

On the origin of the IceCube TeV-PeV neutrinos

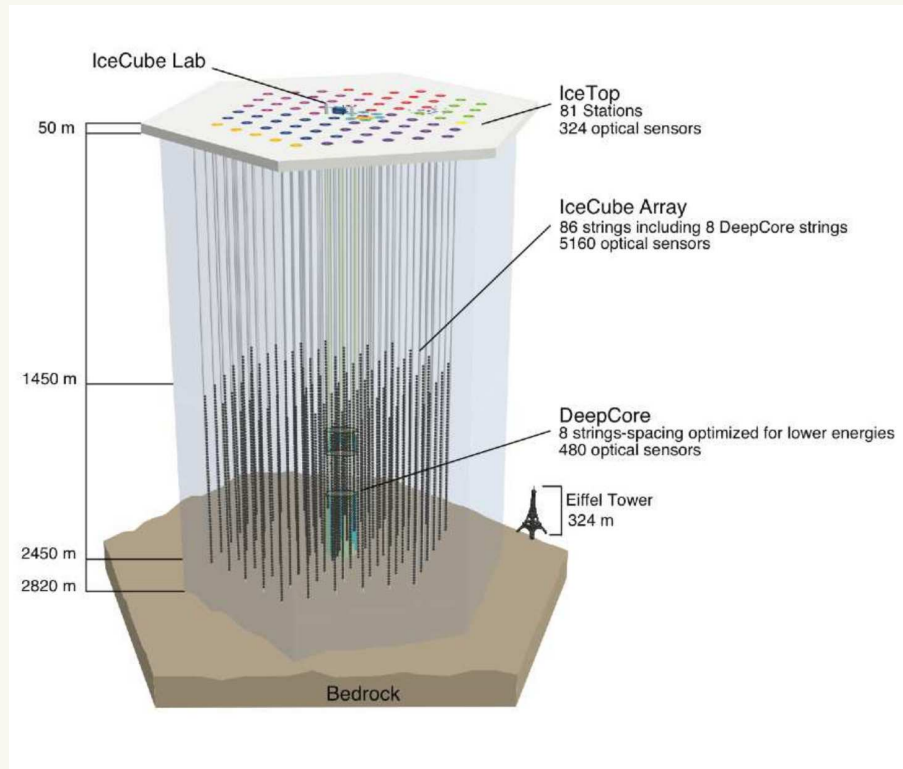
Jordi Salvadó

Department of Physics, University of Wisconsin and Wisconsin IceCube Particle Astrophysics Center



