

R4 Status

**Observations of Gamma Ray from
Dark Matter**

Jim Hinton, Max Planck Institute for Nuclear Physics

Hiro Tajima, Nagoya University

R4: Observations of Gamma Ray from Dark Matter

❖ Participating Institutions

- Max Planck Institute for Nuclear Physics, DESY
- INFN Padova
- University of Leicester, University of Liverpool
- Nagoya University, Hiroshima University, Ibaraki University

❖ Research topics

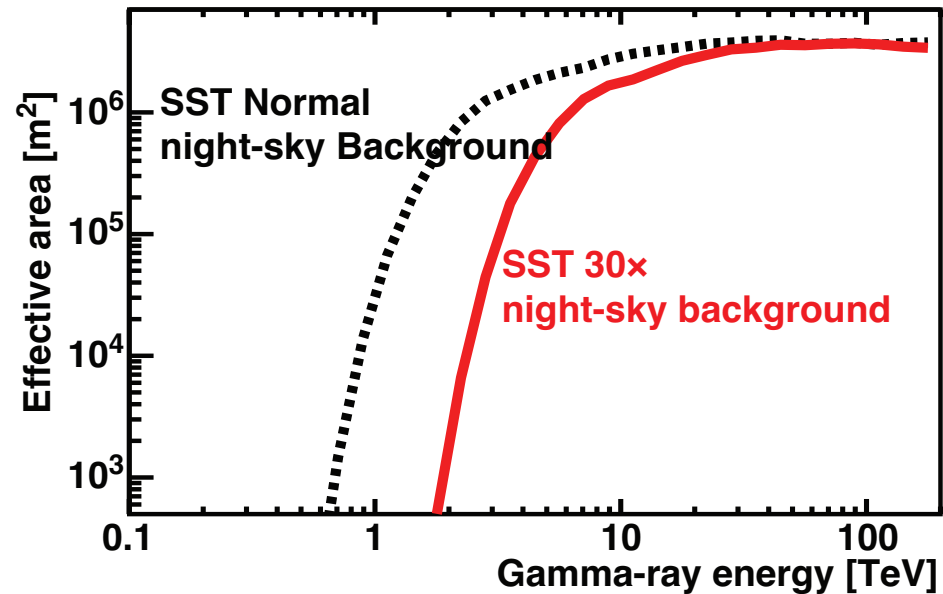
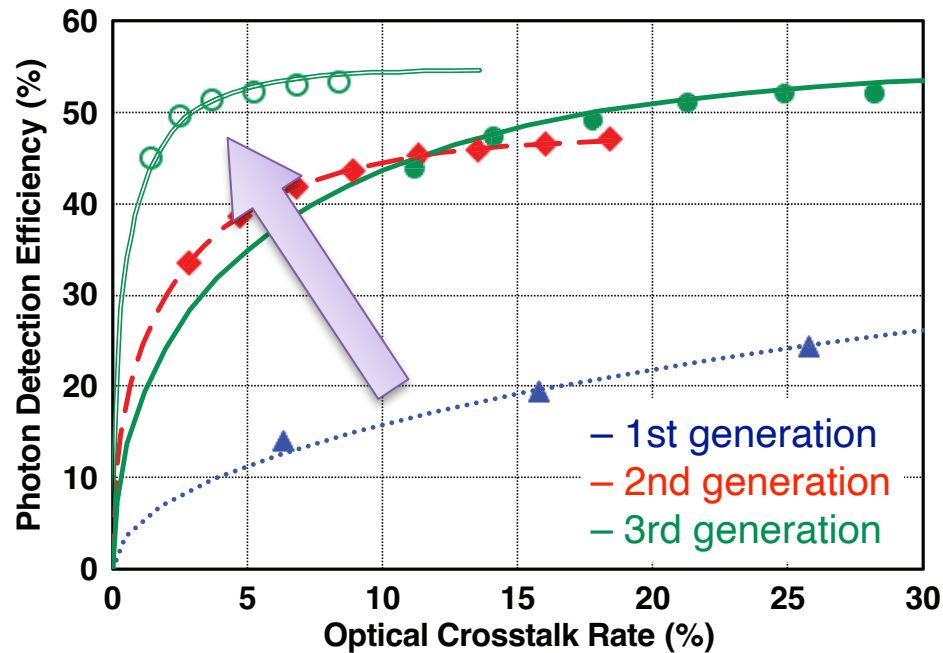
- Dwarf spheroidal galaxies
- Galactic center
- Galaxy clusters
- Line search

