Re-Engineering of PSFC Report Submission to meet DOE Requirements
PSFC Document EcoSystem
[Schema until 2015]

PSFC LOCAL DIGITAL ARCHIVE

OPAC
[Online Public Access Catalog]

PSFC REPORT

Preprints + Research Reports

MIT LIBRARIES

Barton
DSpace

DOE Submission via defacto Archival Deposit

ILP Submission via “pull”

TLO “Check Point”
[Technology Licensing Office]

CURATED DOCUMENT VERSIONS

A. Peer Reviewed Preprint
B. Unabridged Manuscript
C. Non-Peer Reviewed Preprint
D. Research or Internal Reports
   [Peer and non-Peer Reviewed]
E. Revisions, Errata of any
PSFC Document EcoSystem
[Expanded to Meet DOE 2015 Data Management Requirements]

**PSFC REPORT**

Preprints + Research Reports

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  - F. Accepted manuscript [i.e., for publication]
  - G. VoR [DOE regarded Version of Record, i.e., published version]

- VoR + Accepted Manuscript ONLY

- DOE/OSTI P.A.G.E.S
  - Public Access Gateway for Energy Sciences
  - Metadata & Link to Accepted Manuscript* and/or VoR

- DOE Required Data Management Plan Elements
  - Author Manuscript with Data Sets

* Traceable grant sponsorship must be included.
What does "Beta" mean?

DOE PAGES\textsuperscript{Beta} contains an initial collection of journal articles and accepted manuscripts as a demonstration of its functionality and eventual expanded content. Over the next year, additional metadata and links to articles and accepted manuscripts will be added as they are submitted to OSTI, with anticipated annual growth of 20,000-30,000 publicly-accessible articles and manuscripts. When DOE PAGES moves beyond the "beta" period, it will offer distributed full-text access to all DOE-affiliated accepted manuscripts or articles after an administrative interval of 12 months.

Guidance for DOE-Funded Authors

I'm a researcher at a DOE national laboratory and have just had a manuscript accepted for publication in a peer-reviewed journal; what do I need to do in order to comply with DOE's public access requirements?

I'm a researcher with a grant from DOE and have just had a manuscript accepted for publication in a peer-reviewed journal; what do I need to do in order to comply with DOE's public access requirements?

Find out more

Do you have questions about DOE PAGES\textsuperscript{Beta} content, procedures, or policies? More information is available at OSTI's Public Access Policy page and in our Frequently Asked Questions.
A compact neutron spectrometer for characterizing inertial confinement fusion implosions at OMEGA and the NIF

A compact spectrometer for measurements of the primary deuterium-tritium neutron spectrum has been designed and implemented on the OMEGA laser facility. This instrument uses the recoil spectrometry technique, where neutrons produced in an implosion elastically scatter protons in a plastic foil, which are subsequently detected by a proton spectrometer. This diagnostic is capable of measuring the yield to ±10% accuracy, and mean neutron energy to ±50 keV precision. As these compact spectrometers can be readily placed at several locations around an implosion, effects of residual fuel bulk flows during burn can be measured. Future improvements to reduce the neutron energy uncertainty to ±15-20 keV are discussed, which will enable measurements of fuel velocities to an accuracy of ~±25-40 km/s.


Publication Date: 2014-06-04

OSTI Identifier: 1172498

Grant/Contract Number: NA0002035

Type: Accepted Manuscript
This content will become publicly available on June 4, 2016

Multispecies density peaking in gyrokinetic turbulence simulations of low collisionality Alcator C-Mod plasmas
20 years of research on the Alcator C-Mod tokamak


