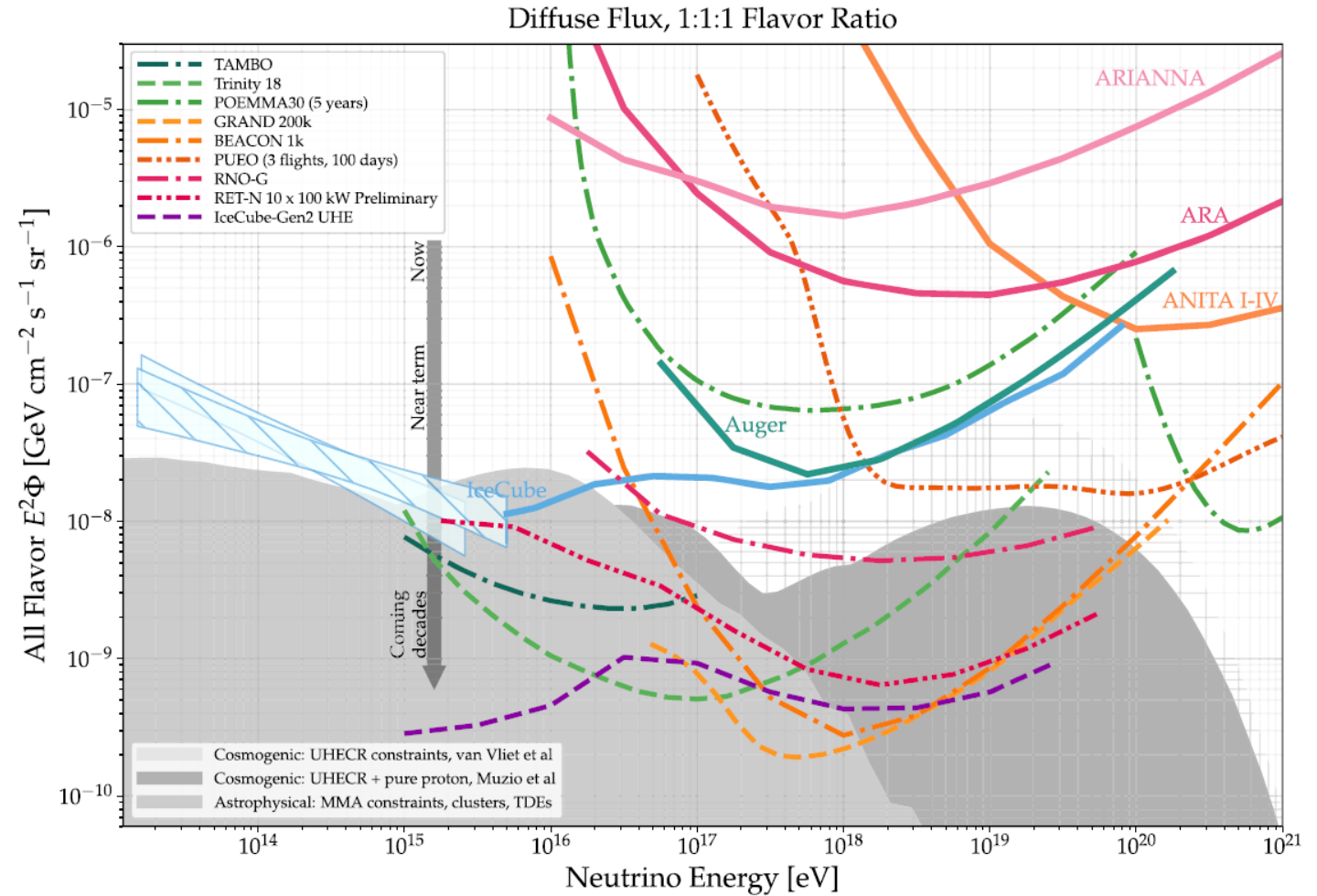


IN-ICE RADIO/RADAR DETECTION OF HIGH-ENERGY PARTICLE CASCADES

PROBING THE $>PEV$ COSMIC NEUTRINO FLUX

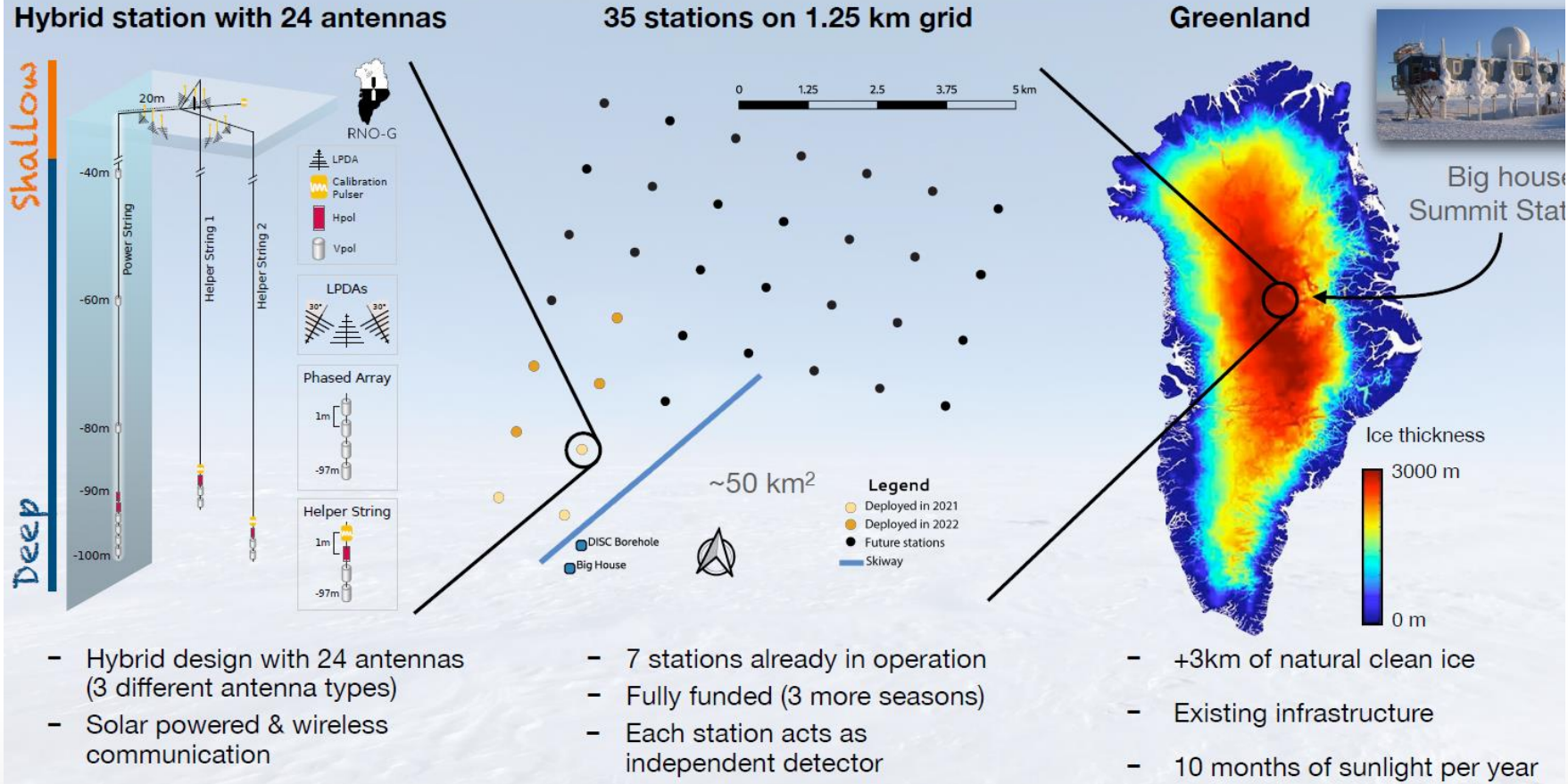
VUB-IIHE involvement in:
RNO-G: Leading
RET: Leading
ARA: Simulations & Analysis
GRAND: Simulations & Analysis
Gen2-Radio: RNO-G \rightarrow Pathfinder / Gen2-Radio-North



