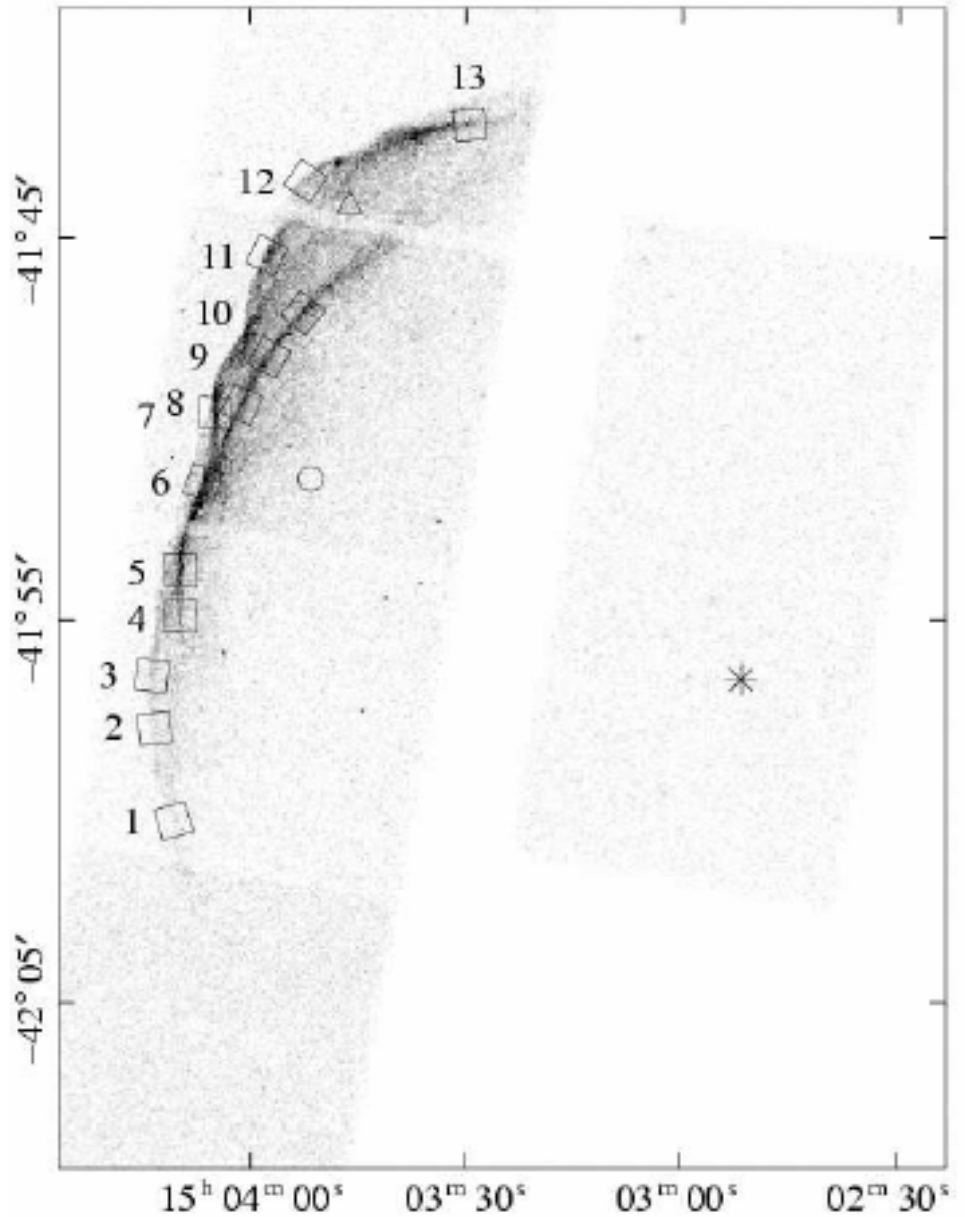
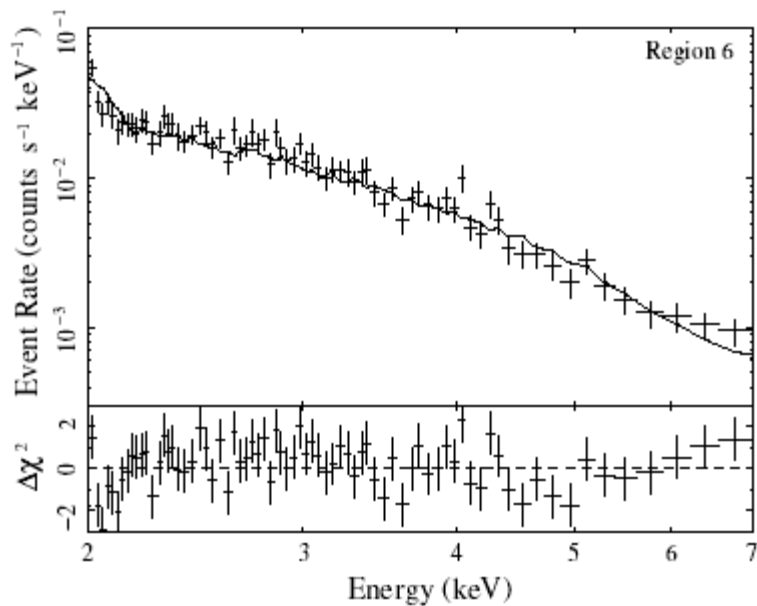


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Extract spectra for each region.



Synchrotron emission

For an electron energy distribution of the form: $N(E) \sim E^{-p}$

Producing synchrotron emission in a magnetic field B ,

The photon intensity distribution is of the form $I(\nu) \sim \nu^{-\alpha}$

Where $\alpha = (p-1)/2$

And the maximum photon energy is

$$E \approx (0.6 \text{ keV}) \left(\frac{B}{\mu\text{G}} \right) \left(\frac{E}{100 \text{ TeV}} \right)^2$$

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Assume an electron spectrum of the form

$$\frac{dn}{dpc} = A \left(\frac{pc}{\text{GeV}} \right)^{-\Gamma + a \log\left(\frac{pc}{\text{GeV}}\right)} e\left(\frac{\text{GeV} - E}{\epsilon}\right)$$

and infer a magnetic field using a combination of TeV measurements (IC) and X-ray (synchrotron from same electrons).

Then calculate expected photon spectrum.

Find $\Gamma \sim 2.2$ and cutoff energy ~ 20 TeV.