❖ Instruments

- Fermi Gamma-ray Space Telescope (Padova, NU, HU)
 - ◉ WIMP mass up to $800 \text{ GeV}/c^2$
- Cherenkov Telescope Array (MPIK, DESY, Padova, UL, NU, HU, IU)
 - ◉ WIMP mass up to a few TeV/c^2

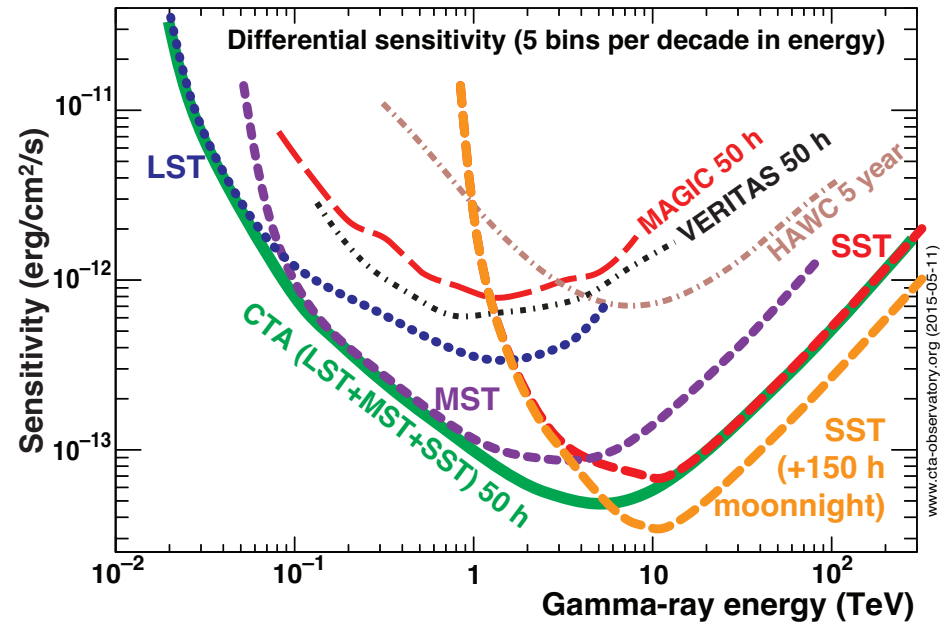
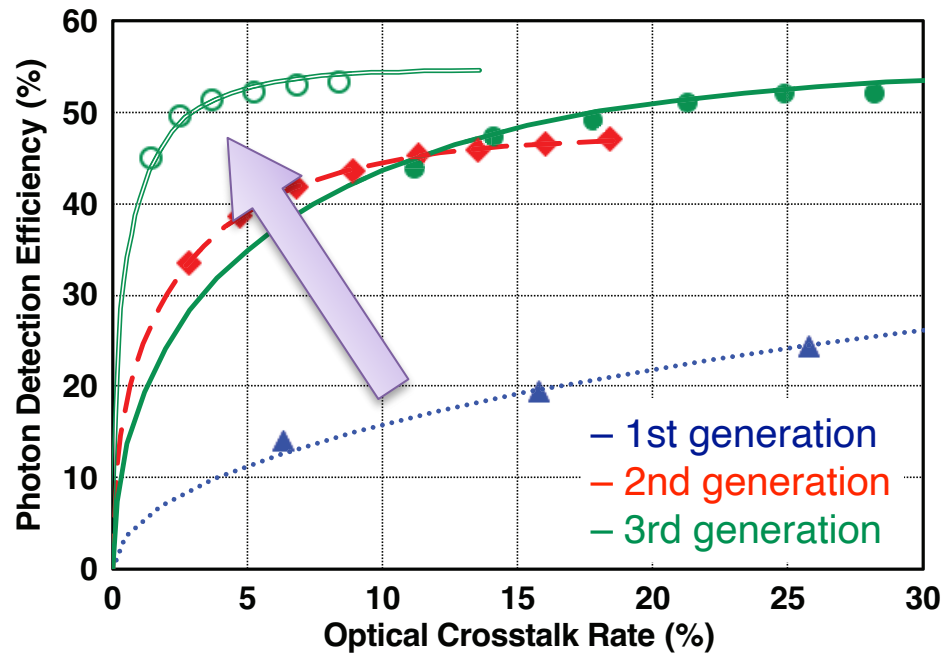
Development of SiPM Camera for CTA

