

## INFORMATII PERSONALE



## Dr. Dan Stutman



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Cetățenie: SUA și Română

## EXPERIENȚĂ MUNCĂ

2021 – Prezent	Cercetator Senior CS I	ELI-NP, Laboratorul de imagistică cu raze X
2022-prezent	Cercetator vizitator	Universitatea Johns Hopkins, Departamentul de Fizică și Astronomie
2006 - 2021	Cercetator Principal	Universitatea Johns Hopkins, Departamentul de Fizică și Astronomie
2020-2021	Fizician	Microworks GmbH, Germania
2015 - 2020	Cercetator Senior CS I	ELI-NP, <i>Sef Departament Experimente cu Laser de Mare Putere</i>
2001 - 2006	Cercetător	Johns Hopkins University, Departamentul de Fizică și Astronomie
1998 - 2001	Cercetător asistent	Universitatea Johns Hopkins, Departamentul de Fizică și Astronomie
1996 - 1998	Postdoctorat	Universitatea Johns Hopkins, Departamentul de Fizică și Astronomie
1994 - 1996	Cercetator asociat	Universitatea Princeton, Laboratorul de fizică a plasmei
1988 - 1994	Asistent de cercetare	Institutul de Fizică Racah, Hebrew University
1986 - 1988	Inginer de cercetare	Institutul de Fizică Racah, Hebrew University
1982 - 1985	Inginer de Cercetare	Institutul pentru Reactoare Nucleare, România

## EDUCAȚIE ȘI INSTRUIRE

1982	MSc, Inginerie Fizică - Reactoare Nucleare	Universitatea de Stat București, România
1995	doctorat, Fizică	Institutul de Fizică Racah, Hebrew University, Ierusalim

 Limbă matema **Română**

Alte limbai

	ÎNȚELEGERE		VORBESTE ING		SCRIS
	Ascultare	Lectură	Vorbit interacțiunea	Spoken producție	
Engleză	C2	C2	C2	C2	C2
Franceza	B1	B1	B1	B1	B1

Niveluri: A1/2: De bază utilizator - B1/2: Independent utilizator - C1/2  
 Competente utilizator Uzuul european Cadru de Referință pentru Limbi

**ACTIVITATE**

- Domenii de expertiza:**
- Imagistica cu contrast de fază și interferometrie cu raze X
  - Instrumentație pentru diagnostic de plasmă cu raze X
  - Fizica laserilor de mare putere și intensitate
  - Fizica fuziunii inertiiale
  - Fizica fuziunii magnetice
  - Fizica imagisticii medicale
  - Fizica laserilor cu raze X

**Activitate la ELI-NP:**

- Conducerea planificării și implementării experimentelor cu laseri de 10 PW și 1 PW la ELI-NP în perioada 2016-2020.
- Proiectarea sistemului de transport al fasciculelor laser de 2x10 PW la ELI-NP.
- Reprezentarea ELI-NP la întâlniri și în comitete internaționale.
- Castigarea și conducerea Proiectului Cercetări de Frontieră în Interacția Foton-Materie folosind Fascicule Extreme de Lumină Helicoidală (PMIHLB, 1.8 Me).
- Dezvoltarea planului de cercetare instituțional intitulat Aplicații Medicale ale laserilor de Mare putere (AMLMP, 35 Me).
- Dezvoltarea de concepte de instrumentație și diagnostică a laserilor de mare putere bazate pe interferometrie cu raze X.
- Dezvoltarea de experimente de comisionare a laserilor de mare putere de la ELI-NP.
- Dezvoltarea de noi metode de imagistică medicală bazate pe interferometrie cu raze X și surse de raze X produse cu laser.
- Supervizare cercetare studenți doctorali și cercetători postdoctorali.

