	Experiment title: **XyloglucanEndotransglycosylase.** *BAG: Uppsala (II)*	**Experiment number**: LS-2187
ESRF		

Beamline: ID13	**Date of experiment**: from: 020201 to: 020203	**Date of report**: 23 Aug 2002
Shifts: 2	**Local contact(s)**: M. Burghammer	*Received at ESRF:*

Names and affiliations of applicants (* indicates experimentalists):

T. Alwyn Jones, Uppsala University, alwyn@xray.bmc.uu.se
* Patrik Johansson, Uppsala University, patrik@alpha2.bmc.uu.se

Report:

Xyloglucan is an abundant polysaccharide in dicot cell walls where it can form crosslinks that restrains cell expansion and allows the generation of turgor pressure. The enzyme XyloglucanEndotransglycosylase, XET, is belived to play a key role in wall expansion and growth. Catalyzing both endolytic cleavage of xyloglucan *and* ligation of the newly generated end to another xyloglucan chain, it enables expansion without undermining cell structure.

A first native dataset of recombinant XET from *Populus tremula* was collected at ID13 to a resolution of 2.5Å. The structure was later solved by SIRAS using a three site Au-derivative from data in part collected at ESRF ID14:4 to a resolution of 2.1Å