IN-ICE RADIO/RADAR DETECTION OF HIGH-ENERGY PARTICLE CASCADES

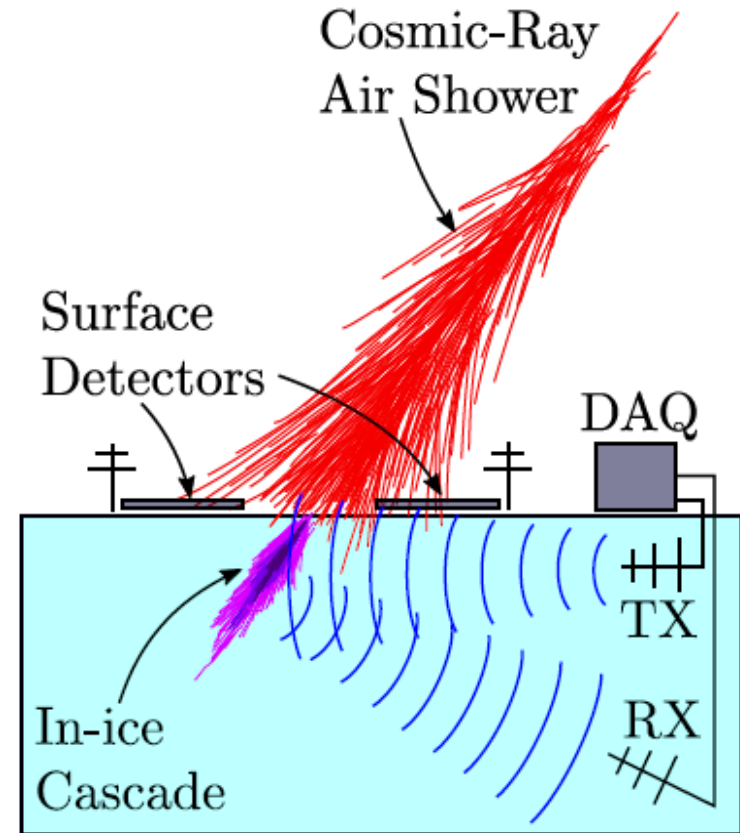
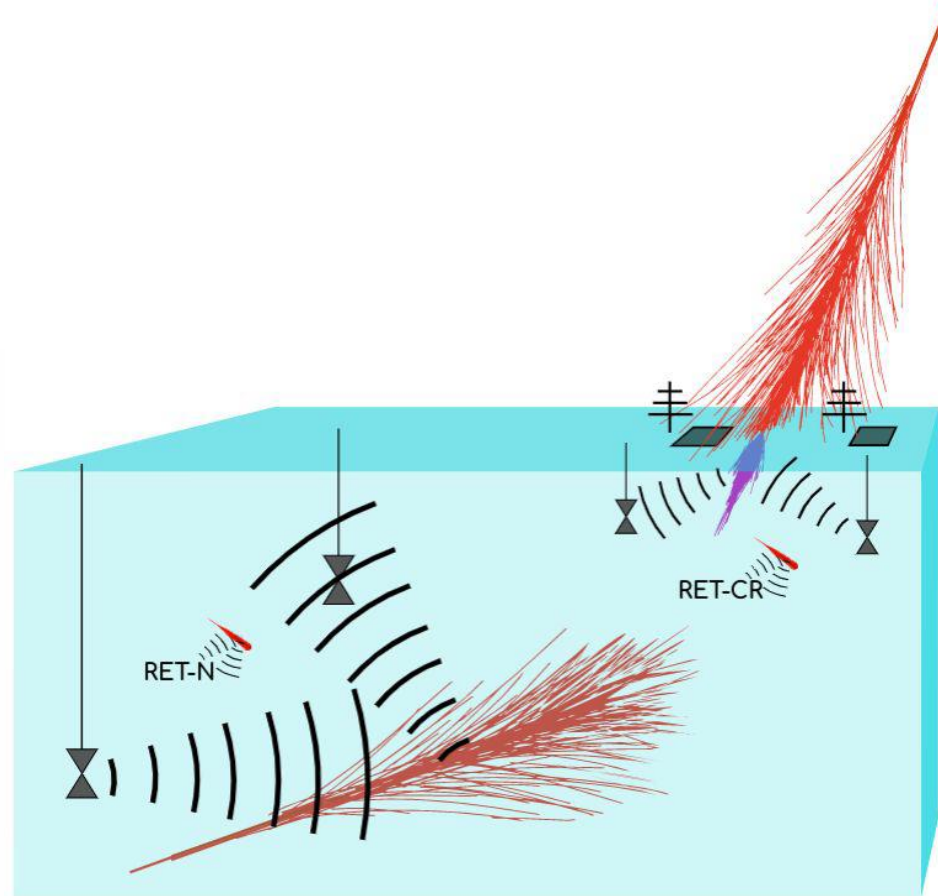
PROBING THE $>PEV$ COSMIC NEUTRINO FLUX – RNO-G