**Activitate la Johns Hopkins:**

Din 2006 până în 2021 am condus Grupul de Spectroscopia Plasmei și Imagistica X de la Departamentul de Fizică și Astronomie al Universității Johns Hopkins. În acest rol am câștigat și condus ca Director de Proiect multiple granturi de cercetare pentru Departamentul Energiei al SUA, pentru Agenția Națională de Securitate Nucleară, precum și pentru Institutul Național de Sănătate. În cadrul acestei cercetări:

- Dezvoltarea și utilizarea de noi diagnostice cu raze X pentru plasmă de fuziune magnetică și inerțială. Am proiectat și construit noi tipuri de instrumente cu raze X capabile să capteze cu viteză mare și rezoluție imaginii rezolvate spectral ale plasmelor de fuziune fierbinți și dense. Împreună cu grupul meu, am folosit datele de la instrumentele acestea împreună cu coduri avansate de simulare, pentru o mai bună înțelegere a transportului particulelor și energiei în fuziune. Instrumentația pe care am construit-o a fost implementată pe toate cele trei tokamak-uri mari din SUA: NSTX, DIII-D, Alcator C-Mod, precum și pe tokamak-ul EAST din China și pe Large Helical Device din Japonia. Activitatea include și dezvoltarea conceptuală a diagnosticului cu raze X pentru ITER și participarea la evaluările internaționale ale diagnosticelor ITER.
- Dezvoltarea și utilizarea imagisticii X cu contrast de fază Talbot-Lau (pe bază de rețea) pentru diagnosticarea plasmelor de fuziune inerțială. Am fost pionierat aplicarea tehnicii Talbot-Lau pentru diagnosticarea profilurilor de densitate electronică în plasmă de fuziune cu laser. Aceasta a inclus dezvoltarea interferometrelor Talbot cu magnificare mare și a interferometriei Talbot-Lau monocromatice, tehnici care în prezent sunt foarte solicitate în cercetarea fuziunii cu laser precum și în cercetarea XFEL.
- Dezvoltarea și utilizarea interferometriei Talbot-Lau pentru imagistica medicală. Am dezvoltat și patentat la JHU Interferometrul cu unghi mic de incidență (GAI) și câteva metode asociate, care permit imagistica cu contrast de fază cu contrast și sensibilitate ridicate la energiile de raze X dure necesare pentru aplicații clinice (până la ~120 keV). GAI a permis prima demonstrație publicată a CT cu contrast de fază la energia și doza clinică de raze X.
- Am ghidat și supervizat cercetarea a 12 studenți doctorali și cercetători postdoctorali.
- În cadrul unui grant SBIR cu o companie medicală, am dezvoltat și testat primul sistem de imagistică cu contrast de fază cu raze X pentru articulațiile mici ale mâinii.
- În 2020-2021 am dezvoltat împreună cu radiologi de la Johns Hopkins Medical School, de la Universitatea din Wisconsin și de la Politehnica München din Germania, o propunere de grant de 7,5 milioane NIH care vizează construirea și evaluarea clinică a unui sistem de radiografie cu contrast de fază pentru diagnosticarea cancerului de plămân și a COVID-19.

## INFORMAȚIE ADIȚIONALĂ

## Granturi și proiecte de cercetare

Titlu	Finanțarea Agenție	Perioadă	Cantitate (\$)	Rol
Cercetare de Frontiera cu Fascicule de Lumina Helicoidale de Mare Intensitate si Energie	Ministerul Cercetarii Romania	2018-2022	1.800.000 euro	PI
Dezvoltare de diagnostice bazate pe raze X moi pentru plasmă de fuziune magnetica in National Spherical Torus Experiment (NSTX)	Departamentul de Energie al SUA	2009 - 2019	3.850.000	PI
Dezvoltarea de diagnostice cu contrast de faza in raze X pentru plasmă de fuziune inertiala	Agentia Nationala de Securitate Nucleara	2015 - 2018	742.000	PI
Sistem de imagistica X cu contrast de faza pentru articulatiile corpului uman	Institututul National de Sanatate al SUA	2011 - 2013	440.000	PI
Diagnostice SXR-EUV pentru plasmă de fuziune magnetica	Departamentul de Energie al SUA	2008 - 2011	1.824.000	Co - PI
Masuratori cu raze X moi pentru transportul de energie si particule in National Spherical Torus Experiment (NSTX)	Departamentul de Energie al SUA	2006 - 2009	975.000	Co - PI
Dezvoltarea de diagnostice XUV avansate pentru plasmă de fuziune magnetica	Departamentul de Energie al SUA	2005 - 2008	1.350.000	Co - PI