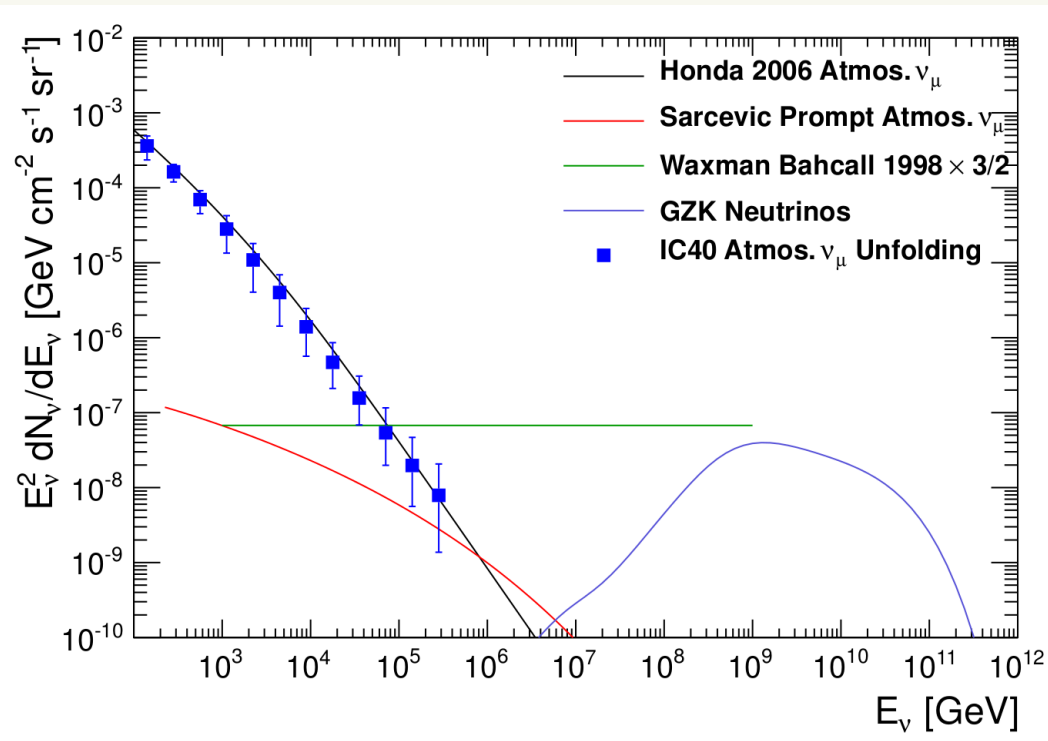
Santa Barbara, October 2, 2014

IceCube Results



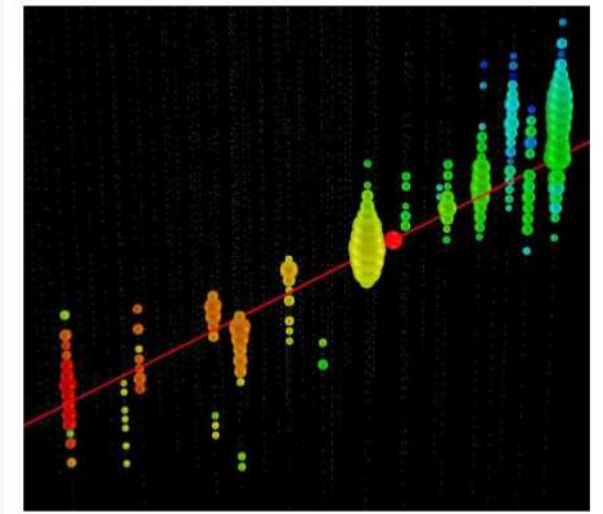
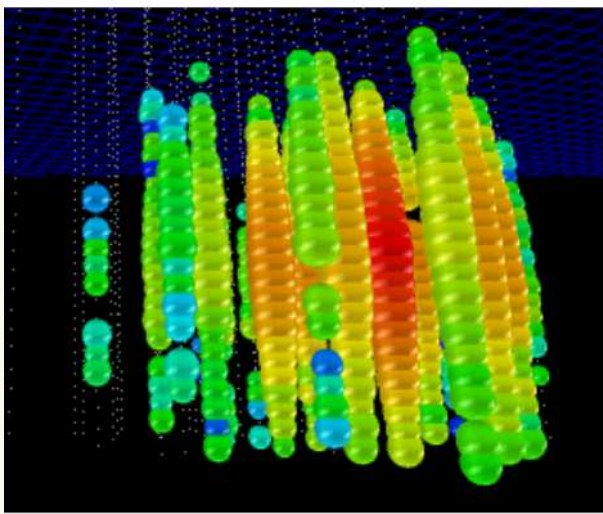
- 1km³ volume
- 86 string
- 5160 PMTs

