Beamline Jockey Days - Challenges in Imaging



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Efficient use of beamtime: The "Shock" Beamtime Allocation Group at beamline ID19 of the ESRF

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4th generation high-energy synchrotron photon sources offer unprecedented capabilities of probing matter during transient dynamics at high spatio-temporal scales using hard X-rays. The combination of high brilliance, short bunch duration (down to 100 ps) and high-energy of the extremely brilliant source at ESRF-EBS opens the door of studying materials under extreme events of shock and high-strain rate combined to in-situ subsurface ultra-high speed X-ray radioscopy measurements at relevant scales. The recent establishment of new access modes, such as beamline allocation groups (BAG), aim at building a collaborative community and providing regular access to the shared pool of cutting-edge installations. The so-called "Shock"BAG brings together experts in shock physics and dynamic behaviour of materials, building upon the recently installed instrumentation such as Split-Hopkinson Pressure bar (SHPB), single stage gas luncher, 850 mJ bs-pulsed laser shock and pulsed power-driver as well as a chamber compatible with energetic materials which allow studying matter under a plethora of extreme scenarios. Frequently, these setups are intensive for installation and alignment and hence, do not allow for efficientuse during a single beamtime campaign. The BAG access mode allows to gather the relevant community for a given experimental setup, targeted preparation of samples and environments which drastically improves efficiency at the beamline while for the user community it gives regular access to beamtime.

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