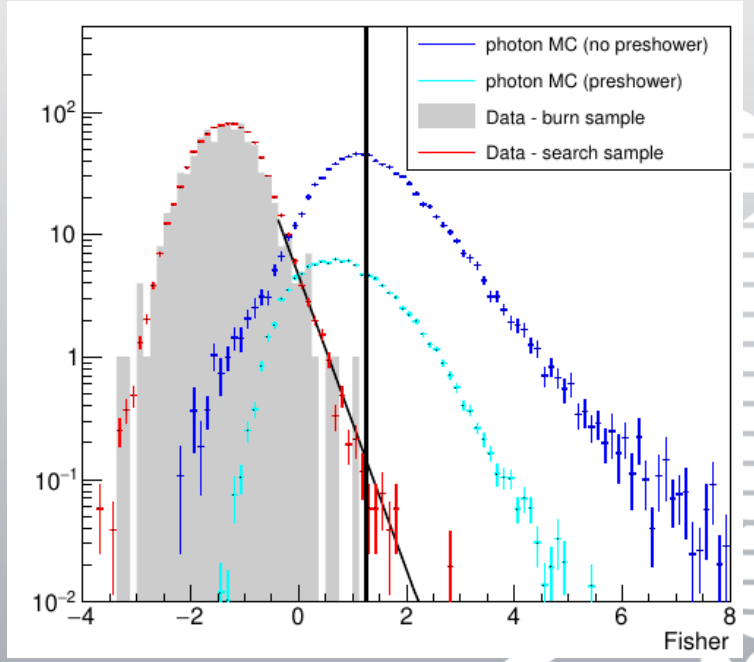
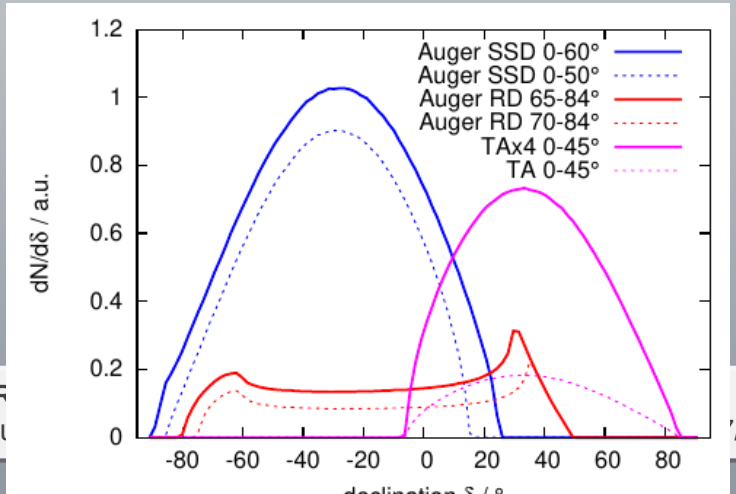
Considerations RD

- Aperture for 60-85 deg small due to effective array size
- Horizontal trap for regular array, longitudinal shrinking with theta, lateral same
  - 2km grid gives directions with no signal except for line in direction of shower
  - irregular grid could reduce lateral holes