IceCube Results



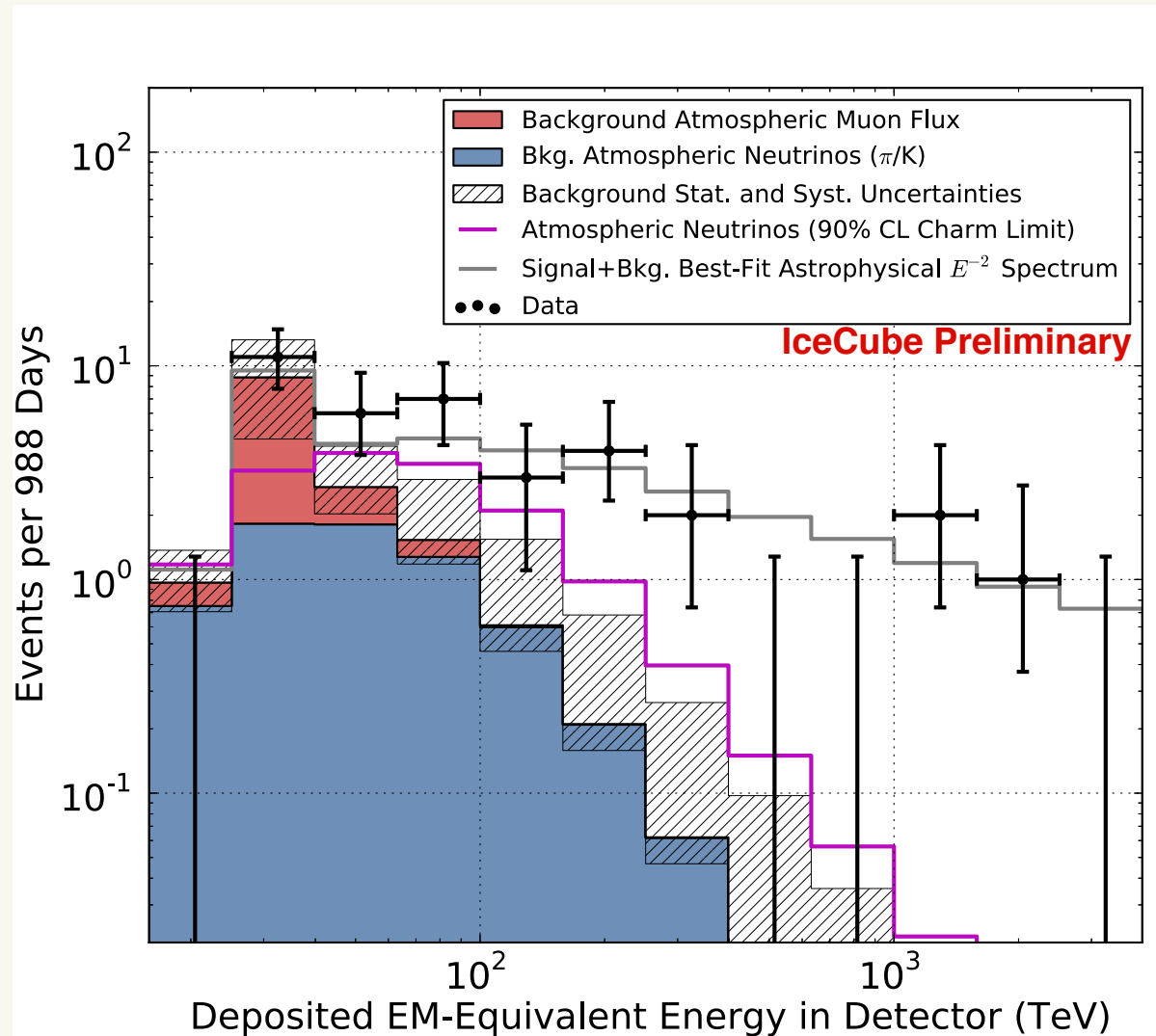
- Atmospheric Neutrinos
- Charm Atmospheric Neutrinos
- Astrophysical Neutrinos
- Cosmogenic Neutrinos

IceCube Results



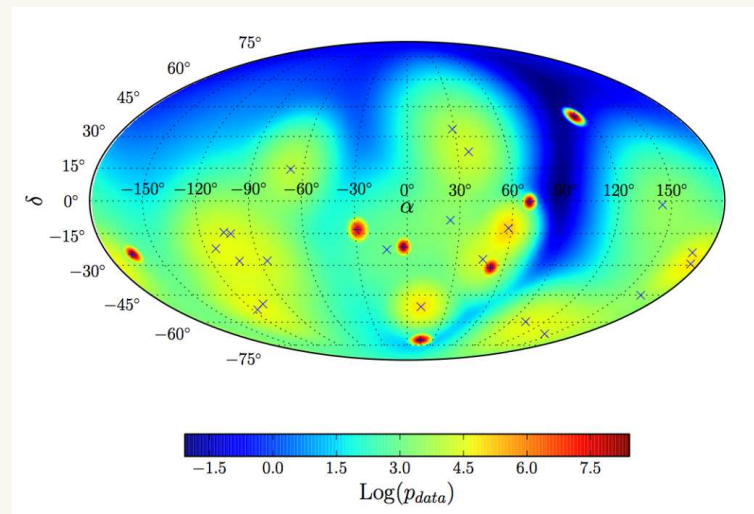
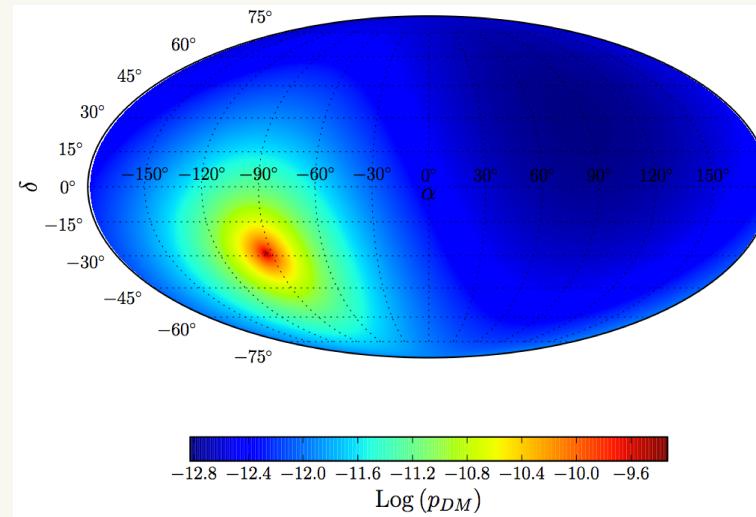
- They measure 28 high energy events from May 2010 to May 2012
- 7 Tracks and 21 Cascades
- Angular errors $\approx 1^\circ$ for tracks and $\approx 10^\circ$ for cascades.
- Result is consistent with oscillations

