Discussion Summary

Biology

- Single molecule imaging
  - Still one of the biggest challenges
  - Dynamics of molecules (not in crystal field), compared with cryo-EM
- Big data
  - Need to reach a compromise on the big data handling since on-site storage resources are limited
  - Clear policy on data storage/handling should be established
  - Facility will ask user's demands/opinions
- Support for life-science users
  - Operation and support can be much improved
  - Coordination for preparation at wet lab.
  - This issue is common to SP8 users

Chemistry & AMO

- "Exotic" lasers for alternative pumping (extended wavelength range, sub-10 fs, …)
  - 'SACLA Basic Development Program' is an option
- Development of accelerator capabilities (attosecond pulses)
  - Generation of shorter pulse duration of XFEL. Tanaka Takashi san's idea is one possibility, but it would be not straightforward since significant reconstruction of the beamline is necessary
  - Measurement system for as-XFEL is required, but will be possible
  - Better to have a meeting on this specific topic to discuss science cases
- Energy scan range with self-seeding
  - For XANES, scan range of <50 eV is desired
  - Scan-range will be checked by the facility
  - It takes ~8 hours before providing seeded FEL, but try to reduce the time

Materials Science

- Share the information
  - Ask current capabilities of instruments and software to the BL staff
  - Further development of laser systems (mid-IR – THz) for pump, including characterizations and alignment, please exploit the SACLA Basic Development Program
  - Similar demands are from community of ultrafast chemistry/AMO
- "Real time" monitoring of arrival timing
  - Already possible; please discuss with BL staff

XQO/HEDS

- Limited resource of laser scientists
  - Domestic collaboration (or to find international resources)

- Radiation shield for intensities above 1e20 W/cm2
  - Shielding is not necessary for vacuum study

- Infrastructure of optical laser systems has already reached an adequate level: how to exploit it?
  - Should be discussed in the community

General remarks

- New budget for enhancing activities is very important
- More publications!

- Next meeting: August or September of 2019 ?