

ICaRO: a new cosmic ray detector at Izaña Atmospheric Observatory

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Introduction

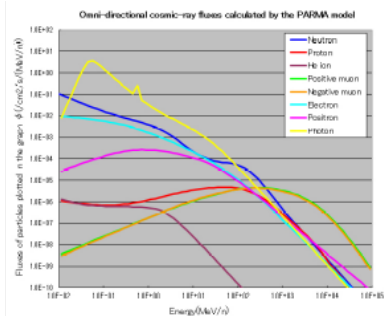
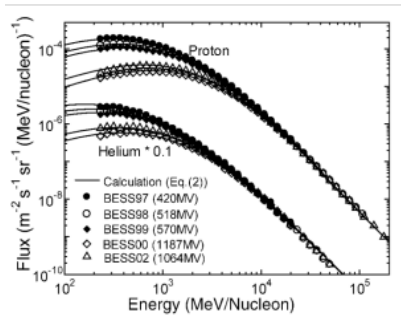
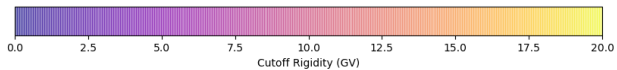
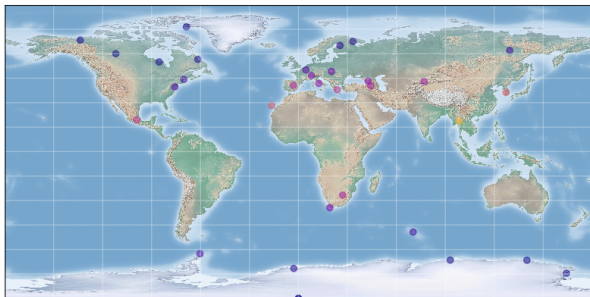


Figure: Sato et al., 2008

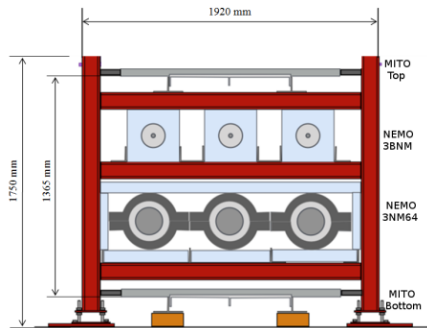
The Earth as a global detector



Why Canary Islands?

- $28^{\circ}18'N$, $16^{\circ}29'W$, 2373 m a.s.l., $R = 11.5$ GV.
- Cover a gap into the NMDB [Artamonov et al.,2016.]
- Its height and cutoff rigidity make it an observation site of solar neutrons
- Izaña Atmospheric Research Center (IARC)
- Güimar Geomagnetic Observatory (GGO)
- Observation of cosmic rays, atmosphere conditions and magnetospheric status

Izaña Cosmic Ray Observatory (ICaRO)



Conclusions

- A new cosmic ray detector, ICaRO, will be installed along the second part of 2021 at Izaña Atmospheric Research Center.
- Its location, $28^{\circ}18'N$, $16^{\circ}29'W$, 2373 m a.s.l. at a vertical cut-off rigidity of 11.5 GV makes it an ideal detector to study, cosmic rays and solar activity, the cosmic ray-atmosphere-magnetosphere interaction and solar neutrons.



Acknowledgements

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