Energy Spectrum



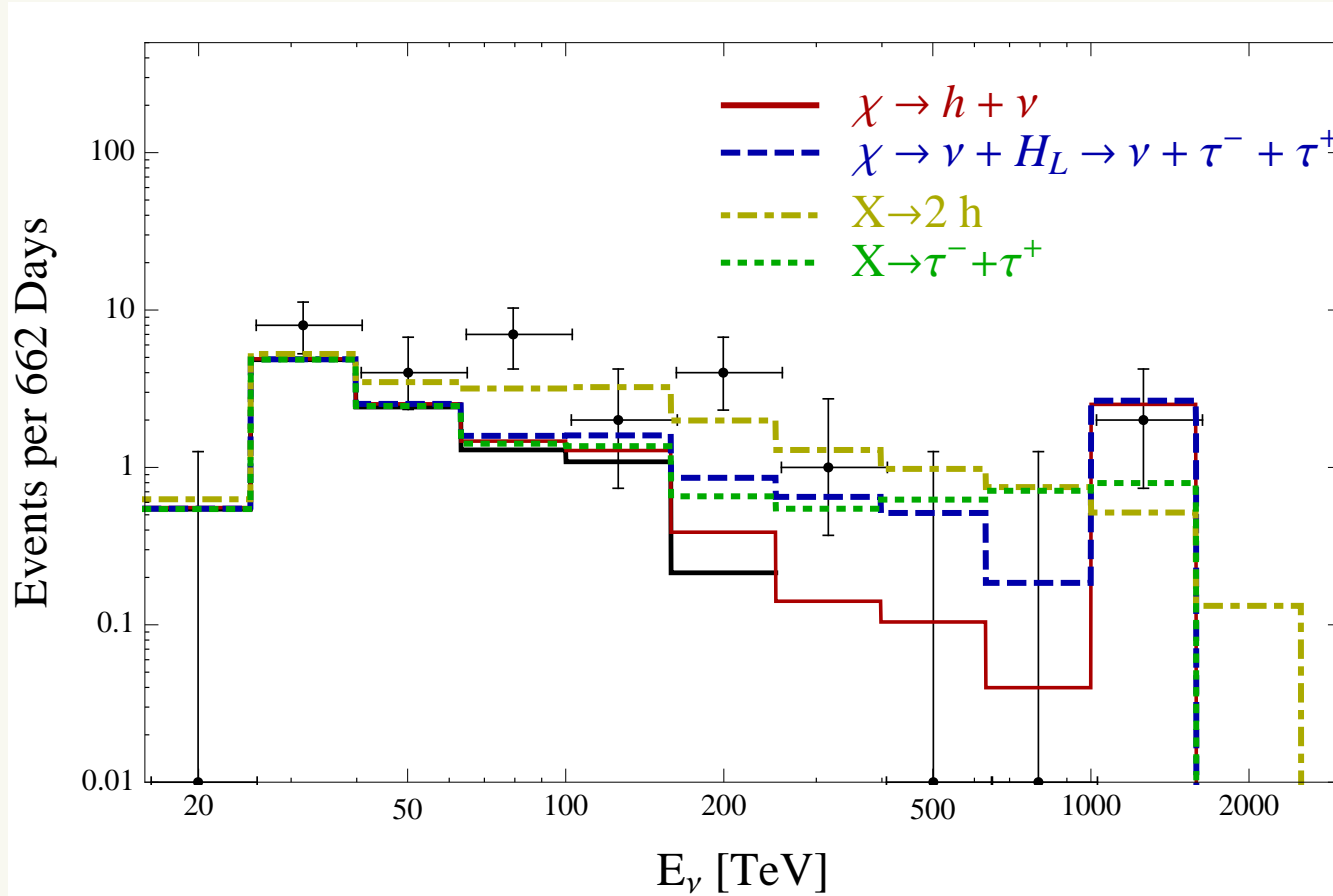
IceCube Collaboration, 1405.5303

