

Advanced European Infrastructures for Detectors at Accelerators

WP7 (NA6): Advanced hybrid pixel detectors 4th Annual Meeting

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WP7 Milestones

Milestones	Responsible Group	Month due
MS29 Validation and release of TCAD simulation 🗸	INFN	M16 (AUG 2016)
MS49 Workshop on 3D and planar sensors 🗸	FBK	M24 (APR 2017)
MS51 Workshop on LGAD characterization 🗸	INFN	M24 (APR 2017)
MS50 Technological choice on LGAD sensor thickness 🗸	CSIC	M24 (APR 2017)
MS81 Test beam campaign for 3D and planar sensors	MPG-MPP	M36 (APR 2018)
MS87 Common MPW runs completion	CSIC	M42 (DEC 2018)
MS97 Validation TCAD radiation damage model with data comparison	INFN	M46 SEP 2019)

M42: Completed but the active edge planar production at FBK (lack of SoI wafers). Just started after the needed SOI wafers have been procured.



WP7 Deliverables & Oxford meeting

	Device simulation	
חפעוכפ	characterization	

Deliverable	Responsible Group	Month due
D7.1 Simulation of 3D pixel sensor cells 🗸	INFN	M18 (OCT 2016)
D7.2 Simulation active edge 🗸	CERN	M18 (OCT 2016)
D7.3 LGAD simulation 🗸	INFN	M18 (OCT 2016)
D7.4 TCAD model radiation damage	INFN	M46 SEP 019)
D7.5 Wafer Layout MPW run WP7	CSIC	M30 (NOV 2017)
D7.6 Initial pixel characterization	UNIMAN	M24 (APRIL 2017)
D7.7 Final pixel characterization	MPG-MPP	M46 SEP 019)
D7.8 LGAD characterization	INFN	M46 SEP 019)

- Plenary speaker: Anna Macchiolo
- Open call for contributions (recent update of activities end of February)
- Discussion on future activities on hybrid sensors?

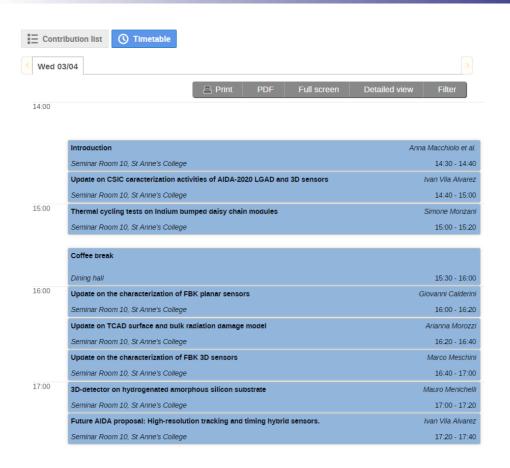


SAP recommendations & Y5 activities

- One recommendation: "Continued excellent coordination with the experiments is strongly encouraged."
 - All recent 3D and LGAD productions are a major part of the sensor RD activities of the pixel and timing detector at ATLAS and CMS.
- Main Y5 activities:
 - Complete planar AE production runs and characterizations.
 - Continue and complete the radiation tolerance assessment of 3D and LGAD productions (Sept 2019)
 - Update the radiation damage models using the new results (Sep 2019)



Today's agenda



- Results on last year (very) intense characterization campaign of FBK 3D and planar pixel sensors at test beams (CERN, DESY, Fermilab)
- Preliminary characterization of CNM thin LGADs
- Status of recently completed CNM 3D run
- TCAD simulations update and indium based hybridization studies.
- start a more structured discussion on the future activities on hybrid detectors for AIDA++