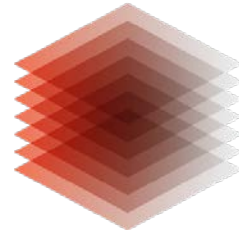

LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK



TIB

Digital Object Identifier (DOI): Enabling Scientific Publication and Citation – Role of Libraries

Britta Dreyer

Санкт-Петербург, 20. – 21. June 2016

Arbicon 2016

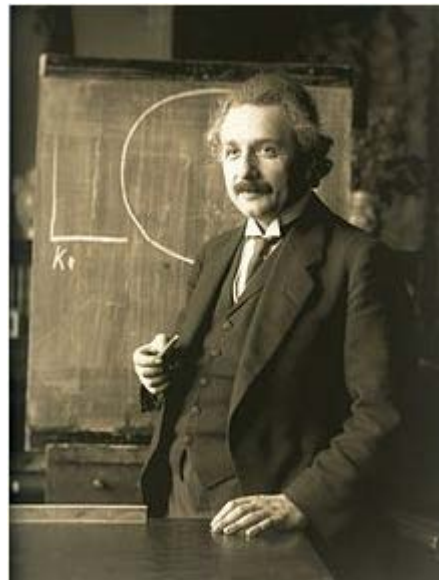
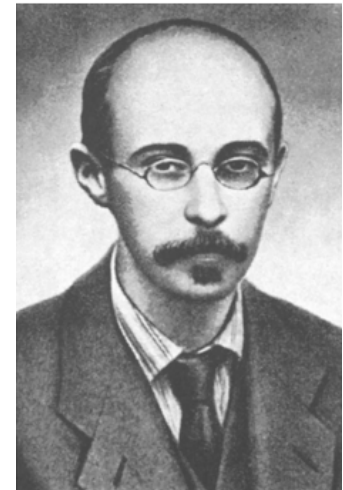
Agenda

1. **The Value of Open Data**
2. **DOI and DataCite**
3. **DOI Registration in practice**
4. **Research Data Services at the German National Library of Science and Technology (TIB)**

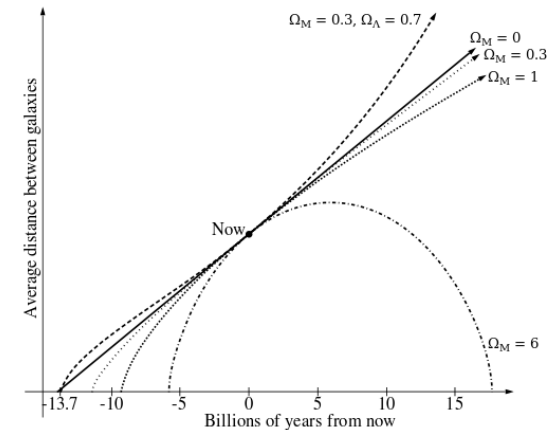
Russian Scientists

Alexander Alexandrowitsch Friedmann (1880 – 1925)

- Born in St. Petersburg, developed the Friedmann-Equations, inspired Albert Einstein



$$E = mc^2$$



Published Research Data with DataCite DOIs

- On 14 September 2015 first observation of gravitational waves was made - 100 years after publication of the theory of general relativity by Albert Einstein
- Made available by the LIGO and Virgo Collaborations on 11 February 2016 through our member the California Digital Library with DataCite DOIs

Albert Einstein himself doubted that they could ever be detected...



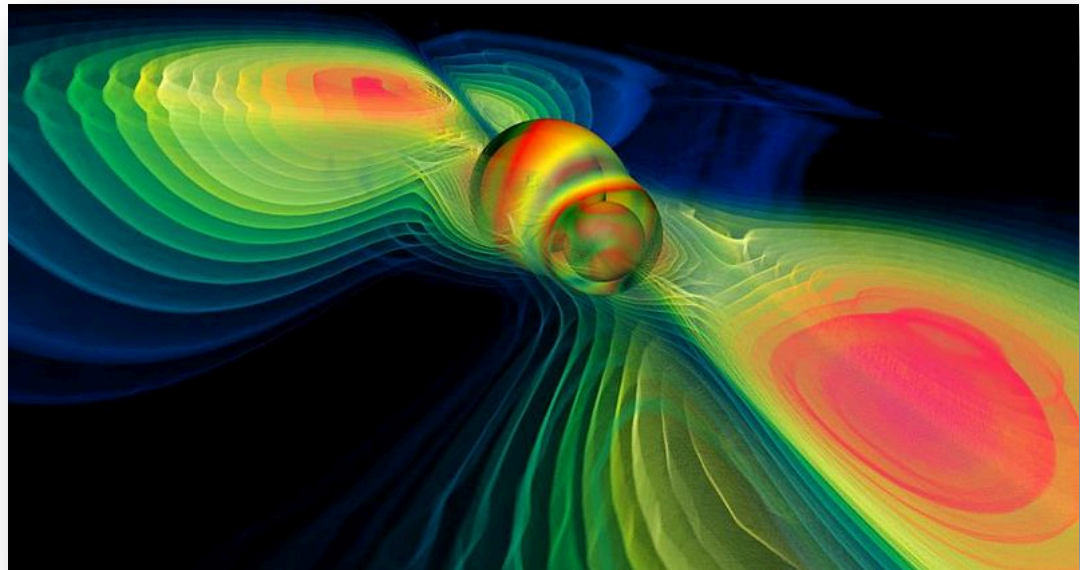
Source:

Benger, W: When black holes collide

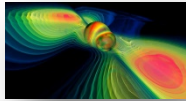
[https://commons.wikimedia.org/wiki/File:](https://commons.wikimedia.org/wiki/File:When_Black_Holes_Collide.jpg)

When_Black_Holes_Collide.jpg

CC-BY 2.0



State of the Art Data Publication!



Explore: **GW150914**

View: <http://doi.org/10.7935/K5MW2F23>

The data behind the collision of two black holes

- collected by LIGO's twin detectors,
- citable via a DataCite DOI, and
- **open for everyone!**

Made available by LIGO Open Science Center at the California Institute of Technology and Massachusetts Institute of Technology – including technical reports, graphs, calibration data & even audio files!

LIGO LIGO Open Science Center
LIGO is operated by California Institute of Technology and Massachusetts Institute of Technology and supported by the U.S. National Science Foundation.

Getting Started

- Tutorials
- Data & Catalogs
- Timelines
- My Sources
- Software
- GPS – UTC
- About LIGO
- Student Projects
- Acknowledgement

Data release for event GW150914

This page has been prepared by the LIGO Scientific Collaboration (LSC) and the Virgo Collaboration to inform the broader community about a confirmed astrophysical event observed by the gravitational-wave detectors, and to make the data around that time available for others to analyze. There is also a [technical details page](#) about the data linked below, and feel free to contact us. This dataset has the Digital Object Identifier (doi) <http://dx.doi.org/10.7935/K5MW2F23>

Summary of Observation

The event occurred at GPS time 1126259462.39 == September 14 2015, 09:50:45.39 UTC. The false alarm rate is estimated to be less than 1 event per 203,000 years, equivalent to a significance of 5.1 sigma. The event was detected in data from the LIGO Hanford and LIGO Livingston observatories.

