

# Morphologies and SEDs of HE Sources Revealed by LHAASO

Bingcheng Jin

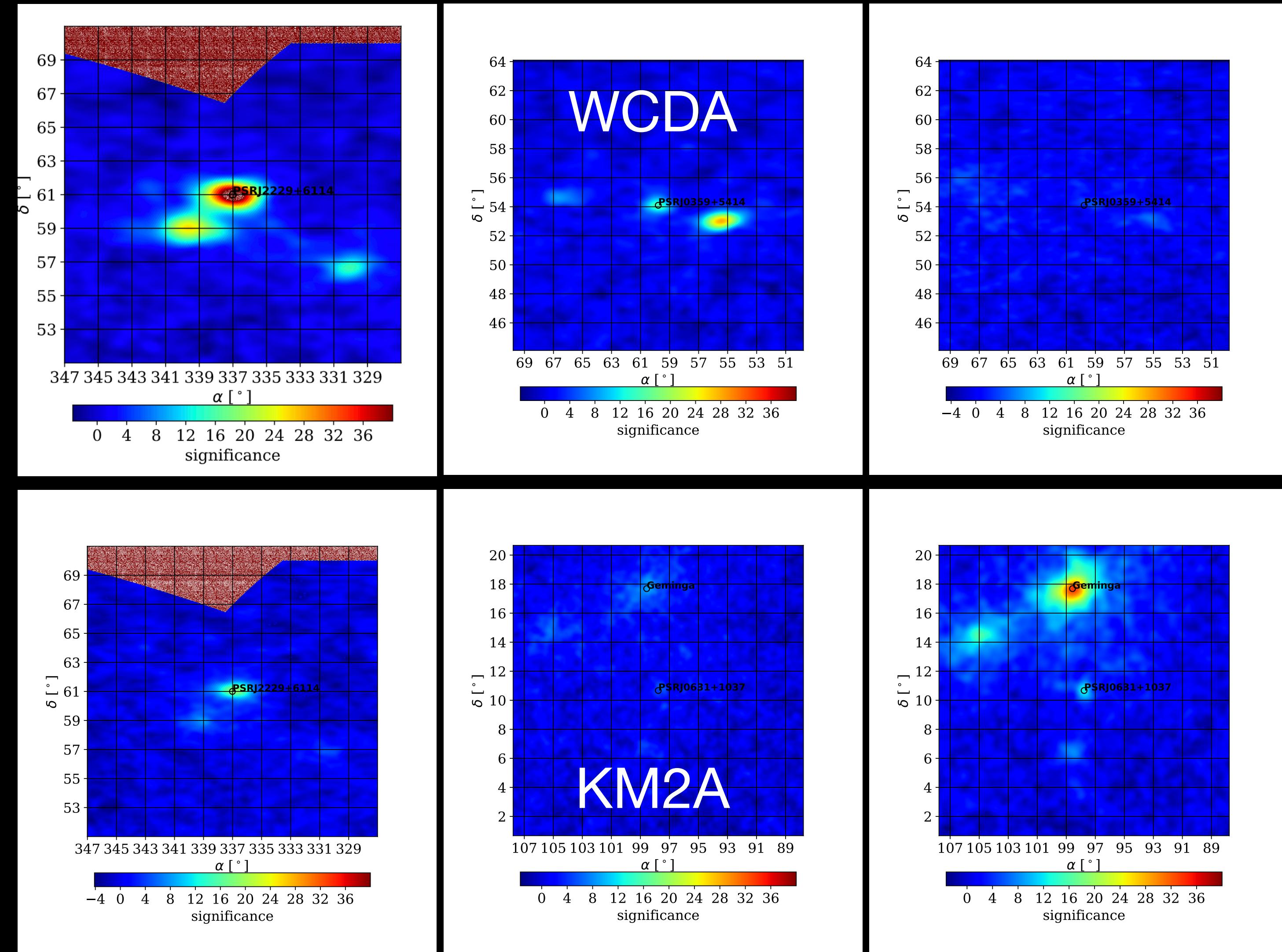
DoA, SoP, Peking University

Advisor: Gwenael Giacinti & Hao Zhou (TDLI)

# LHAASO Observations

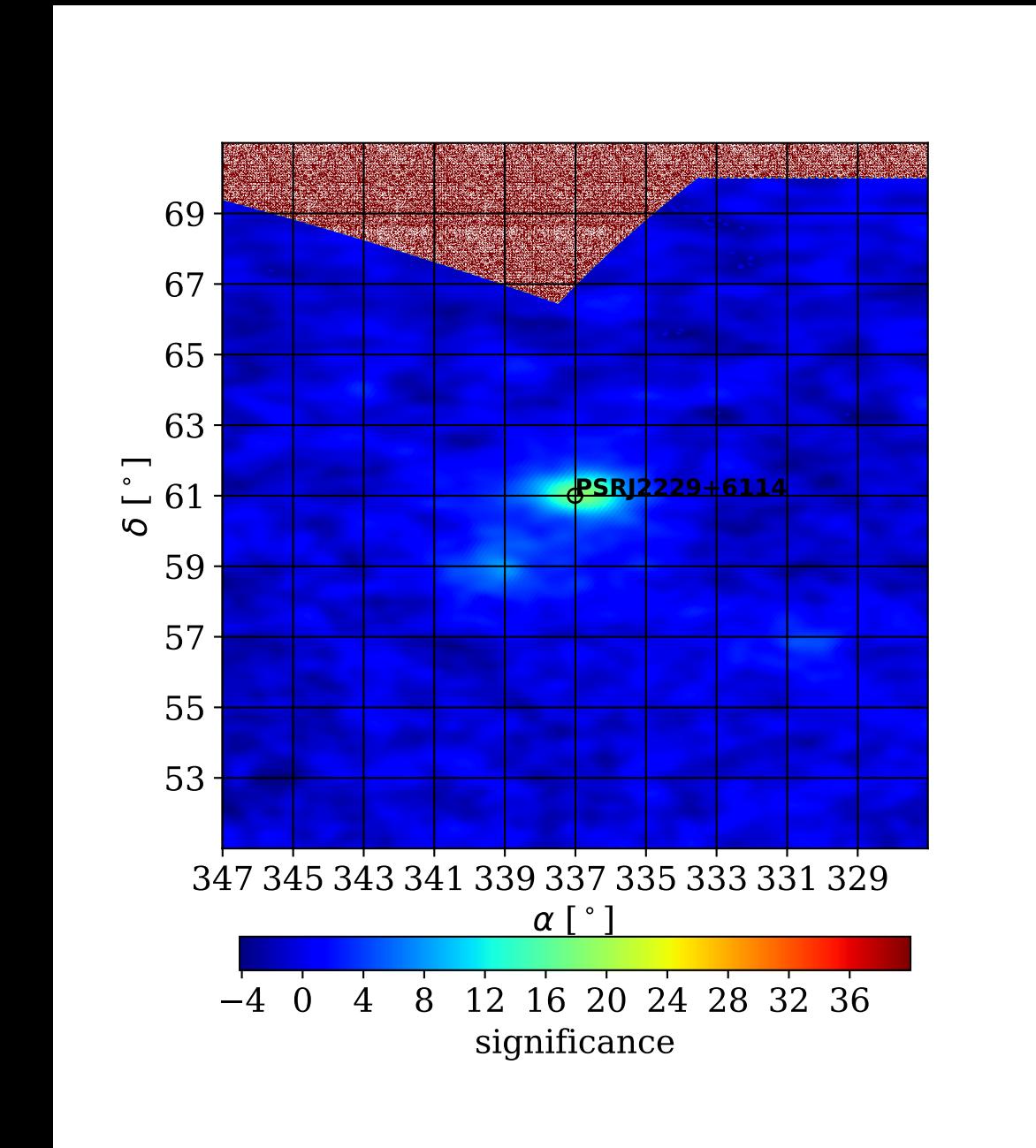
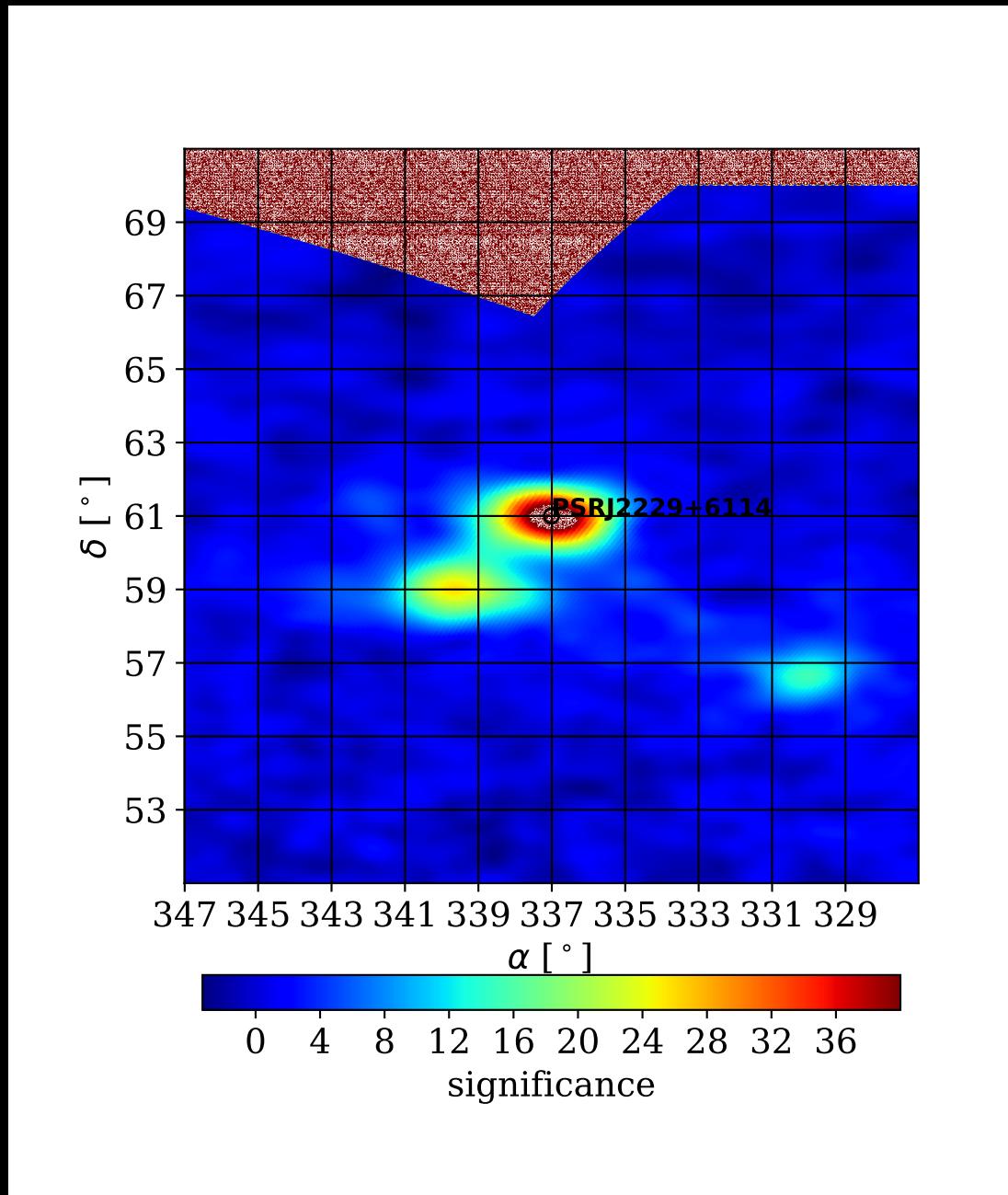
Extended  
Blended  
Point-like