Dark matter spatial Distribution Analysis



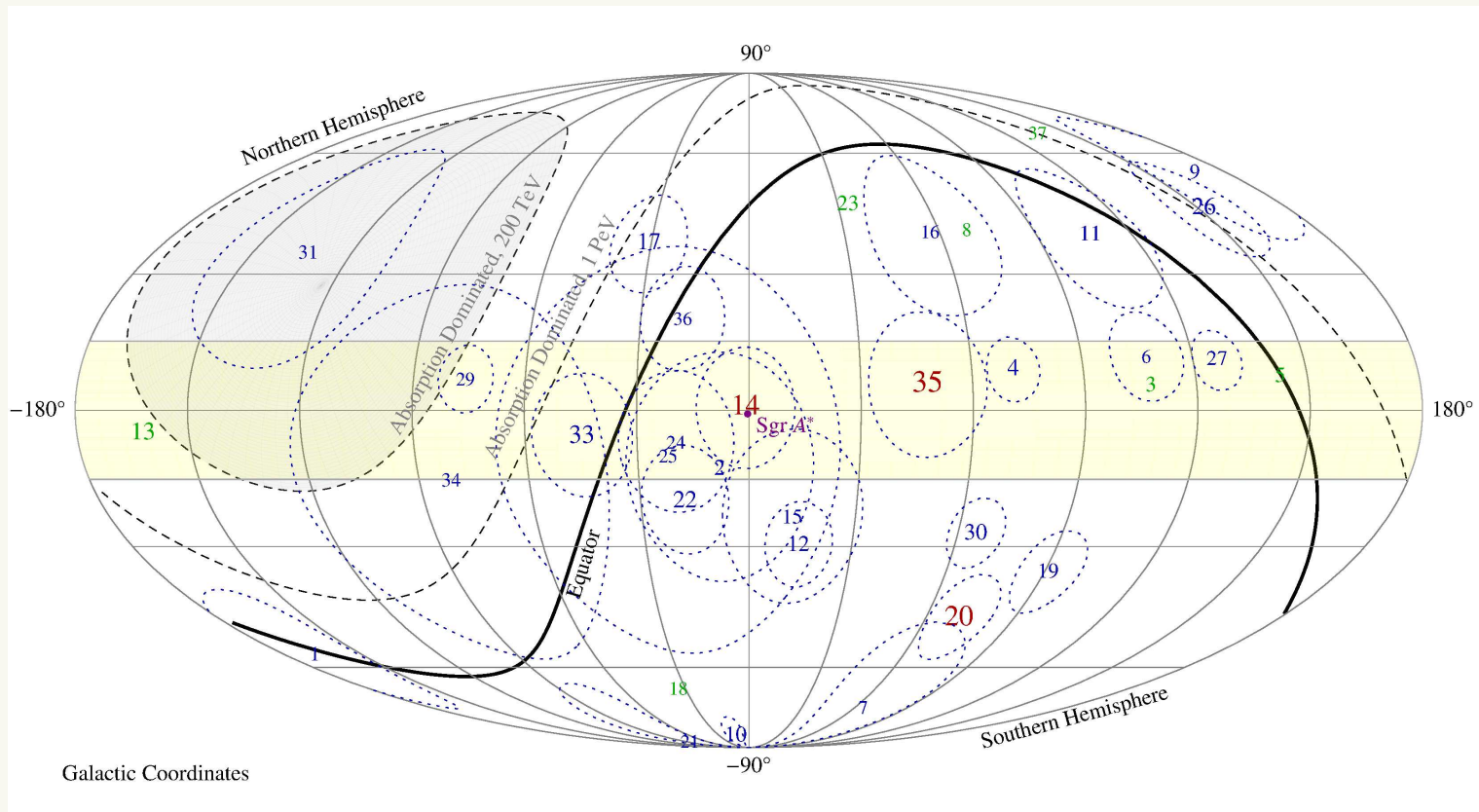
arXiv:1311.5864, Y. Bai, R. Lu, J.S.

