



## Experiment Report Form

**The double page inside this form is to be filled in by all users or groups of users who have had access to beam time for measurements at the ESRF.**

Once completed, the report should be submitted electronically to the User Office using the **Electronic Report Submission Application**:

*<http://193.49.43.2:8080/smis/servlet/UserUtils?start>*

### ***Reports supporting requests for additional beam time***

Reports can now be submitted independently of new proposals – it is necessary simply to indicate the number of the report(s) supporting a new proposal on the proposal form.

The Review Committees reserve the right to reject new proposals from groups who have not reported on the use of beam time allocated previously.

### ***Reports on experiments relating to long term projects***

Proposers awarded beam time for a long term project are required to submit an interim report at the end of each year, irrespective of the number of shifts of beam time they have used.

### ***Published papers***

All users must give proper credit to ESRF staff members and proper mention to ESRF facilities which were essential for the results described in any ensuing publication. Further, they are obliged to send to the Joint ESRF/ ILL library the complete reference and the abstract of all papers appearing in print, and resulting from the use of the ESRF.

Should you wish to make more general comments on the experiment, please note them on the User Evaluation Form, and send both the Report and the Evaluation Form to the User Office.

### **Instructions for preparing your Report**

- fill in a separate form for each project or series of measurements.
- type your report, in English.
- include the reference number of the proposal to which the report refers.
- make sure that the text, tables and figures fit into the space available.
- if your work is published or is in press, you may prefer to paste in the abstract, and add full reference details. If the abstract is in a language other than English, please include an English translation.



	<b>Experiment title:</b> BAG - LEBS - 2012-1	<b>Experiment number:</b> MX-1292
<b>Beamline:</b> ID23eh1	<b>Date of experiment:</b> 23/06/2012 from: 9h30 to: 8h00	<b>Date of report:</b> 04/07/2012
<b>Shifts:</b>	<b>Local contact(s):</b> E. Gordon	<i>Received at ESRF:</i>
<b>Names and affiliations of applicants (* indicates experimentalists):</b> <b>M. Ranaivoson* CNRS, LEBS</b> <b>M. Knossow* CNRS, LEBS</b>		

## Report:

### 1) Project 1: Tubulin in complex with a tau fragment and stabilized by a stathmin-like domain.

In continuation of previous synchrotron runs, we tested 5 crystals of tubulin in a complex with a short construct of the Tau protein and further stabilized by a stathmin-like domain protein. The diffraction is highly anisotropic. We collected datasets from two crystals. After data processing with XDS and Scala (statistics summarized below), it appears that the diffraction limit is not enhanced as compared to those of previously collected crystals.

P222 crystals	Cell (a, b, c) (Å)	Resolution (Å)	Completeness (%)	multiplicity	I/sig(i)	Rmeas (%)
Crystal 1	54.3, 94.4, 274.5	4.1	98.6 (97.0)	3.4 (3.3)	7.3 (1.4)	14.8 (124)
Crystal 2	54.1, 94.7, 277.7	4.2	96.0 (97.9)	3 (3)	6.2 (1.4)	17.1 (97.1)

### 2) Project 2: Anti-tubulin DARPin for a structural study of tubulin assemblies.

During this session, we aimed at collecting datasets of better qualities and higher resolution for crystals previously tested. Two different DARPins constructs were used, and nearly 40 crystals of complexes with tubulin, grown in slightly different crystallization conditions were tested. Though they did not display better diffraction patterns than the previously tested crystals, we collected 4 datasets, the statistics of which are summarized below after processing using XDS.

P222 crystals	Cell (a, b, c) (Å)	Resolution (Å)	Completeness (%)	multiplicity	I/sig(i)	Rmeas (%)
Crystal 1	104.5, 118.0, 190.2	4.4	98.9 (96.2)	4.0 (4.1)	4.8 (2.0)	33.4 (68.7)
Crystal 2	104.3, 118.0, 189.1	4.0	99.3 (98.3)	4.9 (4.9)	6.5 (2.1)	31.8 (99.0)
Crystal 3	104.9, 118.2, 197.9	3.9	99.4 (97.8)	4.8 (4.8)	6.2 (2.2)	27.4 (96.2)
Crystal 4	52.4, 118.5, 198.3	3.9	98.6 (94.4)	4.2 (4.3)	7.1 (2.0)	20.7 (83.5)

### 3) Project 3: Tubulin in complex with a centrosomal protein CPAP

During this session we tested new crystals of the complex tubulin- PN23 domain of CPAP. Five crystals were tested, all diffracted about 8-10 Å. We collected one dataset which we processed with XDS. Data quality is clearly marginal.

P4 crystals	Cell (a, b, c) (Å)	Resolution (Å)	Completeness (%)	multiplicity	I/sig(i)	Rmeas (%)
Crystal 1	303 303 695	14	87 (88)	7 (7)	8.7 (5.8)	20 (33)