## Brevete SUA și Internaționale

Title	Filing Country	Type of Patent Application	Patent Application Number	Application Publication Number	Patent Issued Number	Innovator - Full Name
Reflector Filtered Quasi-monochromatic Talbot-lau Interferometers for High Sensitivity and Contrast Phase-contrast Imaging with Hard X-rays	United States	US - ORD	13/493,392	US-2013-0028378	8,767,915	Dan Stutman
Reflector Filtered Quasi-monochromatic Talbot-lau Interferometers for High Sensitivity and Contrast Phase-contrast Imaging with Hard X-rays		PCT	PCT/US2012/041908	WO 2013/019322	WO 2013/019322	Dan Stutman
High Energy X-ray Phase-contrast CT Systems Using Tiled Glancing Incidence Gratings		PCT	PCT/US2014/033561	WO 2014/134634	WO 2014/134634	Dan Stutman
High Energy X-ray Phase-contrast CT Systems Using Tiled Glancing Incidence Gratings	United States	US - ORD	14/176,655	US-2014-0226782		Dan Stutman
Glancing Angle Interferometer Tomosynthesis System (GAL-TS) for High Energy, Fast and Low Dose X-ray Phase-contrast Imaging	United States	US - ORD	14/174,830	US-2014-0226785		Dan Stutman
X-ray Phase-contrast Scanning Radiography Systems Using Multi-view Glancing Angle Interferometers	United States	PRO	61/990,831			Dan Stutman

## PUBLICATII IN JURNALE

### Publicatii 2023

D. Stutman, N. Safca, P. Tomassini, E. Anghel, and C. A. Ur "Towards high-sensitivity and low-dose medical imaging with laser X-ray sources", Proc. SPIE 12582, Compact Radiation Sources from EUV to Gamma-rays: Development and Applications, 1258207 (8 June 2023)

### Publicatii 2022

Experimental demonstration of ultrahigh sensitivity Talbot-Lau interferometer for low dose mammography  
Nicoleta Safca, Dan Stutman, Elena Anghel, Florin Negoita, Calin Alexander Ur  
Physics in Medicine and Biology, Volume 67, 23NT01, 2022

Current advances on Talbot-Lau x-ray imaging diagnostics for high energy density experiments (invited)  
M. P. Valdivia, G. Perez-Callejo, V. Bouffetier, G. W. Collins IV, C. Stoeckl, T. Filkins, C. Mileham, M. Romanofsky, I. A. Begishev, W. Theobald, S. R. Klein, M. K. Schneider, F. N. Beg, A. Casner, and D. Stutman  
Review of Scientific Instruments 93, 115102 (2022)

TIA: A forward model and analyzer for Talbot interferometry experiments of dense plasmas, G. Pérez-Callejo, V. Bouffetier, L. Ceurvorst, T. Goudal, M. P. Valdivia, D. Stutman, A. Casner  
Physics of Plasmas 29, 043901 (2022)

### Publicatii 2016-2021

[1] Generation of Ultrarelativistic Monoenergetic Electron Bunches via a Synergistic Interaction of Longitudinal Electric and Magnetic Fields of a Twisted Laser  
Yin Shi, David Blackman, Dan [Stutman](#), and Alexey Arefiev  
Phys. Rev. Lett. 126, 234801, 2021

[2] Next-Generation Hardware Advances in CT: Cardiac Applications  
Alan C. Kwan, Amir Pourmorteza, Dan [Stutman](#), David A. Bluemke, and João A. C. Lima  
Radiology 2021 298:1, 3-17

