

 **National Spherical Torus eXperiment Upgrade**

NSTX-U / Magnetic Fusion Science Meeting

June 28, 2021

COVID vaccination status for PPPL onsite access

- PPPL staff need to log-in to [VacStatus](#) and select an option by **July 1**
- [HR COVID vaccination info \(and FAQs\)](#)
- Still awaiting word on specific requirements, but anyone who will be *onsite at PPPL* for substantial time will likely need to be vaccinated or have an approved exemption

Some upcoming events

- July 6-9, 2021 (virtual), [Joint Asia-Pacific-US-EU Transport Task Force](#) (deadline: ~~April 30~~)
- July 19-23, 2021 (virtual), [Theory & simulation of disruptions](#) (deadline: ~~June 14~~)
- Aug 16-18, 2021 (virtual), [Sherwood Theory Conference](#) (deadline: July 9)
- Sept 6-10, 2021 (virtual), [EU-US Transport Task Force](#) (deadline: ~~April 30~~)
- Sept 12-16, 2021 (virtual), [IEEE Int. Conf. on Plasma Science \(ICOPS\)](#) (deadline: ~~May 28~~)
- Sept 26 - Oct. 1 (virtual), [AAPPS-DPP](#) (invited nominations deadline: ~~May 31~~)
- Nov. 8-12, 2021 (Pittsburgh / hybrid), [APS-DPP](#) (invited deadline: ~~May 26~~)
- Dec. 6-9, 2021 (virtual), [IAEA Technical Meeting on Energetic Particles](#) (deadline: Sept 6)
- Dec. 12-16, 2021 (Denver?), [IEEE-SOFE & PPC](#) (deadline: June 30)

APS contributions

- **Contributed oral & poster deadlines: July 15** - please let Stan and myself know of your intentions to submit NSTX-U contributions by this Friday (**July 2**)
- **Sorting category:** 6.16 Low-aspect ratio tokamaks: PEGASUS, NSTX-U and MAST-U (*we will provide DPP a group order list for poster and oral sessions*)
- **Note:** Ph.D students that are graduating (within coming 1 year) or recently graduated (within previous 2 years) can request a 24 minute oral by indicating “Ph.D Oral-24” in the Special Instructions fields ([see here](#))

Please sign up for Science Working Groups

- Recall we have recently updated NSTX-U Research organization into [Science Working Groups](#) (from older Topical Science Groups)
- You can sign-up at to any [SWG email list](#) in which you are interested
- Intention is that groups will hold periodic meetings as needed to present and coordinate ongoing NSTX-U research (Milestones or otherwise)

National Spherical Torus eXperiment Upgrade

Home Meetings Drag & Drop Calendars Phone Book Sitemap

NSTX-U Web Pages:

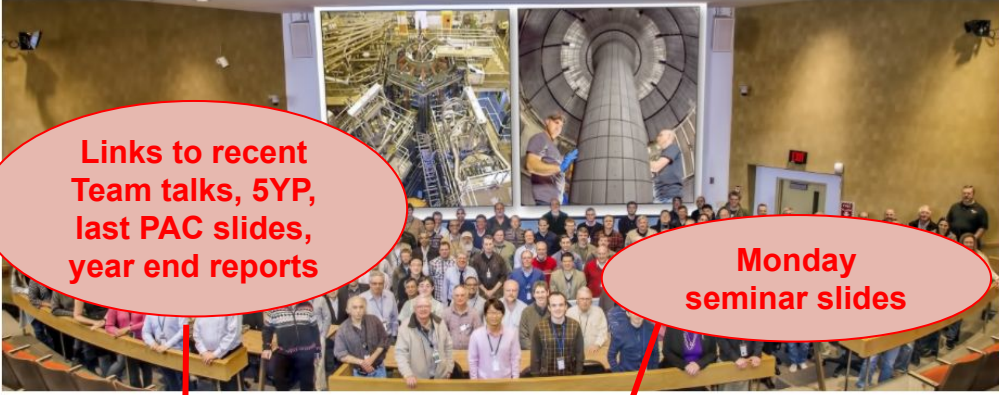
- Home
- Overview
- Mission
- Accomplishments
- Collaboration Info
- Data Management Plan
- Diagnostics
- Five Year Plans
- Group Links / Files / Email
- Joint Research Targets
- Milestones
- Operations
- Organization
- Outreach Seminars
- Program
- Project
- Publications & Presentations
- References - Design & Overview
- Reports - Weekly
- Reports - Quarterly
- Remote Connection Info - Zoom
- Research Forum - 2015
- Roles and Responsibilities
- Run Coordination
- Run Schedule Calendar
- Science Groups
- Scientific Conferences
- Software
- Surface Science
- Task Forces
- User Information Form
- Working Groups
- NSTX Upgrade Overview