- What is the basic strategy to find the best fit?
- For different sources:
- their intrinsic spectrum will differ
- Their morphology will differ



# Modeling HE Sources

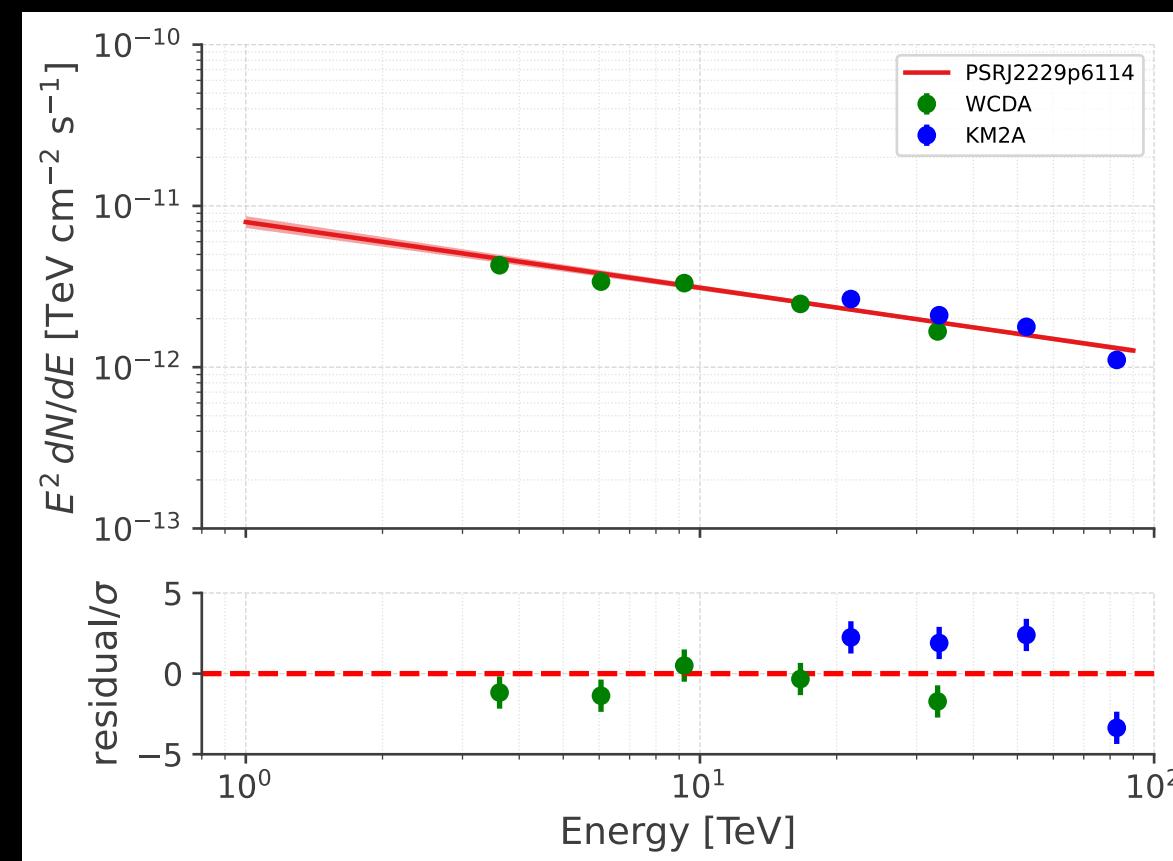
- 2-D Morphology: Disk Morphology, Gaussian Morphology
- Spectral Type: Power Law, Cutoff Power Law and Log Parabola