Energy spectrum from DM



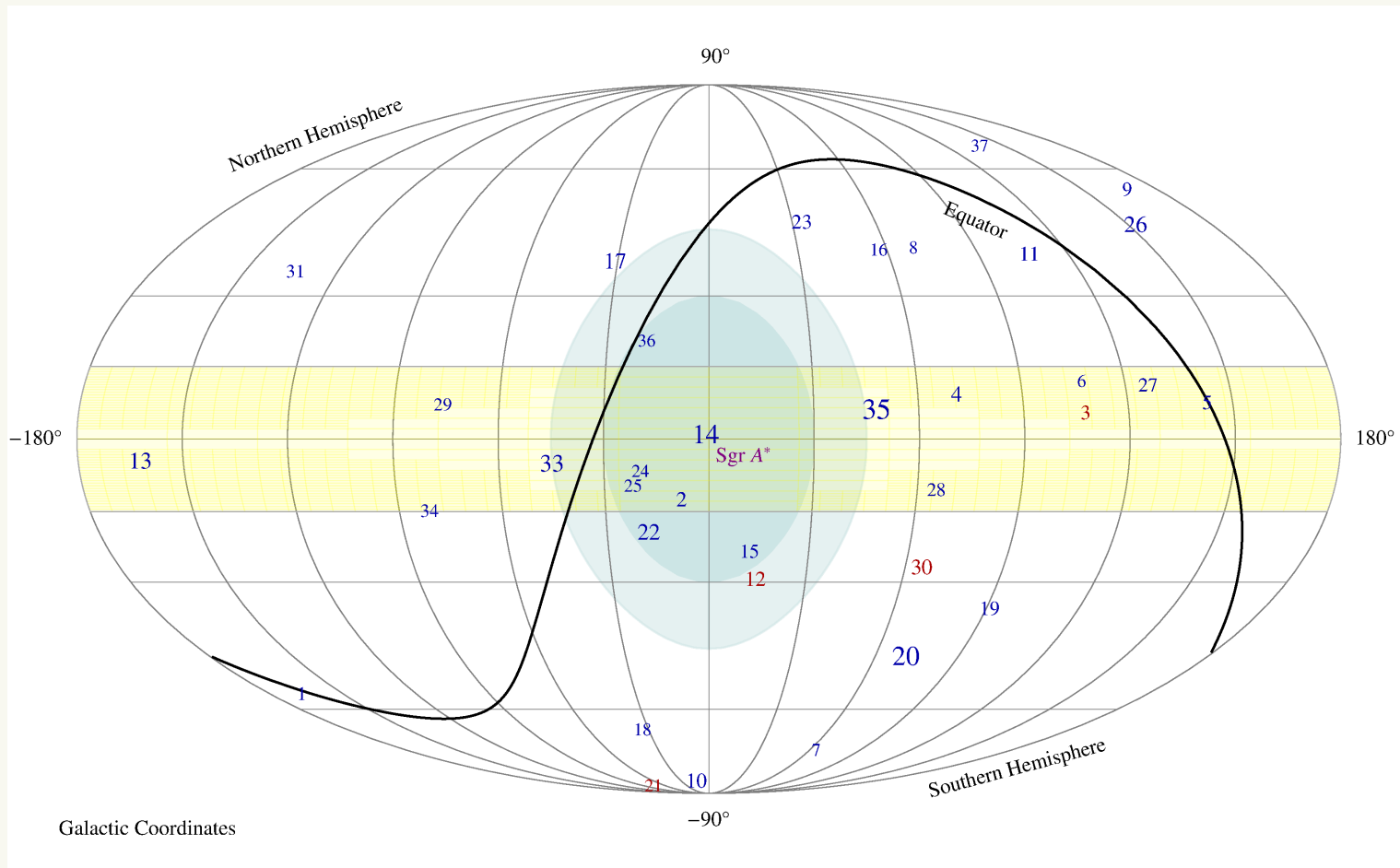
arXiv:1311.5864, Y. Bai, R. Lu, J.S.

