AIDA innova

Advancement and Innovation for Detectors at Accelerators

WP7: Gaseous Detectors

Silvia Dalla Tore (INFN-Trieste), Burkhard Schmidt (CERN)

WP7 Session at the 2nd Annual Meeting, April 25, 2023

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Overview

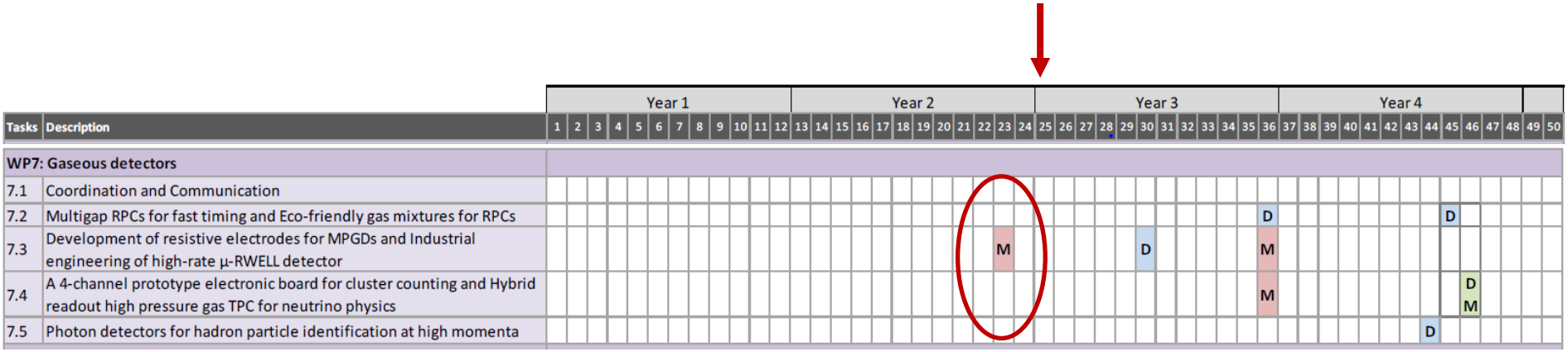
- **Task 7.1: Coordination and Communication** (S. Dalla Torre, BS)
- **Task 7.2: RPC sector** **3 tasks**
  - 7.2.1: Multi-gap RPCs (MRPCs) for fast timing (C. Williams)
  - 7.2.2: Shower development in SDHCAL (Mary-Cruz Fouz)
  - 7.2.3: Eco-friendly gas mixtures for RPCs (B. Mandelli, D. Piccolo)
- **Task 7.3: MPGD sector, Technology and engineering** **2 tasks**
  - 7.3.1: Development of resistive electrodes for MPGDs (P. Verwilligen)
  - 7.3.2: Industrial engineering of high-rate µ-RWELLs (G. Bencivenni)
- **Task 7.4: Large volume gaseous detectors** **2 tasks**
  - 7.4.1: A 4-channel electronic board for cluster counting (F. Grancagnolo)
  - 7.4.2: High pressure gas TPC for neutrino physics (A. Deisting)
- **Task 7.5: PID sector** **1 task**
  - Photon detectors for hadron particle identification at high momenta (S. Dalla Torre)

Partners

		Beneficiaries							Associated Partners				
Tasks	7.1	CERN	INFN-Trieste										
	7.2.1	INFN-Bologna	LIP-Coimbra	Univerity of Clermont-Ferrand	PICOTECH SAS				Tsinghua University	Shenzhen Institute of Advanced Technology	Seoul National University Bundang Hospital	IRIS Co.	Benemérita Universidad Autónoma de Puebla
	7.2.2	CNRS - IP2I	CNRS - LPC	CNRS - OMEGA	CIEMAT								
	7.2.3	CERN-EPDT	INFN-Frascati	INFN-Roma2	INFN-Bologna	INFN-Bari	INFN-Torino	Ghent University					
	7.3.1	INFN-Pavia	INFN-Bari	INFN-Lecce									
	7.3.2	INFN-Frascati	INFN-Bologna	INFN-Ferrara	CERN	ELTOS							
	7.4.1	INFN-Lecce	CAEN										
	7.4.2	RHUL	UOXF	INFN-Bari	USC	CERN	CSIC-IFIC						
	7.5.1	INFN-Trieste	INFN-Bari	INFN-Bologna	Charles University				USTC	INCOM			

- **Strong collaboration with industry (yellow boxes)**
- **Wide and solid links also outside Europe**
- **Bi-lateral agreements with non-European partners have been signed last year**

MILESTONES & DELIVERABLES



Tasks	Description	Year 1												Year 2												Year 3												Year 4													
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7.5	Photon detectors for hadron particle identification at high momenta																																											D							

- The first milestone of WP7 has been successfully achieved!

Milestone Report Task 7.3.1

Production of DLC with ion beam deposition and pulsed laser deposition

A.P. Caricato; A. Valentini; P.Verwilligen

Diamond-Like Carbon (DLC) resistive layers are a key ingredient for increasing the rate capabilities of Micro-Pattern Gaseous Detectors (MPGDs). Their production method and related quality is studied by ion beam deposition and pulsed laser deposition. The current DLC sample size will be scaled up gradually to 10×10 cm^2, their quality is assessed for the production of detector-grade amplification structures.

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AIDAinnova

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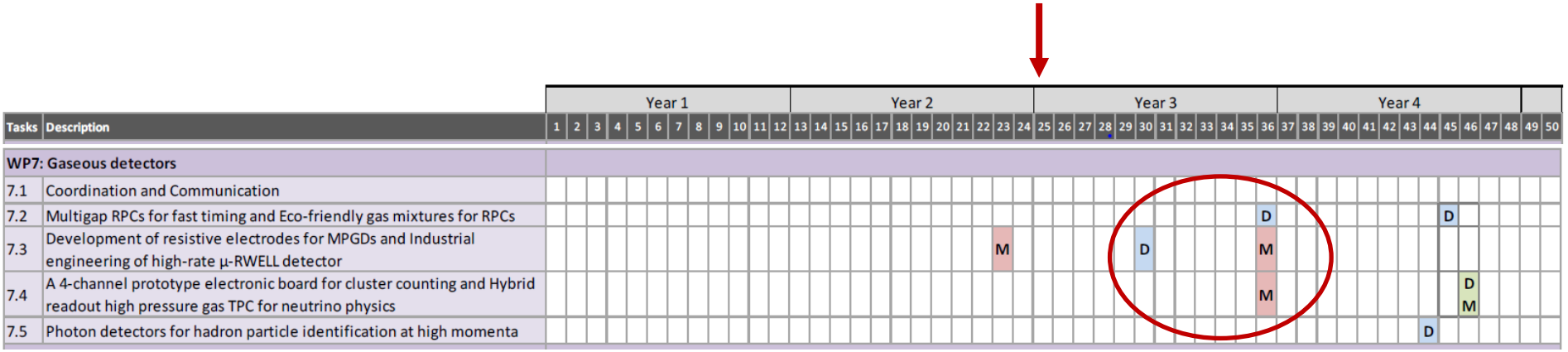
- Report delivered on time in month 23 (February 2023)
- 22 pages – 15 figures – Introduction to various PVD techniques for DLC

MILESTONES & DELIVERABLES



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- We have a couple of Deliverables and Milestones coming up.
- I do hope that the presenters address the plans and progress towards the achievement of these milestones and deliverables.
- **We have allocated 15min for each talk, plus 5min discussion**