Detector EOIs

Introduction

CERN, January 16, 2025

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Today: Satellite Meeting

Technicalities

Agenda:

- we will follow the slide deck as much as possible
- coffee break 1030-1100

Presentation mode:

- we share the slide deck from the meeting room
- no switching back and forth to remote sharing
  - remote presenters tell us to advance slides
- slide deck is pdf made last night

Presenters:

- in-person, zoom, proxy, proxy on zoom, convenors

Allocated times (including switch-over)

- sub-detector default: 3'
  - larger or merged: up to 5’
- concepts 6'

Number of presentations:

- concepts: 3
- sub-detectors:

Next Steps: Write EOIs

Content

Joining activities and merging EOIs is an on-going process

- we may initiate a few more matches today
- can of course also happen later, at any time
- or, vice versa, joint activities can and probably will submit separate funding requests

Content, on 2-4 pages (3-6 for concepts):

- The scope of planned activties for the next 3-5 years
- The Partners (Institutes) and their expertise
- The names of one or two contact persons
- The connection with technological activities in the DRD framework
- The engineering and simulation connections with concept groups
- References to relevant more detailed documentation of the technologies

Important: no duplication
sub-detectors remain embedded in DRDs and connected to concepts

Next Steps: Submit EOIs

The Calls

Deadline Jan 31 for submission of EOIs to **PED** (us)

- for editorial feedback and iteration
- and inclusion in combined FCC submission summary
  - we will write an executive summary or cover letter
    - to be circulated with all submitters
  - attach EoIs in pdf format to common FCC submission
    - no template
- EOI submitters are free to chose
  - independent submission to ESU (we'd appreciate to remain posted)
  - being attached to FCC common submission (default, let us know otherwise)
  - both (let us know)

Editorial team:
Srini Rajagopalan,
Guy Wilkinson,
with MD, MAP, FS

Deadline Mar 31 for submission to **ESU**

- submission of executive summary and attached EoIs (optional)
- submission of EOIs (independent or in parallel)

Back-up

Grouped EoIs

https://docs.google.com/spreadsheets/d/1iHTDN1TJpfk_sDrYm7HrY8zuQxfDZj4MtFooziXq5rQ/edit?usp=sharing

EOI Grouping

File Edit View Insert Format Data Tools Extensions Help

A1 EOI Abstract ID

	A	B	C	D	E	F	G
17			SiPM-on-Tile HCAL				
18	**D0032**	Calorimeter	**Development of the SiPM-on-Tile Analog Hadron Calorimeter (AHCAL) technology: detector geometry, readout and trigger concept and electronics, mechanical and thermal integration, photon sensors, scintillators, simulation and reconstruction.**	Frank Simon	KIT	frank.simon@kit.edu	DESY, U Hamburg, U Heidelberg, KIT, U Mainz, UT Arlington, NIU, FZU Prague
19			SiW ECAL				
20	**D0039**	Calorimeter	**SiW-ECAL : a silicon-tungsten highly granular electromagnetic calorimeter suitable for particle flow-based detector concepts at a Higgs/ElectroWeak/Top factory.**	Vincent Boudry	LLR – LLR, CNRS, École polytechnique, Insti	Vincent.Boudry@in2p3.fr	IJCLab (Orsay), LLR (Palaiseau), LPNHE (Paris), Omega (Palaiseau), DMLab, IFIC (Valencia), CERN, U. Tokyo, KEK, iThemba labs (Cape Town)
21	**D0074**	Calorimeter	**Building on the experience / contribution to CMS and CMS Upgrades - and in particular HGCAL and design studies, high throughput digital electronics and algorithms. Most of the potential effort is currently focused on completing the latter.**	Anne-Marie Magnan	Imperial College London	a.magnan@imperial.ac.uk	TBD
22			MAPS ECAL				
23	**D0059**	Calorimeter	**Development of MAPs for Si-tungsten calorimeter.**	Alexander Paramonov	Argonne National Laboratory	aparamonov@anl.gov	ANL
24			Tile fibre HCAL				
25	**D0086**	Calorimeter	**The ALLEGRO HCAL is a concept of a scintillating tile hadronic calorimeter for the central region, designed to provide a high-performance, high granularity and cost-effective solution for FCC-ee.**	Henric Wilkens	CERN	Henric.Wilkens@cern.ch	LIP, CERN, ITIM Cluj, IFIC Valencia, Univ. of Be
26			LumiCal				
27		Lumical	**Development of Lumical**	Mogens Dam			
28			Carbon fibre wire chamber				
29	**D0013**	Main Tracker and Envelopes	**Interested and working towards detector concept based on a novel wire chamber concept employing carbon fiber wires for the Outer tracking device of FCC-ee. Open for additional collaborators.**	Andy Jung	Purdue University	andreas.werner.jung@cern.ch	Purdue University
30			Straw-tube tracker				
31	**D0015**	Main Tracker and Envelopes	**Straw-tube tracker design and tracker design optimization**	Oliver Kortner	Max-Planck Institute for Phyics	Oliver.Kortner@cern.ch	University of Michigan, Ann Arbor
32							
33	**D0062**	Main Tracker and Envelopes	**R&D for straw tracker electronics/readout**	Anyes Taffard	UC Irvine	ataffard@uci.edu	UM, MSU, UMass, Harvard, Duke, UT Austin, MPI
34	**D0038**	Main Tracker and Envelopes	**Development of a thin-wall straw tracker for FCC-ee inner tracking system. Combined with the pixel detector and silicon wrapper, it will provide excellent momentum resolution and PID capability over a wide momentum range**	Junjie Zhu	University of Michigan	junjie@umich.edu	MPI, UMass, Harvard, Tufts, MSU, UC Irvine, Duke, UT Austin