



EDMS NO.
1767975

REV.
1.0

VALIDITY
VALID

REFERENCE : NOT REQUIRED

HL-LHC Resources request

Date: 2017-02-06

Project/Activity: WP10

Title Position/Task: Beam-machine interaction calculations for the experimental insertions.

Description Project:

In the context of the HL-LHC project, extended energy deposition calculations are regularly required to assist the machine design evolution by the detailed assessment of the impact of the different kinds of losses on the operational conditions and lifetime of the various beamline elements.

Task:

You will join the FLUKA team to:

- Maintain and develop the HL-LHC FLUKA models of the four experimental insertions, integrating the new elements as being designed and implementing the relevant optics configurations;
- Follow up the power and dose evaluation from the TAXS to the Dispersion Suppressor for both IR1 and IR5, as a function of the TCL settings;
- Analyze accidental loss scenarios as defined by WP5;
- Quantify the radiation profile for ion luminosity;
- Study the implications of the further LHCb luminosity upgrade.

Profile: Post-Doc physicist with a solid knowledge of radiation-matter interaction

Experience:

Robust experience in Monte Carlo simulations of particle showers

Specific details: Familiarity with the FLUKA code

Requester: EN-STI

Starting date: October – November 2017