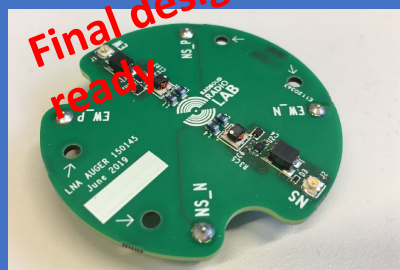
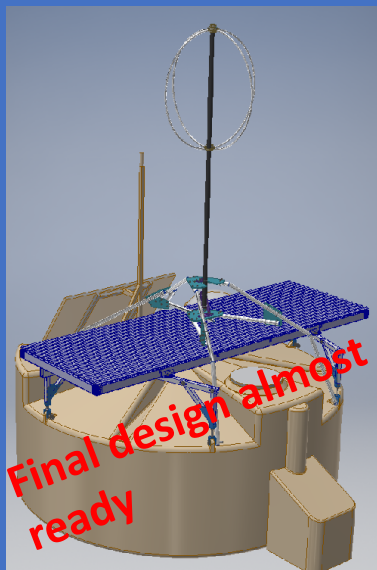


Auger/Cosmic Rays

Auger Radio Upgrade

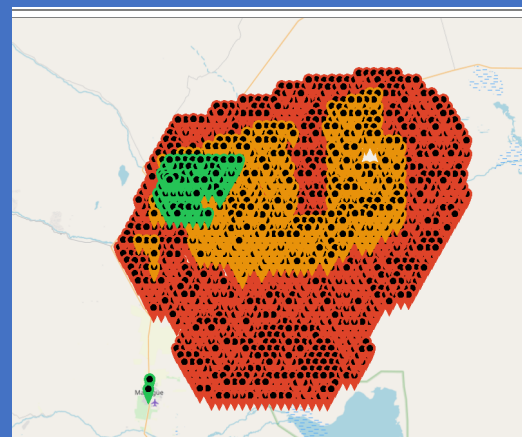


Mid November: 10 station engineering array with final mechanics and electronics.

Unlike Astro, the RU-HEF group is not involved in the analysis, lack of PhD-power

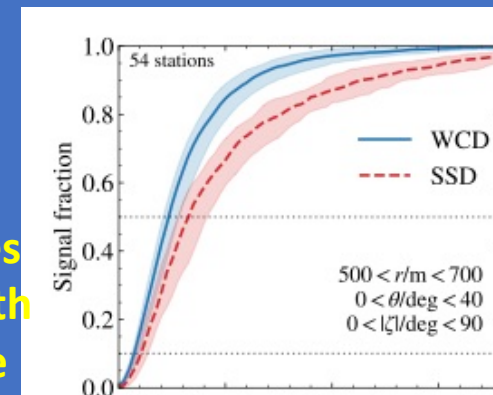
Bottleneck: UUB (Upgraded Auger baseline electronics). We got more influence on this thanks to NWO-groot

Auger Scintillator Surface Detector



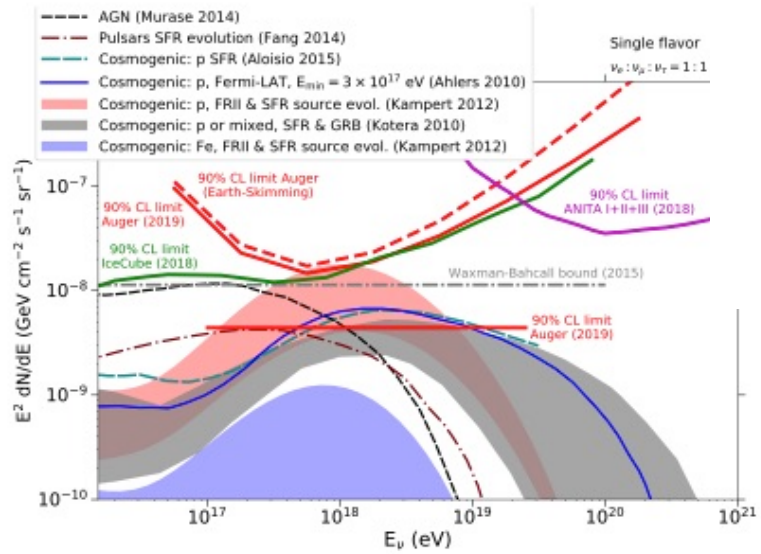
511 modules installed in the field, 80 with PMTs

First analysis: differences SSD/WCD consistent with different e/mu response (Mart Pothast)



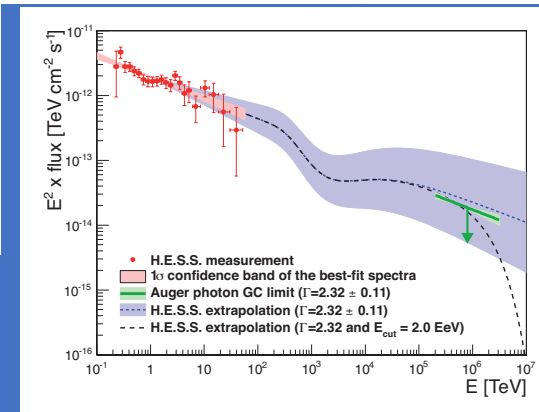
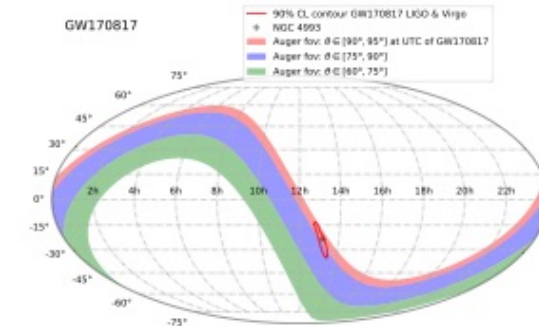
Auger/Cosmic Rays

General Auger analysis highlights



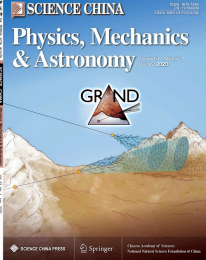
**Neutrino limit: Well below
 Waxman-Bahcall bound
 JCAP10 (2019) 022**

**Multi-messenger: GW follow up,
 Galactic center photons, ...
 Front. Astron. Space Sci. 6 (2019) 24.**



GRAND

**Site selection
 for GP300, G10K
 is completed**

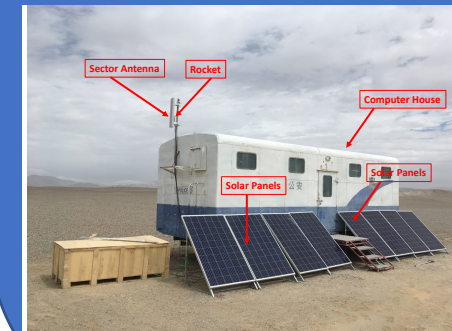


**First prototype
 units in the field**

**Electronics prototypes
 are being evaluated**



**Good support local
 government (infrastructure!)**



**GRAND collaboration is being
 formed MoU proposal to be
 discussed in WAR**