

PaNdata ODI - WP7 Preservation

Start month: M10

End Month: M30



Science & Technology
Facilities Council



- WP objectives
- Where do we stand
 - PI for data sets
 - DOI and Datacite
 - Datacite contract
 - Implementation
- Planning

“incorporate models and tools oriented towards long-term **data preservation** into the PaNdata infrastructure”

Long term = 3/5 (publication) + 10 (review/exploitation)
= 15 years, at least

- **D7.1) Implementation of persistent identifiers for PaNdata datasets: [month 15]**
- D7.2) Mechanisms and tools for representation information and archiving: [month 21]
- D7.3) Mechanisms and tools for integrity of datasets: [month 27]
- D7.4) Report on evaluation of preservation mechanisms: [month 30]

- Objectives :
 - Being able to identify permanently and sustainably the Data Sets
 - Sealing the links between datasets and publication
- Which one, ARK, PURL(Z), HANDLE/DOI, our own ... ?
- DOI, Why ?
 - Technically (persistence, scope, scalability, ...) fits our needs
 - DOI has a very good libraries/publisher support and market penetration.
 - ISO standard
 - DOI is becoming The standard for PID
 - Worst case scenario -> handle system

- Datacite : amongst the 10 Ras, DataCite is the only one that focus on scientific data.
 - DOI's metadata are adapted for scientific experimental data;
 - Provides APIs (Web Services) for automating the generation of DOIs; and much more (export /OAI-PMH, metadata search engine, citation formatter, statistics ...)
 - Datacite is composed of major scientific Libraries;
 - Very active organisation - Agreements with Publishers.

- DOI = 10.5286/ISIS.E.1010256
DOI = 10.5291/ILL-DATA.6-05-579
- Creator = Investigators/PI
- URL of landing page
- **Title** = Title of the experimental proposal
- Publisher = STFC ISIS Facility / ILL / ESRF
- Date = 3rd December 2010
- Data Format = ISIS Neutron RAW/ NXS
- **Data Citation** = Griffin, T. et al; (2010): RB12345, STFC ISIS Facility,
doi:10.1107/S0021889810034357

- Have to deal with national representative
 - STFC with the British Library
 - ESRF & ILL with INIST (CNRS)
- Annual fee in order to cover the Infrastructure cost
 - 1000€ for 10,000 DOIs
- Difficulties
 - High level quality metadata (samples are prepared by the users, difficult to assert for the RIs)
 - Mandatory metadata vs competition & non disclosure period
- ILL_INIST as a model for the PANData partners ? Interest ?

TOSCA



Data collected on the
Tosca instrument
at the ISIS facility

ISIS Data Data Set

Title: RB12345.

Investigation title: Hitting a material with neutrons to determine its structure.

Creator: Griffin, T.

Creator: Smith, T.

DOI: 10.1107/S0021889810034357

Date of Experiment: January 2004 BCE

Publisher: STFC ISIS Facility

Data format: RAW

Select the data format above to find out more about it.

Data Citation

The recommended format for citing this dataset in a research paper is [author], [date], [title], [publisher], [doi]

For Example:

Griffin, T. et al; (2010): RB12345, STFC ISIS Facility, doi:10.1107

Abstract

abstract text for data sets which are older than the embargo period and the earth. And the earth was without form, and void; and the Spirit of God moved upon the face of the waters. And God said, saw the light, that it was good: and God divided the light from the darkness he called Night. And the evening and the morning firmament in the midst of the waters, and let it divide the waters: and divided the waters which were under the firmament from the was so. And God called the firmament Heaven. And the evening God said, Let the waters under the heaven be gathered together and it was so. And God called the dry land Earth; and the gathering God saw that it was good. And God said, Let the earth bring forth tree yielding fruit after his kind, whose seed is in itself, upon the forth grass, and herb yielding seed after his kind, and the tree yield kind: and God saw that it was good. And the evening and the morning there be lights in the firmament of the heaven to divide the day from seasons, and for days, and years: And let them be for lights in the earth: and it was so. And God made two great lights; the greater rule the night: he made the stars also. And God set them in the earth, And to rule over the day and over the night, and to divide was good.



