Report on the results obtained during the HS-4231 experiment

The goal of this experiment was to measure the structure of BST thin films of various thicknesses in order to confirm the existence of a monoclinic phase for intermedaite thicknesses.

The experiments carried out at room temperature were successful. On the contrary the temperature setup at the time did not allow for meaningful temperature-dependent measurements to be carried out : no reliable measurement of the sample temperature, icing of the sample, an evolution consisting of three discreet steps for the substrate we had hoped to use as a temperature calibrate.

We also experienced some difficulty familiarizing the software used on the beamline. We could not find a conversion program which would have enabled us to work directly on the data.

Nevertheless the quality of the synchrotron beam, the support from the outstanding support staff and the high quality of the diffractometer have been essential assets for our understanding of the problem.

Our results have been published in : P.E. Janolin et al. J.Phys.Chem.Matter 26, 292201 (2014)