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Deliverable D6.3 - GDS Topical Meeting

“GDS for high-intensity and heavy-ion beams”

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EXECUTIVE SUMMARY

This document reports on the second topical meeting of the GDS (Gas-filled Detectors and Systems) Networking Activity of the ENSAR2 project. Deliverable D6.3 was to organise a topical meeting on the use of GDS with high-intensity and heavy-ion beams (Month 24). In this report we report on the successful completion of this deliverable.

INTRODUCTION

The aim of the GDS Networking Activity is to establish and coordinate a large group of research collaborations that are in the process of developing new capabilities with gas-filled, active-target detection systems for application in the field of nuclear physics. The GDS network will exchange information through various media and scientific events between physicists and engineers already working on these projects across Europe. It will assist and promote collaborations and personnel working on similar projects and will encourage the support and training of highly qualified personnel in this rapidly evolving field.

TOPICAL MEETING

As part of the GDS networking activity, we have organised the second of four annual topical meetings. The second topical meeting was held from January 17 to January 19, 2018 at the University of Santiago de Compostela in Spain. The website for the meeting is available at <https://indico.in2p3.fr/event/16443/>.

The meeting was attended by a total of 59 participants from 12 different countries. The meeting programme consisted of short presentations from experts on active-targets detectors, time-projection chambers, micropattern gaseous detectors for nuclear and particle physics, and data analysis. **Slides of 35 presentations are available on the meeting website** and cover the following topics:

- Physics with gas-filled detections systems
- Active-target and time-projection chambers: ongoing and forthcoming projects
- Experiments with high-intensity and heavy-ion beams
- Gas properties for high-intensity and heavy-ion beams
- Ancillary detectors for high-intensity and heavy-beams
- Simulation for gas-filled detection systems

All speakers tried to focus their talks on the main themes of the workshop, that is either the use of heavy-ion and/or high-intensity beams from different points of view:

- 1) Talks about the need for active targets in physics research with heavy or intense ion beams.
- 2) Talks about technical solutions that were developed to cope with this problematic.
- 3) Talks about the software solutions for experiments that use heavy-ion/intense beams.

All of these presentations triggered several discussions about the overlap and complementarity in Europe of many projects in nuclear physics and in particle physics. The need to coordinate such developments and to share the efforts emerged.

CONCLUSION

The second of four annual meetings of the GDS collaboration was held at University of Santiago de Compostela (Spain) from January 17 to January 19, 2018. This topical meeting constitutes deliverable D6.3 of the ENSAR2 project and is the third deliverable of the GDS networking activity. The next GDS topical meeting D6.4 is presently being organised and will be held at the Institut de Physique Nucléaire d'Orsay (France).