- There are [Science Summaries](#), covering the information below in ordinary language.
- There is a [one page factsheet](#) about GW150914, summarizing the event.

How to Use this Page

- Click on the section headings below to show available data files.
 - (click to Open/Close all sections)
- There are lots of data files available in the sections below, look for the word **DATA**.
- Click on each thumbnail image for larger image.
- See the papers linked below for full information, references, and meaning.
- Many of the data files linked below have heterogeneous formatting; if you have any questions, please contact us.

The GW150914 detection paper:

Observation of Gravitational Waves from a Binary Black Hole Merger

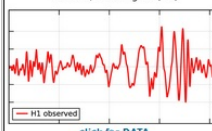
For full details see LIGO DCC, arXiv, or Phys. Rev. Letters
This paper and all the companion papers can also be found at papers.ligo.org

Estimated source parameters

Quantity	Value	Upper/Lower error estimate	Unit
Primary black hole mass	36	+5 -4	M sun
Secondary black hole mass	29	+4 -4	M sun
Final black hole mass	62	+4 -4	M sun
Final black hole spin	0.67	+0.05 -0.07	
Luminosity distance	410	+160 -180	Mpc
Source redshift, z	0.09	+0.03 -0.04	
Energy radiated	3	+0.5 -0.5	M sun

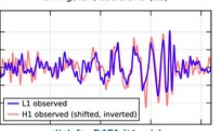
TABLE I. Estimated source parameters for GW150914. We report the median value as well as the range of the 90% credible interval. Masses are measured in the source frame; to convert masses to detector frame, multiply by (1+z). The source redshift assumes standard cosmology.

Hanford, Washington (H1)



click for DATA

Livingston, Louisiana (L1)



click for DATA (L1 only)

Source: Screenshot GW150914 Landing Page:

<http://doi.org/10.7935/K5MW2F23>

Page 5

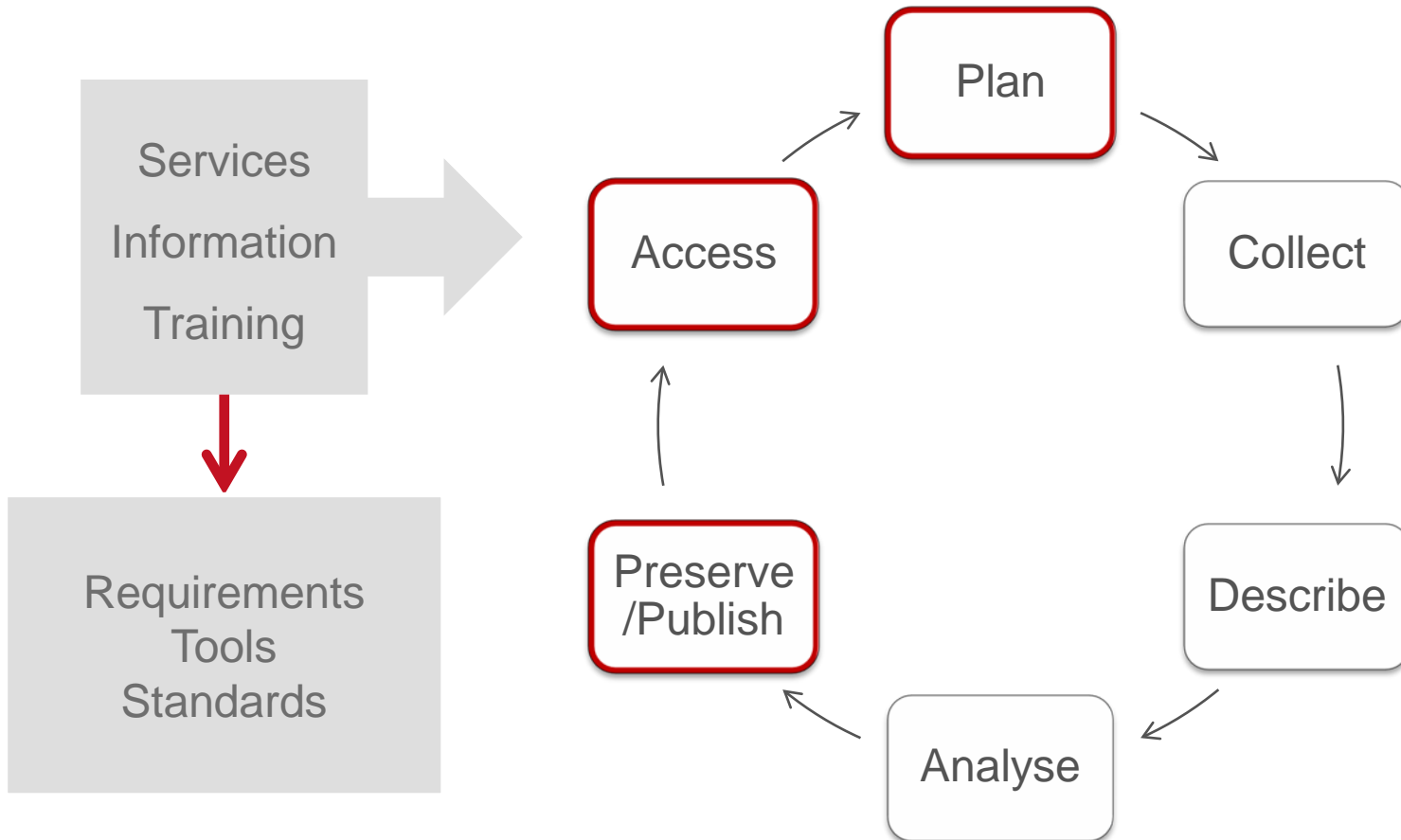
Requirements for Research Data Preservation and Sharing

1. Trustworthy research data repositories
2. Data policies
3. Standards for data citation, metadata, licensing
4. Intellectual property rights and proprietary data
5. Methods and tools adapted to the scientific workflows
6. Cost recovery strategies

