

# **2nd EuCARD2 ColMat-HDED annual meeting**

**Thursday 04 December 2014 - Friday 05 December 2014**

**GSI, Darmstadt**

## **Scientific Programme**

The **first day** of the meeting is dedicated to present and discuss progress attained so far by all partners, with particular attention to the vast campaigns of irradiation tests and mechanical characterisation of materials for collimators.

<u>Outcome of the meeting should be a workplan for future activities and for meeting our next deadline M24 milestone (MS70 Present results on material damage from irradiation).</u>

<u>Define contribution of partners to ongoing beam-test programme at CERN</u>

The **second day** of the meeting aims at laying a roadmap to address the following questions on DPA (Displacement Per Atom):

Confirm that different methods used to calculate DPA are consistent.

Would they give the same or similar results for the same damage?

Given a certain beam/energy/flux/fluency do we obtain a unique value?

Confirm that DPA is a valid and comprehensive figure of merit for damage. If not what should we add?

Could we obtain from experimental data curves for the meaningful parameters (thermal and electrical conductivity, mechanical properties ... ) as a function of DPA?

How does radiation damage depend on irradiation temperature and collimator working temperature?

Do all Graphite grades behave similarly with respect to radiation damage?

<u>How can we extrapolate or scale from measurements results to different (LHC) beam conditions?</u>

<u>How can we mitigate radiation damage?</u>

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<u>Outcome of the meeting should be a consensus on how calculate DPA and a planning for future studies and extrapolations.</u>