## Estimating the errors in $r_{\rm cat}$ via flux variability analysis

We define:

$$r_{\text{cat}} = \frac{\alpha \cdot v_i}{E_i}$$

$$\log(r_{\text{cat}}) = \log(\alpha) + \log(v_i) + \log(E_i)$$
(2)

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where  $\alpha$  is the error in flux measurement.