Phys. Plasmas 21, 110501 (2014); http://dx.doi.org/10.1063/1.4901920

+ VIEW AFFILIATIONS

b) Invited speaker
20 Years of Research on the Alcator C-Mod Tokamak

M. Greenwald¹, A. Bader², S. Baek³, M. Bakhtiari⁴, H. Barnard⁴, W. Beck⁴, W. Bergerson⁵, I. Bespamyatnov⁶, P. Bonoli⁷, D. Brower⁸, D. Brunner⁹, W. Burke¹, J. Candy¹, M. Churchill¹, I. Cziegler¹, A. Diallo¹⁰, A. Dominguez¹¹, B. Duval¹², E. Edlund¹³, P. Ennever¹, D. Ernst¹, I. Faust¹, C. Fiore¹, T. Fredian¹, O. Garcia¹⁴, C. Gao¹, J. Goetz¹⁵, T. Gofinopoulos¹⁶, R. Granetz¹, O. Grulke¹⁷, Z. Hartwig¹, S. Horne¹⁸, N. Howard¹⁹, A. Hubbard¹, J. Hughes¹, I. Hutchinson¹, J. Irby¹, V. Izzo¹, C. Kessel⁶, B. LaBombard², C. Lau², C. Li¹, Y. Lin¹, B. Lipschultz¹³, A. Loarte¹⁴, E. Marmar¹, A. Mazurenko¹⁵, G. McCracken¹⁶, R. McDermott¹⁷, O. Meneghini⁵, D. Mikkelsen⁶, D. Mossessian¹⁸, R. Mumgaard¹, J. Myra¹⁹, E. Nelson-Melby²⁰, R. Ochoukov¹⁷, G. Olynyk¹¹, R. Parker¹, S. Pitcher¹⁴, Y. Podpaly²², M. Porkolab¹, M. Reinke¹³, J. Rice¹, W. Rowan⁴, A. Schmidt²³, S. Scott⁶, S. Shiraiwa¹, J. Sierchio¹, N. Smick²⁴, J.A. Snipes¹⁴, P. Snyder⁵, B. Sorbom¹, J. Stillerman¹, C. Sung¹, Y. Takase²⁵, V. Tang²³, J. Terry¹, D. Terry¹, C. Theiler⁸, A. Tronchin-James²⁶, N. Tsuji²⁵, R. Vieira¹, J. Walk¹, G. Wallace¹, A. White¹, D. Whyte¹, J. Wilson⁶, S. Wolfe¹, G. Wright¹, J. Wright¹, S. Wukitch¹, S. Zweben⁶

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⁸ Ecole Polytechnique Federale de Lausanne, Centre de Recherches en Physique des Plasmas, Lausanne 1015, Switzerland
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¹¹ Energetيك Technology, 7 Constitution Way, Woburn, MA 01801
¹² Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, TN, 37830

Acronym
About

The Dataverse Project

The Dataverse is an open source web application to share, preserve, cite, explore and analyze research data. It facilitates making data available to others, and allows you to replicate others work. Researchers, data authors, publishers, data distributors, and affiliated institutions all receive appropriate credit.

A Dataverse repository hosts multiple dataverses. Each dataverse contains dataset or other dataverses, and each dataset contains descriptive metadata and data files (including documentation and code that accompany the data).

A Collaboration with Harvard Library, Harvard University IT, and IQSS

Since 2012, the Institute for Quantitative Social Science has collaborated with Harvard Library and Harvard University Information Technology (HUIT) to make the Harvard Dataverse openly available to researchers and data collectors worldwide from all disciplines to deposit data. In this collaboration IQSS leads the development of the open source Dataverse software; and in conjunction with the Open Data Assistance Program at Harvard (a collaboration with Harvard Library, the Office for Scholarly Communication and IQSS) provides user support for the Harvard Dataverse. The Library Technology Services at HUIT provides hosting and backups support of the Harvard Dataverse.

History of the Project

Dataverse software is being developed at Harvard’s Institute for Quantitative Social Science (IQSS), along with many collaborators and contributors worldwide. Dataverse was built on our experience with our earlier Virtual Data Center (VDC) project, which spanned 1999-2006 and was organized by Micah Altman, Gary King, and Sidney Verba as a collaboration between the Harvard-MIT Data Center (now part of IQSS) and the Harvard University Library. Precursors to the VDC date to 1987, comprising such entities as preweb software to transfer cataloging information by FTP to other sites across campus automatically at designated times, and even to a stand-alone software guide to local data.
An evolution of magnetic reconnection behavior, from fast jets to the slowing of reconnection and the establishment of a stable current sheet, has been observed in strongly-driven, electron jets (Jet-20VA) ejected from the reconnection region, indicating that two-fluid or collisionless magnetic reconnection occurs early in time. The absence of jets and the persistence of strong, stable magnetic fields at late times indicates that the reconnection process slows down, while plasma flows stagnate and plasma conditions evolve to a cooler, denser, more collisional state. These results demonstrate that powerful initial plasma flows are not sufficient to force a complete reconnection of magnetic fields, even in the strongly-driven regime.
Main data files comprise 22 variables in three subcategories of risk (political, financial, and economic) for 146 countries for 1984-2009. Data are annual averages of the components of the ICRG Risk Ratings (Tables 3B, 4B, and 5B) published in the International Country Risk Guide. Indices include: political; government stability; socioeconomic conditions; investment profile; internal conflict; external conflict; corruption; military in politics; religion in politics; law and order; ethnic tensions; democratic accountability; and bureaucratic quality; financial; foreign debt; exchange rate stability; debt service; current account; international liquidity; and economic: inflation; GDP per head; GDP growth; budget balance; current account as % of GDP.