Data Management documentation

Email sign-up

Research Milestones

Various links & pages still being updated



Links to recent Team talks, 5YP, last PAC slides, year end reports

Monday seminar slides

Upcoming and Past NSTX-U Meetings:

- [NSTX-U/Theory Partnership Presentations \(June 8, 2021\)](#)
- [Program and Collaboration Presentations \(Feb-March 2021\)](#)
- [2021-2025 NSTX-U Five Year Plan \(PDF\)](#)
- [NSTX-U IAEA-FEC 2021 Contributions](#)

Quick Links for Additional Information:

- [Monday Physics Meetings](#)
- [Research Team Governance](#)
- [NSTX-U Recovery Status](#)
- [Information for...](#)
- [NSTX-U Sta...](#)
- [Experimental Propo...](#)

Governance, Science Working Group structure

Publications

- Prior to journal submission, should email Head of Physics Analysis (wgutten@pppl.gov) to distribute for ~1 week Team review
- Data in figures should be [archived](#) ([instructions](#), [how-to guide](#)) & the ARK link should be included in the paper
- First PPPL *author or coauthor* is responsible for submitting draft (and eventual Accepted Manuscript) to [Publications Office](#) for review, patent clearance and OSTI archiving

Please read the webpages to educate yourself on your responsibilities

NSTX-U link to [Publications](#) info

Much information on data usage, access, publishing, archiving

Data Management Plan - NSTX-U

nstx-u.pppl.gov/data-management-plan

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Data Management Plan

The NSTX-U Data Management Plan (DMP) describes the elements of data from measured to analyzed and also describes the resources available for the data management and preservation during the course of research operations. In addition, this page describes the resources available for sharing of data and provides a link to user requirements for data access. Finally, web links to the NSTX-U and PPPL computing and analysis resources are provided. Any NSTX-U data management plan questions should be directed to the NSTX-U Head of Physics Analysis: Stan Kaye (kaye@pppl.gov).

I. Data Categories

Data from NSTX-U discharges will be obtained from a suite of diagnostics measuring a broad range of plasma characteristics. The three main categories of NSTX-U data are raw, reduced, and analyzed.

A. Raw

Raw (measured) data may take the form of voltages, emissivities, etc, and are not directly useable as input to higher level analysis routines. The raw data will be:

1. OD - temporally and spatially constant information during the course of a plasma discharge such as fixed operational settings, device/facility conditions, etc.
2. 1D - temporally varying measurements (magnetic fluxes, neutron rates, etc.), or spatially varying data taken only at one time
3. 2D - measurements that vary both in time and space (kinetic profiles, etc.)
4. 3D - temporally varying 2D images (visible camera, gas puff imaging, etc.)

B. Reduced

Raw data will be converted to reduced data through diagnostic-specific analysis software. Reduced data will be in real physics units (e.g., temperatures, densities, etc.), and once validated by the responsible diagnostician, can be used as input to high level analysis codes. A listing of NSTX-U diagnostics, units for the measurements, and the person responsible for the diagnostic is provided [here](#).

C. Analyzed

Validated reduced data that has been synthesized through direct analysis or through higher level analysis codes. Analyzed data, along with some validated reduced data, form the basis for figures and physics conclusions presented in publications.

II. Data Management Resources, Storage, and Archival

Talk & poster presentations

Archive of slides in this [DragNDrop directory](#) (not sure how up-to-date this is)

- *Bigger conferences (APS, EPS, IAEA, TTF, Sherwood)*: we ask that you do a dry run with appropriate Team members (these will typically be Team-coordinated, especially APS & IAEA)
- *Smaller conferences*: as a courtesy (mostly for awareness) we ask you to please email Head of Research (skaye@pppl.gov) and Head of Physics Analysis (wgutten@pppl.gov) that you are contributing
- *Seminar and outreach talks*: no communication required; however, we are (were) keeping a [directory](#) of [Outreach talks](#) to which we would happily update and add new talks for future reference

Data usage, access, publications & presentations

- [Data Usage Agreement](#) should be filled out by all collaborators intending to present & publish data, analysis and/or modeling
 - **Data access:** If you don't already have access, reach out to your PPPL research contact

Publications

- Prior to journal submission, should email Head of Physics Analysis (wgutten@pppl.gov) to distribute for ~1 week Team review
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