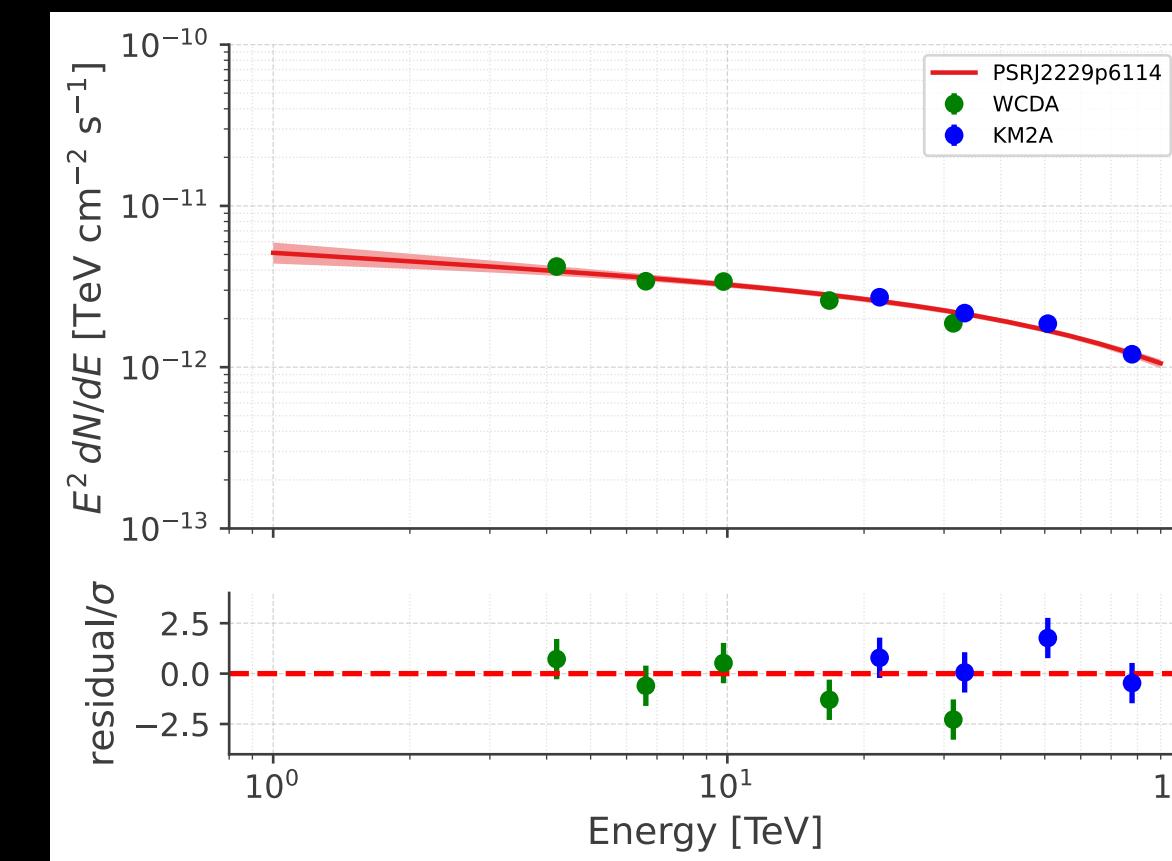
PSRJ2229+6114

How to best model the HE sources?

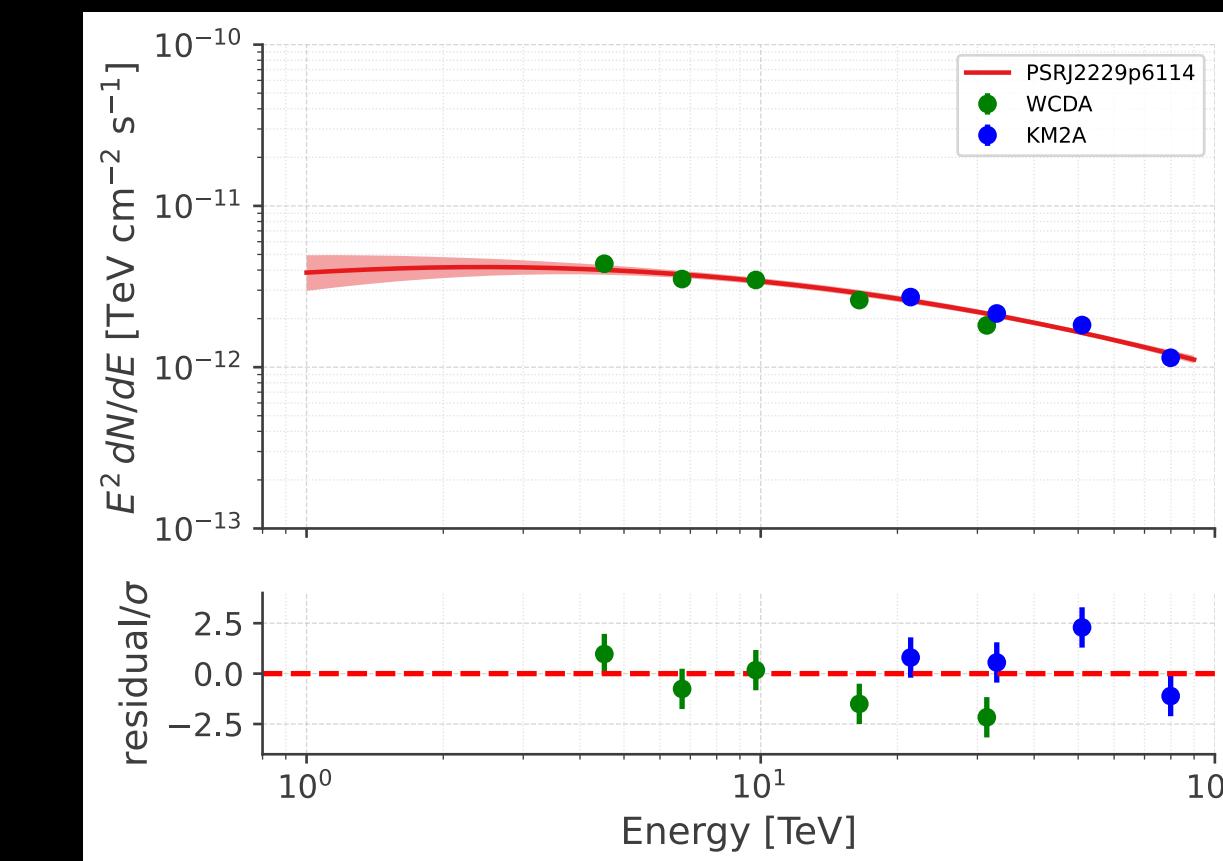
# How Spectral Type Influence Flux Measurement



Power Law  
TS=1062.63, 2717.03

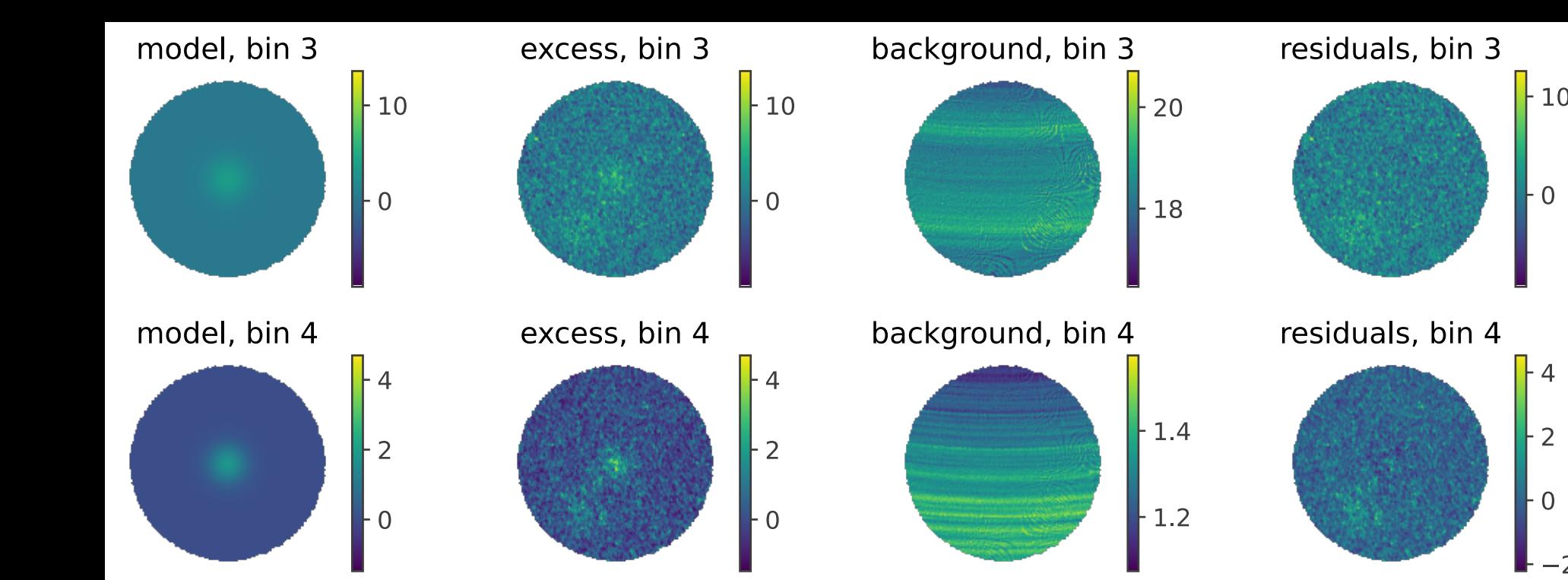
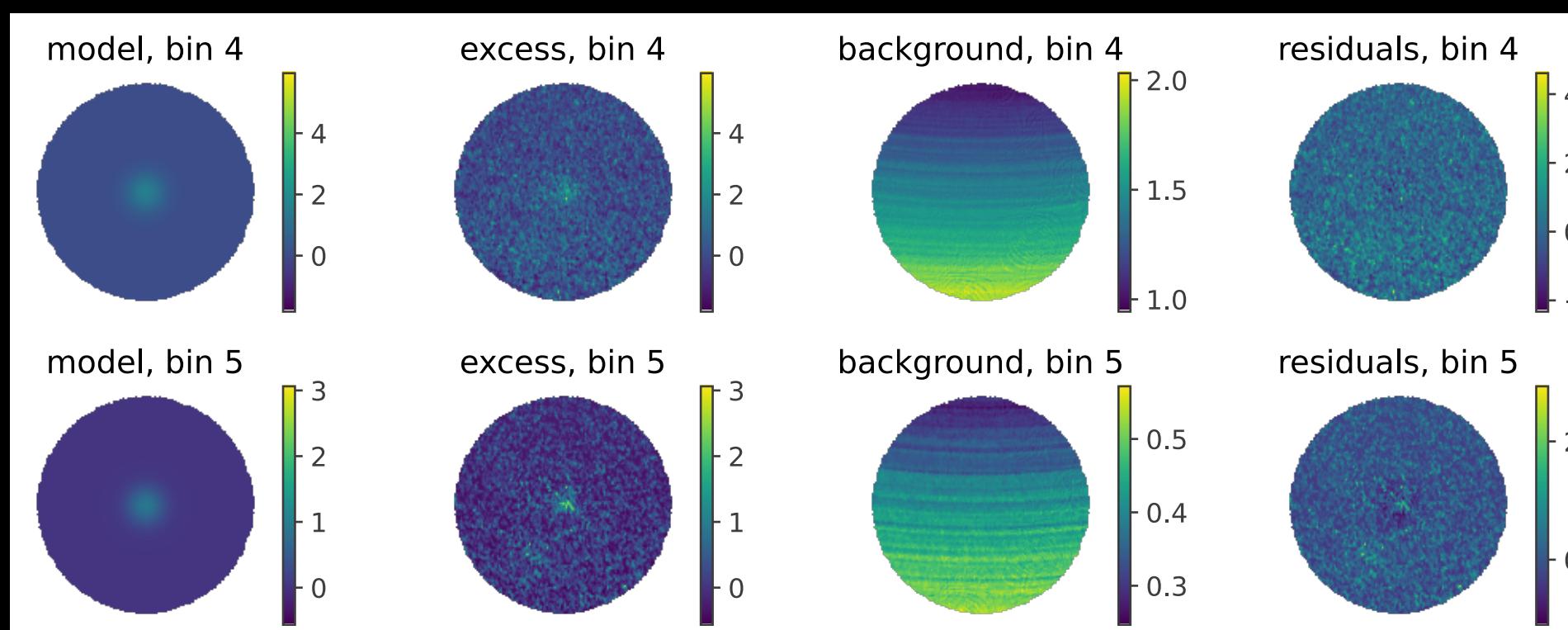