Example Photons

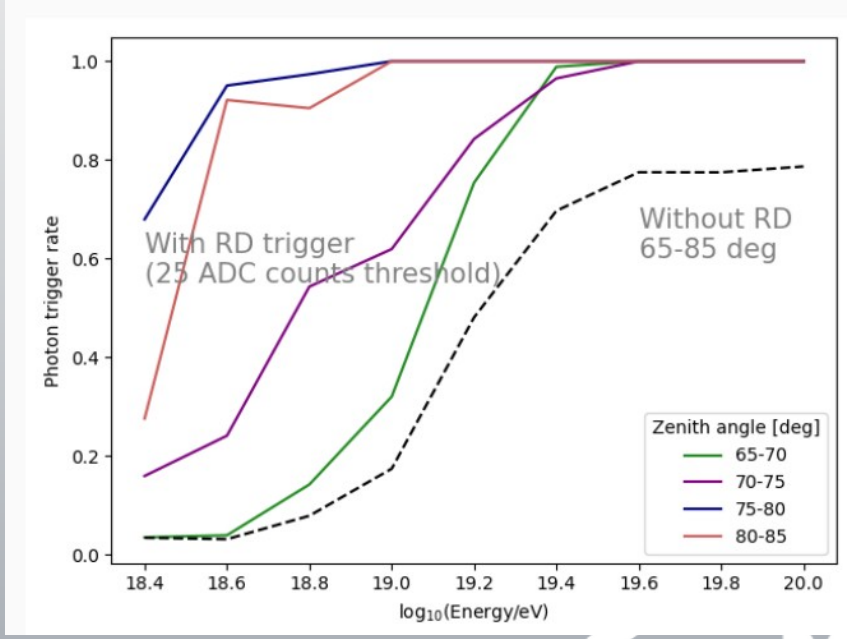
- SD analysis 30-60 deg
- RD 60-85 adds 30% aperture
- But 60-85 adds sky coverage
- In Addition, RD offers much better separation
- Expect in 30-60 deg x2 larger efficiency

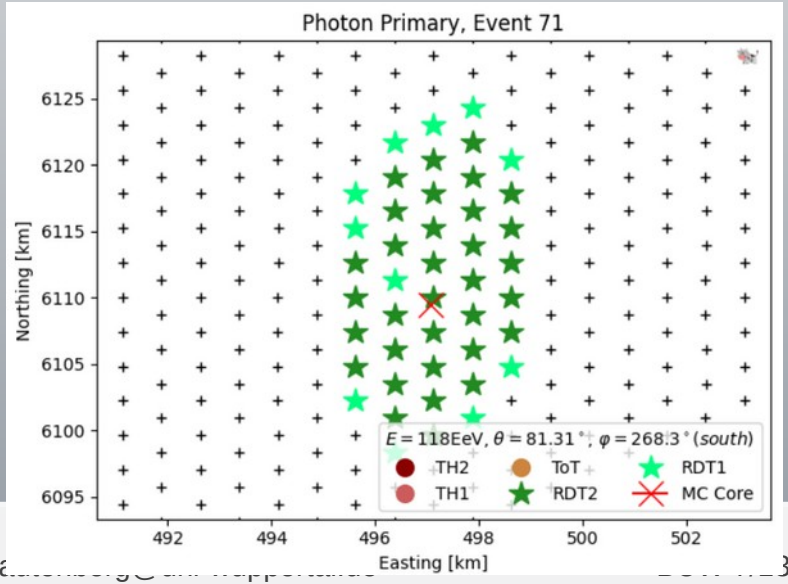




RD trigger

- RD-trigger means EM trigger
- Simple threshold with veto on many bins
- Very effective for RD, but also additional stations for hadrons





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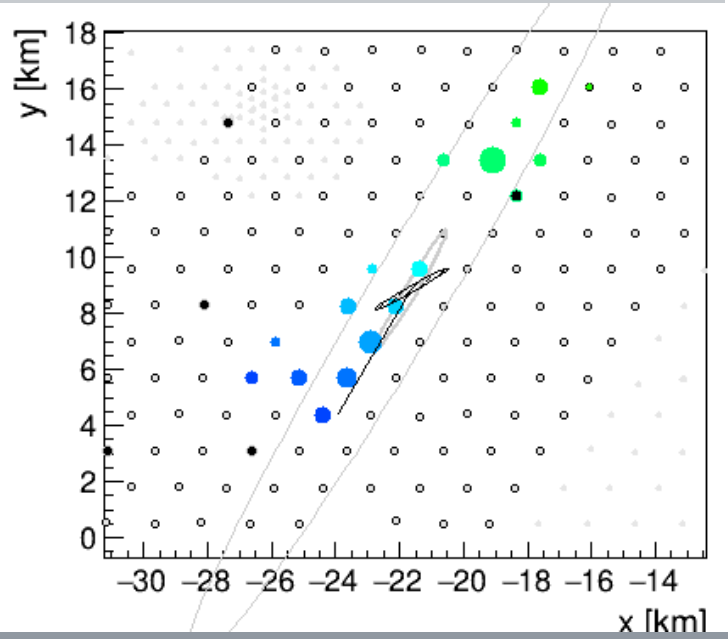

