ERT Brief at HPSTAR (Jan. 01, 2016)

Engineering Resource Team (ERT) serves as an advisory committee to the Center Director (CD) for large instrument and facility (LIF\*) purchase and management. To optimize the central functionality of LIF, a general procedure is suggested to follow:

A. Requirements for LIF purchase initiation from PI or PIs\*\*:

1. Provide a description about broad interests for general high pressure research related to the proposed LIF;
2. Provide a statement of the designed functionality and impact research directions;
3. Form a core user group to propose the LIF initiation together (specialized LIF team);
4. Provide a detail plan and time table to ensure the designed functionality;
5. For fully operation, make sure the related accessories are included;
6. If a supporting technician is required full time or part time, the new hiring shall be requested in the proposal, and PI may recruit this individual after approval;
7. Decide the research required LIF parameters and vendor information;
8. Provide information about the similar LIF at other institutions, and compare the quotes.

\* LIF is defined as equipment cost over CNY 300K

\* \*PI refers to HPSTAR tenured or tenure tracked staff scientist

LIF initiators shall provide ERT the above information in one itemized document. At least two ERT members will evaluate the application package, give feed back to the initiator aligned with the overall HPSTAR center development plan. ERT will provide suggestion to CD for final decision.

B. Duty for LIF initiators:

1) Make the LIF full time available for core users and general HPSTAR users;

2) Share at least 25% of its operation time to general users or anytime LIF is available;

3) 25% time should be evenly distributed year round to let others have access, the exact open period depends on the minimum experimental time (like one week per month, or 1-2 days per week);

4) Provide a formal standard operation procedure (SOP);

5) Train all new users to be familiar with the LIF;

6) Maintain the LIF in operational mode;

7) Arrange the LIF usage record and sign-in log book to track the status

Each LIF shall have one in-charge manager (could be the proposed PI, or the supporting Engineer), who keeps the LIF system at best performance status.

C. Public lab management

1) Duties of the full-time lab manager:

a) Overall lab safety inspection everyday (walk through each lab everyday);

b) In charge of public tools, parts, equipment maintenance/refilling and housekeeping, coordinate the engineering /technician effort;

c) Check log-books, keep lab in safe/clean environment;

d) Take care of new users training for public labs

e) Regulate users to National Lab standard.

f) Other daily operations of all laboratories.

2) Duties of Engineers/specialists:

a) Maintain the special and public labs as assigned.

b) Report to ERT for the overall LIF running and usage.

c) Help users to solve their specific demands.

d) Follow up the new capabilities from vendors, and provide advisory to in charge LIF manager or ERT on possible improvement.

ERT will evaluate lab managers and engineers/specialists each year according mutual satisfaction and performance.

D. General user request for LIF use

Request for the use of LIF as a general user should be submitted to ERT. The request should contain the following information: scientific background, research approach, period of facility access required, flexible or fixed dates, expectation / possible output, end of run evaluation.

Each request submitted to ERT will be evaluated by at least two ERT members who are experts in the related techniques and the LIF in-charge manager, and an recommendation will be submitted to ERT chair for usage record.

Current ERT members (total 12):

Jiuhua Chen (multianvil, deformation)

Zhiqiang Chen (beamline optics, lab innovation)

Yang Ding (strong correlated system, spectroscopy)

Kuo Li (chemisty, Neutron)

Junyue Wang (optics, mechanics)

Lin Wang (nanomaterials, optics)

Tsu-Chien Weng (spectroscopy, time-resolve)

Hong Xiao (superconductor, magnetic system)

Hao Yan (nanomaterials, EXAFS)

Wenge Yang (crystallography, imaging) - Chair

Li Zhang (multianvil, laser heating)

Haiyan Zheng (chemistry, NMR, Neutron)

Current Engineers and assigned in charge- ERT member (in parenthesis):

FIB Engineer: Yanping Yang (Junyue Wang, Li Zhang)

Mechanical Engineer: Yuyong Xiong, Mingbo Sun + 1 more (Junyue Wang, Hao Yan)

Optical Engineer: Weitao Ding (Lin Wang, Tsu-Chien Weng)

IT Engineer: Chen Chen (Tsu-Chien Weng)

PPMS engineer: Hongjie Pang (Hong Xiao, Lin Wang)

Changchun Lab Manager: Bin Yang (Jiuhua Chen)

Beijing Lab Manager: Xiaojiang Li (Kuo Li, Haiyan Zheng)

Gas Loading, CVD Engineer: Haiyun Shu (Li Zhang)

Magneto Sputtering Engineer: Hongliang Dong (Zhiqiang Chen, Wenge Yang)

Please submit any question related to ERT to the group email address: [ERT@hpstar.ac.cn](mailto:ERT@hpstar.ac.cn)

Any news update can be found online www.hpstar.ac.cn/ERT