COMPTECH operation at APS for the past 1.5 years

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Abstract:

Since Nov. 2014, COMPTECH project has been operated at GSECARS (APS) for about a year and half. COMPTECH PI Dr. Dera and Officer Dr. Zhang have been working on the following projects and achieved several successes: 1. Successfully developed X-ray thermal diffuse scattering experimental procedure and analysis software code, applied to single crystal Si, olivine and bridgmanite; 2. Successfully developed universal membrane cap for different types of diamond anvil cells, the cap is ready for users' user at APS; 3. Standard reusable cheap resistive heaters for diamond anvil cell studies, suitable for moderate high temperature study (to about 200-250 ˚C); 4. COMPTECH website modification including introduction to techniques and COMPRES facilities at APS, software tools for the high-pressure mineral physics community and the COMPRES technology advisory committee meeting; 5. Developed collaboration with sector 34 micro-diffraction beamline, implementation of portable high-pressure viewing and spectroscopy system now is in process; 6. Attended IEDA-kickoff workshop and joined the discussion of developing the possible mineral physics data base as part of the IEDA project.