Cutoff Power Law  
TS=1061.68, 2736.67

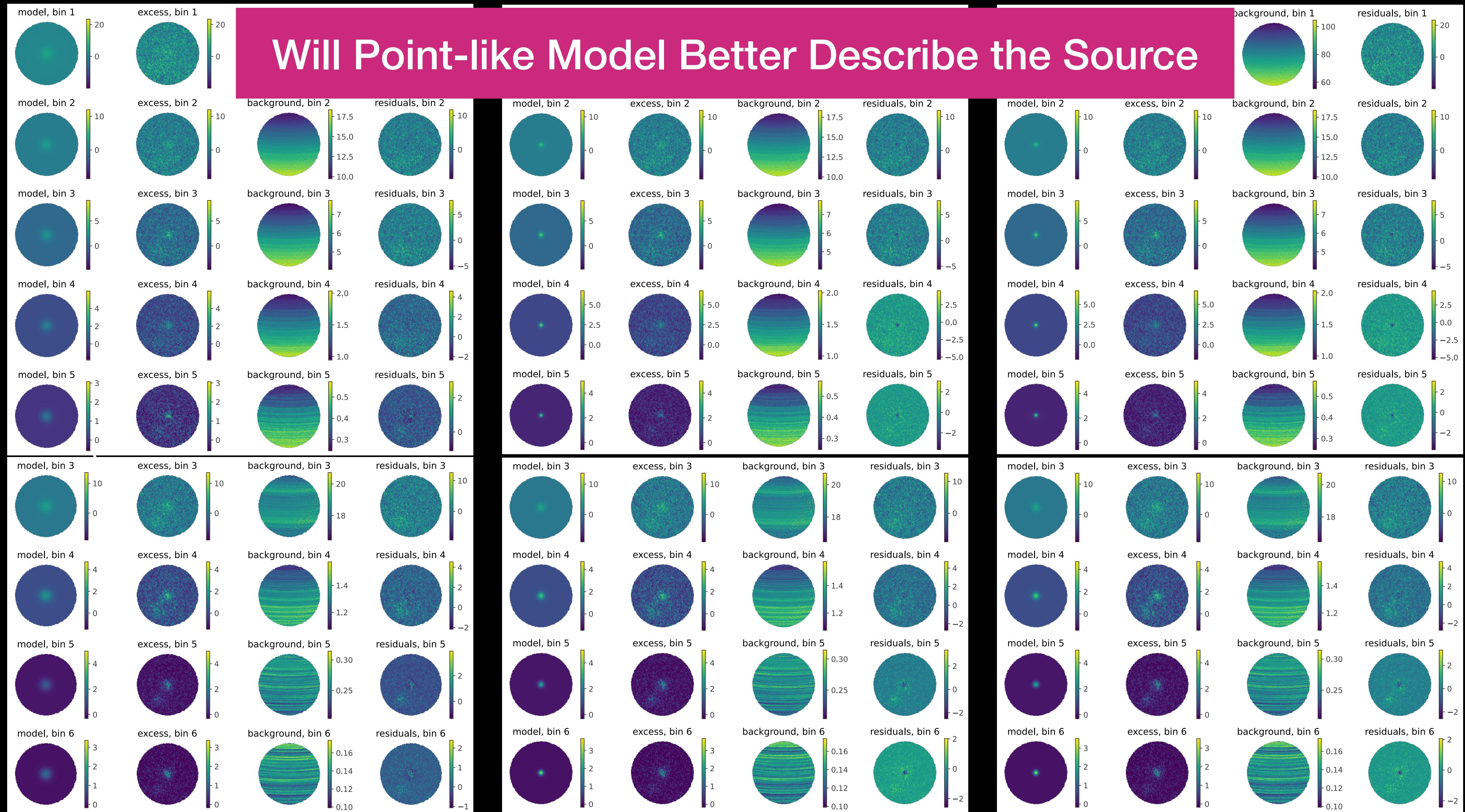


Log Parabola  
TS=1060.55, 2734.26

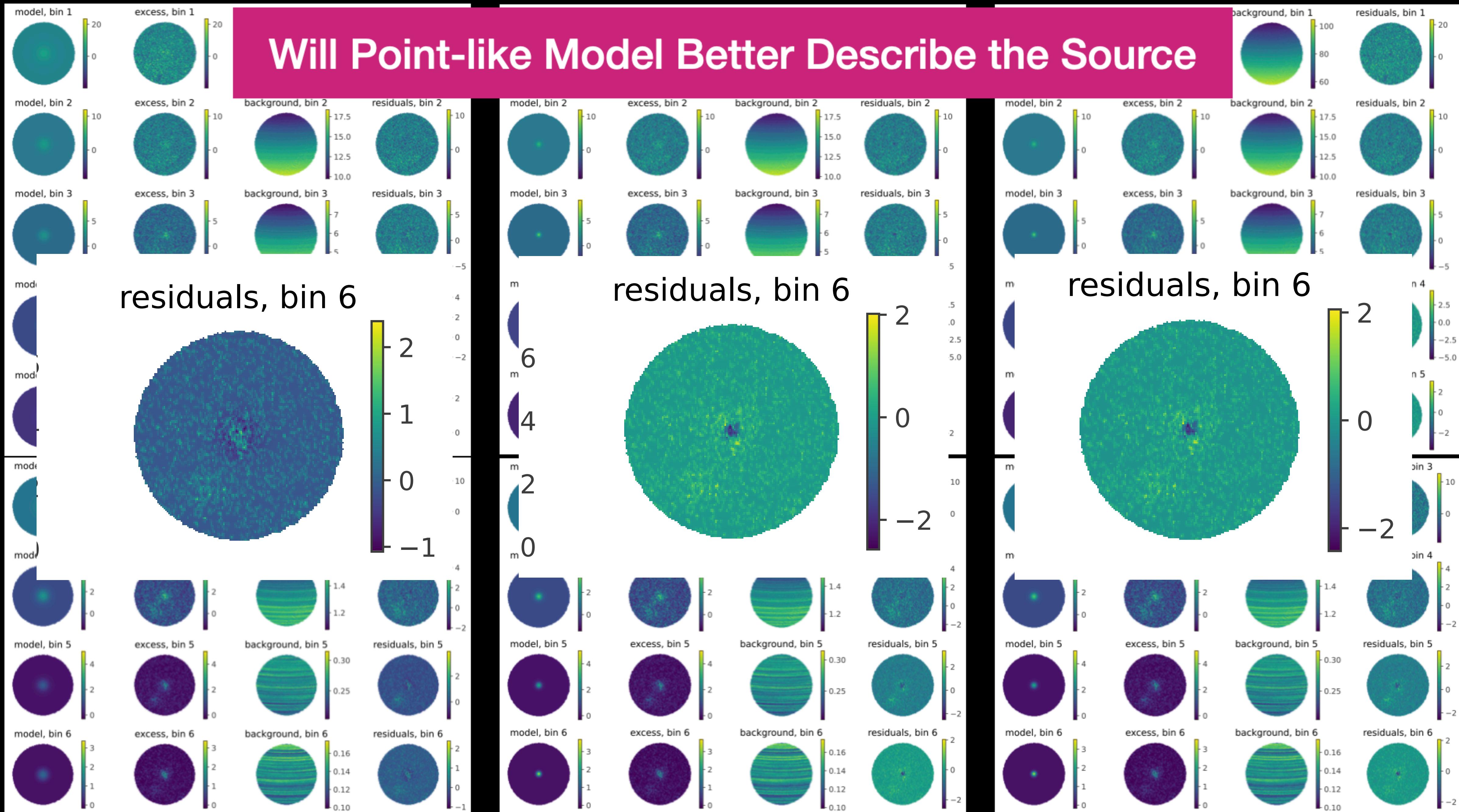
Are they good enough to model the source?



