

DRD4 – WP 4.2 – Vacuum Photo-Detectors (VPD)

- **4.2.1: VPD: New material, new coatings, longevity and rate capability study**
 - This concerns the R&D on new materials to produce VPD, new shapes and new coatings and their consequences on their longevity and rate capability
- **4.2.2: VPD-PMT: New photocathode materials, structure and high quantum efficiency VPD**
 - New photocathode materials, new structures and their impact on improving the quantum efficiency for different wavelengths
- **4.2.3: VPD time and spatial resolution performance**
 - Study of VPD timing and spatial performance using appropriate readout electronics and appropriate anode structures

Group	4.2.1	4.2.2	4.2.3	Funding [kEUR]	F	S	P	E	Proposed new WP 4.2.x
Edinburgh	x	x	x						
Istanbul			x						
Nagoya	x		x						
Iowa	x	x	x						x
Erlangen	x		x						
Univ. S.T. China			x						
Trieste			x						
Padova B2	x								
Ferrara	x		x						
IHEP-CAS-FPMT		x	x						x
ARARAT			x						x
Lyon	x	x	x						
Warwick	x		x						
Leicester	x		x						
JSI Ljubljana	x		x						
Tot.	10	4	14	9000-1200	8-20	10-25	6-13	7-14	3

Proposal of new Work Packages (WP4.2.x)

- 3 groups proposed new WPs:
 - ARARAT AANL, Yerevan (Development of sub-10 ps Radio Frequency Photo-Multiplier Tubes)
 - IHEP-CAS-FPMT (Combine the vacuum detector and SiPM and MCP together to be the new type of detector)
 - Iowa (not explicitly specified)

Next steps

- We would like to organize a meeting in the coming days with all those who showed interests in joining WP4.2 to:
 - Discuss a few milestones and deliverables aimed at structuring our activities but also to convince our funding agencies
 - Correctly assess resources and person power (avoid double counting due to incorrect filling of Survey forms)
 - Share responsibilities for these milestones and deliverables
 - Structure the way to work together and the exchange with industrial partners
 - Structure the way to work with the WGs