- ❖ Improvement of SiPM performance
 - Suppress optical crosstalk while maintaining photon detection efficiency
- ❖ Improvement of gamma-ray source sensitivity by moon-night observations
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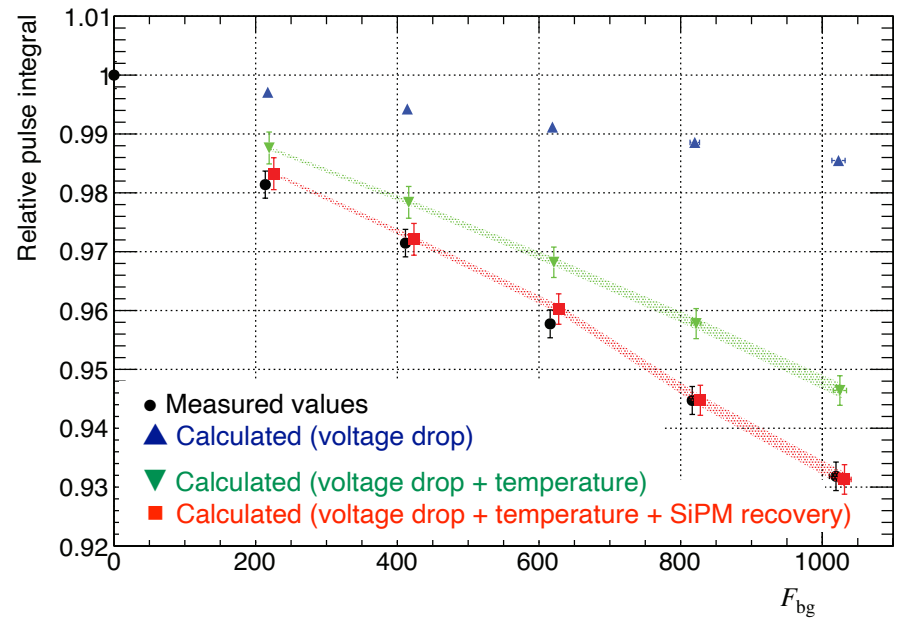
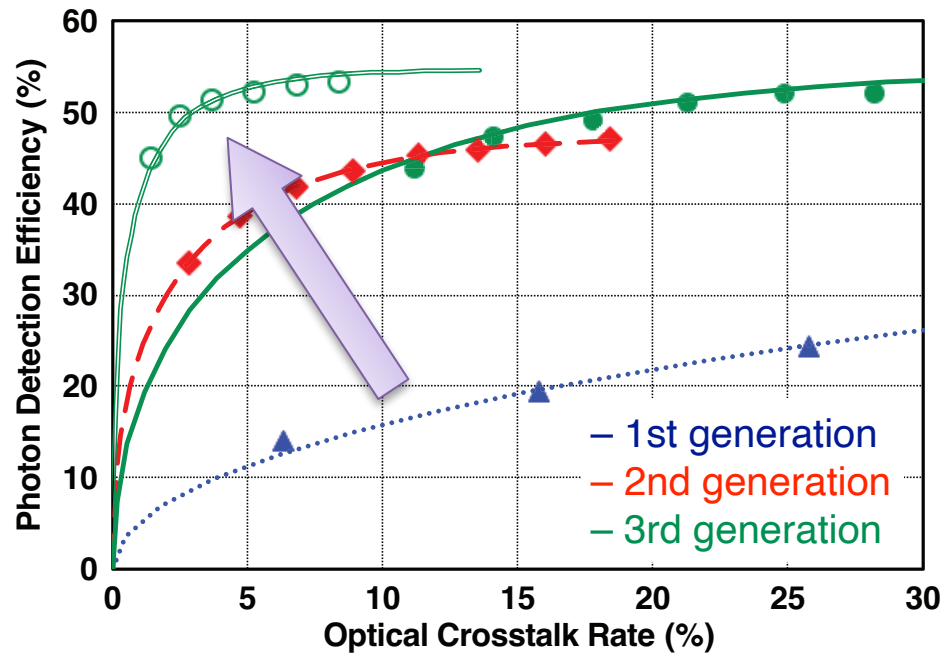
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CTA Timeline