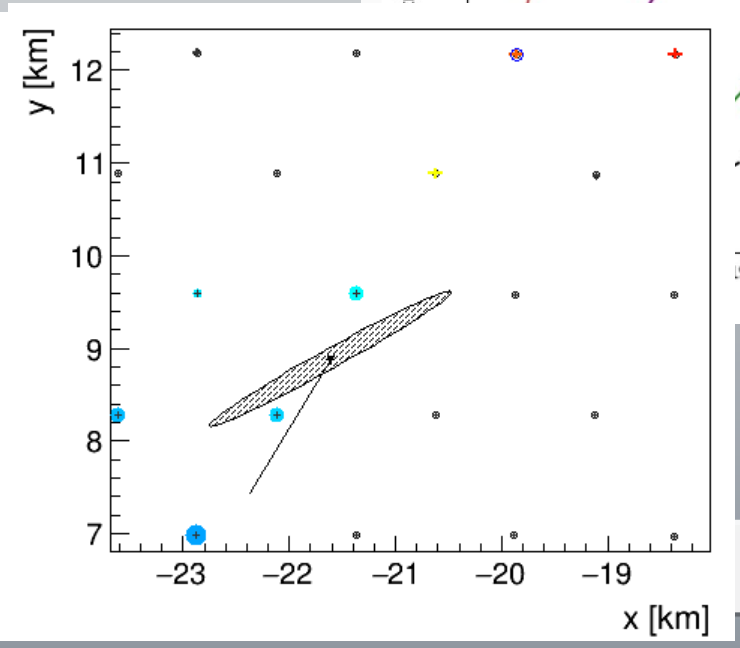

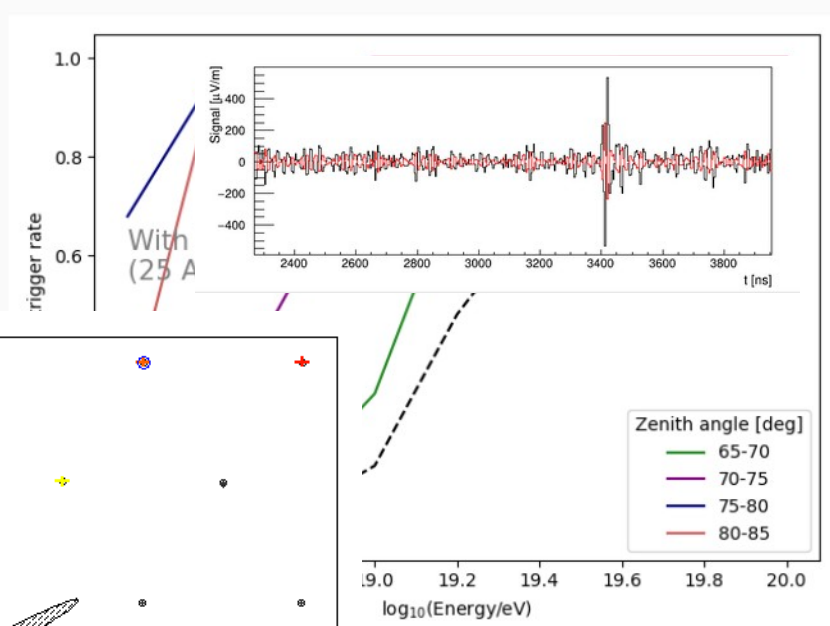

Interference Analysis (Tim)

- Requires ns-synchronisation – might be possible:
  - with future Galileo (Atmospheric corrections)
  - White-rabbit on WLAN
- Sensitivity on Xmax

Antenna Design (Frank)

- Age of precision measurement instead of high sensitivity discovery
  - Wide frequency band
  - easy calibration
  - low ground sensitivity
  - flat sensitivity
  - Small influence from manufacturing or alignment
  - Small sensitivity to environmental and anthroposophic thread