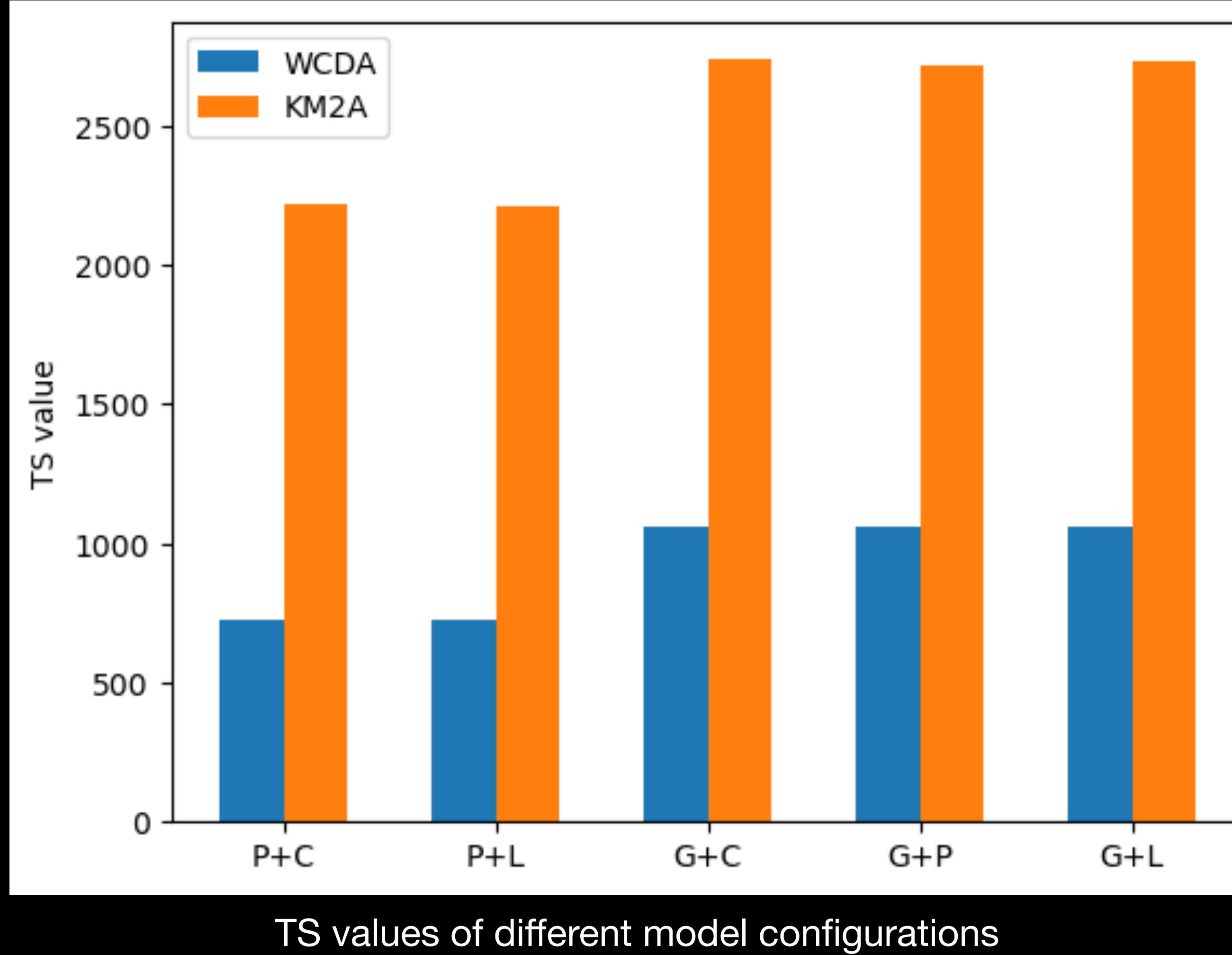
# Will Point-like Model Better Describe the Source