[3] Direct Laser-Driven Electron Acceleration and Energy Gain in Helical Beams  
Etele Molnár and Dan [Stutman](#)  
Laser and Particle Beams Volume 2021, Article ID 6645668

[4] Talbot-Lau x-ray deflectometer: Refraction-based HEDP imaging diagnostic  
M. P. Valdivia, D. [Stutman](#), C. Stoeckl, W. Theobald, G. W. Collins IV, V. Bouffetier, M. Vescovi, C. Mileham, I. A. Begishev, S. R. Klein, R. Melean, S. Muller, J. Zou, F. Veloso, A. Casner, F. N. Beg, and S. P. Regan  
Review of Scientific Instruments 92, 065110 (2021)

[5] Implementation of Talbot-Lau x-ray deflectometry in the pulsed power environment using a copper X-pinch backlighter Milenko Vescovi, Maria Pia Valdivia, Felipe Veloso, Dan [Stutman](#), and Mario Favre  
Journal of Applied Physics 127, 203301 (2020)

[6] A broad energy range (100 MeV–10 GeV) electron spectrometer for high power laser wakefield acceleration experiments  
Deepak Sangwan, Soicro Aogaki, Septimiu Balascuta, Florin Rotaru, Petru Ghenuche, Mihai Risca, Dan [Stutman](#), and Bogdan Diaconescu  
AIP Advances 10, 055006 (2020)

- [7] Power Scaling for Collimated  $\gamma$ -Ray Beams Generated by Structured Laser-Irradiated Targets and Its Application to Two-Photon Pair Production  
T. Wang, X. Ribeyre, Z. Gong, O. Jansen, E. d'Humières, D. Stutman, T. Toncian, and A. Arefiev  
Phys. Rev. Applied 13, 054024 (2020)
- [8] Current status and highlights of the ELI-NP research program  
K. A. Tanaka, K. M. Spohr, D. L. Balabanski, S. Balascuta, L. Capponi, M. O. Cernaianu, M. Cuciuc, A. Cucoanes, I. Dancus, A. Dhal, B. Diaconescu, D. Doria, P. Ghenuche, D. G. Ghita, S. Kisyov, V. Nastasa, J. F. Ong, F. Rotaru, D. Sangwan, P.-A. Söderström, D. Stutman, G. Suliman, O. Tesileanu, L. Tudor, N. Tsoneva, C. A. Ur, D. Ursescu, and N. V. Zamfir  
Matter and Radiation at Extremes 5, 024402 (2020)
- [9] Implementation of a Talbot–Lau x-ray deflectometer diagnostic platform for the OMEGA EP laser  
M. P. Valdivia, D. Stutman, C. Stoeckl, C. Mileham, J. Zou, S. Muller, K. Kaiser, C. Sorce, P. A. Keiter, J. R. Fein, M. Trantham, R. P. Drake, and S. P. Regan  
Review of Scientific Instruments 91, 023511 (2020)
- [10] Simulations of carbon ion acceleration by 10 PW laser pulses on ELI-NP Sangwan, D., Culfa, O., Ridgers, C., Aogaki, S., Stutman, D., & Diaconescu, B.  
Laser and Particle Beams, 37(4), 346-353 (2019)
