

THE ADVANCED PHOTON SOURCE

THE ADVANCED PROTEIN CHARACTERIZATION FACILITY AT THE APS

Modern and purposefully designed, the new Advanced Protein Characterization Facility (APCF) adjoins the Advanced Photon Source facility, ready to open new vistas in macromolecular crystallography.

The APCF, constructed with State of Illinois funds, is supported for operations by the U.S. Department of Energy and the National Institutes of Health. It houses a state-of-the-art bioscience facility for up to 90 researchers, staff, and visiting scientists engaged in the production, characterization, and crystallization of biological proteins and other macromolecules and complexes.

Knowledge about three-dimensional structures of macromolecules is critical for understanding their function and interactions and to design new therapeutics. But obtaining single crystals of macromolecules is a major bottleneck in structure determination.

Thanks to its physical and mission connection to the APS, the APCF efficiently delivers crystals to the x-ray beamlines for determining three-dimensional structures of proteins and other biological macromolecules. The APCF also makes possible characterization of biophysical properties and biochemical functions of proteins, and studies their interactions with other macromolecules and small ligands.

In addition to its primary mission, the APCF will provide training in advanced protein biochemistry and structural biology methods in collaboration with local and state education organizations, encourage participation through visiting scientist appointments, and will serve as a resource for academic and research institutions in Illinois and nationwide.

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The Advanced Photon Source with the Advanced Protein Characterization Facility in the foreground.

The facility includes laboratories with built-in, robot-assisted technologies for the production, characterization, and crystallization of proteins, other macromolecules, and macromolecular complexes.



CALL FOR APS GENERAL-USER PROPOSALS

The Advanced Photon Source is open to experimenters who can benefit from the facility's high-brightness hard x-ray beams.

General-user proposals for beam time during Run 2015-1 are due by Friday, October 31, 2014.

Information on access to beam time at the APS is at http://www.aps.anl.gov/Users/apply_for_beamtime.html or contact Dr. Dennis Mills, DMM@aps.anl.gov, 630/252-5680.

Argonne National Laboratory is a U.S. Department of Energy (DOE) laboratory managed by UChicago Argonne, LLC

The Advanced Photon Source is a U.S. DOE Office of Science User Facility operated for the DOE Office of Science by Argonne National Laboratory under Contract No. DE-AC02-06CH11357



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