



	<b>Experiment title:</b> X-Ray Crystallographic Investigations on the Structures and Functions of the Photosystem I and II	<b>Experiment number:</b> LS-1932
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## Report:

We are elucidating the three-dimensional structure of the photosystem II (PSII) purified from the thermophilic cyanobacterium *Synechococcus elongatus*. Up to now we obtained electron density maps at relatively low resolutions, the most recent model determined at 3.8 Å (Zouni et al., 2001).

The aim of the experiment was to collect dataset at Mn edge to improve experimental phasing using anomalous signal of two Mn-clusters which are present in PSII dimer. The current resolution of these data is 4.8 Å. Due to low reproducibility of PSII preparation and crystallisation, the search for suitable crystals failed as we could not obtain resolution better than 4.8 Å. Therefore we decided to continue with the search for well-diffracting crystals instead of collecting low resolution dataset.

## Reference

Zouni, A., Witt, H.-T., Kern, J., Fromme, P., Krauß, N., Saenger, W., Orth, P. (2001) Crystal structure of photosystem II from *Synechococcus elongatus* at 3.8 Å resolution. *Nature* **409**, 739-743.