

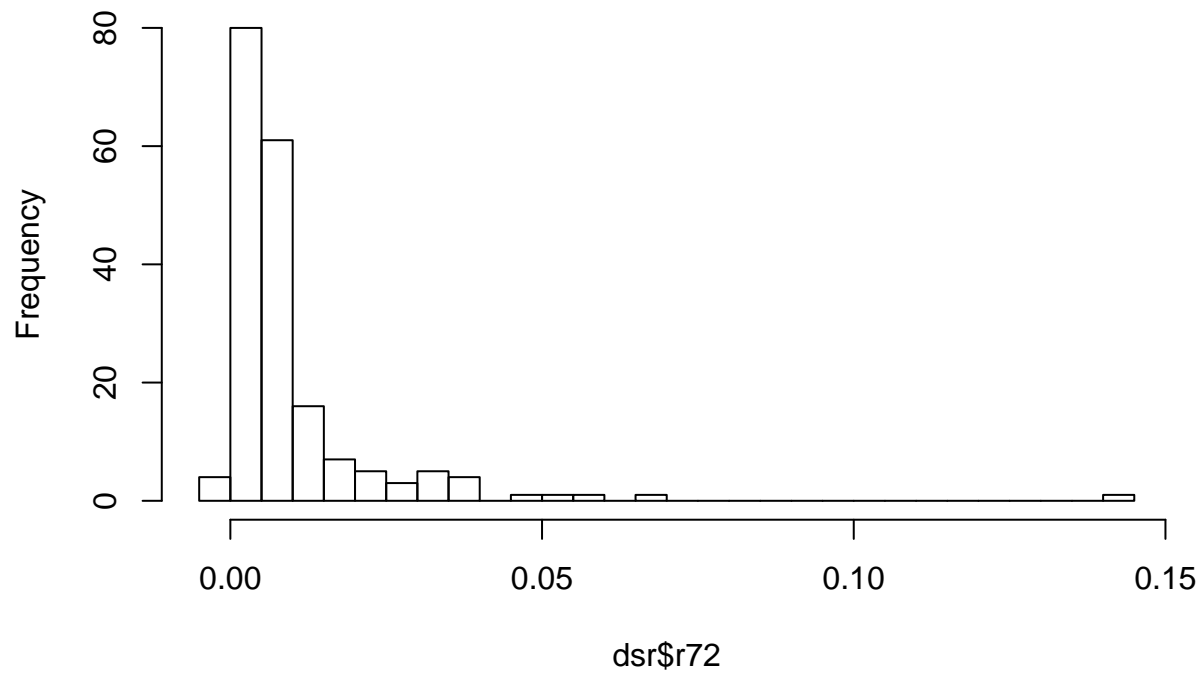
Emission error

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```
hist(dsr$r72, breaks = 30)
```

Histogram of dsr\$r72



```
quantile(dsr$r72)
```

```
##           0%           25%           50%           75%           100%  
## -0.0009435626  0.0034953460  0.0056790352  0.0093977309  0.1412962095
```

```
quantile(dsr$rr72)
```

```
##           0%           25%           50%           75%           100%  
## -0.27496519  0.01610747  0.02422149  0.03634921  0.13131873
```

```
quantile(dsr$r168)
```

```
##           0%           25%           50%           75%           100%  
## -0.002080023  0.002258740  0.003841420  0.007021518  0.104996167
```

```
quantile(dsr$rr168)
```

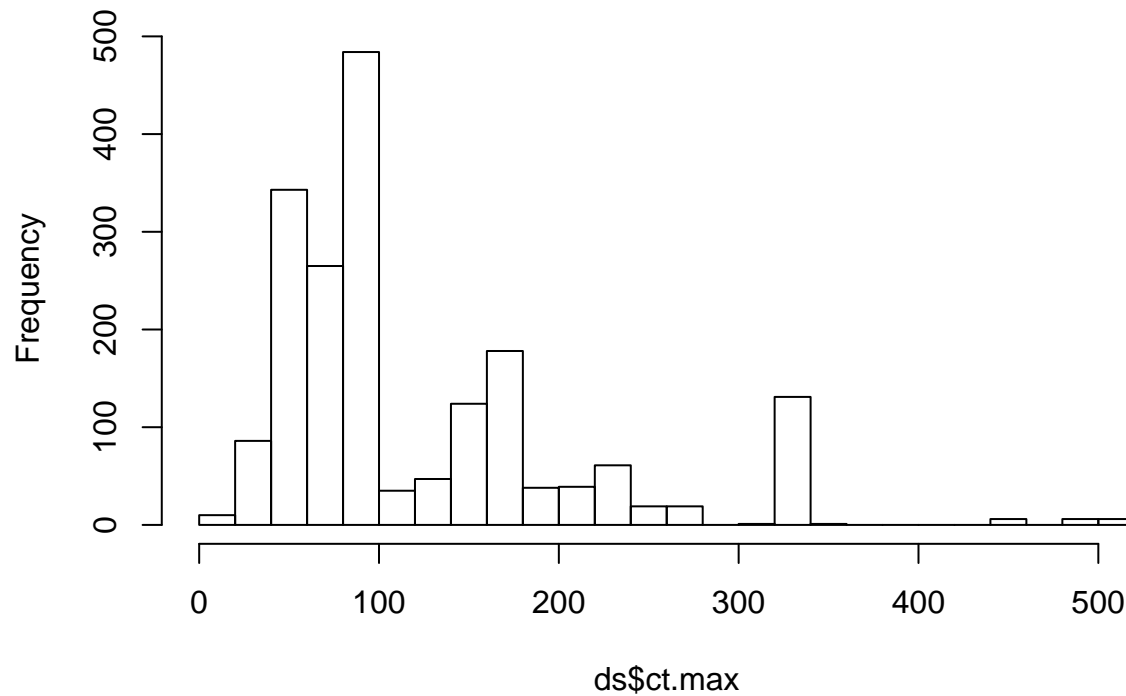
```
##           0%           25%           50%           75%           100%  
## -0.305363536  0.008307685  0.016031442  0.027972404  0.180514871
```

