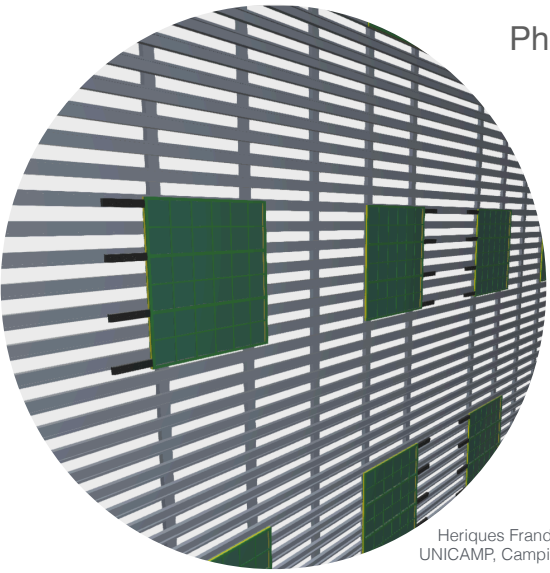
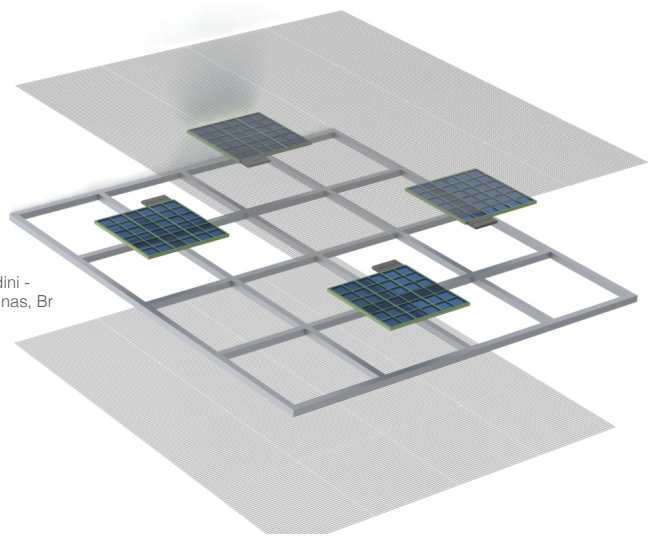


$\sim 4\pi$ PD System design for the VD LAr Volume

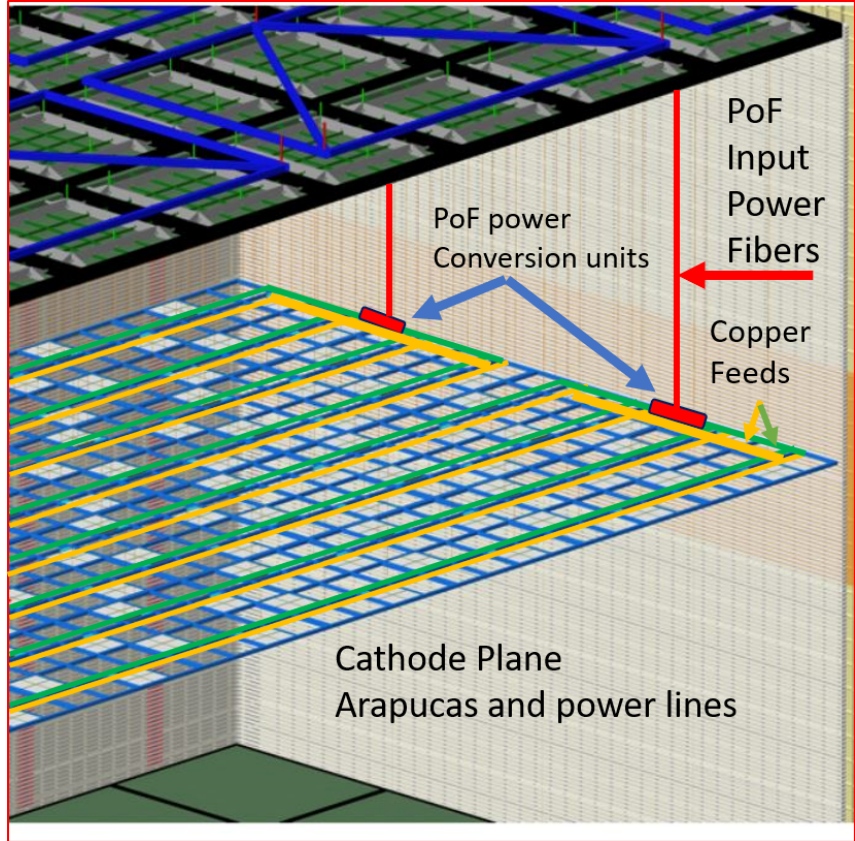


Photon Detectors hanging on Field Cage Walls

Heriques Frandini - UNICAMP, Campinas, Br



Photon Detector into the Cathode frame under conductor mesh (exploded view)



