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Date: 08 Apr 2025

### FYI - Fusion News/Alerts

#### **Manufacturing milestone - All 8 cryopumps received**

<https://www.iter.org/node/20687/all-8-cryopumps-received>  
[Latest ITER Newslines: <https://www.iter.org/whatsnew/454>]

#### **Five contracts that will shape the future of fusion devices**

<https://fusionforenergy.europa.eu/news/fusion-technology-development-contracts-knowledge/>

#### **Commercial fusion power plant closer to reality following research breakthrough**

<https://www.eurekalert.org/news-releases/1078435>

#### **European labs lead the way: Europe's fusion energy research in full swing**

<https://euro-fusion.org/eurofusion-news/european-labs-lead-the-way-europes-fusion-energy-research-in-full-swing/>

#### **Berkeley Lab Boosts Fusion Research Using ML Models on NERSC Supercomputers**

<https://www.hpcwire.com/off-the-wire/berkeley-lab-boosts-fusion-research-using-ml-models-on-nersc-supercomputers/>

#### **International conference of plasma experts discuss space and fusion physics**

<https://www.pppl.gov/news/2025/international-conference-plasma-experts-discuss-space-and-fusion-physics>

#### **UKAEA awards £3.5m to develop the sensors engineers need to operate fusion plants**

<https://www.thechemicalengineer.com/news/ukaea-awards-35m-to-develop-the-sensors-engineers-need-to-operate-fusion-plants>

#### **Taking the “training wheels” off clean energy**

<https://news.mit.edu/2025/taking-training-wheels-off-clean-energy-0402>

#### **Crane back in business - with a little help from Spot the robot**

<https://www.gov.uk/government/news/crane-back-in-business-with-a-little-help-from-spot-the-robot>

#### **Imaging Nuclear Shapes by Smashing Them to Smithereens**

<https://www.energy.gov/science/np/articles/imaging-nuclear-shapes-smashing-them-smithereens>

#### **Reducing the Dark Current**

<https://physics.aps.org/articles/v18/s40>

#### **Primordial Soup Was Full of Flavors**

<https://physics.aps.org/articles/v18/75>

## FYI – LIBRARY NEWS/ALERTS

### **ATLAS Collaboration awarded Breakthrough Prize in Fundamental Physics**

<https://atlas.cern/Updates/Press-Statement/Breakthrough-Prize>

### **Battery materials face a rocky path ahead**

<https://cen.acs.org/energy/energy-storage-/Battery-materials-face-rocky-path0/103/web/2025/04>

### **EU and Switzerland initial agreement on participation in Union programmes**

[https://www.eeas.europa.eu/delegations/switzerland/eu-and-switzerland-initial-agreement-participation-union-programmes\\_en](https://www.eeas.europa.eu/delegations/switzerland/eu-and-switzerland-initial-agreement-participation-union-programmes_en)

### **Scientists find rare double-star spiral doomed for supernova explosion**

<https://www.space.com/the-universe/stars/scientists-find-rare-double-star-spiral-doomed-for-supernova-explosion>

### **High-intensity shock tube reveals high-speed interface flow mechanism**

<https://phys.org/news/2025-04-high-intensity-tube-reveals-interface-1.html>

### **New Quark Discovery Reveals a Critical Clue About The Birth of The Universe**

<https://www.sciencealert.com/new-quark-discovery-reveals-a-critical-clue-about-the-birth-of-the-universe>

### ***Recent Peer-Reviewed Articles of Interest***

#### **Distortions in charged-particle images of laser direct-drive inertial confinement fusion implosions**

<https://pubs.aip.org/aip/pop/article/32/4/042702/3342780/Distortions-in-charged-particle-images-of-laser>

#### **Bifurcation, chaos, modulation instability, and soliton analysis of the schrödinger equation with cubic nonlinearity**

<https://www.nature.com/articles/s41598-025-96327-6>

#### **Sub-per-mille bunch energy spread in a quasi-linear laser-wakefield accelerator via periodical de-chirpings**

<https://www.nature.com/articles/s42005-025-02057-6>

#### **The discharge plasma in ion engine neutralizers: Numerical simulations and comparisons with laboratory data**

<https://pubs.aip.org/aip/jap/article/108/11/113308/372156/The-discharge-plasma-in-ion-engine-neutralizers>

#### **Solar wind penetration into dusty magnetospheres creates electrostatic waves and structures**

<https://pubs.aip.org/aip/pop/article/32/4/042901/3342436/Solar-wind-penetration-into-dusty-magnetospheres>

**[Of Interest]**

**Networking for the Future: Five Ways ESnet Accelerates the Nation's Science**

<https://newscenter.lbl.gov/2025/04/07/five-ways-esnet-accelerates-the-nations-science/>