7. Motivation for change

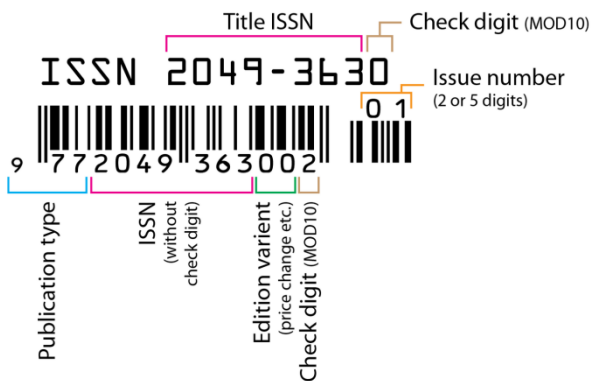
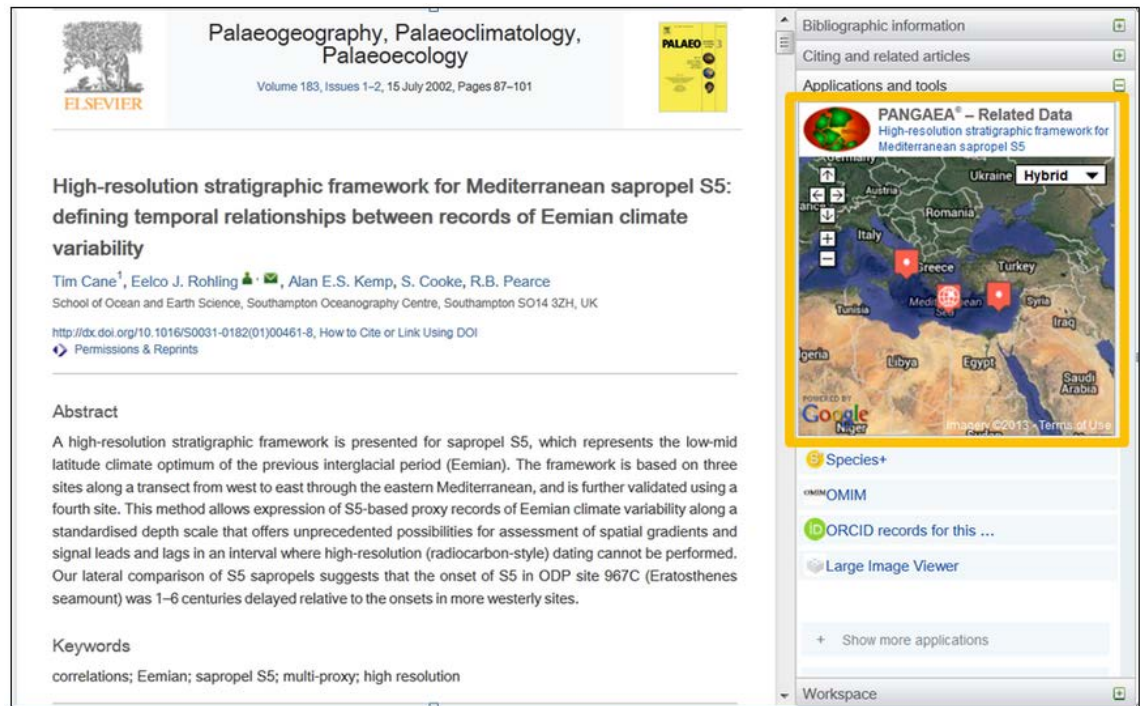


Research Data Management – Key Roles for Libraries



Digital Persistent Identifier

ISBN and ISSN are here since 1970s → **Hyperlinking** not possible → Granularity options

The screenshot shows a web page from Elsevier. The article title is "High-resolution stratigraphic framework for Mediterranean sapropel S5: defining temporal relationships between records of Eemian climate variability". The authors listed are Tim Cane, Eelco J. Rohling, Alan E.S. Kemp, S. Cooke, R.B. Pearce. The abstract describes a high-resolution stratigraphic framework for sapropel S5, which represents the low-mid latitude climate optimum of the previous interglacial period (Eemian). The framework is based on three sites along a transect from west to east through the eastern Mediterranean, and is further validated using a fourth site. This method allows expression of S5-based proxy records of Eemian climate variability along a standardised depth scale that offers unprecedented possibilities for assessment of spatial gradients and signal leads and lags in an interval where high-resolution (radiocarbon-style) dating cannot be performed. Our lateral comparison of S5 sapropels suggests that the onset of S5 in ODP site 967C (Eratosthenes seamount) was 1-6 centuries delayed relative to the onsets in more westerly sites.

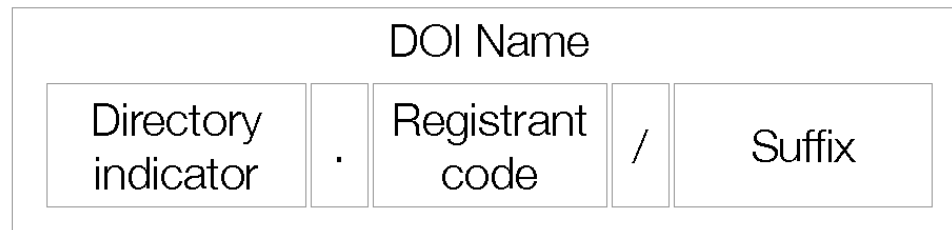
<https://www.elsevier.com/connect/bringing-data-to-life-with-data-linking>

For a landing page of this dataset please follow <http://dx.doi.org/10.1594/PANGAEA.849289>

Digital Object Identifier (DOI)



- Persistent Identifier and hyperlink
- Typically expressed as a URL
- Specifies the resource – not the location
- Has metadata attached
- ANSI/NISO Z39.84-2000 (reconfirmed 2005, 2010)
- Standard DIN ISO 26324 (2012)
- Unique alphanumeric string assigned by a registration agency

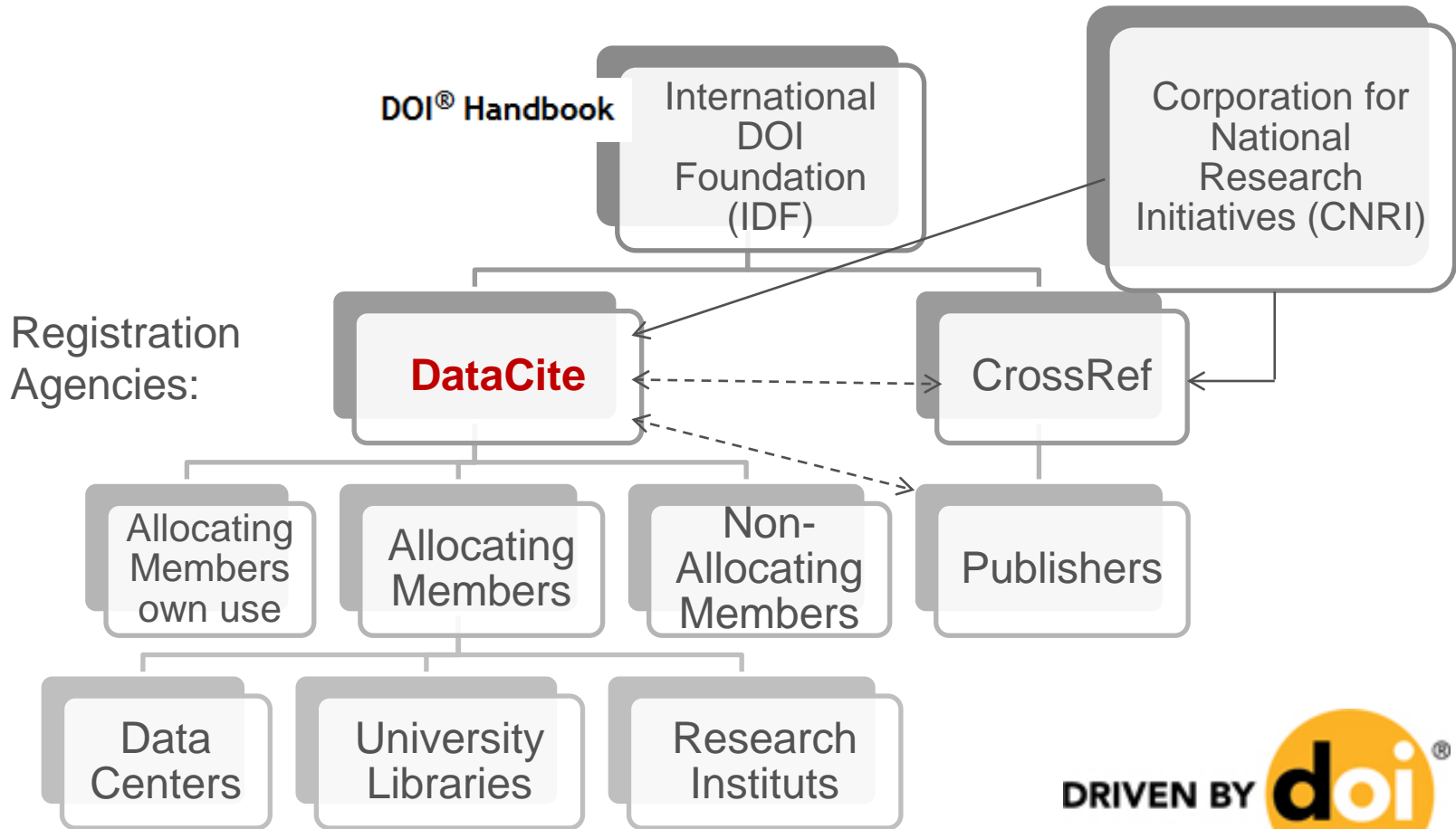


Example:

