

## **pc.egptail: The PC prior for the tail parameter in the EGP likelihood**

### **Parametrization**

This is (approximate) the PC prior for the tail parameter  $\xi$  in the EGP likelihood, where we use that the KLD to the base-model  $\xi = 0$  is

$$\text{KLD} \approx \xi^2.$$

This means that the pc-prior is

$$\pi(\xi) = \lambda \exp(-\lambda|\xi|) \frac{1}{Z}$$

where  $Z$  depends on the  $\xi$ -interval where this prior is defined (see next subsection).

### **Specification**

This prior is to be used with `family = "egp"`.

This prior for the hyperparameter  $\xi$  is specified in the `hyper`-specification, as

```
hyper = list(<theta> = list(prior="pc.egptail", param=c(<lambda>, <low>, <high>)))
```

restricted to the interval  $[\text{low}, \text{high}]$ . The default interval is  $[-1/2, 1/2]$ .

### **Example**

### **Notes**