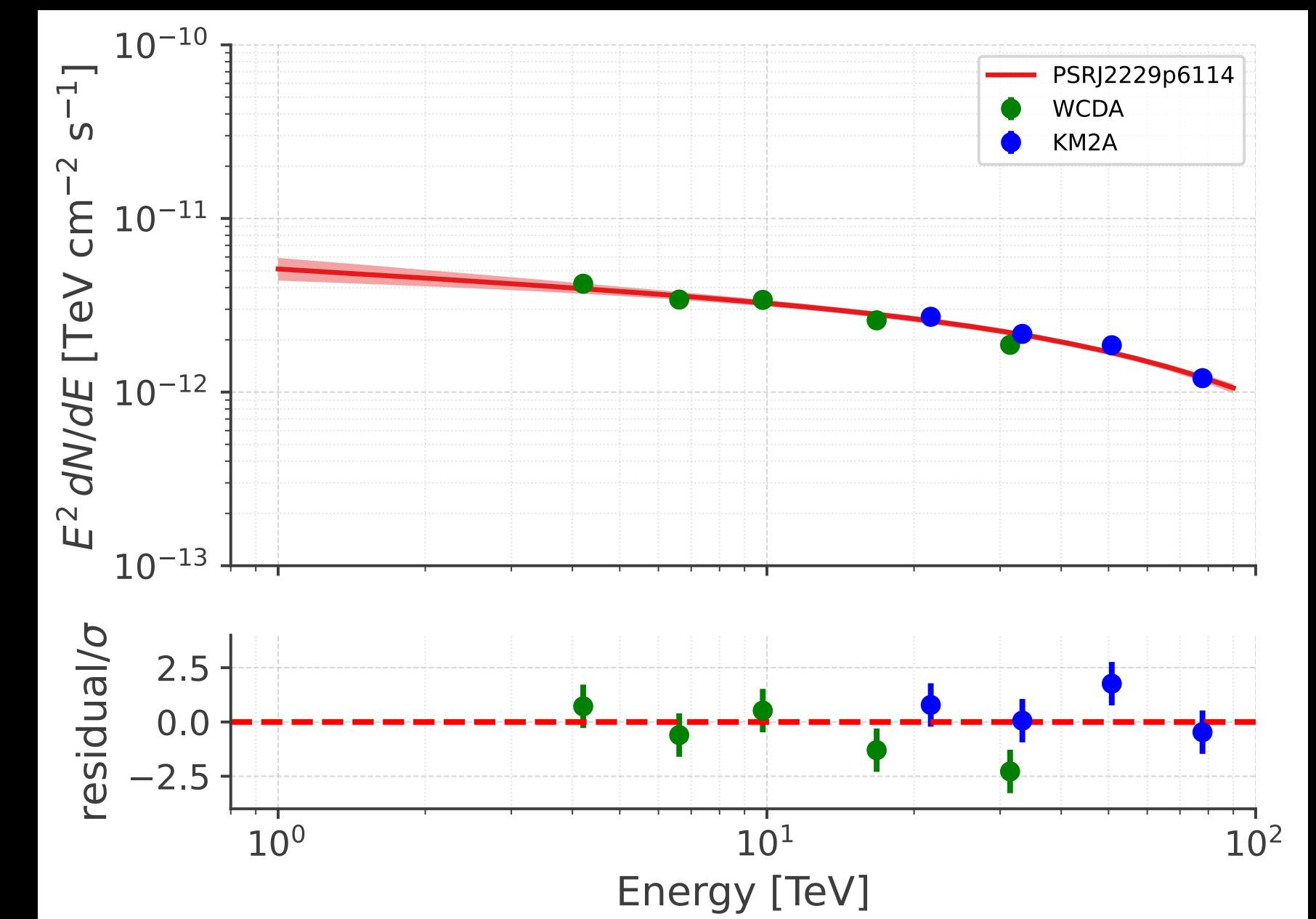
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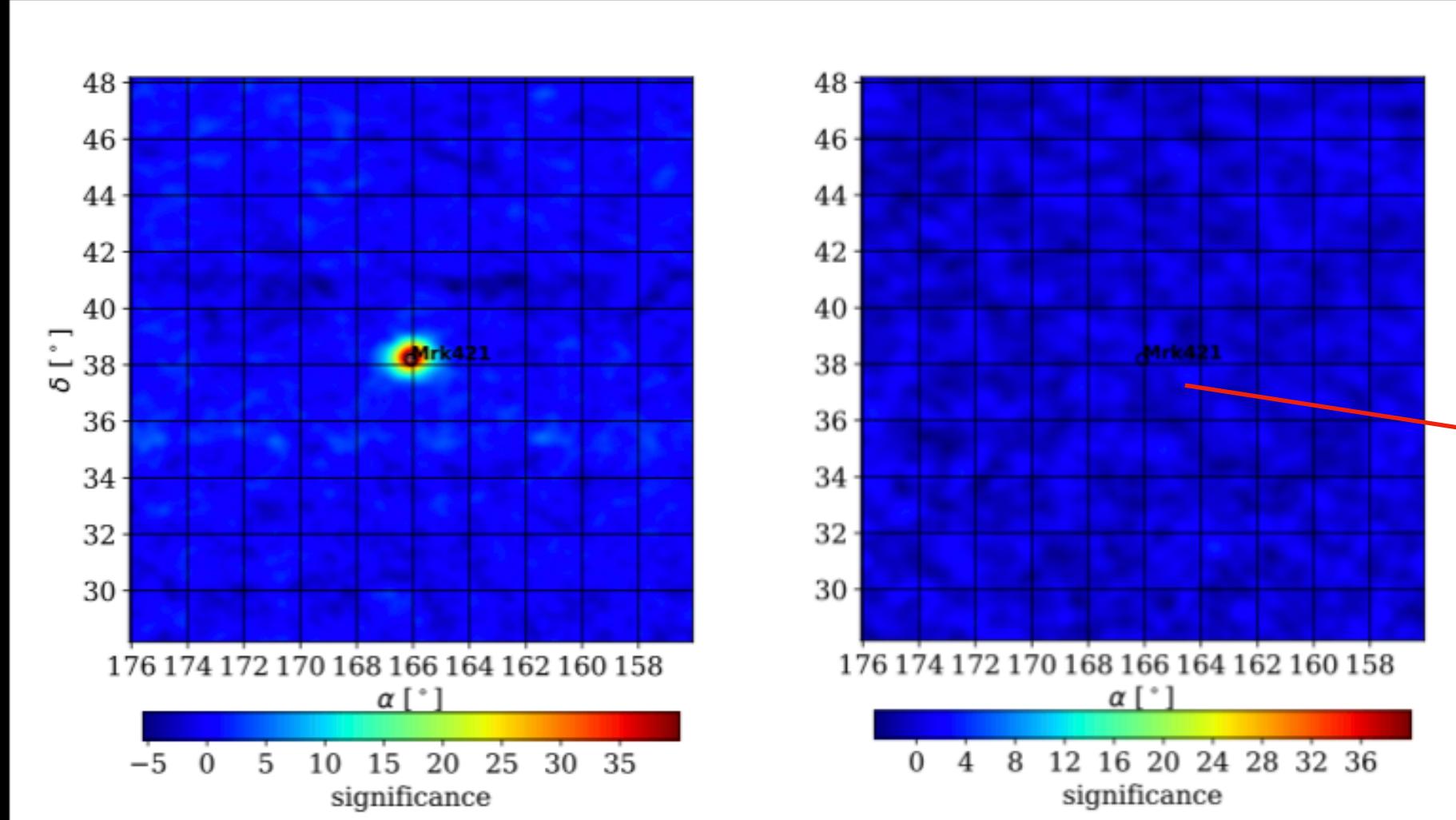
# Best Fit Model



