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Subject: Scalers in prespec software

Posted by [Michael Reese](#) on Wed, 31 Aug 2016 11:41:00 GMT

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There is a feature in the prespec package, that allows to plot a ratio of two scaler values (s1 and s2) over time.

If the s2 is just the time (the time can be interpreted as scaler value that is increased with a constant frequency), then a plot of the rate of s1 over time is obtained.

The keyword for this is

```
rate s1:s2 resolution,duration
```

where resolution determines how wide the bins of the rate-histogram will be, and duration says how much time (in units of s2) the rate-histogram covers.

For example, If one adds the following lines to the file "Daq/scaler.config" in the analysis script (the one that was running online analysis during 2014 campaign)

```
processor Blub/test1 UTILS.Pair
first <- Daq/Scaler.trlo41_line3_09_ACC_TRIG10_part_sc41_reduced
second <- Daq/Scaler.time
rate first:second 1.0,100 in test
end
```

```
processor Blub/test2 UTILS.Pair
first <- Daq/Scaler.trlo25_line2_09_Free_TRIG10
second <- Daq/Scaler.time
rate first:second 1.0,100 in test
end
```

```
processor Blub/test3 UTILS.Pair
first <- Daq/Scaler.trlo25_line2_09_Free_TRIG10
second <- Daq/Scaler.trlo41_line3_09_ACC_TRIG10_part_sc41_reduced
rate first:second 1000.0,1000000 in test
end
```

The following will appear in Go4 (from the lowest histogram, one can read that the ratio of the two scalers is around 1.3)

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## File Attachments

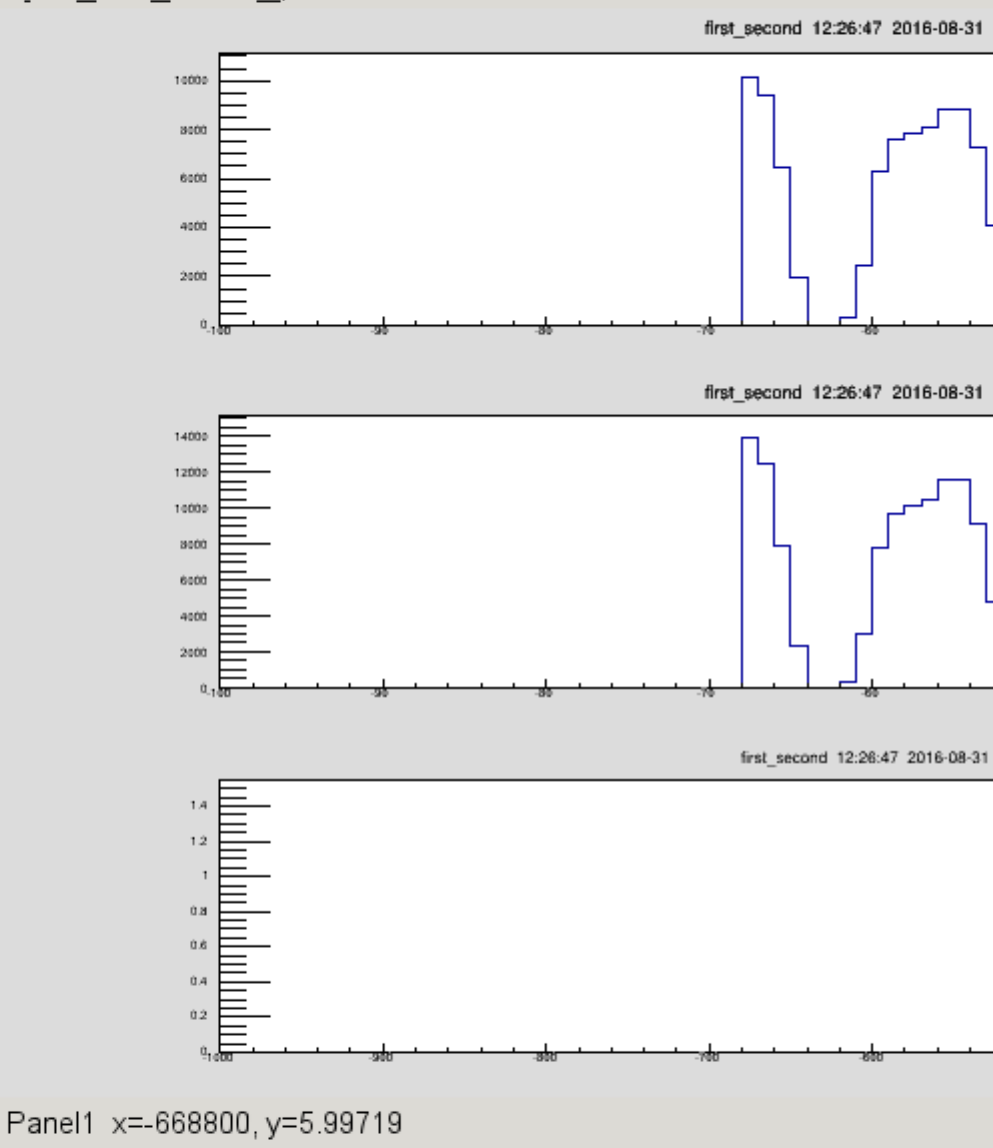
1) [scaler\\_in\\_prespec.png](#), downloaded 617 times

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2 s All items scatter No Errors Cartesian X: Lin Y: L

Browser

Name	Info
Workspace	folder
Analysis	Controller r
Histograms	All Histograms
crates	UserFolder
Agata	UserFolder
TimeRef	UserFolder
TestScaler	UserFolder
Daq	UserFolder
Blub	UserFolder
test	UserFolder
Blu...	first_second
Blu...	first_second
Blu...	first_second
Frs	UserFolder
Lycca	UserFolder
Hector	UserFolder
particle	UserFolder
gamma	UserFolder
Conditions	All Conditions
Parameters	All Parameters
DynamicLists	Dynamic Lists
Trees	References
Pictures	Picture objects
Canvases	All TCanvas
EventObjects	Event objects
UserObjects	For User C



Log window

Date	Time	Type	Description
31.08.16	12.26.47	Info	Analysis nameslist was requested from client current
31.08.16	12.26.44	Info	Client UserClient-lxg0146-27579 working function is stopped...
31.08.16	12.26.44	Info	AnalysisClient UserClient-lxg0146-27579 has STOPPED analysis processing
31.08.16	12.26.37	Info	Analysis nameslist was requested from client current
31.08.16	12.26.36	Info	Analysis nameslist was requested from client current
31.08.16	12.26.35	Info	Analysis nameslist was requested from client current
31.08.16	12.26.34	Info	Analysis nameslist was requested from client current
31.08.16	12.26.31	Info	Client UserClient-lxg0146-27579 working function is started...
31.08.16	12.26.31	Info	AnalysisClient UserClient-lxg0146-27579 has started analysis processing.
31.08.16	12.26.31	Info	Analysis nameslist was requested from client current

/data.local/80Kr\_Be\_cent\_0482.lmd ██████████ Current Ev/s 928 Average Ev/s