Package ‘QuantileNPCI’

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Type Package
Title Nonparametric Confidence Intervals for Quantiles
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exactBeta  

*Calculate lower and upper CI of a given quantile using exact method, based on beta distribution*

**Description**

Calculate lower and upper CI of a given quantile using exact method, based on beta distribution

**Usage**

```r
exactBeta(n, q, alpha)
```

**Arguments**

- `n`: sample size
- `q`: quantile
- `alpha`: desired significance level

**Value**

a list of the lower and upper confidence limit of the quantiles. Values are between [0,1]

- `u1`: lower confidence limit of the quantile
- `u2`: upper confidence limit of the quantile

**Examples**

```r
QuantileNPIC:::exactBeta(25, 0.5, 0.05)
```

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**flood**  

*The flood rate of Feature River and Blackstone River.*

**Description**


**Usage**

```r
flood
```
quantCI

Format
A data frame with 96 rows and 3 variables:

loc  River name
year  year of the record
discharge  flood discharge rate

Description
Calculate nonparametric confidence intervals for quantiles using fractional order statistics,

Usage
quantCI(x, q, alpha, method)

Arguments
x  vector of data
q  the quantile
alpha  the significance level
method  the method used for calculate the confidence interval. Options are "exact" or "approximate".

Value
returns a list of 5 values:

u1  the lower confidence limit of the quantile
u2  the upper confidence limit of the quantile
lower.ci  the estimated x value at u1
qx  the estimate x value of at the quantile q
upper.ci  the estimated x value at u2

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Examples
x <- c(3.5,2.4,2.1,1.3,1.2,2.2,2.6,4.2)
quantCI(x, q=0.5, alpha=0.05, method = "exact")
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