Also includes the IRIS-3 dataset by Steve Knack and Philip Keefer, which covers the period of 1982-1997 and computed scores for six additional political risk variables: corruption in government, rule of law, bureaucratic quality, ethnic tensions, repudiation of contracts by government, and risk of expropriation.

Additional data files provide country risk ratings and databanks (economic and social indicators) for new emerging markets for 2000-2009.
Re-Engineering of PSFC Report Submission

Old Millennium circa 1995+:
clunky email exchange

1. Author: Requests number
2. Librarian: Report Determination Form sent
3. Author: Completes Report Determination Form
4. Librarian: Number assigned
5. Librarian: Instructions sent
6. Author: Cover sheet with grant statement completed
7. Author: Blue Form completed
8. Author: Full text sent (PDF or Word)
9. Author: Abstract sent
10. Librarian: abstract formatted
11. Librarian: asks for review
12. Author: reviews/approves abstract & full text & sends email ok
13. Librarian: deposit to PSFC OPAC & ILP

New Millennium 2016:
automated, self-service web interface

1. Get a **Number**
2. Complete **Query** about report
3. **Upload** manuscript and dataset files
4. **Review** and formatting by Librarian
5. Proof, review and **Confirm** all
6. **Deposit** to repositories
Re-Engineering of PSFC Report Submission

Old Millennium circa 1995+: clunky email exchange

1. Author: Requests number
2. Librarian: Report Determination Form sent
3. Author: Completes Report Determination Form
4. Librarian: Number assigned
5. Librarian: Instructions sent
6. Author: Cover sheet with grant statement completed
7. Author: Blue Form completed
8. Author: Full text sent (PDF or Word)
9. Author: Abstract sent
10. Librarian: abstract formatted
11. Librarian: asks for review
12. Author: reviews/approves abstract & full text & sends email ok
13. Librarian: deposit to PSFC OPAC & ILP

New Millennium 2016: automated, self-service web interface

1. Number
2. Query
3. Upload
Re-Engineering of PSFC Report Submission

Streamlined Changes!

- Automated Number Generation
- No repeat entry of data
- Automated email instructions
- Automated email reminders
- No “Blue Form”
- No cover sheet
- No abstract needed [if on first page of manuscript]
- Automated file naming
- Able to track status of many reports
- Able to see/track status of group/division submissions
- Able to verify au/ti of previously submitted reports
- Obtain a number and do nothing more, until ready

- Comprehensive pre-submission data query
- Preparation of dataset files
- Preparation of graphics files
- Individual upload of each figure file
Report Submission Flow Chart

Phase I
Author Submission

Number
1

Query
2

Upload
3

Author

Library Processing

Phase II

Review

Confirm

Phase III
External Distribution

Deposit

Librarian
PSFC REPORT NUMBER REQUEST FORM - PAGE 1 OF 2

Is your report a revision of a previously submitted PSFC report?  
No

Is the manuscript complete?  
No

What is the month and year that you expect to complete the manuscript?  
Month  Year

Is this a graduate thesis?  
No

Is this a research finding where the information will be kept internal (not for publication or dissemination outside of the PSFC)?  
No

Does this report reveal any POTENTIALLY PATENTABLE new equipment, process or material? You must be certain of the answer, even if you are not the first author.  
No

Continue

PSFC REPORT NUMBER REQUEST FORM - PAGE 2 OF 2

Title: *

Authors: *

First PSFC author:  

First author:  

Corresponding author:  

