	Experiment title: **Gelsolin/actin complexes: Alwyn Jones BAG**	**Experiment number**: LS-2187
Beamline: ID14 4	**Date of experiment**: 12-14 April 2003	**Date of report**: 30/08/2004
Shifts:	**Local contact(s)**: Raimond Ravelli	

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Report:

The special and temporal regulation of actin polymerization provides the force for cell locomotion. Gelsolin is an actin filament severing and capping protein that regulates the timing of actin polymerization through controlled capping or uncapping of filament ends. Gelsolin also contributes to regulating the total number of filaments through its severing function.

In this trip we collected 5 data sets of soaks of a structure that had been solved on ID29 (see reference below). The soaks were analogues of PIP2 a molecule that releases gelsolin from an actin filament. Unfortunately, there was no density for the PIP2 analogues in the maps.

Irobi, E., Burtnick, L. D., Urosev, D., Narayan, K. & Robinson, R. C. (2003) From the first to the second domain of gelsolin: a common path on the surface of actin? *FEBS Lett.* **552**, 86-90. ESRF data only.

In a second experiment we soaked ATP into full length gelsolin crystals. The ATP molecule can be seen clearly in the electron density maps and we are currently refining this structure.