



## ECB Workshop

30.01.2020

Seminar room 3, Bldg. 1b

### Description of workshop

In 2019 high-pressure research at the Extreme Conditions Beamline (ECB, P02.2) has continue to evolve. Experiments in the dynamic Diamond Anvil Cell at high-P have become a standard technique and the development of the simultaneous high-P and -T dDAC technique has further matured. We have also made progress in the development of imaging capabilities of the beamline, as well as in the calibration our standard resistive heated DAC setup together with our external partners. Submicron focusing is also becoming more robust and finds more and more users for ultra-high-pressure experiments. During this satellite meeting we will present ongoing research from different internal and external groups at the ECB and give an outlook on ongoing and foreseen technical developments.

Organizer: H. P. Liermann

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## PROGRAMME

|                    |  |                |                       |
|--------------------|--|----------------|-----------------------|
|                    |  |                | Chair: K. Glazyrin    |
| 14:00              | <b>Session 1: Experimental Capabilities of the ECB</b><br>Status of the ECB and Outlook                                      | H. P. Liermann | DESY                  |
|                    |  |                | Chair: H. P. Liermann |
| 14:30              | <b>Session 2: Experimental highlights</b><br>Multi-megabar diffraction studies at the ECB: toroidal DACs with submicron beam | E. Pace        | Uni. of Edinburgh     |
| 15:00              | Towards understanding kinetics on fast compression in the dynamic-DAC  | R. Husband     | DESY/LLNL             |
| <b>15:00-15:30</b> | <b>Coffee break (30 Min.)</b>  |                |                       |
| 15:30              | Radial diffraction in the dynamic DAC  | L. Q. Huston   | LANL                  |
| 16:00              | Time-resolved X Ray Diffraction experiments with a Resistively Heated dynamic Diamond Anvil Cell (RHdDAC)                    | A. Mendez      | DESY/Uni. of Bayreuth |
| 16:30              | The "shocking" effects of dynamic compression and heating experiments on quartz  | C. Otzen       | DESY                  |
| 17:00              | Kinetics of Deformation at high Compression Rates using dynamic Diamond Anvil Cell.  | Ch. Plueckthun | XFEL                  |
| 17:20              | Revisiting the spin state crossover in single crystal (MgFe)O at the regime of high resolution                               | K. Glazyrin    | DESY                  |
| 17:50              | Crystal chemistry of Fe-rich bridgmanite at lower mantle pressures   | J. Koemets     | Uni. of Bayreuth      |
| <b>18:20</b>       | <b>End of the workshop</b>   |                |                       |