

Advanced Science by Frontier Spectroscopies with Soft X-ray FEL

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” Recent progress and development plans of SACLA BL1” Y. Kubota (RIKEN)

“Development of soft X-ray FEL focusing system using a Wolter mirror” Dr. H. Motoyama (Univ. Tokyo)

“Some examples of soft X-ray second harmonic generation” Dr. C. Schwartz (UC Berkeley)

“Development of time-resolved soft X-ray absorption spectroscopy for liquid sample”
Dr. H. Iwayama (IMS)

“Observation and application of ultrafast magnetism”

Prof. A. Tsukamoto (Nihon Univ.)

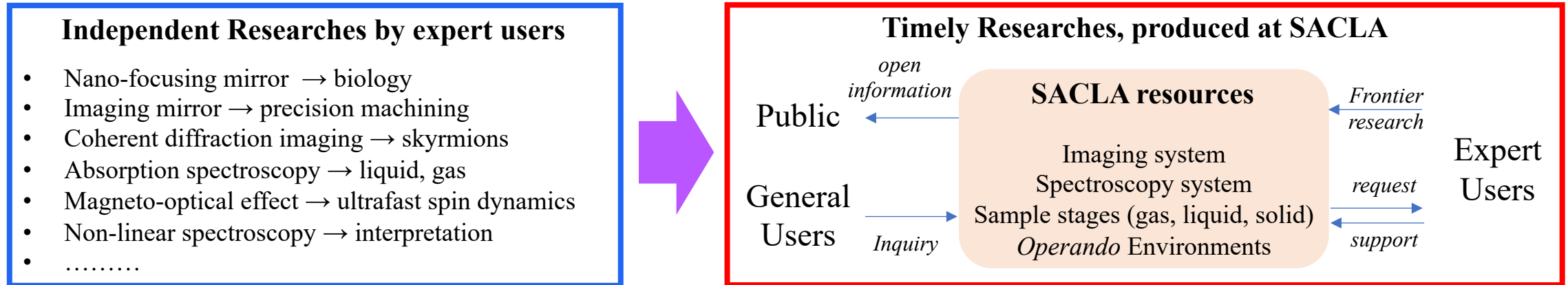
Round table discussion

Recent progress and development plans of SACLA BL1

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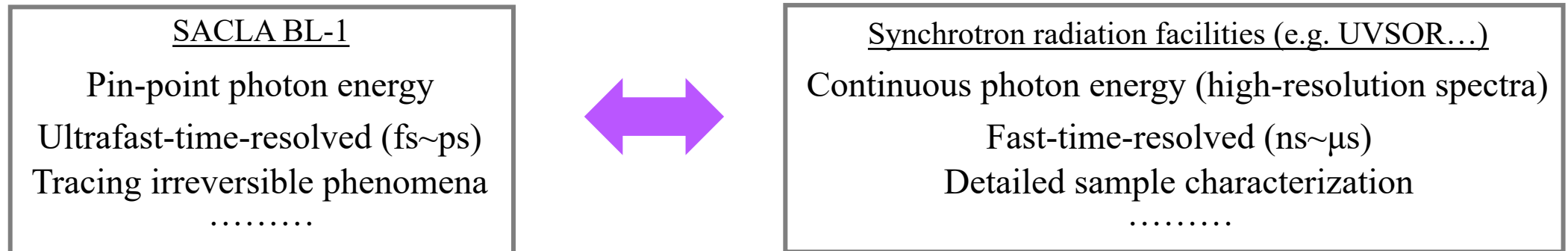
1. Bottom-up to Top-down

SACLA Basic Development Program
JST XFEL Promoting Operation



2. Production collaboration with synchrotron radiation

Communications with users of other SX facilities that share the same photon energy range with SACLA BL-1



Regular workshops (e.g. SACLA user meeting satellite)

3. Request to the SXFEL beamlines, SACLA BL-1

- More attenuators to control flux and to select/remove high-harmonic photons
- Modify optical elements for high-harmonic photons
- Circular polarized light (conversion film filter may be enough)
- Photon energy up to L-edge absorption edges of transition metal
- Faster change of photon energy

4. Other issues

- Remote experiments
 - Mail-In experiments
 - SXFEL over the world
- SACLA BL-1: $h\nu=28-150$ eV
FLASH: $h\nu=14-310$ eV
FERMI: $h\nu=12.4-310$ eV

I understand your request.
We will update the photon flux better than the original values (> 100 uJ/pulse).
We look forward to developing new science together with high harmonic photons.
Let us know your expecting pulse energy at high harmonics (3rd and 5th).

FLASH operates in too special mode to bring our own experimental techniques.
FERMI has low flux for our experiments.
Coming to SACLA BL-1, I had enough flux and completed measurement so quickly!
Thanks!

Photons, generated at SACLA BL-1, allow us to make the standard experiments stably.
This is very important today. I am looking forward to the further technical innovations, such as spatial resolved experiments.

users

facility