Power Transmission

PoF Input Power Fibers
Copper Feeds

PoF power Conversion units

Cathode Plane Arapucas and power lines

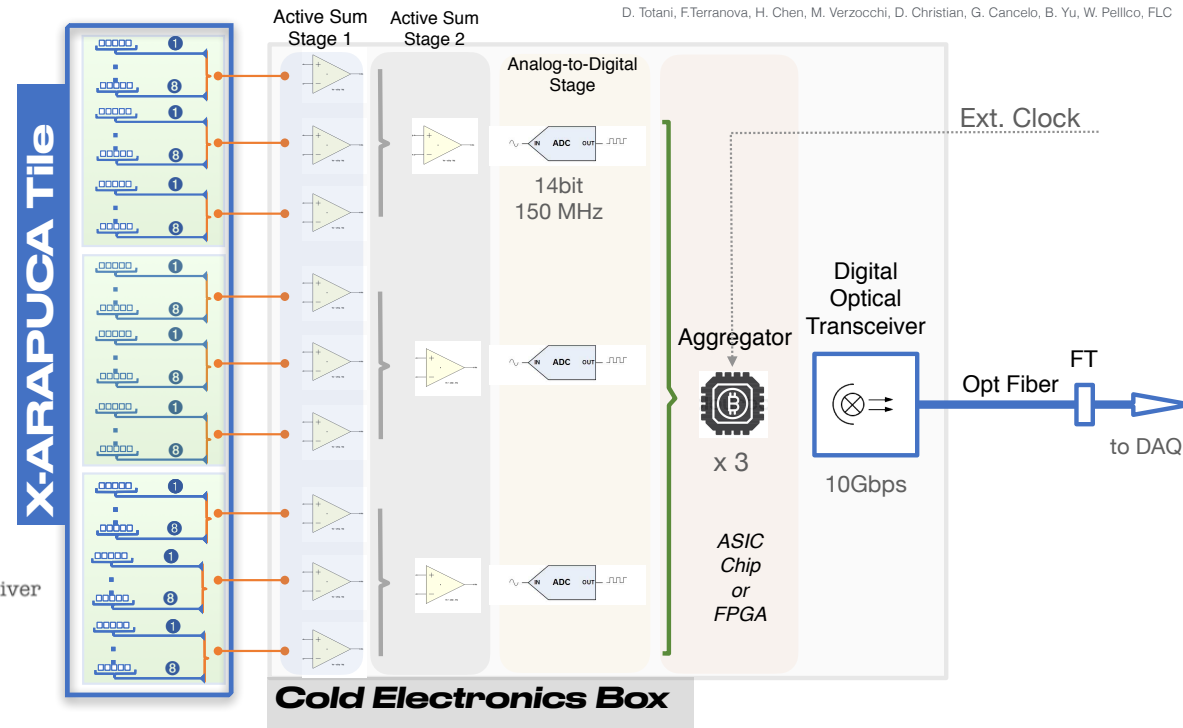
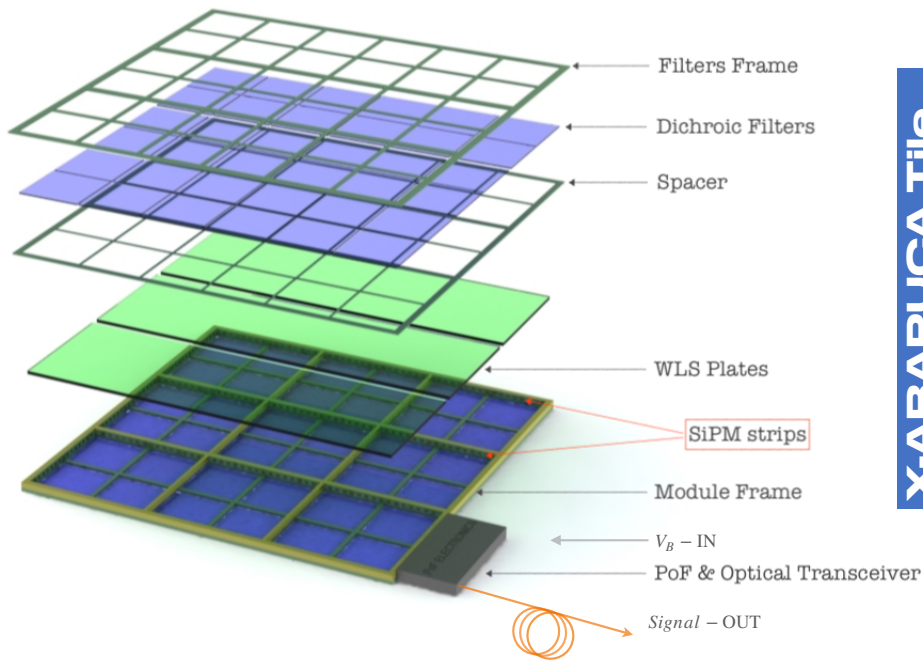


TABLE V. PD basic unit: X-ARAPUCA Tile

	Quantity	Dimensions
Area	1	$630 \times 630 \text{ mm}^2 = 0.4 \text{ m}^2$
Thickness	1	22 mm
Weight	1	$\sim 4.5 \text{ kg}$
Optical Area	2 (two-sided)	$600 \times 600 \text{ mm}^2 = 0.36 \text{ m}^2$
Sectors ("MegaCell")	3	$600 \times 200 \text{ mm}^2 = 0.12 \text{ m}^2$
Dichroic Filters	36×2	$100 \times 100 \text{ mm}^2$
WLS plates	3	$600 \times 200 \text{ mm}^2 = 0.12 \text{ m}^2$
PhotoSensors (SiPM)	360	$6 \times 6 \text{ mm}^2$
Read-out Channels	3	
SiPMs per channel	120	

