EUROPEAN SYNCHROTRON RADIATION FACILITY

INSTALLATION EUROPEENNE DE RAYONNEMENT SYNCHROTRON

ESRF

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 via the User Portal:

https://wwws.esrf.fr/misapps/SMISWebClient/protected/welcome.do

Reports supporting requests for additional beam time

Reports can 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.

	Experiment title: Russian grant: Connection and interplay of the structural and magnetic properties of the noncentrosymmetric crystals of B20-type synthesized under high Pressure	**Experiment number**: HC2598
Beamline: ID11 BM01A ID11 ID11 BM01A	**Date of experiment**: from: 22.11.2015 to: 23.11.2015 from: 01.12.2015 to: 02.12.2015 from: 01.12.2015 to: 02.12.2015 from: 08.12.2015 to: 08.12.2015 from: 14.12.2015 to: 15.12.2015	**Date of report**: 10.06.2016
Shifts:	**Local contact(s)**: DIADKIN Vadim, CHERNYSHOV Dmitry	*Received at ESRF:*

Names and affiliations of applicants (* indicates experimentalists):

DIADKIN Vadim, CHERNYSHOV Dmitry, VALKOVSKIY Gleb, IASHINA Ekaterina, KUCHUGURA Mariia, KORSHUNOV Artem, ZVJAGINTCEV Oleg, DUBITSKIY Ilya, PODCHEZERTCEV Stanislav, BYKOV Alexei, ALTYNBAEV Evgeniy

Report:

The Russian Grant proposal was granted a beamtime through Management Contingency. All the allocated beamtime was fruitfully utilized by Russian users thereby the

main goal of the Management Contingency beamtime at promoting scientific use of the ESRF by Russia was achived. The original scientific report (written in Russian) was accepted by the Russian Ministry.

Briefly, it was demonstrated that absolute structure of MnSi and FeSi can be determined even for huge crystals (~ 4000 × 4000 ×100 mkm) by means of high energy synchrotron radiation (wavelength 0.158 Å). A comparison with the data collected at BM01A (the wavelength 0.68 Å) for the same crystal shows the correctness of the absolute structure measured at the higher energy. The crystallograpihic chirality determined for the samples grown in the same syntering conditions coincides. Analysing the statistical distribution of the chirality measure, i.e. the distribution of Parsons quotients, shows that the chirality is the same over the sample area. As a rule, the sample chirality inherits the seed chirality. Although, there finds out some exeptions for FeSi samples.