Same as submitter

Get Report Number
Query 2

Prototype Mock-Up

Report Number: PSFC/JA-16-4
Submitter: Jason Thomas
Created: 02/23/2016 13:10
Status: Number Assigned
Title: This is a test Alcator C-Mod title
Authors: Greenwald, M.; Author2, A.; Author3, B.
Keywords: (minimum 5)
- activation & afterheat
- ADX
- Alcator C-Mod
- boundary value problems
- fusion reactors
First PSFC author: Greenwald, Martin
First author:
Corresponding author:

Manuscript
Completed: No
Expected Completion: April 2016
Published Status: Submitted

Grant Number(s):
- Greenwald, Martin J., "DOE - Chicago", "DE-FC02-99ER54512", Fab Eq - Psfc Remote Collaboration Upgrade
- Greenwald, Martin J., "DOE - Chicago", "DE-SC0012470", Mdsplus Development And Support

Grant Statement: This work was supported by the... Grant (or Award) Number...
Upload

Prototype Mock-Up

**UPLOAD MANUSCRIPT FILE FOR REPORT NUMBER PSFC/JA-16-3**

Upload Manuscript PDF Document:

Number of Manuscript Pages: 
Manuscript must be paginated.

Select Manuscript File: Choose File No file chosen

Upload Manuscript File

**UPLOAD FIGURES FILE FORM FOR REPORT NUMBER PSFC/JA-16-3**

Upload Figure Image and Data Files:

Specify Manuscript Label: (Figure or Table number)

Select Image File: Choose File No file chosen

Select Data File: Choose File No file chosen

Upload Selected Figure Files

Uploaded Figure Files:

<table>
<thead>
<tr>
<th>Figure label</th>
<th>Image file</th>
<th>Data file</th>
<th>Original file</th>
</tr>
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<td>16JA003 FIG_1.hdf5</td>
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<td>Table 1</td>
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<td>16JA003 TAB_2.hdf5</td>
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<tr>
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<td>16JA003 FIG_2.hdf5</td>
<td>waveform.jpg</td>
</tr>
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</table>
• No dataset files required for IR or RR series reports.

• For JA series [preprints, etc.] only dataset figure files are required (i.e., schematic, photos, videos, etc. are exempt).

• Figure files are uploaded individually and automatically renamed

• Figures will have same nomenclature as in the manuscript, i.e., Fig 3a = 16ja001_figure-3a.HDF5

• Collaboration with authors from other labs: Who is responsible...?
Report Submission Flow Chart with Status

Phase I
Author Submission
- Number
- Query
  - Pending
  - Complete
- Upload
  - Pending
  - Complete

Phase II
Library Processing
- Review
  - Pending
  - Complete
- Confirm
  - Pending
  - Complete

Phase III
External Distribution
- Deposit
  - Pending
  - Complete
# List of all of your Pending Reports

<table>
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<tr>
<th>Report</th>
<th>First Author</th>
<th>Title</th>
<th>Created on</th>
<th>Submitter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
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<td>Smaller, faster fusion</td>
<td>02/23/2016 13:13</td>
<td>Jason Thomas</td>
<td>Number Assigned</td>
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<td>My thesis</td>
<td>02/23/2016 13:11</td>
<td>Jason Thomas</td>
<td>Pending Query</td>
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<td>Alcator C-Mod title</td>
<td>02/23/2016 13:10</td>
<td>Jason Thomas</td>
<td>Pending Upload</td>
</tr>
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Showing 1 to 3 of 3 entries

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**Phase I**
Author Submission

1. **Number**
   - Pending Query
   - Complete

2. **Pending Query**
   - Complete

---

**Phase II**
Library Processing

1. **Pending Upload**
   - Complete

---

**Phase III**
External Distribution

1. **Pending Review**
   - Complete
2. **Pending Confirm**
   - Complete
3. **Pending Deposit**
   - Complete

---

**Roles**

- **Author**
- **Librarian**
Tools & Resources

AT PSFC:

- DMP Samples/Templates: on Library website home page and at Report Publishing: [http://library.psfc.mit.edu/publishing/dmp/dmp.html](http://library.psfc.mit.edu/publishing/dmp/dmp.html)
- Report Submission Interface: forthcoming on Library website
- DMP components/questions: Martin
- HDF5 file conversion: Josh
- Report Processing: Jason

OUTSIDE PSFC:

- Dataverse: [http://dataverse.org/](http://dataverse.org/)