

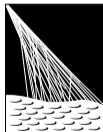
Follow-up Search for UHE Photons from Gravitational Wave Sources with the Pierre Auger Observatory

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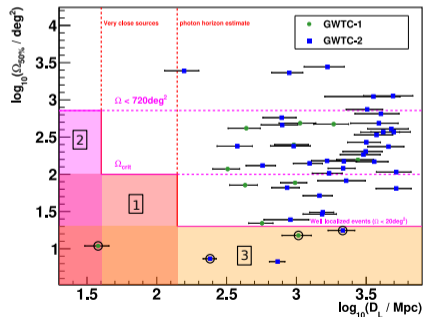
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International Cosmic Ray Conference 2021, Berlin, Germany

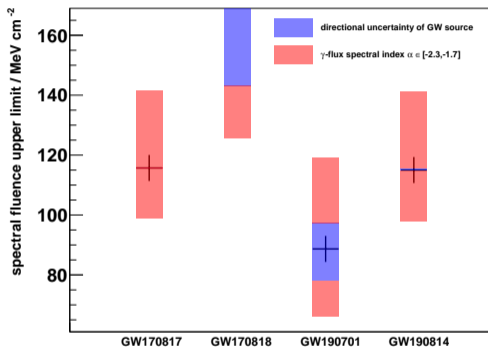


PIERRE
AUGER
OBSERVATORY

- First constraints on ultra-high-energy (UHE) photons from gravitational wave (GW) sources.
- Use the surface detector of the Pierre Auger Observatory to identify photons above 10 EeV.
- GW event selection strategy favors close and/or well localized sources.
- 4 GW events selected:
 - ▶ 2 binary black hole mergers
 - ▶ 1 binary neutron star merger
 - ▶ 1 black hole - neutron star merger candidate



- No coincident photon candidate events identified.
⇒ Upper limits on the spectral fluence during 1 day.



- Further results to be expected after future GW observation runs.