Radio Neutrino Observatory - Greenland



IN-ICE RADIO/RADAR DETECTION OF HIGH-ENERGY PARTICLE CASCADES

THE RADAR ECHO TELESCOPE FOR COSMIC RAYS

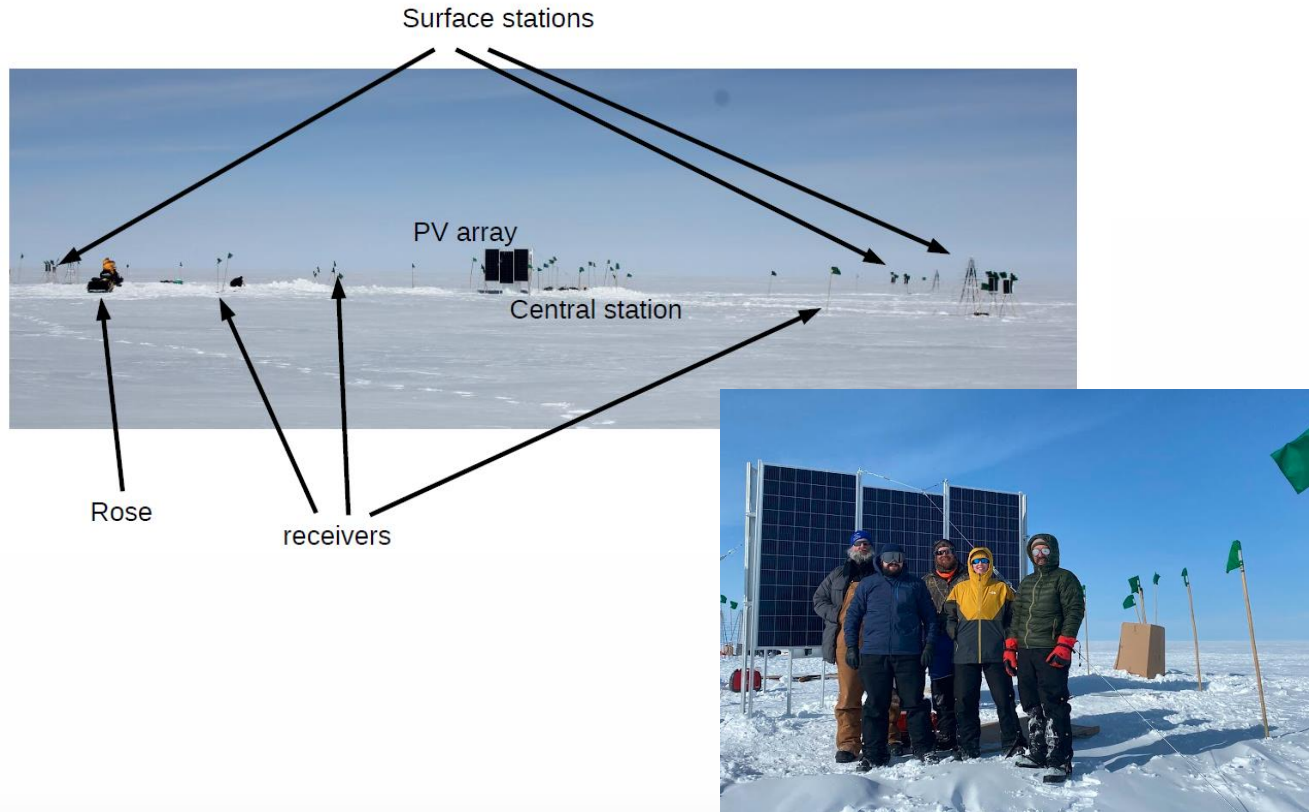


[RET-CR paper: arXiv: 2104.00459 - Phys. Rev. D 104, 102006](https://arxiv.org/abs/2104.00459)

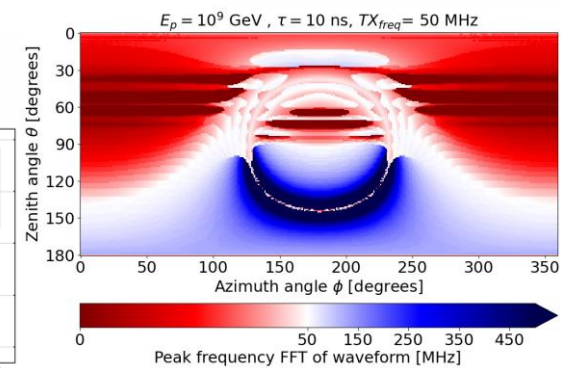
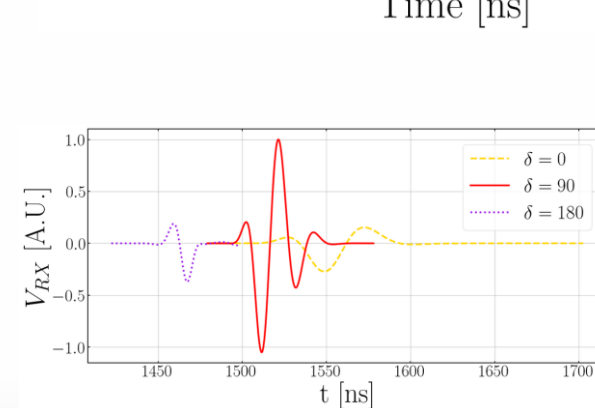
