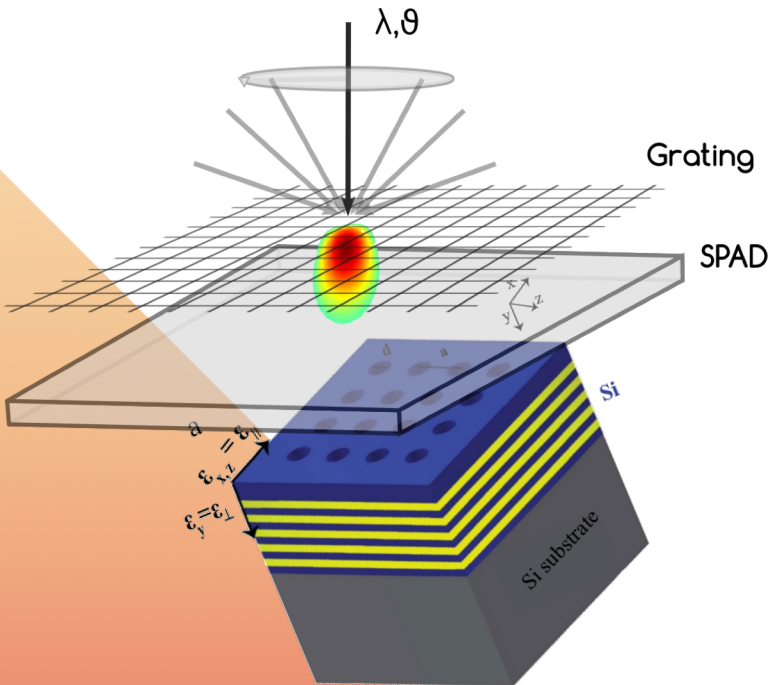# Photoquant

Nano-photonics applied to ultrafast single photon sensors: aims at exploiting the potential of the emerging field of nano-photonics for developing a new generation of highly efficient and ultrafast photo-sensors, with close to 100% PDE, ultra-high cell density, negligible correlated noise and beyond state of the art primary noise.

Current status of progress:

% of deliverables completed so far: 60%

% of budget (100 kEUR) spent so far: 50%

Any remaining uncertainties w.r.t planned deliverables

    ☐   No

        Yes; WP2 activities are delayed (end of the month)

    [X]

Using students (PhD/MSc/BSc) in the project?

    ☐   No

        Yes; Trainee (Fresnel), Researcher (FBK), Project associate (CERN)

    [X]

Any interactions with other funded ATTRACT projects so far?

    ☐   No

    [X]   Yes with PLASiPM (Giovanni Paternoster, FBK), and informal meeting

between our CERN group & FASTIC CEERN and UCB team

λ,ϑ

Grating

SPAD

Si

Si substrate

Photoquant

If your project were to be selected for ATTRACT Phase 2:

How would your technology scale up to become an industrial product/system?
Implementation of the proof of concept of phase 1 in the SiPM production.

With who you would need to partner for this to happen? (No names, just profiles of type of organizations)
Industrial partner and research centres, natural continuation of the current partnership.

Have you already discussed this with KT Group?
No. Planned to do it.

What applications will you demonstrate with value for science, industry and society? (Examples)
SiPM with higher PDE and better temporal response for light detectors used in several applications, such as HEP and medical applications.

Any comments, remarks or observations you would like to make to CERN?
-