**FuseNet application**

**for mini workshop of V.N.Karazin Kharkiv National University team at**

**Golem facility of Czech Technical University in Prague**

**Introduction**

The GOLEM tokamak at Czech Technical University of one of small-size fusion devices used for solving a large amount of plasma problems including education in the field.

Plasma Physics laboratories of V.N.Karazin Kharkiv National University (KhNU) were almost completely destroyed by russian bombardments. At least, all the education at KhNU is carried out on-line. There is no possibility to provide practical exercises in Kharkiv.

KhNU kindly applies to FuseNet with proposal to support arrangement of miniworkshop at GOLEM for bachelor students in plasma physics which is discussed preliminary with colleagues from Czech Technical University in Prague.

Karazin KhNU is one of the oldest universities in Ukraine. Educational and School of Physics and Technology of KhNU was established more than sixty years ago to provide education for Soviet nuclear science and industry. The main directions of education at the School are as follows: nuclear physics, plasma physics, physical material science and medical physics. The leading scientists of National Science Center “Kharkiv Institute of Physics and Technology” and other Kharkiv research centers carry out teaching at this School.

The curriculum in plasma physics contains the number of subjects in this field, in particular:

* Fundamentals of Plasma Physics;
* Plasma Instabilities;
* Elementary Processes in Plasma, and Plasma Chemistry;
* Plasma Diagnostics and Modern Plasma Technologies;
* Plasma-Surface Interaction…

These courses form the foundations for plasma physics fundamental education.

The team for suggested mini workshop at the GOLEM tokamak for Fusion Education consists of this year bachelors of the School. Our suggested team consists of five students with associate professor Kononenko S. as supervisor. We suggest five day (one week) duration of the miniworkshop at GOLEM. The arrival and departure days should be added to five working days.

**Suggested schedule**

1. Arrival in Prague and accommodation in the University dormitory or a hotel (on Sunday).

2. Work according to the plan

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| --- | --- | --- | --- |
|  | Morning bloc | Lunch break | (Afternoon bloc) |
|  | Introduction to the tokamak GOLEM. |  | Tokamak GOLEM operation,  diagnostics, data processing and analysis. Welcome party. |
|  | Tasks of day for all: **Electron energy confinement time measurement.** Introduction & Measurement |  | Measurement, data processing and analysis. Preparation of the reports. |
|  | Tasks of day: group A: **Electrostatic probes;** group B**: Runaway electrons in tokamaks.** Introduction & Measurement |  | Measurement, data processing and analysis. Preparation of the reports. |
|  | Additional measurements. Data analysis. Preparation of the reports. |  | Data analysis. Preparation of the reports. Farewell party. |
|  | Presentation of reports. |  | Summing up the results of the workshop. Parting |

3. Departure from Prague.

**Student team**

1. Ibrahim Raed;
2. Nastya Barysheva;
3. Yasmina Siddiki;
4. Renata Osipova;
5. Amalia Shakhnazarian.

Supervisor Sergiy Kononenko

\*Estimated budget file is in Appendix 1