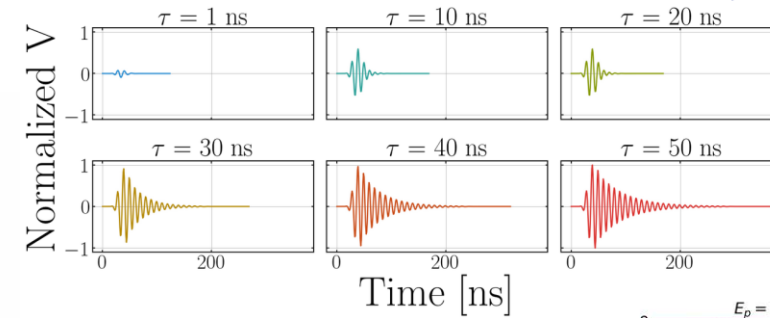
IN-ICE RADIO/RADAR DETECTION OF HIGH-ENERGY PARTICLE CASCADES

RET-CR MAY 2023 DEPLOYMENT + SECOND DEPLOYMENT 2024

FULL SIMULATION FRAMEWORK DEVELOPED



$$\sigma_{RCS,e^-} \simeq \sigma_{Thomson} \cdot \left(\frac{\omega}{\omega_c}\right)^2 \cdot G_{Hertz}$$



First results

$$\mathcal{F} = \epsilon_0 c_0 \int E^2(t) dt$$

