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**EXAFS measurements of solid and liquid gallium**

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Beamline(s): X18B

**Introduction:** The liquid structure of gallium appears anomalous having a shoulder on the high Q side of the first peak, the origin of which is not fully understood. It has been suggested to examine pressure-dependence of the small R region to provide more information to clarify the structure of liquid.

**Methods and Materials:** Thin layer of gallium was prepared between the Kapton tape to prevent oxidation and also the Kapton tape will protect liquid gallium from flowing. 30 cm long Danfysik, Oxford calibrated ion chamber was used to measured beam intensity before and after the sample. The ion chamber was filled with 100 % N<sub>2</sub> gas. Since there is no reference sample, Using PIP (Si photodiode), a fluorescence measurement was tested, which was inserted near sample areas with 45 degree angle. The PIP did not work properly at high temperature due to the radiation from the heat gun. The position of detectors (ion chamber) and the sample were aligned using a He-Ne laser..

**Results:** Two EXAFS spectra were taken from a solid and a liquid gallium. Both of the spectra appeared same.

**Conclusions:** The data are still being analyzed.

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