

ctools - Change request #2656

Use full true energy binning in csspec for the RMF

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

<b>Status:</b>	Closed	<b>Start date:</b>	08/01/2018
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>	Knödlseider Jürgen	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	1.6.0		
<b>Description</b>			
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.