```
dfsumm(dsr)
```

```
##  
## 190 rows and 5 columns  
## 190 unique rows  
##           pmid           r72          rr72          r168          rr168  
## Class           integer    numeric numeric    numeric numeric  
## Minimum           306 -0.000944 -0.275 -0.00208 -0.305  
## Maximum           1544    0.141    0.131    0.105    0.181  
## Mean              1031  0.00979  0.0284    0.0083  0.0204  
## Unique (excl. NA)    190      190      190      190      189  
## Missing values       0         0         0         0         0  
## Sorted              TRUE      FALSE      FALSE      FALSE      FALSE
```

```
hist(ds$ct.max, breaks = 20)
```

Histogram of ds\$ct.max



```
quantile(ds$ct.max)
```

```
##      0%      25%      50%      75%     100%
##  1.0167  69.5000  94.9000 165.0000 508.0000
```

```
# Calculate more from ds
```

```
ds$inc.p72 <- 100 * (ds$e.rel.final / ds$e.rel.72 - 1)
```

```
quantile(subset(ds, ct.max > 168)$inc.p72, na.rm = TRUE)
```

```
##      0%      25%      50%      75%     100%
## -108.37103  10.59526  23.24391  39.46414 185.81529
```

```
names(ds)
```

```
##      [1] "inst"          "eid"           "pid"
```

##	[4]	"pmid"	"database"	"proj"
##	[7]	"exper"	"exper2"	"institute"
##	[10]	"country"	"file"	"first.row.in.file"
##	[13]	"last.row.in.file"	"pub.id"	"pub.info"
##	[16]	"lat"	"long"	"topo"
##	[19]	"field"	"plot"	"plot.area"
##	[22]	"treat"	"rep"	"rep2"
##	[25]	"n.ints"	"t.start.p"	"t.end.p"
##	[28]	"dt1"	"dt.min"	"dt.max"
##	[31]	"ct.min"	"ct.max"	"meas.tech"
##	[34]	"meas.tech2"	"meas.tech.orig"	"j.NH31"
##	[37]	"j.rel1"	"e.1"	"e.4"
##	[40]	"e.6"	"e.12"	"e.24"
##	[43]	"e.48"	"e.72"	"e.96"
##	[46]	"e.final"	"e.rel.1"	"e.rel.4"
##	[49]	"e.rel.6"	"e.rel.12"	"e.rel.24"
##	[52]	"e.rel.48"	"e.rel.72"	"e.rel.96"
##	[55]	"e.rel.final"	"clay"	"silt"
##	[58]	"sand"	"oc"	"soil.type"
##	[61]	"soil.type2"	"soil.water"	"soil.moist"
##	[64]	"soil.ph"	"soil.dens"	"crop.res"
##	[67]	"till"	"air.temp.6"	"air.temp.12"
##	[70]	"air.temp.24"	"air.temp.48"	"air.temp.72"
##	[73]	"air.temp.mn"	"air.temp.z"	"soil.temp.6"
##	[76]	"soil.temp.12"	"soil.temp.24"	"soil.temp.72"
##	[79]	"soil.temp.48"	"soil.temp.mn"	"soil.temp.z"
##	[82]	"rad.6"	"rad.12"	"rad.24"
##	[85]	"rad.48"	"rad.72"	"rad.mn"
##	[88]	"wind.6"	"wind.12"	"wind.24"
##	[91]	"wind.48"	"wind.72"	"wind.mn"
##	[94]	"wind.z"	"wind.2m.6"	"wind.2m.12"
##	[97]	"wind.2m.24"	"wind.2m.48"	"wind.2m.72"
##	[100]	"wind.2m.mn"	"wind.loc"	"rain.1"
##	[103]	"rain.6"	"rain.12"	"rain.24"
##	[106]	"rain.48"	"rain.72"	"rain.tot"
##	[109]	"rain.rate.1"	"rain.rate.6"	"rain.rate.12"
##	[112]	"rain.rate.24"	"rain.rate.48"	"rain.rate.72"
##	[115]	"rain.rate.mn"	"rh.6"	"rh.12"
##	[118]	"rh.24"	"rh.48"	"rh.72"

## [121]	"rh.mn"	"far.loc"	"man.source"
## [124]	"man.source.orig"	"man.bed"	"man.con"
## [127]	"man.trt1"	"man.trt2"	"man.stor"
## [130]	"man.dm"	"man.tkn"	"man.tan"
## [133]	"acid"	"man.tic"	"man.ua"
## [136]	"man.ph"	"man.freeNH3"	"man.eq.gasNH3"
## [139]	"date.start"	"app.start"	"app.start.orig"
## [142]	"app.method"	"app.method2"	"app.method.orig"
## [145]	"app.rate"	"tan.app"	"incorp"
## [148]	"incorp.orig"	"time.incorp"	"man.area"
## [151]	"dist.inj"	"furrow.z"	"furrow.w"
## [154]	"crop"	"crop.orig"	"crop.z"
## [157]	"crop.area"	"lai"	"notes"
## [160]	"flag"	"inc.p72"	