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managed by Brookhaven Science Associates
for the U.S. Department of Energy

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Dear Colleague,

This is the call for proposals, and an invitation to participate in our next *ATF Program Advisory Committee and ATF Users' Meeting* to be held at Brookhaven National Laboratory on October 1-2, 2015. A short synopsis of the facility's capabilities, beam parameters and equipment is attached to this letter.

The ATF is an Office of Science National User Facility in service of Accelerator Stewardship under the program of High Energy Physics.

For additional information about our user program, together with guidance on submitting and performing your experiment at the ATF, please visit the ATF website at http://www.bnl.gov/atf/.

Interested researchers should submit their proposals by September 1st. This year we will introduce a new proposal submittal process. Details can be found on the Users' Meeting website http://www.bnl.gov/atfusermeeting/. The submitted proposals shall be presented in person to the ATF's Program Advisory Committee at the Users' Meeting in October.

Principal investigators or designee of active experiments at the ATF are expected to present progress reports in person.

A tentative agenda of the meeting includes: Facility presentations, status reports on active experiments, new experimental proposals, informal pre-proposal presentations, an update on the ATF-II project, and feedback from the user community on ATF-II fitness for particular classes of experiments.

The meeting registration site is now open.
Please follow the link https://www.bnl.gov/atfusersmeeting/reg/step1.php#form to start your registration.
The registration deadline is September 25. Early registration is encouraged.

I look forward to seeing you at the ATF in October.

Sincerely,

Igor Pogorelsky Interim Director
Accelerator Test Facility

(see below)

Facilities and equipment available at the ATF:

An **Electron Beam** deliverable to two experimental beam lines that can be tailored as follows:

- Energy: 30 – 80 MeV (Tunable)
- Charge: 10 – 1000 pC / bunch (Tunable)
- Bunch length: 0.1 – 6 ps (Tunable)
- Typical normalized emittance: 1 – 2 μm
- Minimum energy spread: 0.1%
- Minimum transverse size: 5 μm
- Repetition rate: 1.5 Hz
- Microsecond pulse trains
- Bunch trains with tunable spacing are available using the mask technique

Three different **Lasers** are available for laser-based experiments; they also can be brought into synchronized collisions with the electron beam. The parameters of the ATF's laser are as follows:

- **TW CO_2**
  - Peak power: 2 TW
  - Pulse length: 3 ps
  - Wavelength: 9-10 μm
- **Nd:Yag**
  - Pulse energy: IR = 10 mJ, UV = 0-30 μJ
  - Pulse length: IR = 14 ps, UV = 8ps
  - Wavelength: IR = 1.06 μm UV = 0.353 μm
- **Ti:Sapphire**
  - Pulse energy: 3 mJ
  - Pulse length: 180 fs
  - Wavelength: 785 nm

Experimental Chambers with the following multiple built-in features are available to experimenters.

- Laser – electron-beam interaction points with provisions for tightly focusing both beams,
- Provisions for synchronizing and co-aligning the laser and electron beam,
- Plasma source, and,
- Multiple viewing ports and motorized in-vacuum translations.

Beam Diagnostics at the ATF allow users to retrieve data on both the condition of the electron beam and laser, such as energy, bunch length, spot size, and emittance. A list of the diagnostics equipment that is available to users includes

- Beam Profile Monitors
- Gigabit Cameras with Frame Grabbers
- Bolometers
- Electron and Optical Spectrometers
- Faraday Cups
- Photodiodes
- Laser Joule Meters
- Streak Camera

- Frequency-Resolved Optical Gating (FROG)
- Thomson Parabola Ion Spectrometer
- IR Cameras
- EMCCD Cameras
- Oscilloscopes

The ATF also offers **scientific- and technical-expertise** and support in experiment safety, laser, e-beam, vacuum, mechanical- and electrical-engineering, computer-controls and data acquisition.

Use of the ATF is free for non-proprietary work (cost recovery is in effect for raw materials, manufacturing, and proprietary work).

For information on the ATF-II upgrade, please refer to the following documents:
ATF Upgrade Proposal http://www.bnl.gov/atf/docs/ATFupgrade.pdf
ATF-II Upgrade Workshop newsletter
http://www.bnl.gov/atf/docs/ATFNewsletter_25Nov2014_WorshopReport.pdf