

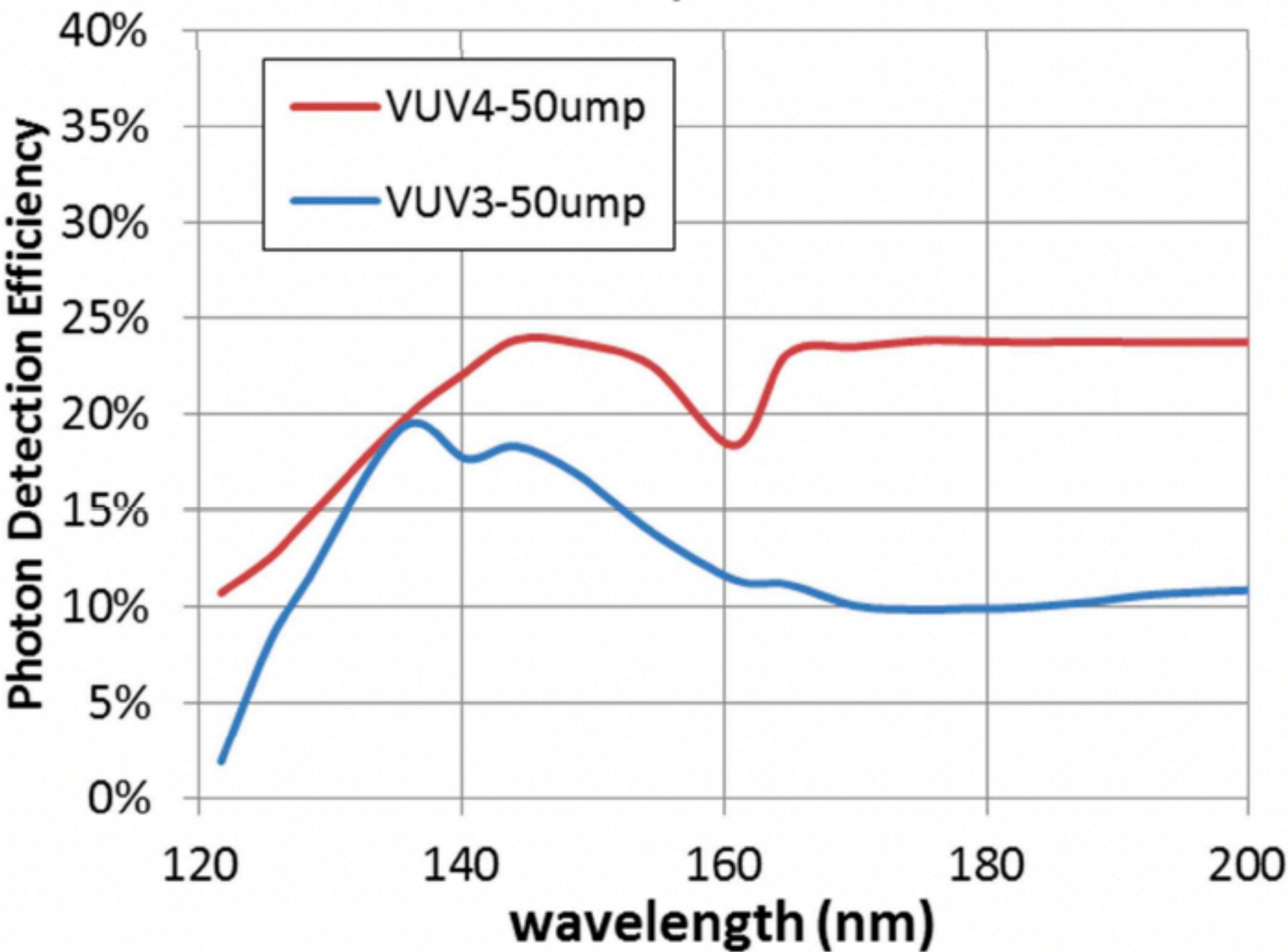
Light detection device

Some preliminary requirements to initiate the discussion

- Suited for reflectivity and transmission tests, and alternative measurements
- Sensitivity to LAr and LXe scintillation light wavelengths ($<128\text{nm}$)
- Area of at least 1inch to avoid alignment issues
- Robust for laboratory tests
- Granularity? (Study the light distribution as a function of the position)
- Ideally complement with measurements at different ranges (visible for example): complement with other device (or the same if possible) with sensitivity to larger wavelengths $>300\text{ nm}$.

Array of SiPMs

PDE measurement data
Vover = 4V, in vacuum



S13370 series are basic VUV-MPPCs with 4th generation (VUV4).

Sensitivity for 128nm (Liq. Ar)	Sensitivity for 178nm (Liq. Xe)	Low RI
✓	✓	

S13370-6050CN 329 euros (1 elemento 6x6mm)

Array de 4x4: 5264 euros

MPPCs **S13360 –3075PE** (3 x 3 mm²)

MPPCs **S13360-6075PE** (6 x 6 mm²)

Examples from arrays that Nadia has in TRITIUM



S13361-3075AE-08 MPPC array, 8x8
1156€ + IVA

S13361-6075AE-08 MPPC array, 4x4
1156€ + IVA

Photomultiplier

28mm dia., Head-on type, Cs-Te photocathode (Effective area : 23 mm dia./Spectral response : 115 to 320 nm)

Figure 1: Typical Spectral Response

Photomultiplier tube

R6836



Calibrated PMT: ~2800 euros