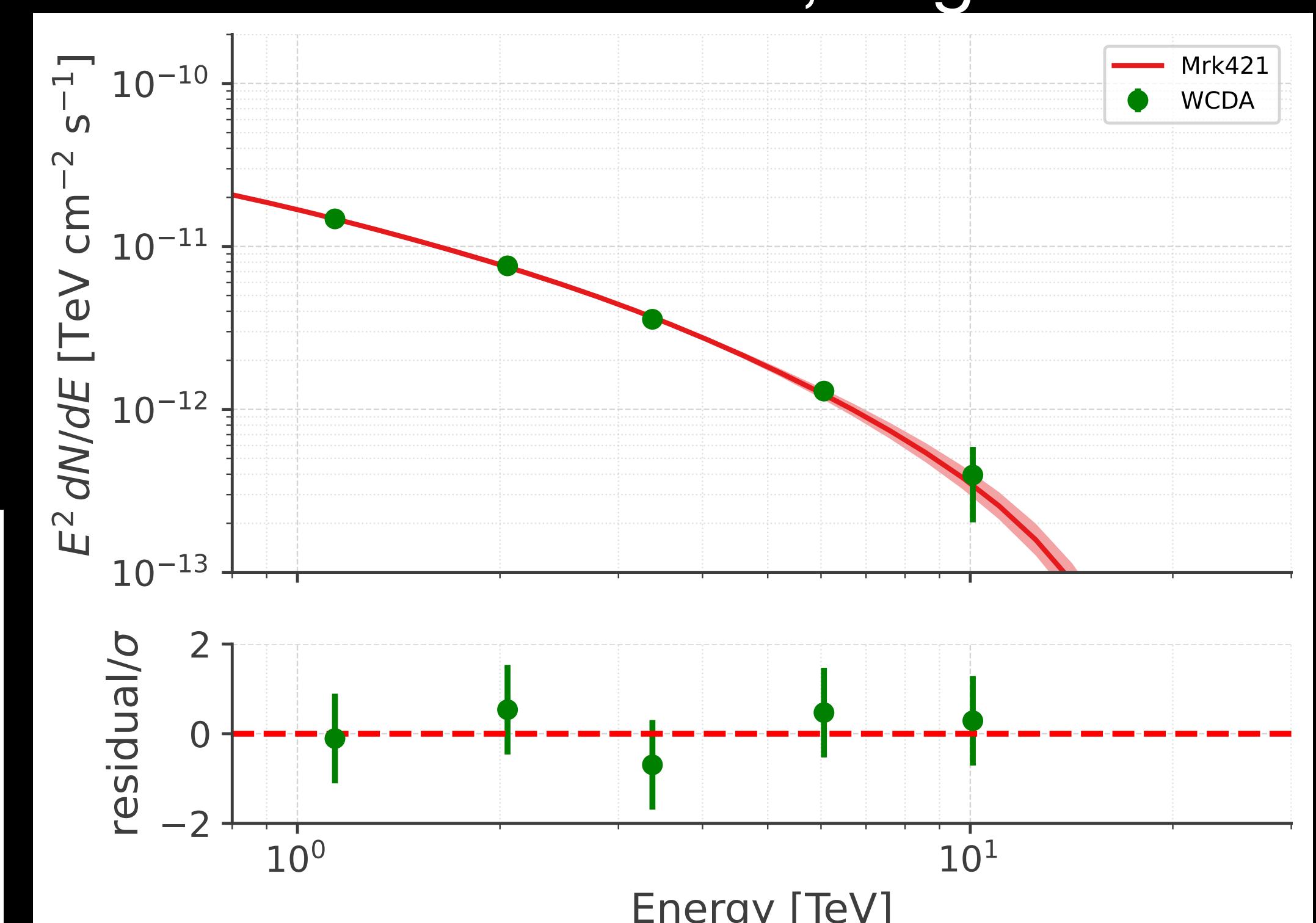
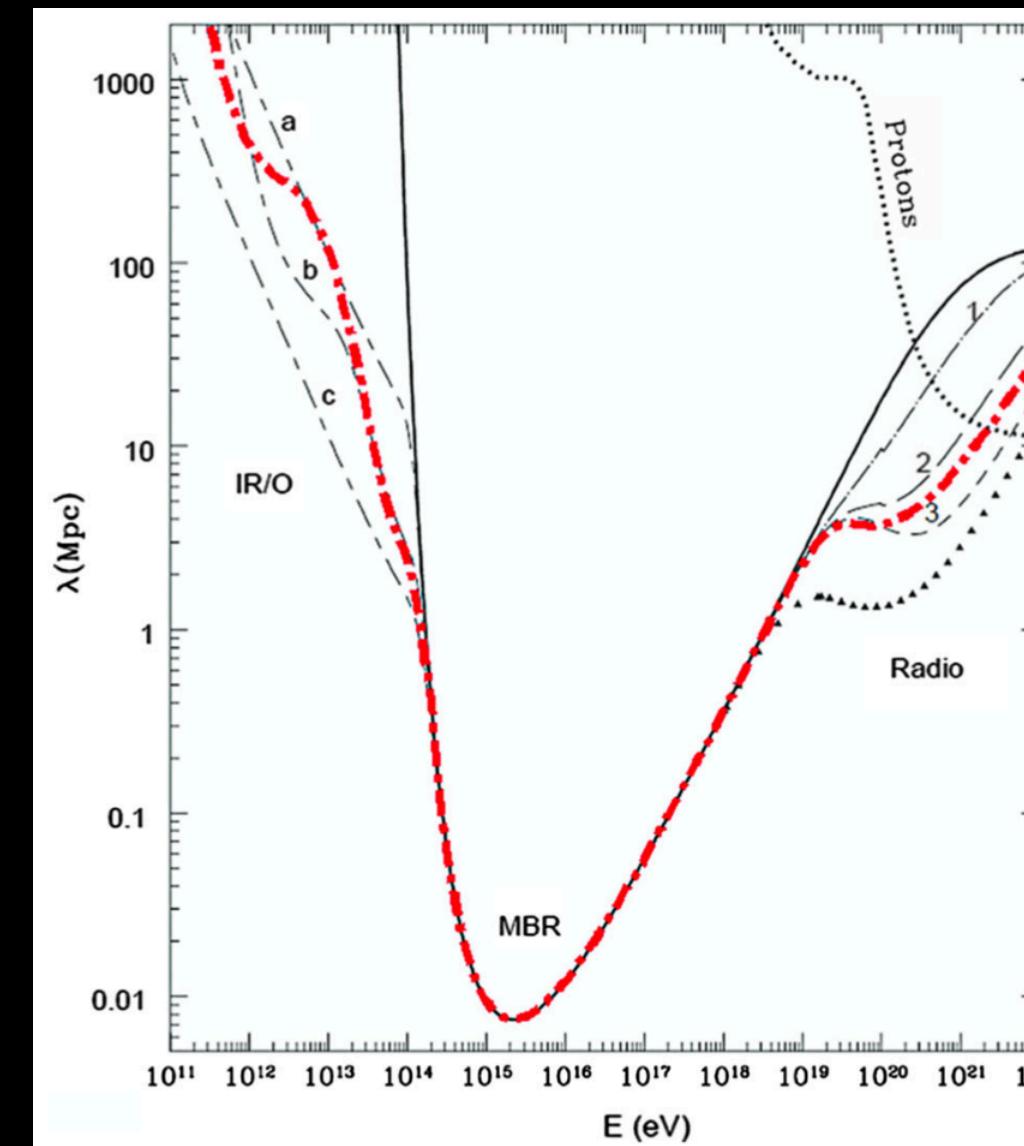
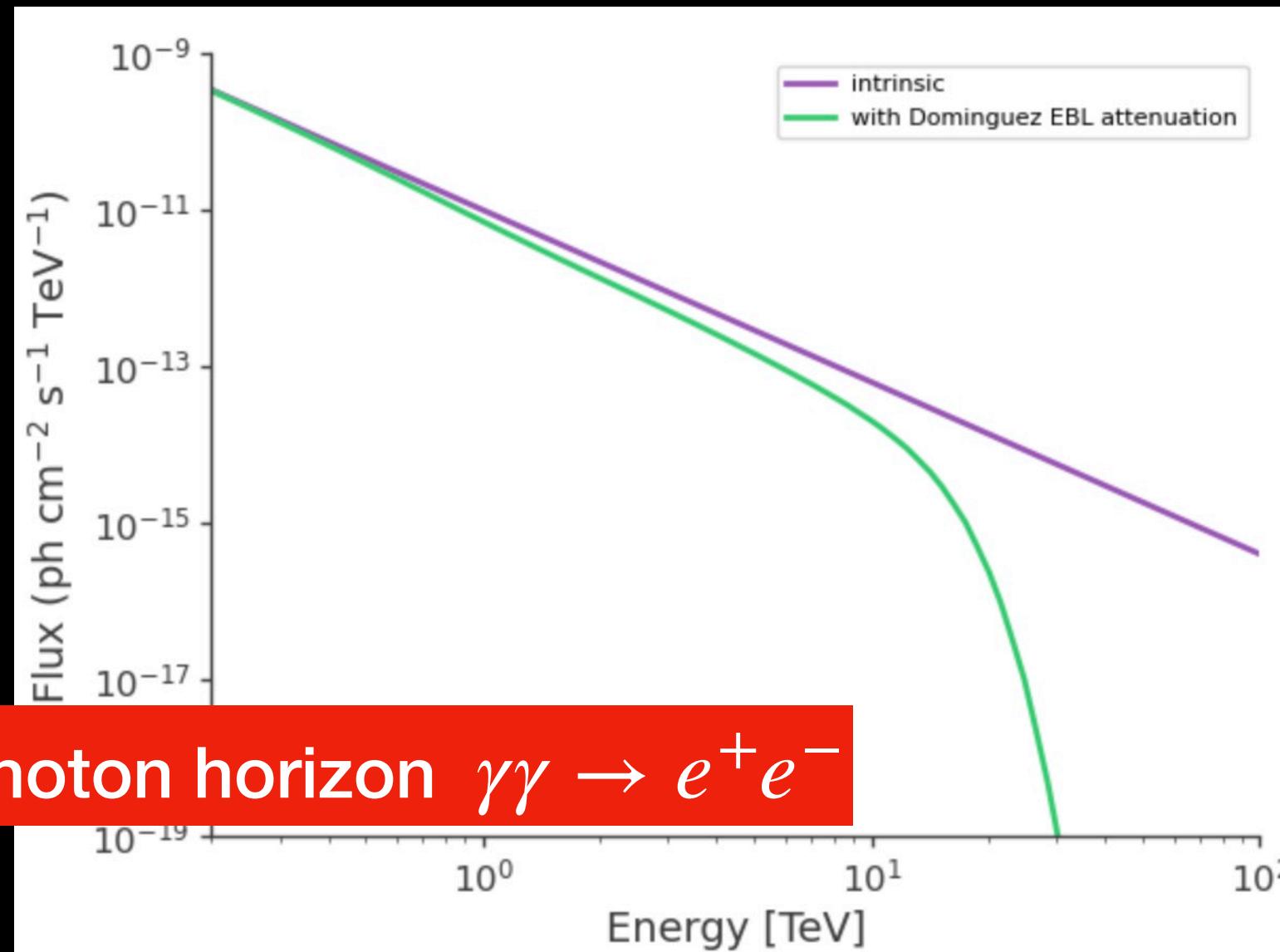
G+C gives largest TS values