10	.	1234	/	data567
----	---	------	---	---------



DataCite Structure

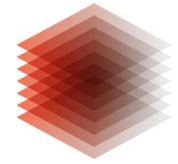


DOI Registration Agencies

<p>Chinese library for digital resources</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>airiti, Inc.</p> </div> <div style="text-align: center;">  <p>Crossref</p> </div> </div>	
<p>Chinese knowledge database</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>China National Knowledge Infrastructure (CNKI)</p> </div> <div style="text-align: center;">  <p>DataCite</p> </div> </div>	
<p>Universal unique identifier system for movie and television assets</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>EIDR (Entertainment Identifier Registry)</p> </div> <div style="text-align: center;">  <p>ISTIC (The Institute of Scientific and Technical Information of China)</p> </div> </div>	<p>DOI names for Chinese journals, data sets and dissertations</p>
<p>DOI names for Japanese journal articles</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>JaLC (Japan Link Center)</p> </div> <div style="text-align: center;">  <p>Korea Institute of Science and Technology Information (KISTI)</p> </div> </div>	<p>KISTI is a government-funded research institute</p>
<p>mEDRA is the European DOI Registration Agency for some European countries.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>mEDRA (Multilingual European DOI Registration Agency)</p> </div> <div style="text-align: center;">  <p>OP (Publications Office of the European Union)</p> </div> </div>	<p>Publishing house of the EU institutions, responsible for publishing and distributing EU publications</p>

DataCite in a Nutshell

- Found in December 2009
- 27 allocating members and 8 non-allocating members in 21 countries
- ~ 700 data centers around the world
- DataCite **DOIs** have been assigned to 7.7 Mio DOIs of research datasets
→ making them **public, citable, traceable.**
- German non-profit association - Business Office at German National Library of Science (TIB)
- Member of Research Data Alliance (RDA) and ORCID



Global DOI Providers for General Resources



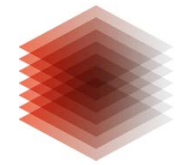
Focus:
data community
Mission:
further data sharing

- Linking scholarly output
- Citation formatter
- Content negotiation
- Event Data

Focus:
publisher Community
Mission:
sustainable infrastructure for scholarly communication

The metadata search services do not operate accross registration agency infrastructures.

DataCite Members



DataCite Membership

Open to all types of organizations

- Allocating Members
- Non-Allocating Members

Members....

- demonstrate an elevated level of **commitment to open-data and open research.**
- become **part of a global data-sharing community**, learning, collaborating, and advocating with a leading-edge network of data research experts.
- **create and manage persistent identifiers (DOIs)** for research outputs (Allocating Members only).
- **play a critical role in advancing DataCite's data-sharing** mission through their financial support.
- **shape the future DataCite** – and data research in general – by serving on our Executive Board.

DataCite – Staff on Board since August 2015

Executive Director	Trisha Cruse
Business Manager	Britta Dreyer
Communication Director	Laura Rueda
Technical Director	Martin Fenner
Starting August 1st: Application Developer	Kristian Garza



Services

ASSIGN DOIS

<https://mds.datacite.org>
<https://api.labs.datacite.org>

METADATA SEARCH

<https://search.datacite.org/>
<https://labs.search.datacite.org>

EVENT DATA

<https://dlm.datacite.org>
<https://ls.datacite.org>

PROFILES

<https://profiles.datacite.org>

RE3DATA

<http://re3data.org>

CITATION FORMATTER

<http://crosscite.org/citeproc/>

STATISTICS

<http://stats.datacite.org>

SERVICE STATUS

<http://stats.datacite.org>
<http://twitter.com/datacitetech>

OAI-PMH

<http://oai.datacite.org>


Content Resolver

<http://data.datacite.org/>

API

<https://mds.datacite.org/static/apidoc>
<https://api.labs.datacite.org/> (soon with
Documentation and new JSON API)

Metadata Search



[Works](#)
[Contributors](#)
[Data Centers](#)
[Members](#)
[Sources](#)

Sign in

Search

732 Data Centers

<p>027.7 - Zeitschrift für Bibliothekskultur</p> <p><small>ethz.ubasojs</small></p>	<p>Members</p> <ul style="list-style-type: none"> <input type="checkbox"/> California Digital Library 167 <input type="checkbox"/> German National Library of Science and Technology 107 <input type="checkbox"/> Leibniz Institute for the Social Sciences 63 <input type="checkbox"/> British Library 61 <input type="checkbox"/> ETH Zurich 40 <input type="checkbox"/> Australian National Data Service <input type="checkbox"/> Library and Information Centre40 of the Hungarian Academy of Sciences 37 <input type="checkbox"/> Conferenza dei Rettori delle Università Italiane 32 <input type="checkbox"/> German National Library of Medicine 31 <input type="checkbox"/> Institute for Scientific and
<p>3TU Datacentrum</p> <p><small>delft.datacent</small></p>	
<p>4TU.Centre for Research Data</p> <p><small>delft.data4-tu</small></p>	
<p>Aalborg University Library</p> <p><small>dk.aau</small></p>	

Event Data

- Collect events around scholarly content (DOI Event Tracker)



DataCite (Crossref)

Import works with Crossref DOIs as relatedIdentifier via the DataCite Solr API.

 datacite-crossref

206,341 Works

DataCite (Github)

Import works with Github relatedIdentifiers via the DataCite Solr API.

 datacite-github

329 Works

Data Level Metrics


- Collects events found via the relatedIdentifier and nameIdentifier attributes of DataCite Metadata







Data from: Rise of the machines – recommendations for ecologists when using next generation sequencing for microsatellite development.

