

# PARTNERSHIP MODELS AT THE APS



**DENNIS MILLS**  
**APS DEPUTY DIRECTOR**

5-Way Meeting October 5, 2016  
SLAC

# SUMMARY OF PARTNERSHIPS MODELS AT THE APS

- Full Scope Partnerships (Collaborative Access Teams - CATS)
  - Typically operate beamline(s) with non-BES fund
  - Minimum of 25% of time goes to General User Program
  - On occasion, APS has partnered with CAT for shared operations (which usually results in more time going to GU Program)
  
- Limited Scope Partnerships (Partner User Proposals – PUPs)
  - Each PUP limited to 30% of an APS-operated beamline.
  - Duration can be up to 3 years.
  
- Collaborative Development Teams (CDTs)
  - CDT provides partial funding for a beamline/sector.
  - APS contributes the remainder of the funding.
  - APS agrees to operate the beamline after construction is complete.

## FULL SCOPE PARTNERSHIPS (CATS)

- A full scope Partner User is one where the partner is fully funding the construction and/or operation of a beamline at the APS.
- At present there are 15 CATs at the APS that operate 34 beamlines.
  - DuPont – Northwestern – Dow (DND - Northwestern)
  - Materials Research (MR - IIT)
  - Geo Soil and Enviro (GSECARS – U of C)
  - BioCARS (U of C)
  - ChemMatCARS (U of C)
  - High Pressure (HP – Carnegie)
  - Industrial Macromolecular Crystallography Association (IMCA - U of Buffalo)
  - BioCAT (IIT)
  - Structural Biology Center (SBC – Biosciences/ANL)
  - Life Sciences (LS – Northwestern)
  - South East Regional (SER – U of Georgia)
  - General Medicine/Cancer (GMCA – XSD)
  - North East (NE – Cornell)
  - Lilly Research Lab (LRL – Lilly)
  - Dynamic Compression Sector (DCS – Washington State University/XSD)

## CATS CAN BE CATEGORIZED INTO 3 GROUPS:

- CATs funded by government agency to support certain scientific communities (often National User Facilities or NUFs)
  - Geo Soil and Enviro (GSECARS) – NSF
  - BioCARS - NIH
  - ChemMatCARS - NSF
  - Structural Biology Center (SBC) – DOE/BER
  - North East (NE) – NIH
  - General Medicine/Cancer (GMCA) – NIH
  - BioCAT - NIH
  
- CATs funded by government agency to support programs of that agency
  - High Pressure (HP CAT) - NNSA
  - Dynamic Compression Sector (DCS) - NNSA
  
- CATs funded by a single entity or consortia to do work of interest to member(s)
  - DuPont – Northwestern – Dow (DND CAT)
  - Life Sciences (LS CAT)
  - South East Regional (SER CAT)
  - Materials Research (MR CAT)
  - Industrial Macromolecular Crystallography Association (IMCA CAT)
  - Lilly Research Lab (LRL CAT)

## LIMITED SCOPE PARTNERSHIPS (PUPS)

- Limited scope partnerships (i.e., Partner User Proposals or PUPs) contribute to the development of the facility in exchange for a set amount of beam time. The process provides access for proposals that:
  - Require reliable beam time over multiple cycles, and
  - Will ultimately benefit the general user community (e.g., provide new instrumentation or capabilities that will be available to all users or by creating or expanding a user community).
- Partner User access can be requested on any beamline operated by the APS.
  - **A maximum of 30% of the time on an individual BL will be allocated to Partner Users (whether on one proposal or multiple proposals)** so that there is always at least 50% of the time available through the GU Program (20% always goes to staff).
  - Typical PUPs are 10% to 15%, in part based on their contributions relative to the operating cost of the beamline.
- PUPs can be active for a period of up to three years.
- Typically we have 20 to 25 active PUPs at any one time corresponding to about 3 beam line equivalents (BLEs). That's about a 10% usage of APS-operated beamlines by PUPs at any one time.

## COLLABORATIVE DEVELOPMENT TEAMS (CDTS)

- In this model, typically several individuals or institutions join to form the CDT. A CDT brings in funding and assumes responsibility for design and of a sector or beamline.
- APS provides at least partial funding and may assume responsibility of construction manager for the project and agrees to operate the beamline after construction is complete.
- As the transition is made from construction to the commissioning/operational phase, the CDT members receive progressively less time as more time is given to General Users.
- Examples of CDTs are the Inelastic X-ray Scattering (IXS) beamline and the Intermediate Energy Scattering (IEX) beamline.

### Typical Transition from CDT Members Usage to GU Usage

Year	Staff/Commissioning	CDT Members	GU
1	20%	40%	40%
2	20%	30%	50%
3	20%	0%	80%

QUESTIONS????