

## 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.

**Experiment title:**

BAG - LEBS - 2012-1

**Experiment****number:**

MX-1292

<b>Beamline:</b> ID14eh4	<b>Date of experiment:</b> 28/05/2012 from: 9h30 to: 8h00	<b>Date of report:</b> 14/06/2012
<b>Shifts:</b>	<b>Local contact(s):</b> Dr Didier Nurizzo	<i>Received at ESRF:</i>

**Names and affiliations of applicants (\* indicates experimentalists):****M. Ranaivoson\*****B. Gigant\*****Report:****1) Project 1: Tubulin in complex with a tau fragment and stabilized by a stathmin-like domain.**

We tested 20 crystals of tubulin in a complex with a short construct of the Tau protein and further stabilized with a stathmin-like domain protein engineered to bind one tubulin. The diffraction is highly anisotropic. Most crystals diffracted to 4 Ang in the most favorable directions, i.e. at a lower resolution than data collected from a previous synchrotron session. Two crystals diffracting at a slightly higher resolution were collected, they belong to an orthorhombic space group. Data processing for one crystal suggested a resolution of about 4 Ang. They were not considered any longer. Statistics of data processing with XDS and Scala for the other crystal are summarized below:

	Cell (a, b, c)	Resolution	completeness	multiplicity	I/sig(i)	Rpim (%)
Crystal 1	54.1, 94.3, 272.9	3.4 Ang	97 (80)	9.9 (5)	8.2 (1.4)	7.8 (65)

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

The objective of this project is to study the effect of anti-tubulin Designed Ankyrin Repeat Proteins (DARPins) on the interactions between tubulin heterodimers. 25 Crystals from two distinct crystallization conditions were tested during this session. The first condition gave crystals that did not diffract. Many crystals from the second condition displayed low quality diffraction patterns (low resolution, high mosaicity) and could not be properly processed with XDS. Eventually two datasets of relatively good quality were processed in two distinct space groups (primitive orthorhombic: crystal 1 and centered monoclinic: crystal 2) and are considered further. Statistics after scaling with Scala are summarized below:

	Cell (a, b, c) (Å)	Resolution (Å)	Completeness (%)	multiplicity	I/sig(i)	Rpim (%)
Crystal 1	104.2, 117.7, 191.6	3.5 Ang	99.6 (98.0)	12.0 (11.8)	9.7 (3.0)	7.2 (25.5)
Crystal 2	230.0, 52.0, 117.6 (β=115.2°)	2.5 Ang	99.2 (95.1)	4.1 (4.1)	13.2 (1.9)	5.0 (40.5)