Michael G Gardner, Alison J Fitch, Terry Bertozzi, Andrew J Lowe, Michael G Gardner, Alison J Fitch, Terry Bertozzi, Andrew J Lowe
 DataPackage published 2011 via Dryad Digital Repository

<http://doi.org/10.5061/DRYAD.F1CB2> 

Has part 51 | Is referenced by 1 | **Is cited by 6**



- Europe PMC  <http://doi.org/10.1073/PNAS.1205856110>
- Europe PMC  <http://doi.org/10.1371/JOURNAL.PONE.0084559>
- PLOS  <http://doi.org/10.1371/JOURNAL.PONE.0084559>
- Europe PMC  <http://doi.org/10.3732/APPS.1200295>
- Europe PMC  <http://doi.org/10.1371/JOURNAL.PONE.0040861>
- PLOS  <http://doi.org/10.1371/JOURNAL.PONE.0040861>

Examples | Stats | Su

Data from: Ontogeny, morphology and taxonomy of the soft-bodied Cambrian ‘mollusc’ Wiwaxia

Martin R. Smith
 DataPackage published 2013 via Dryad Digital Repository

<http://doi.org/10.5061/DRYAD.868SM> 

Has part 53 | **Is referenced by 10**



- Datacite  <http://doi.org/10.1111/PALA.12063>
- Wikipedia  <http://en.wikipedia.org/wiki/Wiwaxia>
- Wikipedia  http://commons.wikimedia.org/wiki/File:Odontogriphus_ROM57723.JPG
- Wikipedia  [http://commons.wikimedia.org/wiki/File:Wiwaxia_corrugata_\(mature\).png](http://commons.wikimedia.org/wiki/File:Wiwaxia_corrugata_(mature).png)

What is an ORCID ID?

- ORCID ID are permanent identifier for researchers
- Protects the researchers unique scholarly identity
- Creation takes 30 seconds – full privacy control
- Lasts longer than your email address – keep contact information up-to-date
- Supports 37 types of „works“
- Push information automatically from Web of Science, Impactstory etc.
- Over 1000 journals are using ORCID to ease their manuscript submission system




Impactstory is a non-profit that helps scientists learn where their research is being cited, shared, saved and more. [Discover your impact today.](#)

<http://blog.impactstory.org/ten-things-you-need-to-know-about-orcid-right-now/>


ORCID Profile

- ✓ Connect funding dollars with tangible outputs
- ✓ Track citations beyond journal articles

ORCID **Britta Dreyer**
<http://orcid.org/0000-0002-0687-5460>
[\(Not You?\)](#)

Impactstory 
ABOUT: Impactstory lets you track and explore the online impact of all your research outputs

has asked for the following access to your ORCID Record

 **iD**

Get your ORCID iD

Allow this permission until I revoke it.
You may revoke permissions on your account settings page. Unchecking this box will grant permission this time only.

This application will not be able to see your ORCID password, or other private info in your ORCID Record. [Privacy Policy](#).

ORCID Profile

- Automatic ORCID profile update when DOI is minted (ORCID push)
- DataCite – CrossRef – ORCID collaboration

If you authorize Crossref and DataCite to update your ORCID record








and you add your ORCID to your paper or dataset submission

ORCID Auto-Update enabled

↔ Have works with your ORCID identifier automatically added to your ORCID record.

disable

when your publication gets a DOI

Physical oceanography and oxygen data during Mare Nigrum cruise MN84

Dan Secieru & Balan Sorin

Dataset published 2010 via PANGAEA - Data Publisher for Earth & Environmental Science

<http://doi.org/10.1594/PANGAEA.745279>



Cite



Add to ORCID

Citation Formatter



Sign in

geo Q

753 Results

Physical oceanography and oxygen data during Mare Nigrum cruise MN84

Dan Secrieru & Balan Sorin

Dataset published 2010 via PANGAEA - Data Publisher for Earth & Environmental Science

<http://doi.org/10.1594/PANGAEA.745279> Cite



Resource type

- Dataset 714
- Collection 39

Publication year

- 1998 339
- 2006 142
- 93
- 33

Physical oceanography and oxygen data during Mare Nigrum cruise MN84

BibTeX RIS APA Harvard IEEE MLA Vancouver Chicago

```
@data{f12a8657-aaf3-48fc-8a59-2984d0949401,
  doi = {10.1594/PANGAEA.745279},
  url = {http://dx.doi.org/10.1594/PANGAEA.745279},
  author = {Secrieru, Dan; Sorin, Balan; },
  publisher = {PANGAEA - Data Publisher for Earth & Environmental Science},
  title = {Physical oceanography and oxygen data during Mare Nigrum cruise MN84},
  year = {2010}
}
```


Citation Recommendation

First Five Metadata schemes:

Creator (PublicationYear): Title. Publisher.
Identifier

Metadata Version 4 citation recommendation:

Creator (PublicationYear): Title. Version.
Publisher. ResourceType. Identifier

Example:

Denhard, Michael (2009): dphase_mpeps: MicroPEPS LAF-Ensemble run by DWD for the MAP D-PHASE project. World Data Center for Climate. Dataset.
http://doi.org/10.1594/WDC/dphase_mpeps

DOI Registration in Practice

▼ Register new Dataset

Datcentre:

DOI latency: Be aware that it can take up to 24 hours until a DOI update is globally known. New DOIs should be resolvable after about 5 minutes.

For testing purposes please only use our dedicated test prefix 10.5072

DOI:

Url:

XML upload: Keine Datei ausgewählt.

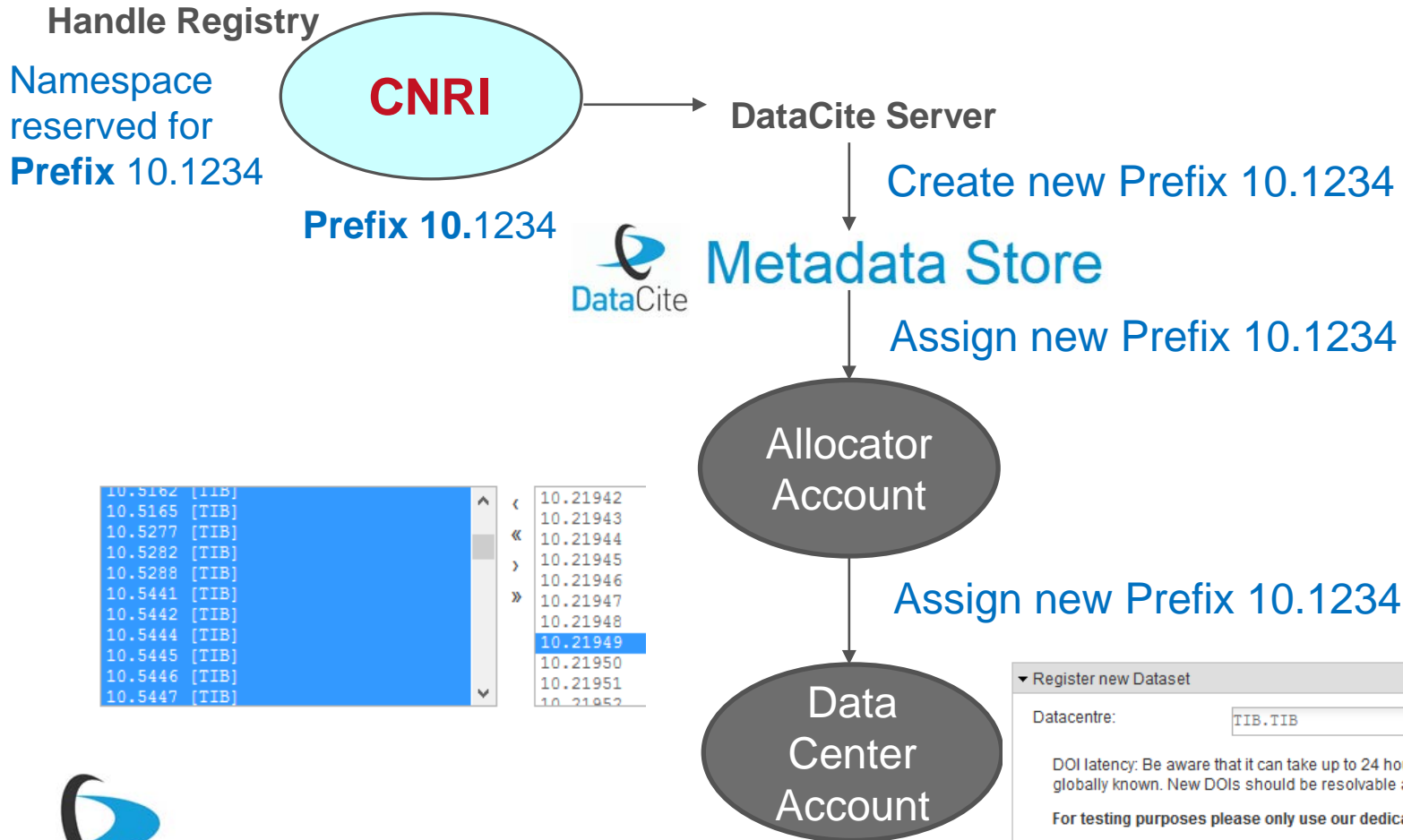
Please select an XML file. It must reference a schema located under the following base URL: <http://schema.datacite.org/meta/>

