

 **National Spherical Torus eXperiment Upgrade**

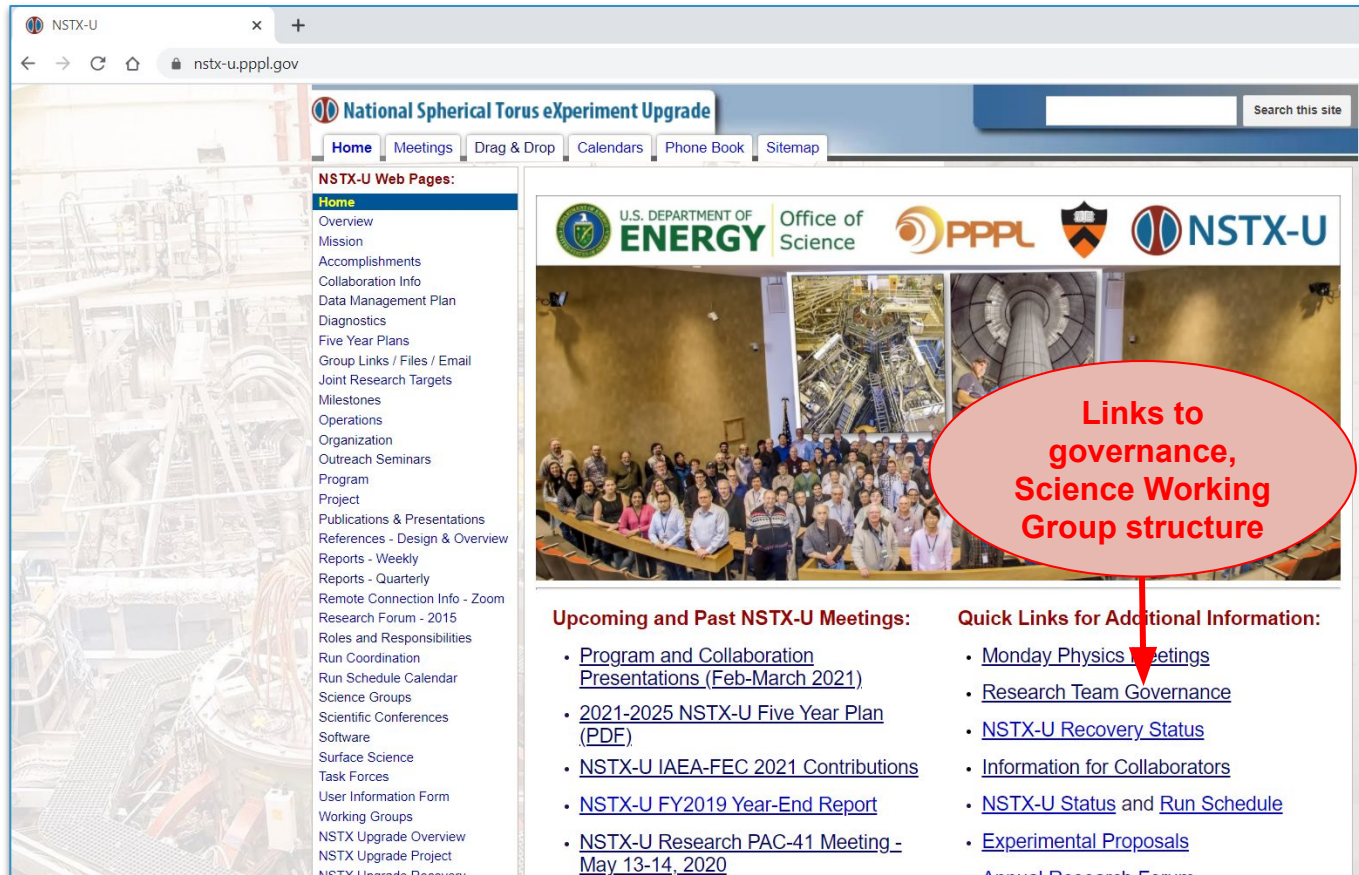
NSTX-U / Magnetic Fusion Science Meeting