- [11] Laser-driven radiation: Biomarkers for molecular imaging of high dose-rate effects  
Asavei, T., Bobeica, M., Nastasa, V., Manda, G., Naftanaila, F., Bratu, O., Mischianu, D., Cernaianu, M.O., Ghenuche, P., Savu, D., Stutman, D., Tanaka, K.A., Radu, M., Doria, D. and Vasos, P.R.  
Med. Phys., 46: e726-e734 (2019)
- [12] Collimated gamma-ray beams from structured laser-irradiated targets -- how to increase the efficiency without increasing the laser intensity  
O. Jansen, T. Wang, Z. Gong, X. Ribeyre, E. d'Humières, D. Stutman, T. Toncian, A. Arefiev  
arXiv:1908.06467 (2019)
- [13] The extreme light infrastructure—nuclear physics (ELI-NP) facility: new horizons in physics with 10 PW ultra-intense lasers and 20 MeV brilliant gamma beams  
S Gales, K A Tanaka, D L Balabanski, F Negoita, D Stutman, O Tesileanu, C A Ur, D Ursescu, I Andrei, S Ataman  
Reports on Progress in Physics, Volume 81, Number 9, 2018
- [14] X-ray backlighter requirements for refraction-based electron density diagnostics through Talbot-Lau deflectometry  
M. P. Valdivia, F. Veloso, D. Stutman, C. Stoeckl, C. Mileham, I. A. Begishev, W. Theobald, M. Vescovi, W. Useche, S. P. Regan, B. Albertazzi, G. Rigon, P. Mabey, T. Michel, S. A. Pikuz, M. Koenig, and A. Casner  
Review of Scientific Instruments 89, 10G127 (2018)
- [15] Talbot–Lau x-ray deflectometry phase-retrieval methods for electron density diagnostics in high-energy density experiments Maria Pia Valdivia, Dan Stutman, Christian Stoeckl, Chad Mileham, Ildar A. Begishev, Jake Bromage, and Sean P. Regan  
Appl. Opt. 57, 138-145 (2018)
- [16] Dose calculations in a cell monolayer for high-throughput irradiation with proton beams generated by PW lasers for space applications Mariana Bobeica, Sohichiroh Aogaki, Theodor Asavei, Mihail O. Cernaianu, Petru Ghenuche, and Dan Stutman  
Life Sciences in Space Research, Volume 19, 2018, Pages 68-75
- [17] Recent progress in understanding electron thermal transport in NSTX  
Y. Ren, E. Belova, N. Gorelenkov, W. Guttenfelder, S.M. Kaye, E. Mazzucato, J.L. Peterson, D.R. Smith, D. Stutman, K. Tritz  
Nuclear Fusion, Volume 57, Number 7 (2017)
- [18] New light in nuclear physics: The extreme light infrastructure  
D. L. Balabanski, R. Popescu, D. Stutman, K. A. Tanaka, O. Tesileanu, C. A. Ur, D. Ursescu and N. V. Zamfir