download



Title

Measurement of pressure and temperature dependence of phonon density of states in CaF_2As_2

Abstract

The parent compounds MF_2As_2 (M=Ba, Ca and Sr) also show pressure-induced superconductivity. In order to understand the role of lattice dynamics in the mechanism of superconductivity it is very important to study the phonon dynamics as a function of pressure and temperature. The pressure induced superconductivity has been found in CaF_2As_2 at 3.5 kbar. Phase transition to a collapsed tetragonal phase and superconductivity seem to be related in these compounds. CaF_2As_2 is the only compound in the recently discovered FAs_2 superconductors which shows the transition at a rather low pressure of 3.5 kbar. Our inelastic neutron scattering measurements at ILL indicate that the phonon modes in the Ca compounds show quite different behavior in comparison of Ba and Sr compounds. We expect that low energy phonon modes up to 20 meV would show significant changes in their energy with pressure, which needs to be investigated. The temperature dependence of density of states is required to investigate the changes in density of states across the tetragonal to orthorhombic phase transition as well as to investigate magnetic excitations and for comparison with our measurements on $\text{CaO}(\text{BaO})\text{F}_2\text{As}_2$.

Download

This data is not currently available to download

Data citation

The recommended format for citing this dataset in a research publication is in the following format: [author] [date] [title] [publisher] [doi]

Instrument

INS

INS

Data has been collected on the INS instrument

DOI > 10.5291/ILL-DATA.7-02-110

Metadata

DOI

doi:10.5291/ILL-DATA.7-02-110

Authors

BRUNCKEL, Thomas; CHAPLOT, Jean-Marc; MOTT, Bryan; HAVEN, KIMIA; CHOPINOVAN, M.; SULL, Thomas; SCHUBERT, Hans-Joachim; DE ME, JEAN-LUC; HANSEN

Publisher

Institut Laue-Langevin

Publication year

2011

Cycle(s)

2004

2004

Proposal number

7-02-110

Date of experiment

11-02-2004

Experiment parameters

Environment temperature

At 500 K (8)

Experiment energy

400-50 meV

Experiment res. energy

40 meV (8)

Sample parameters

Formula

 CaF_2As_2

Consistence

polycrystalline

Mass

10000

Size

5000

Surface

400

Space

14mm (8)

Unit cell A

3.807

Unit cell B

3.807

Unit cell C

11.758

Alpha

90

Beta

90

Gamma

90

Container

Powder cell and cryostat

Jean-François Perrin ILL

Institut Laue-Langevin

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Access to data is governed by the [ILL data policy](#)
ILL has partnered with [DataCite](#) as the registration agency for data persistent identifiers.



- ILL - current
 - Mint DOI right after the end of the first experiment
 - Might change, if Authors list and title appears to be too sensitive
 - Update the full set of Metadata after the non-disclosure period.
- STFC – current
 - Mint DOI on users demand.

- Implementation of DOIs
 - Contract signing with DataCite
 - Deployment DOIs generation mechanism
 - Landing page public rollout

STFC: 8 DOIs

ILL: 3 DOIs

Deliverable.

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- **Conceptual model** for managing, archiving and long term preservation of digital data.
- Origin 2002, Consultative Committee for Space Data Systems (CCSDS)
- ISO standard : 14721:2003
<http://public.ccsds.org/publications/archive/650x0b1.pdf>
- Draft Recommended Standard
<http://public.ccsds.org/sites/cwe/rids/Lists/CCSDS%206500P11/CCSDSAgency.aspx>

- June 2013 – Prototype of OAIS tools
 - AIP (Archival Information Package) SIP/(dissemination) DIP
 - PDI (Preservation Description Information) Provenance, **Context** (D7.2), **Reference** (D7.1), **Fixity** (D7.3) and Access Rights environment in which the Content Information was created.
- Work on Context – i.e e-Logbook, file format description...
- DIP how do we deliver the data ? .zip ? (Fixity – how to ensure that data have not been modified, checksum ?)

Who ?

Questions ?