Events from the galactic center



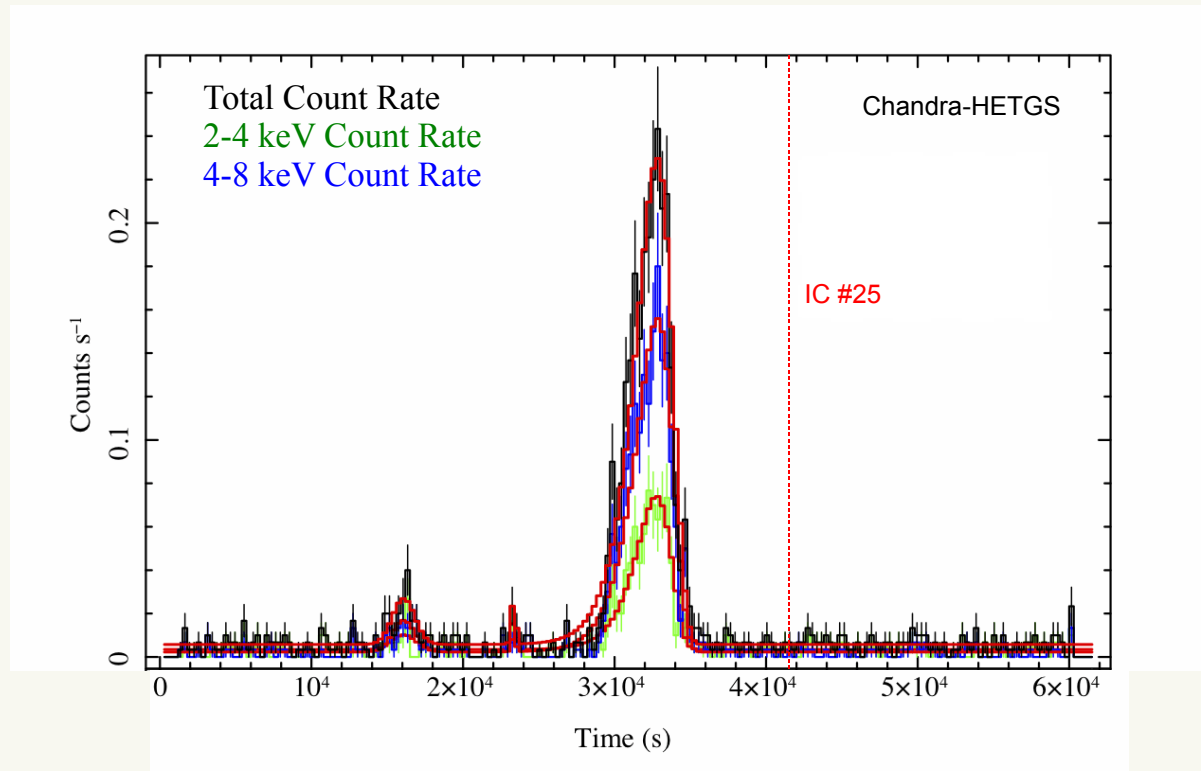
arXiv:1407.2243, Y. Bai, A. J. Barger, V. Barger, R. Lu, A. D. Peterson, J.S.