European Physics Letters, 117 (2017) 28001

[19] A Talbot-Lau X-Ray Deflectometer as a High-Energy Density Plasma Diagnostic Valdivia, MP; Stutman, D; Stoeckl, C; Mileham, CS; Begishev, IA; Bromage, J; Regan, SP

IEEE Transactions on Plasma Science 44, 1592 (2016)

[20] An x-ray backlit Talbot-Lau deflectometer for high-energy-density electron density diagnostics Valdivia, MP; Stutman, D; Stoeckl,; Theobald, W; Mileham; Begishev, IA; Bromage, J; Regan, SP

Review of Scientific Instruments 87, 023505 (2016)

[21] HIGH FIELD PHYSICS AND QED EXPERIMENTS AT ELI-NP

Stutman, D., with Turcu, I. C. E.; Negoita, F.; Jaroszynski, D. A.; et al.

Romanian Reports in Physics 68, S145 (2016)

[22] LASER DRIVEN NUCLEAR PHYSICS AT ELI-NP

Stutman, D., with Negoita, F.; Roth, M.; Thirof, P. G.; et al.

Romanian Reports in Physics 68, S37 (2016)

[23] MATERIALS IN EXTREME ENVIRONMENTS FOR ENERGY, ACCELERATORS AND SPACE APPLICATIONS AT ELI-NP

Asavei, T; Tomut, M ; Bobeica, M; Aogaki, S ; Cernaianu, MO ; Ganciu, M; Kar, S; Manda, G; Mocanu,; Neagu; Postolache, C; Savu, D; Stutman, D; Vizman,; Ursescu, D; Gales, S; Zamfir, NV

Romanian Reports in Physics 68, S275 (2016)

**Publicatii pana in 2015**

- [1] Stutman, Dan; Valdivia, Maria Pia; Finkenthal, Michael, "X-ray Moire deflectometry using synthetic reference images" Applied Optics 54, 5956 (2015)
- [2] Burgos, J; Agostini, M; Scarin, P; Stotler, DP; Unterberg, EA; Loch, S; Schmitz, O ; Tritz, K; Stutman, D "Evaluation of thermal helium beam and line-ratio fast diagnostic on the National Spherical Torus Experiment-Upgrade" Physics of Plasmas 23, 053302 (2016)
- [3] Gheorghiu, CC ; Leca, V ; Popa, D ; Cernaianu, MO ; Stutman, D "Overview on the target fabrication facilities at ELI-NP and ongoing strategies" Journal of Instrumentation 11, C10011 (2016).
- [4] J. M. Muñoz Burgos, K. Tritz, D. Stutman, R. E. Bell, B. P. LeBlanc, and S. A. Sabbagh, "Applications of advanced kinetic collisional radiative modeling and Bremsstrahlung emission to quantitative impurity analysis on the National Spherical Torus Experiment", Phys. Plasmas 22, 123301(2015)
- [5] Valdivia, M. P.; Stutman, D.; Finkenthal, M. "Single-shot Z<sub>eff</sub> dense plasma diagnostic through simultaneous refraction and attenuation measurements with a Talbot-Lau x-ray moire deflectometer" Applied Optics 54, 2577(2015)
- [6] M. P. Valdivia, D. Stutman, and M. Finkenthal, "Moire deflectometry using the Talbot- Lau interferometer as refraction diagnostic for High Energy Density plasmas at energies below 10 keV," Review of Scientific Instruments 85 (7) (2014).
- [7] K. Tritz, R. E. Bell, P. Biersdorfer, D. Boyle, J. Clementson, M. Finkenthal, R. Kaita, T. Kozub, S. Kubota, M. Lucia, R. Majeski, E. Merino, J. Schmitt, D. Stutman, "VUV/XUV measurements of impurity emission in plasmas with liquid lithium surfaces on LTX", Plasma Phys. Control. Fusion, 56 125014(2014)
- [8] K. Tritz, A. Diallo, B. P. LeBlanc, S. Sabbagh, and D. Stutman, "Boundary displacement measurements using multi-energy soft x-rays," The Review of scientific instruments 85 (11), 11E401-411E401 (2014).
- [9] A. Sarapata, J. W. Stayman, M. Finkenthal, J. H. Siewerdsen, F. Pfeiffer, and D. Stutman, "High energy x-ray phase contrast CT using glancing-angle grating interferometers," Medical Physics 41 (2) (2014).



