



	Experiment title: Stilbene Synthese	Experiment number: LS1656
Beamline: ID14 eh2	Date of experiment: from: April 24th 2000 to: April 24th 2000	Date of report: Sept 1, 2000 <i>Received at ESRF:</i>
Shifts: 1	Local contact(s): Julien Lescar	
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Report:

Stilbene Synthese (STS) is a plant polyketide synthase that produces resveratrol by condensing one molecule of coumaroyl-CoA and three molecules of malonyl-CoA. This enzyme, present in grape and Pinus sylvestris, is homologous to the Chalcone Synthase (CHS). Structure of CHS was obtained in 1998[1][2] and used for with molecular replacement on STS data collected on beamline FIP at 3.A resolution. The goal of the experiment reported here was the collection of a high resolution (2.1A) dataset, in order to improve the quality of the model.

[1] J.-L. Ferrer, J. M. Jez, M. E. Bowman, R. A. Dixon and J. P. Noel, "Structure of chalcone synthase and the molecular basis of plant polypeptide biosynthesis", Nat. Struct. Biol., 6(8) (1999), 775-784.
[2] J. M. Jez, J.-L. Ferrer, M. E. Bowman, R. A. Dixon and J. P. Noel, "Dissection of malonyl-Coenzyme A decarboxylation from polyketide formation in the reaction mechanism of a plant polyketide synthase", Biochemistry, 39(5) (2000), 890-902.

High resolution (2.1A) data collection on STS crystal. Considering the lattice parameters(57.30 364.18 57.32 90.00 98.61 90.00, in P21), this resolution could not be obtained anywhere else. 177 deg were collected in two times on a 0.3x0.1x0.1 mm³ crystal. Data were reduced with XDS.