# AGN Energy Spectrum

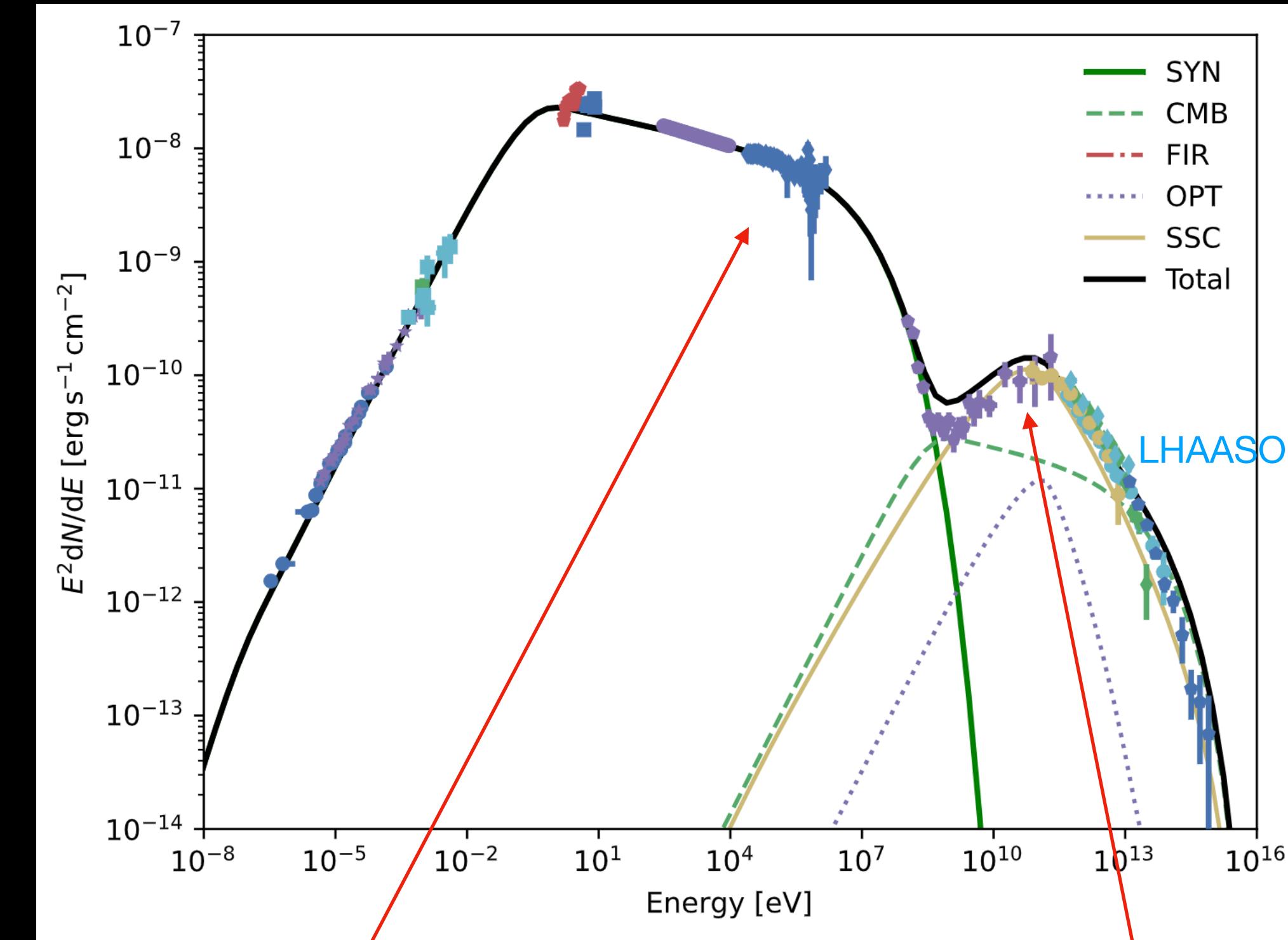
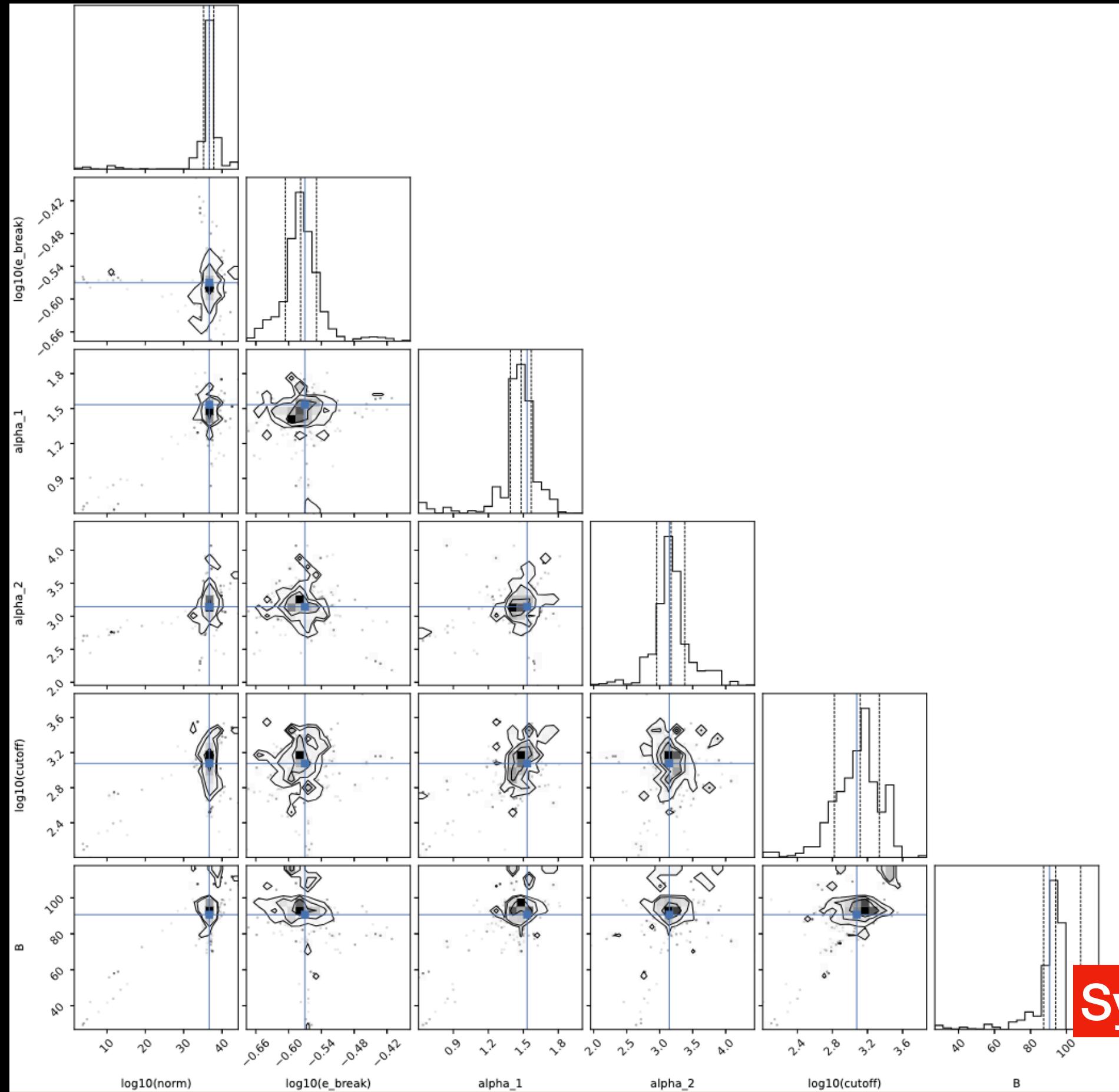


Significance Map of Mrk421, BL Lac,  $z=0.031$



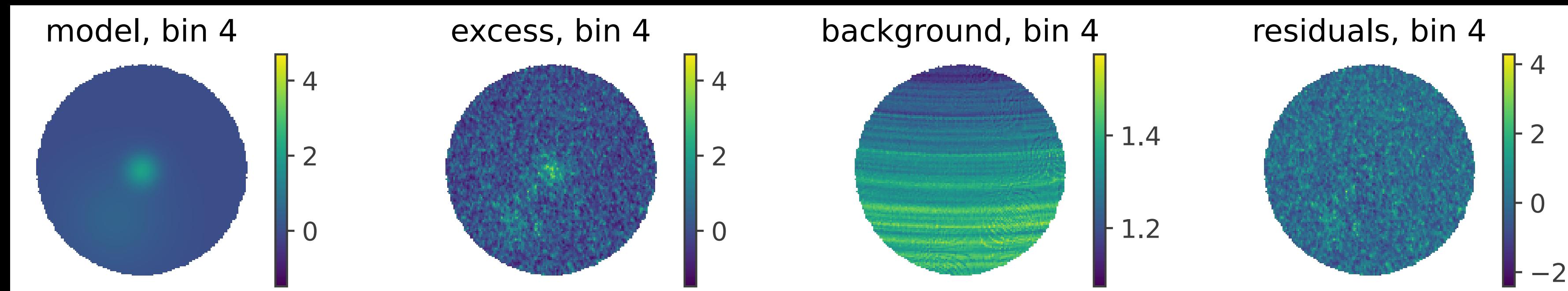
TS=5280.8

# SED Fitting For Crab Nebula



# Further Analysis

- Solve Blending Problem



- Multi-wavelength observations of AGN: From X-ray to TeV
- Correlation between HE emission and AGN activity