EUROPEAN **S**YNCHROTRON **R**ADIATION **F**ACILITY

INSTALLATION EUROPEENNE DE RAYONNEMENT SYNCHROTRON

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.

Deadlines for submission of Experimental Reports

- 1st March for experiments carried out up until June of the previous year;
- 1st September for experiments carried out up until January of the same year.

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.

ESRF	**Experiment title:** Beta2-microglobulin HypF N-terminal domain. (Space grown crystals)	**Experiment number**: LS2183
Beamline: ID14-4	**Date of experiment**: from: 19/09/02 to: 19/09/02	**Date of report**: 26/09/02
Shifts: 1	**Local contact(s)**: Steffi Artz	*Received at ESRF:*

Names and affiliations of applicants (* indicates experimentalists):

Camillo Rosano * - National Institute for Cancer Research (IST), L. R. Benzi 10 16132 Genova - Italy

Simone Zuccotti * - G. Gaslini Paediatric Institute and Advanced Biotechnology Center (CBA) – L. R. Benzi 10 16132 Genova - Italy

Report:

Four datasets have been successfully collected on ID14-4 during this shift. The first one, collected on a human beta2 microglobulin protein crystal, has not been reduced and scaled due to the radiation damage suffered by the crystal. A second human beta2 microglobulin protein crystal has been mounted and data collected up to a maximum resolution of 2.8 Å using a wavelength of 0.926977 Å. Data have been reduced and scaled; crystals belong to the C2221 space group with unit cell parameters a ~ 105 Å, b ~ 150, c ~ 93 $\alpha=\beta=\gamma=90°$. Dataset completeness was 99.8% data redundancy ~ 13 R_{merge} ~ 8.0 %. A solution search with Molecular Replacement is in progress.

The last two datasets have been collected on the E.coli hydrogenase maturation protein HypF “Acylphosphatase-like” N-terminal domain (HypF-ACP). The third dataset has been collected on crystal grown on earth while the fourth on crystal grown on board the International Space Station. Both crystals belong to the R32 space group and display unit cell constants of $a=b$ ~ 58 Å c ~ 156 Å, $\alpha=\beta=90°$, $\gamma=120°$. In the last case diffraction data were collected up to 1.1 Å resolution.