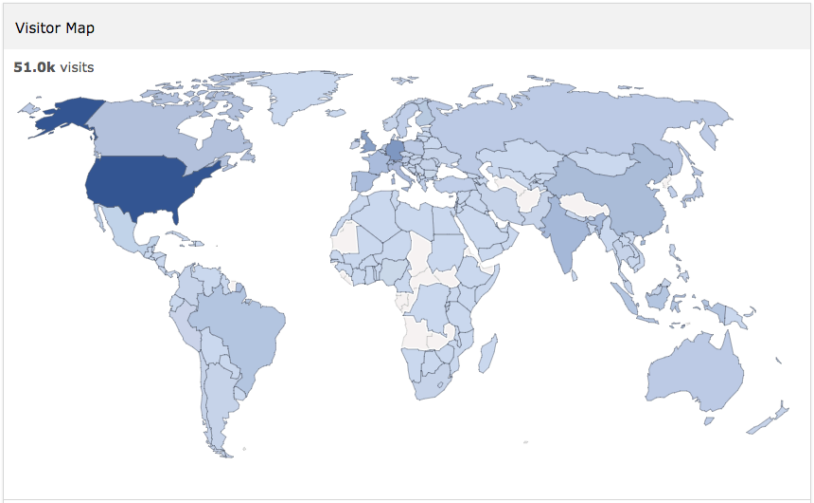


Zenodo

50K
Monthly visitors

30 TB
Stored Files





Questions?

https://inveniosoftware.org

http://github.com/inveniosoftware

https://invenio.readthedocs.io/en/latest/

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Long term preservation

Using Archivematica (FOSS)

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Intend to integrate with CDS & Zenodo &…

https://github.com/CERN-E-Ternity