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## User research at Brookhaven Accelerator Facilities Division

*Monday 2 June 2025 16:00 (2 hours)*

Brookhaven's Accelerator Facilities Division provides users with access to cutting-edge research tools, including the Accelerator Test Facility (ATF) and the Ultrafast Electron Diffraction (UED) facility. The ATF features an RF photocathode electron LINAC, a femtosecond Ti:Sa laser, and a high-peak-power LWIR laser, all capable of synchronized or independent operation. These tools enable advancements in beam manipulation, accelerator and laser technologies, and the study of low-plasma-density regimes for precise electron seeding into plasma cavities. This supports the development of low-emittance beams for compact laser wakefield accelerators (LWFAs), with applications in science and industry. The UED facility, equipped with an RF electron gun and Ti:Sa laser, facilitates dynamic studies of material structures and other low-energy electron beam research. Starting in 2025, access to these facilities will be available through the BeamNetUS program for academia, industry, and national labs. These unique research opportunities will be presented.

### Footnotes

### Paper preparation format

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### Region represented

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**Author:** POGORELSKY, Igor (Brookhaven National Laboratory)

**Co-authors:** BABZIEN, Marcus (Brookhaven National Laboratory); FEDURIN, Mikhail (Brookhaven National Laboratory); LI, William (Brookhaven National Laboratory); POLYANSKIY, Mikhail (Brookhaven National Laboratory); VAFAEI-NAJAFABADI, Navid (Stony Brook University); BIEDRON, Sandra (University of New Mexico); PALMER, Mark (Brookhaven National Laboratory)

**Presenter:** POGORELSKY, Igor (Brookhaven National Laboratory)

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