- [10] M. P. Valdivia, D. Stutman, and M. Finkenthal, "Talbot-Lau based Moire deflectometry with non-coherent sources as potential High Energy Density plasma diagnostic,"  
Journal of Applied Physics 114 (16) (2013).
- [11] D. Stutman, J. W. Stayman, M. Finkenthal, and J. H. Siewerdsen, "High Energy X-ray Phase-Contrast Imaging Using Glancing Angle Grating Interferometers,"  
SPIE Proceedings, Medical Imaging 2013: Physics of Medical Imaging 8668 (2013).
- [12] S. A. Sabbagh, J. W. Ahn, J. Allain, R. Andre, A. Balbaky, R. Bastasz, D. Battaglia, M. Bell, R. Bell, P. Beiersdorfer, E. Belova, J. Berkery, R. Betti, J. Bialek, T. Bigelow, M. Bitter, J. Boedo, P. Bonoli, A. Boozer, A. Bortolon, D. Boyle, D. Brennan, J. Breslau, R. Buttery, J. Canik, G. Caravelli, C. Chang, N. Crocker, D. Darrow, B. Davis, L. Delgado-Aparicio, A. Diallo, S. Ding, D. D'ippolito, C. Domier, W. Dorland, S. Ethier, T. Evans, J. Ferron, M. Finkenthal, J. Foley, R. Fonck, R. Frazin, E. Fredrickson, G. Fu, D. Gates, S. Gerhardt, A. Glasser, N. Gorelenkov, T. Gray, Y. Guo, W. Guttenfelder, T. Hahm, R. Harvey, A. Hassanein, W. Heidbrink, K. Hill, Y. Hirooka, E. B. Hooper, J. Hosea, D. Humphreys, K. Indreshkumar, F. Jaeger, T. Jarboe, S. Jardin, M. Jaworski, R. Kaita, J. Kallman, O. Katsuro-Hopkins, S. Kaye, C. Kessel, J. Kim, E. Kolemen, G. Kramer, S. Krasheninnikov, S. Kubota, H. Kugel, R. J. La Haye, L. Lao, B. LeBlanc, W. Lee, K. Lee, J. Leuer, F. Levinton, Y. Liang, D. Liu, J. Lore, N. Luhmann, Jr., R. Maingi, R. Majeski, J. Manickam, D. Mansfield, R. Maqueda, E. Mazzucato, A. McLean, D. McCune, B. McGeehan, G. McKee, S. Medley, E. Meier, J. Menard, M. Menon, H. Meyer, D. Mikkelsen, G. Miloshevsky, D. Mueller, T. Munsat, J. Myra, B. Nelson, N. Nishino, R. Nygren, M. Ono, T. Osborne, H. Park, J. Park, Y. S. Park, S. Paul, W. Peebles, B. Penafior, R. J. Perkins, C. Phillips, A. Pigarov, M. Podesta, J. Preinhaelter, R. Raman, Y. Ren, G. Rewoldt, T. Rognlien, P. Ross, C. Rowley, E. Ruskov, D. Russell, D. Ruzic, P. Ryan, M. Schaffer, E. Schuster, F. Scotti, K. Shaing, V. Shevchenko, K. Shinohara, V. Sizyuk, C. H. Skinner, A. Smirnov, D. Smith, P. Snyder, W. Solomon, A. Sontag, V. Soukhanovskii, T. Stoltzfus-Dueck, D. Stotler, B. Stratton, D. Stutman, H. Takahashi, Y. Takase, N. Tamura, X. Tang, G. Taylor, C. Taylor, K. Tritz, D. Tsarouhas, M. Umansky, J. Urban, E. Unterberg, M. Walker, W. Wampler, W. Wang, J. Whaley, R. White, J. Wilgen, R. Wilson, K. L. Wong, J. Wright, Z. Xia, D. Youchison, G. Yu, H. Yuh, L. Zakharov, D. Zemlyanov, G. Zimmer and S. J. Zweben, "Overview of physics results from the conclusive operation of the National Spherical Torus Experiment,"  
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- [13] D. Kumar, M. Parman, D. Stutman, and M. Finkenthal, "Transmission grating based imaging spectrometers in the XUV and VUV for various plasmas,"  
Journal of Instrumentation 8 (2013).
- [14] D. J. Clayton, K. Tritz, D. Stutman, R. E. Bell, A. Diallo, B. P. LeBlanc, and M. Podesta, "Electron temperature profile reconstructions from multi-energy SXR measurements using neural networks,"  
Plasma Physics and Controlled Fusion 55 (9) (2013).
- [15] K. Tritz, D. J. Clayton, D. Stutman, and M. Finkenthal, "Compact "diode-based" multi- energy soft x-ray diagnostic for NSTX,"  
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- [16] D. Stutman, K. Tritz, and M. Finkenthal, "Multi-energy x-ray imaging and sensing for diagnostic and control of the burning plasma,"  
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International Workshop on X- Ray and Neutron Phase Imaging with Gratings, edited by A. Momose and W. Yashiro (2012), Vol. 1466, pp. 229-236.
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