XML:



Registration via
DataCite User Interface
or REST API

Creation process of a prefix?



10.5162 [TIB]	<	10.21942
10.5165 [TIB]		10.21943
10.5277 [TIB]	«	10.21944
10.5282 [TIB]		10.21945
10.5288 [TIB]	>	10.21946
10.5441 [TIB]		10.21947
10.5442 [TIB]	»	10.21948
10.5444 [TIB]		10.21949
10.5445 [TIB]		10.21950
10.5446 [TIB]		10.21951
10.5447 [TIB]		10.21952

▼ Register new Dataset

Datacentre:

DOI latency: Be aware that it can take up to 24 hours until a DOI update is globally known. New DOIs should be resolvable after about 5 minutes.

For testing purposes please only use our dedicated test prefix 10.5072

DOI:

Url:

Prefixes

Please keep in mind that DOIs within one prefix name space are inseparable

Recommendations:

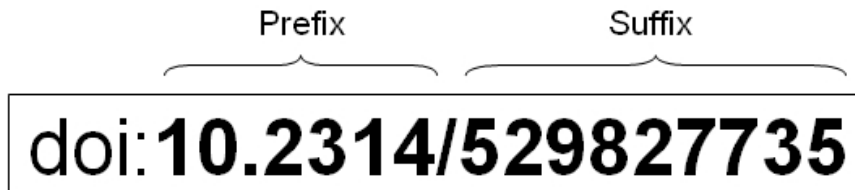
Use additional prefix if:

- Objects are on separate platforms/servers (apply internal/logical separation)
- Different and separate customers
- Different systems or products



Suffix

- Suffix defined by registrant
- Recommendation: Opaque string (names can change)
- Characters for a DOI name:

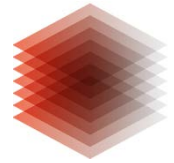


A – Z	: (colon)
a – z	. (full-stop)
0 – 9	- (hyphen)
/ (slash)	_ (underscore)

Media Fragment Identifier

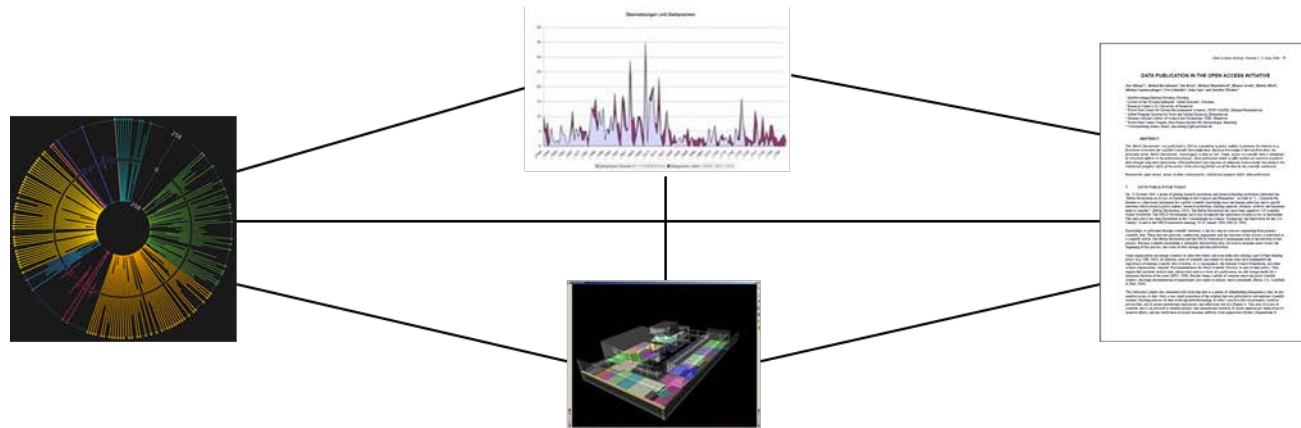
AV Media: <http://dx.doi.org/10.5446/10133#t=00:45,00:48>

Book: <http://dx.doi.org/10.12345/9876#5>



DataCite Metadata

- IDF Requirement
- Based on Dublin Core
- Applicable accross research disciplines
- Linkage between different types of resources
- Connecting resources, creators, institutions and funders



DataCite Metadata Properties

Current version Metadata Schema 3.1 <https://schema.datacite.org/>

Mandatory	Recommended	Optional
Identifier	Subject	Language
Creator	Contributor	Alternate ID
Title	Date	Size
Publisher	Resource Type	Format
Publication year	Related identifier	Version
	Description	Rights
	GeoLocation	

Will be mandatory with Metadata version 4.0

Key for search queries and harvesting

Metadata Schema V 4.0

- Roll-out in September 2016
- Allowing more than one nameIdentifier per creator or contributor
- Addition of new optional subproperties for creatorName and contributorName
 - familyName
 - givenName
- Addition of a new property: FundingReference, with subproperties
 - funderName
 - funderIdentifier
 - funderIdentifierType
 - awardNumber
 - awardURI
 - awardTitle

DOI - New Versions, Changes, Removal

Case: **New version of registered resource**

Solution: New DOI for each version – use metadata attribute „relatedIdentifier“ to link them conveniently

Case: **Change to metadata** i.e. typo fix, transliteration of a name

Solution: Upload the updated xml file via UI or API

Case: **Resource is removed**

Solution: DOI, metadata and landing page remain – worst case DOI inactive

Tombstone page:

Inactive DOI

This document is no longer available.

Contact

Britta Dreyer

Phone: +49 511 762-17642

Email: britta.dreyer@tib.eu



▼ Show Dataset

DOI: [10.2314/GBV:860814092](https://www.tib.eu/suchen/id/TIBKAT:860814092) (<https://www.tib.eu/suchen/id/TIBKAT:860814092>) [\[handle record\]](#)

DOI latency: Be aware that it can take up to 24 hours until a DOI update is globally known. New DOIs should be resolvable after about 5 minutes.