April 26, 2021

Some upcoming events

- (April / TBD) Sherwood theory conference
- May 10-15, 2021 (virtual), [IAEA-FEC](#)
- June 21-25, 2021 (virtual), [EPS Plasma Physics Conference](#)
- 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)
- 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/Fukuoka), AAPPs-DPP ([invited nominations](#) deadline: April 30)
- Nov. 8-12, 2021 (Pittsburgh?), [APS-DPP](#) (invited deadline: May 26)
- Dec. 12-16, 2021 (Denver?), [IEEE-SOFE & PPC](#) (deadline: June 1)

Links to governance, Science Working Group structure on nstx-u.pppl.gov



The screenshot shows the NSTX-U website interface. At the top, the browser address bar displays 'nstx-u.pppl.gov'. The main header features the 'National Spherical Torus eXperiment Upgrade' logo and a search bar. Below the header is a navigation menu with links for Home, Meetings, Drag & Drop, Calendars, Phone Book, and Sitemap. A left sidebar titled 'NSTX-U Web Pages:' lists various site sections, with 'Home' selected. The main content area includes logos for the U.S. Department of Energy, Office of Science, PPPL, and NSTX-U, along with a large group photo of staff. A red callout box with the text 'Links to governance, Science Working Group structure' points to a list of links in the 'Quick Links for Additional Information:' section.

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
- NSTX Upgrade Project
- NSTX Upgrade Recovery

Upcoming and Past NSTX-U Meetings:

- [Program and Collaboration Presentations \(Feb-March 2021\)](#)
- [2021-2025 NSTX-U Five Year Plan \(PDF\)](#)
- [NSTX-U IAEA-FEC 2021 Contributions](#)
- [NSTX-U FY2019 Year-End Report](#)
- [NSTX-U Research PAC-41 Meeting - May 13-14, 2020](#)

Quick Links for Additional Information:

- [Monday Physics Meetings](#)
- [Research Team Governance](#)
- [NSTX-U Recovery Status](#)
- [Information for Collaborators](#)
- [NSTX-U Status and Run Schedule](#)
- [Experimental Proposals](#)
- [Annual Research Forum](#)

FYI: Much information found at nstx-u.pppl.gov

The screenshot shows the NSTX-U website interface. At the top, the navigation bar includes links for Home, Meetings, Drag & Drop, Calendars, Phone Book, and Sitemap. A search bar is located on the right. The main content area features a large banner image of a group of people in a meeting, with a callout pointing to it: "Links to: 5YP, Last PAC slides, Year end reports". Below the banner, there are two columns of text: "Upcoming and Past NSTX-U Meetings:" and "Quick Links for Additional Information:". The meetings list includes links to the 2021-2025 Five Year Plan (PDF), NSTX-U IAEA-FEC 2018 Contributions, NSTX-U FY2019 Year-End Report, and NSTX-U Research PAC-41 Meeting - May 13-14, 2020. The quick links section includes "Monday Physics Meetings" and "Presentation templates:" with sub-links for 4x3 (PPT, PPTX, LaTeX), 16x9 (PPT, PPTX), and Templates and Graphics Folder. A callout points to the "Monday Physics Meetings" link: "Link to Monday seminar slides". On the left side, a vertical menu lists various web pages, with callouts pointing to "Data Management documentation" and "Link to yearly Research Milestones". A large callout at the bottom left states: "A number of links & pages need updating".

Link to Data Management documentation

Link to yearly Research Milestones

Links to: 5YP, Last PAC slides, Year end reports

Link to Monday seminar slides

A number of links & pages need updating

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

Upcoming and Past NSTX-U Meetings:

- [2021-2025 NSTX-U Five Year Plan \(PDF\)](#)
- [NSTX-U IAEA-FEC 2018 Contributions](#)
- [NSTX-U FY2019 Year-End Report](#)
- [NSTX-U Research PAC-41 Meeting - May 13-14, 2020](#)

Quick Links for Additional Information:

- [Monday Physics Meetings](#)
- Presentation templates:
 - 4x3: [PPT](#) [PPTX](#) [LaTeX](#)
 - 16x9: [PPT](#) [PPTX](#)
 - [Templates and Graphics Folder](#)
 - Hi-res [NSTX-U cross-section](#) image (for illustration purposes only)

Much information on data usage, access, publishing, archiving

Data Management Plan - NSTX-U

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

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

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

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
- Data in figures should be [archived](#) ([instructions](#), [how-to guide](#)) & the ARK link should be included in the paper
- First PPPL author 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

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