

Opportunities in High Pressure Science at the ESRF



Wednesday, 7th February – User Dedicated Microsymposium Venue: Chadwick Amphitheatre

09:00 - 09:20	Introduction to high pressure activities at the ESRF by S. Pascarelli , ESRF, France		
	Session I – Chair: I. Daniel, University of Lyon, France		
09:20 - 09:50	Keynote lecture: Structural studies taken to the extreme	L. Dubrovinsky University of Bayreuth, Germany	
09:50 – 10:05	Deciphering the redox dynamics of subduction using in-situ X-ray absorption spectroscopy of arsenic in high-pressure fluids and minerals	G. Pokrovski Géosciences Environnement Toulouse, France	
10:05 – 10:20	Crystallography and acoustic velocities of calcium perovskite	A.R. Thomson University College London, UK	
10:20 – 10:30	Overview of high pressure sample environment	G. Garbarino ESRF, Grenoble, France	
10:30 – 11:00	Coffee break		
	Session II – Chair: V. Cuartero, ESRF, France		
11:00 – 11:30	Keynote lecture: Melting line and Structure of low-Z fluids under extreme conditions: Current status and prospectives with the EBS	F. Datchi Université Pierre et Marie Curie, Paris, France	
11:30 – 11:45	X-ray microscopy opportunities at ID15B beamline of the ESRF	P. Ershov Baltic Federal University Kaliningrad, Russia	
11:45 – 12:00	Interlayer Bond Formation in Black Phosphorus at High Pressure	D. Scelta LENS, Sesto Fiorentino, Italy	
12:00 – 12:15	High-pressure suppression of Jahn-Teller distortion in RMnO3 resolved by EXAFS	R. Vilarinho University of Porto, Portugal	
12:15 – 12:30	Buffer time for additional questions and discussions		
12:30 – 14:00	4:00 Lunch		
	Session III – Chair: V. Svitlyk, ESRF, France		
14:00 – 14:25	Keynote Lecture: Future of ID27 Scientific and Technical Case Melting curve of SiO₂ up to more than 100 GPa and 6000 K with detection of the Si coordination change in the liquid	D. Andrault Université Blaise Pascal, Clermont-Ferrand, France M. Mezouar ESRF, Grenoble, France	
14:25 – 14:40	ESRF towards dynamic compression	R. Torchio ESRF, Grenoble, France	
14:40 – 14:50	Future of high pressure activities at ID18	A. Chumakov ESRF, Grenoble, France	
14:50 – 15:05	Single Crystal X-ray Diffraction and Nuclear Inelastic Scattering at Extreme Conditions: The Case of Carbonates	S. Chariton Bayerisches Geoinstitut, Bayreuth, Germany	

15:05 – 15:20	High pressure XANES and XMCD covering photon energy from 2 up to 15keV	F. Wilhelm ESRF, Grenoble, France
15:20 – 15:35	X-ray emission spectroscopy study of pressure- induced magnetic transitions in magnetite (Fe3O4)	S. Agrestini Max-Planck Institut Dresden, Germany
15:35 – 15:50	Towards a primary pressure scale from a single measurement	B. Wehinger University of Geneva, Switzerland
15:50 – 16:10	Discussion and closing remarks	