Minted: 2016-06-10 08:22 UTC

Updated: 2016-06-10 08:22 UTC

Is Active: true

Is Ref Quality: false

► Show Current Metadata

▼ List all Metadata Versions

Metadata Version	Created	XML Namespace	Automatically converted
0	2016-06-10T08:22:36.000Z	http://datacite.org/schema/kernel-2.2	false

Open Access and Licensing

Open Access is the main goal!

- But it is possible to restrict access to data if necessary → Landing page should inform of access rights.
- Metadata and landing page should always be available.

Russian versions of CC Licenses:

Wikimedia Wikisource.

Professional 2011 3.0 translations by IIS:

Russian translation of CC BY 3.0 (Unported)

Russian translation of CC BY-SA 3.0 (Unported)

Russian translation of CC BY-ND 3.0 (Unported)

Russian translation of CC BY-NC-SA 3.0 (Unported)


Russian translation of CC BY-NC 3.0 (Unported)

Russian translation of CC BY-NC-ND 3.0 (Unported)



German National Library of Science and Technology (TIB)

Research library for science and technology, architecture, chemistry, computer science, mathematics and physics

Member of **Leibniz Association**
500 members of staff 

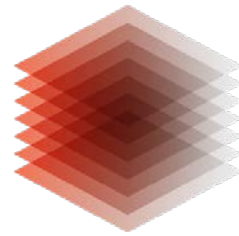
Global supplier for scientific and technical information

Founding member of DataCite 

- 55,345 journal subscriptions (15,967 print; 39,378 digital)
- 9.1 m items, 17.3 m patents & standards



LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK



TIB

TIB Resource Types



DataCite Search Works Contributors Data Centers Members Sources Sign in

German National Library of Science and Technology (TIB)
Germany

tib allocating member

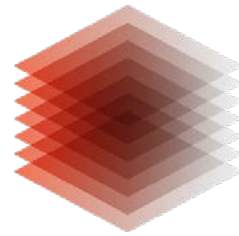
Total Metadata Records: 1,030,112 Works

Resource Types

<input type="checkbox"/> Dataset	361,983
<input type="checkbox"/> Text	247,634
<input type="checkbox"/> Image	124,542
<input type="checkbox"/> Collection	26,122
<input type="checkbox"/> Audiovisual	628
<input type="checkbox"/> Other	174
<input type="checkbox"/> Film	54
<input type="checkbox"/> Software	22
<input type="checkbox"/> Event	21
<input type="checkbox"/> Sound	2
<input type="checkbox"/> Interactive resource	1

<https://search.labs.datacite.org/>

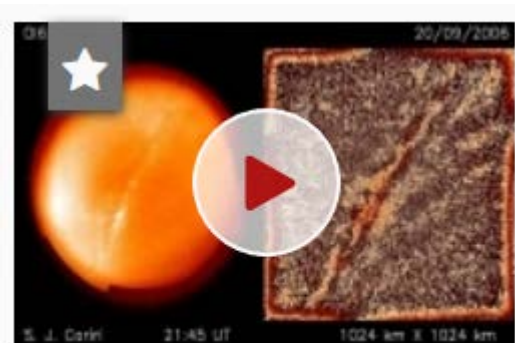
LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK



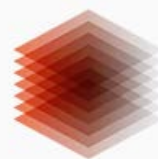
TIB

Internal Customers

- Retro-digitisation
- Audio visual media
- Research reports
- Handbuch.io
- University document server



Periodic gravity waves in the lower thermosphere



TIB AV-PORTAL

TIB Portal: Search and Access to Digital Content

Page 1 from 21,695 hits

Sort by: Best results | [Currentness](#) | [Title](#)

Drilldown

Year of publication


 -

Type of media

< All types of media

- Article (Journal) (3,362,203)
- Report (789,332)
- Conference paper (665,529)
- Book (58,958)
- Research Data (21,695)
- Article/Chapter (Book) (17,495)
- Conference Proceedings (9,428)
- Theses (9,058)
- No value (5,094)
- Paper (4,185)

« < 1 2 3 4 5 6 7 > »



[Non-tidal Ocean Geopotential Coefficients averaged over certain Time Period](#) (3.9393604)

GRACE Science Data System | DataCite | 2002
 Supplier: GRACE Science Data System
 Keywords: ECMWF atmospheric data



[Static Field Geopotential Coefficients estimated from Satellite Data only](#) (3.9393604)

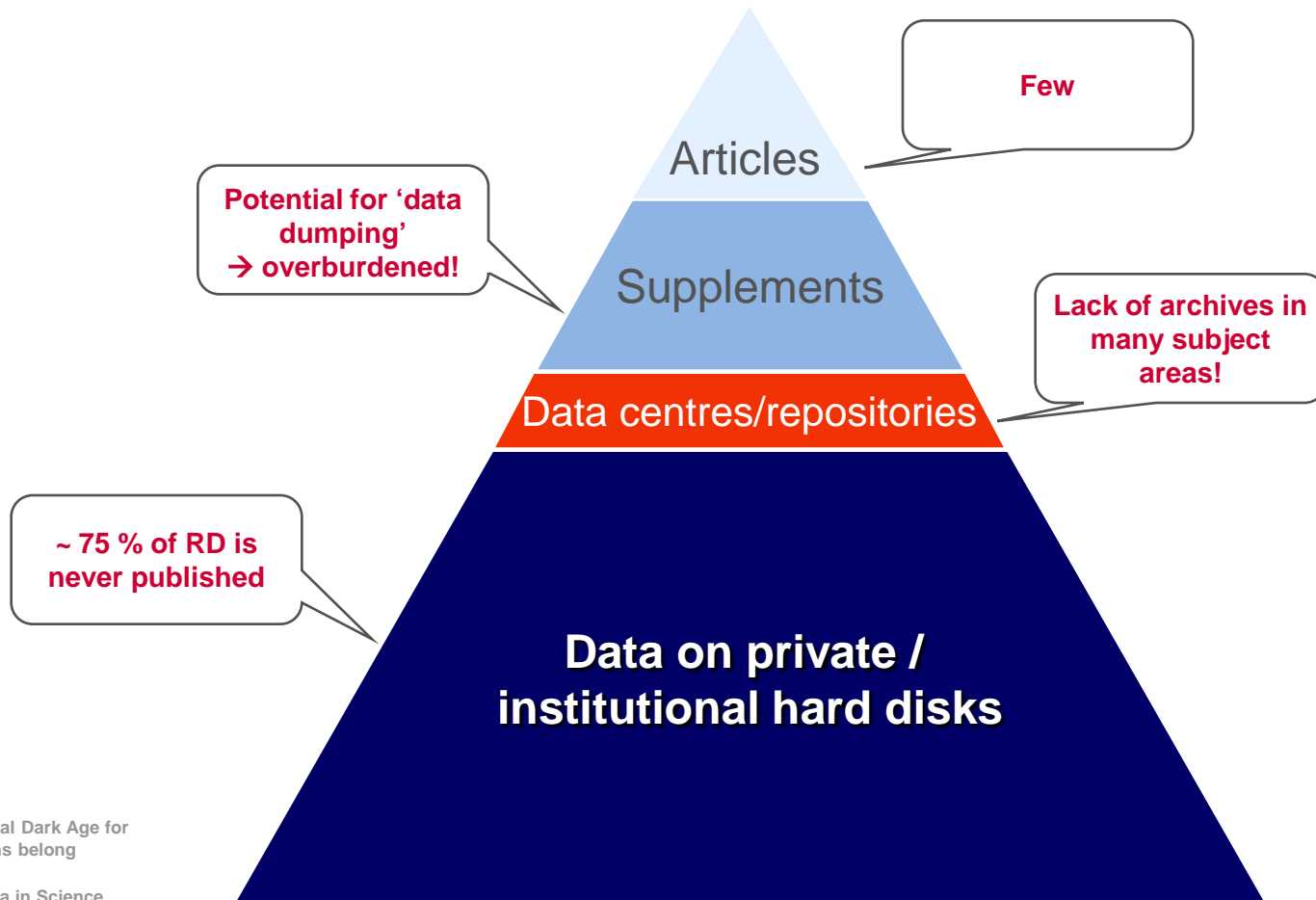
GRACE Science Data System | DataCite | 2002
 Static Field Geopotential Coefficients estimated from Satellite Data only ...
 Supplier: GRACE Science Data System



