

ctools - Change request #2656

Use full true energy binning in csspec for the RMF

08/01/2018 12:10 PM - Knödlseider Jürgen

Status:	Closed	Start date:	08/01/2018
Priority:	Normal	Due date:	
Assigned To:	Knödlseider Jürgen	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	1.6.0		
Description			
Currently, csspec applies a 20% margin to determine the true energy range from the reconstructed energy range. This appears not to be sufficient for HESS data. A solution would be to check the RMF and get the corresponding energy boundaries, but even simpler, all etrue energy bins could be used.			

History

#1 - 08/01/2018 10:12 PM - Knödlseider Jürgen

- Status changed from New to Pull request

- % Done changed from 0 to 100

csspec now uses the full true energy range of the RMF for an On/Off analysis, making sure that the tails of the energy dispersion are not cut in case that they are wider than the 20% margin.

Specifically, the following code is now implemented in `csspec._select_onoff_obs()`:

```
# Select energy bins in etrue and ereco. All etrue energy bins are
# selected. A 0.1% margin is added for reconstructed energies to
# accomodate for rounding errors.
etrue = obs.rmf().etrue()
ereco = gammalib.GEbounds()
itrue = [i for i in range(obs.rmf().etrue().size())]
ireco = []
for i in range(obs.rmf().emeasured().size()):
    ereco_bin_min = obs.rmf().emeasured().emin(i)
    ereco_bin_max = obs.rmf().emeasured().emax(i)
    if ereco_bin_min * 1.001 >= emin and ereco_bin_max * 0.999 <= emax:
        ereco.append(ereco_bin_min, ereco_bin_max)
        ireco.append(i)
```

#2 - 08/01/2018 10:47 PM - Knödseder Jürgen

- Status changed from Pull request to Closed

Merged into devel.