



VINČA Institute of Nuclear Sciences,
Belgrade, Serbia
participant summary

E-JADE MEETING 28/02/18

I. Bozovic Jelisavcic, scientific contact for the VINCA Belgrade

TASKS

- **WP3 - Task 3.5 Detector-related R&D and physics studies for the ILC**
- **Title_A: Higgs physics studies at ILC**
- **Title_B: Software integration of the very forward detectors in the common detector description for ILC**
- **Everything in cooperation with the Tohoku University (H. Yamamoto).**

PLAN OF REALIZATION

- **1st out of 5 person-months realized (ER) with the Tohoku University – in September 2017 immediately in after the E-JADE funding was received; REPORT SUBMITTED**
- **2nd month (ER) planned for February 2018, Tohoku University, ongoing realization (4/2 – 6/3). All task A.**
- **Left: 3 months to be realized until the end of the year.**
- **Realizable:**
 - **One short term visit combined with ICHEP18 in July. Funding provided**
 - **1 month x 2 students (working on the task B) visit in autumn. 50% of funding provided **New tranche of funding needed from the project.****

DELIVERABLES (Task A)

PLANNED:

Scientific paper published in a leading journal on Higgs physics at ILC. Internal notes.

CURRENT:

In preparation:

Scientific paper to be published in a leading journal:

1. *H* → *WW* decay at 500 GeV ILC, in preparation with J. Tian (KEK)
2. *Charged Higgs production at 1 TeV ILC*, in preparation with C. Drews (Dresden/Tohoku)

Done:

1. Seminar at the Tohoku University

Invited seminar: Mila Pandurović, "*Higgs physics at linear colliders*"

Lecturer: Mila Pandurović (Vinča Institute of Nuclear Science, Serbia)

Date: Thu, September 21, 2017, <http://www.sci.tohoku.ac.jp/news/20170907-9282.html>

2. Contribution the conference:

H → *WW* fully hadronic decay at 250 GeV ILC, ILD meeting, Ichinoseki, February 2018.

DELIVERABLES (Task B)

PLANNED:

DD4HEP software based description of the instrumented forward region at ILD.

Since the forward detectors comprise several sub-detectors (LCAL, BCAL, LHCAL, pair-monitor), this work is to be included in a comprehensive software provided by the FCAL Collaboration.

CURRENT:

- Two new students started to work on software implementation of the pair monitor design.
- The aim of the study is to quantify the added value of this detector for instrumentation of the very forward region at ILC.
- First results expected to be presented at the FCAL Workshop in Cracow, Poland, 10-11 May 2018.