[Non-tidal Atmosphere Geopotential Coefficients averaged over certain Time Period](#) (3.9393604)

GRACE Science Data System | DataCite | 2002
 Supplier: GRACE Science Data System
 Keywords: ECMWF atmospheric data

1. Reality of data publishing



Modified based on
STM / Smit, E: Avoiding a Digital Dark Age for
Data: why data and publications belong
together
ICSTI workshop Delivering Data in Science
PARIS, 5 March 2012

RADAR: Research Data Repository

- **Digital data repository (RADAR)** for archiving & publishing research data

Goal:

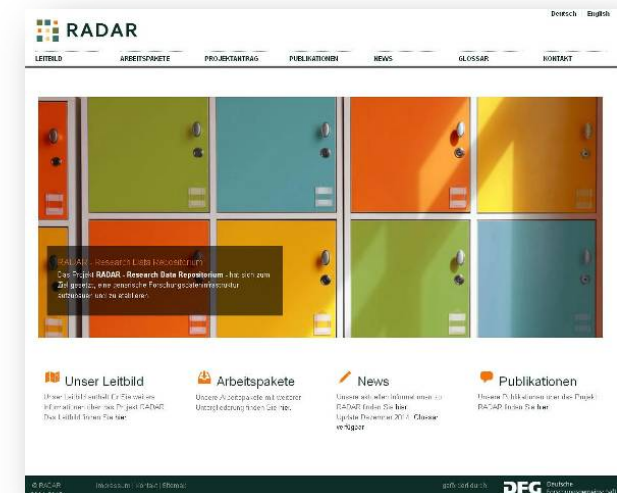
Preservation & reuse of research data

Focus:

Repository for heterogeneous research data (**‘Long Tail’**), addition to big data archives → for customers without own computing centers/capacities, dedicated to open research data standards

Further information: www.radar-projekt.org

Service (July 2016): www.radar-service.eu



RADAR: Service & Business Model

Services:

Basic service: **Archival Storage** (with EPIC-Handle)

Extended service: **Data Publication** (with DOI)

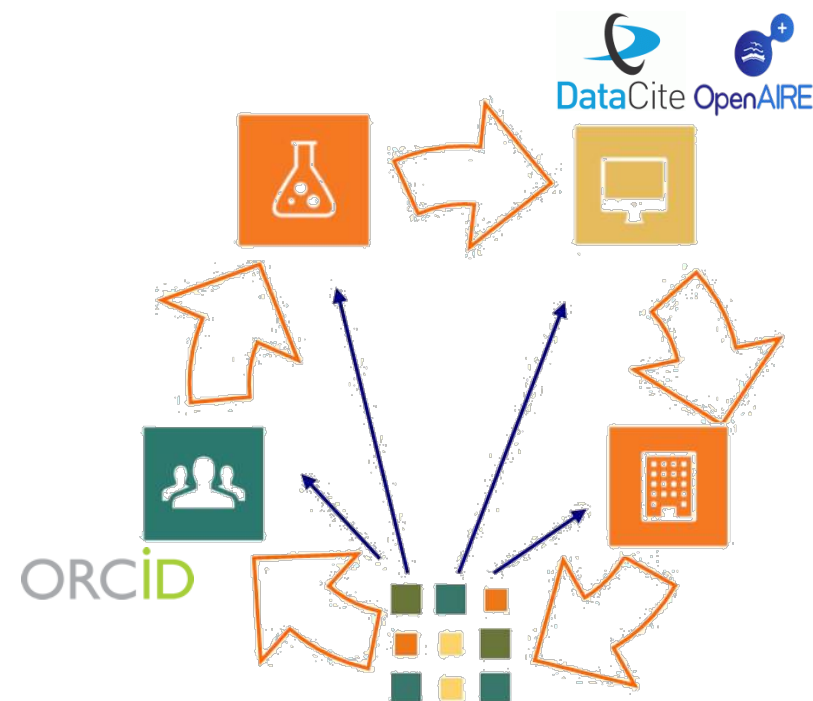
Features:

- Data Life Cycle support
- Sign Up using ORCID
- REST **API** for clients (**customizable**)
- Interoperability & cross-linking of published datasets via API: DataCite, ORCID & others
- **Optional Peer-Review** Support
- **Download Statistics**

Prices:

Annual fee + data volume

(price information: www.radar-projekt.org/display/RE/Home)



➡ Generic end-point repository with services for scientists/institutions

Resources

Citations recommendations

<http://jats4r.org/citations-recommendations/>

How to develop RDM services

<http://www.dcc.ac.uk/resources/how-guides/how-develop-rdm-services>

DOI Handbook

<https://www.doi.org/hb.html>

Workshops for researcher

<http://anulib.anu.edu.au/research-learn/research-data-management-0>

<http://www.data-archive.ac.uk/media/2894/managingsharing.pdf>

<http://datalib.edina.ac.uk/mantra/>

<http://opus.bath.ac.uk/412/>



DataCite Plugins

Dataverse software will be able to mint DOIs directly through the DataCite Metadata Store API.

<https://github.com/IQSS/dataverse/releases/tag/v4.3>

OJS DataCite Plugin

<https://github.com/pkp/ojs/tree/master/plugins/importexport/datacite>

Dspace

<https://wiki.duraspace.org/display/DSDOC/All+Documentation>

Eprints

<https://github.com/eprints/datacite>

DataCite - Upcoming webinar and event

Webinar:

DataCite Metadata Schema Version 4.0 in June/July

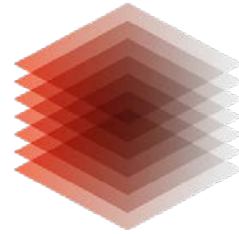
Event:

PIDapalooza
Reykjavik, Nov 2016

November 9 -1, 2016 in Reykjavik, Iceland

<http://pidapalooza.org/>

LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK



TIB

Спасибо and thank you!

Contact:

Britta Dreyer

T +49 (0)511 762-17642,

TIB DOI-Service: britta.dreyer@tib.eu

DataCite Business Office: britta.dreyer@datacite.org