Events form the galactic center

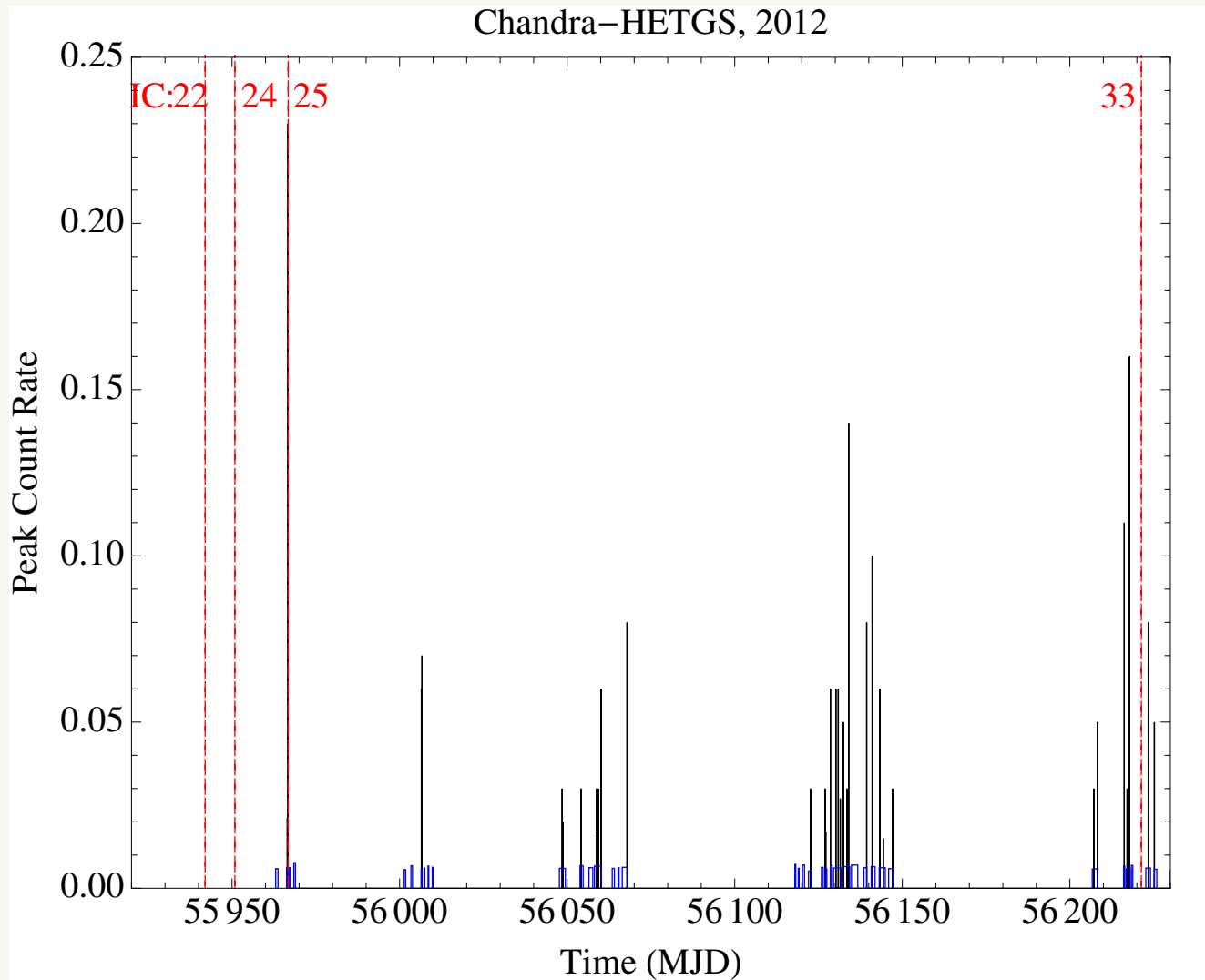


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Events from the galactic center (time clustering)

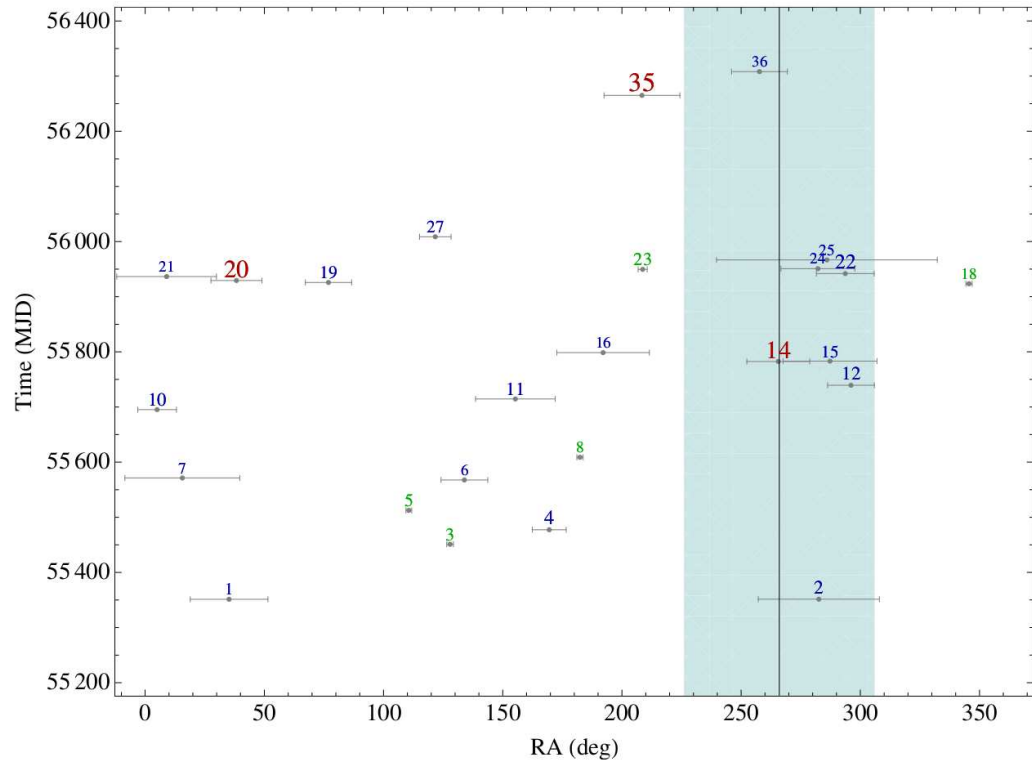


Events from the galactic center (time clustering)



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