**Dear ECFA national contacts**

**We would like to receive your answers by 8/03/2021**

**Questions on national strengths (equal to all TFs):**

1. Areas of particular national strength or of minimal significant activity within the topics covered by the Task Force 3 Solid State Detectors

* *the development of different silicon and diamond sensor technologies*
* *design and construction of vertex and tracking detectors*
* *radiation hardness studies and testing*

1. Current national plans for strategic investment relevant to this Task Force area
   * *Long term Experimental particle physics programme is ongoing where funds are available for R&D in LHC phase-II upgrades and also beyond. The focus of the research is linked to ECFA roadmap and will follow closely the outcome of the latter. The R&D is performed in cooperation with numerous external research groups.*
   * *The calls for small/medium infrastructure are regularly opened and the matching funds required from the projects/programs are available. The main priorities here are testing equipment related to semiconductor sensors technologies. There are regular calls for research projects available to us.*
   * *In terms of silicon detectors, the programme focuses mainly on hybrid and monolithic pixel detectors as well as on technologies required for the construction of detector modules (development of flexible circuities).*
   * *We intensively work on characterization also on simulations of sensor operations with emphasis on the radiation damage. This work is interlinked with the RD50 collaboration.*
2. Significant opportunities for seeking future resources, particularly (though not only) through European schemes (also in synergy with other science areas) that should be considered when highlighting R&D priorities

* *We rely on national core funding plus support by and synergies with European projects like AIDAinnova.*
* *We have a good collaboration with medical physics and astrophysics groups where the resources are available when benefical for all parties.*

**Specific questions related to TF3 topics.**

For a given topic (feel free to add a topic if you consider it missing),

Let us know the type of R&D you think is particularly relevant, and how you rate it in terms of priority with respect to the other R&Ds in the table.

The “comments” space is available to provide more insights

on the specific topic. For example the needed level (0.1% of radiation length, 1000 m^2), what technologies are considered more relevant and/or if there are ongoing/planned national R&D efforts (additional details not covered in questions 1) or 2) )

|  |  |  |  |
| --- | --- | --- | --- |
| **Topic\R&D priority** | **Low** | **Medium** | **High** |
| **Low material budget** | X | X |  |
| Comments |  | | |
| **Spatial resolution** |  |  | X |
| Comments |  | | |
| **Temporal resolution** |  | X | X |
| Comments |  | | |
| **Large area** |  | X | X |
| Comments |  | | |
| **Occupancy** | X |  | X |
| Comments |  | | |
| **Radiation resistance** | X |  | X |
| Comments |  | | |

**Indicate broad national interests and outline the needs**

|  |  |  |
| --- | --- | --- |
|  | **Facility**  **(collider, fixed-target, non-accelerator)** | **Type of interaction/**  **experiments** |
|  | FCC-hh | , hh |
| Comments | HL-LHC (ATLAS ITk and HGTD also for LS4)  Based on silicon detectors , BCM’ based on diamond detector | |
|  |  | |
| Comments |  | |
|  |  | |
| Comments |  | |
|  |  | |
| Comments |  | |