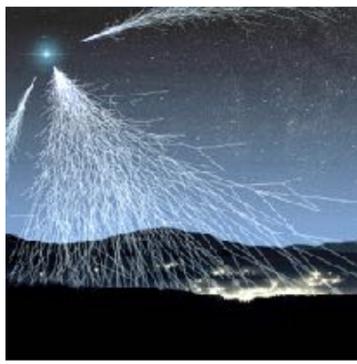
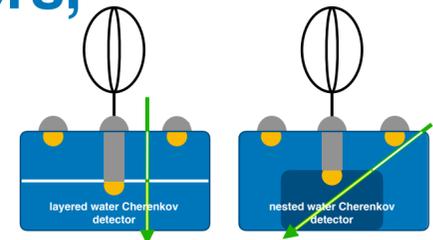
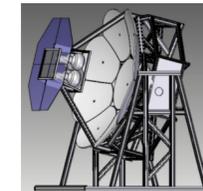
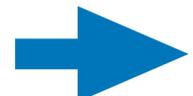


# GCOS - The Global Cosmic Ray Observatory



- World-wide initiative to conduct multi-messenger astroparticle physics beyond 2030
- MM-APP has started: GW sources, IceCube neutrinos, and follow-ups, ...  
key results from Telescope Array & Pierre Auger Observatory (anisotropies, mass composition)
- building on this knowledge, it is time to prepare for a Global Cosmic Ray Observatory after 2030
- aim for multi-purpose observatory:  
sources of UHE particles (charged CRs, neutrinos, gamma rays), connection to GWs,  
dark matter searches, fundamental physics, particle physics, geophysics and atmospheric science
- considering different detection concepts, including layered/nested water Cherenkov detectors,  
radio antennas, and fluorescence light telescopes
- workshop with >200 participants in May 2021  
to discuss path to define physics case and develop concepts for detection technologies
- we plan a follow-up workshop at the end of 2021/begin of 2022 with the goal  
to write a roadmap for multi-messenger astroparticle physics (CRs, GAs, NUs, GWs) beyond 2030  
and a Global Cosmic Ray Observatory



 theatre of dreams, 21 July