

### \*\*\* Abstract

- I invite the author to call the unresolved gamma-ray background the isotropic gamma-ray background as done in many other publications. This avoid to create confusion in the community about what is the UGRB and the IGRB

There is a reason why I do not call this component IGRB, even if I do not have strong preferences between UGRB and IGRB. I estimate the energy spectrum of this extragalactic component (masking the resolved sources and subtracting a galactic model) I prefer not to call it "IGRB spectrum", because there are dedicated and more accurate analyses on that, with which I do not want to compete. Also, UGRB, which is amore accurate definition since this component is not isotropic, as been already used and it's quite common inside auto- and cross-correlation community (see Tröster et al.: arXiv: 1611.03554v2; Branchini et al.: arXiv:1612.05788v1; Cuoco et al.2017 ApJS 232 10; etc...). The Fermi Collaboration will decide which acronym is the best for the paper that will be written. For this proceeding I will keep UGRB since in the talk I gave at the symposium I used this acronym.

- with eight year of Fermi-LAT Pass 8 data: I'd say using 8 years and also Fermi should be Italicized everywhere in the text. Also in sec 1, Pass 8 is italicized. I recommend to be consistent throughout the paper

corrected

### \*\*\* Sec 1

- flagged with PSF0 type -> flagged as PSF0 type events.

corrected

-why does the author start at 158 MeV and not, say, at 100 MeV ?

The choice of the energy range, as usually happens, is an *in itinere* process. Indeed we have 100 logarithmic micro energy bins from 100MeV and 1 TeV, and we group them in other to obtain the macro bins as explained in the proceeding. So the energy ends of the macro bins are given by the first and the last micro bins that are merged. Also, when we started this analysis the first bin was starting at ~500 MeV (524 MeV precisely), then we tried to push down the measurement until it was reasonable, trying to keep the width of the energy bins almost constant (logarithmically speaking). So we added the 2 lower bins that you see in this proceeding (the first one starts at 158 MeV).

-majority of the galactic emission: galactic -> Galactic (and everywhere in the paper)

corrected.

-the phrase about how the disk radius changes with energy is not clear. It seems it increases with energy, while the text states that it shrinks. Also it is not clear what happes below 1 GeV.

Here there may be a misunderstanding: the text in the brackets "above 1 GeV" refers to "the integral flux of the sources", in the sense that we take the parameter "Flux1000" given by the catalog to define a radius for each source which is bigger for high-flux sources and smaller for fainter sources. Maybe the sentence is more clear if I remove the brackets and just leave the details for the future paper. I think, though, it is clear that the mask shrinks with the energy, since the radius for each source is defined as a multiple of the PSF at a given energy (the lower end of the bin), and the PSF improves with the energy.

### \*\*\* Sec 2

- pixel area -> pixel solid angle

Actually, if the pixel area is in radians square, it is the same number. Anyway I changed it.

- when quoting the power law index (should be written as power-law index) of the IGRB (-2.3) I'd add a reference to Ackermann et al. 2015  
done.

- pag 3.: as function of energy (remove the)  
thanks, corrected.

### \*\*\* Sec 3

- when mentioning the detection efficiency I would add a reference to Abdo et al. 2010, ApJ 720, 435.

If I have to add a reference here, I would add the following one, which is a more recent work:

arXiv:1711.03111 [astro-ph.HE]  
it is on arrive

- catalog ....., which also giveS a definition  
thanks, corrected.

### \*\*\*\* Conclusions

- Pass8 processing -> to the new event level analysis, Pass 8.  
corrected.

### \*\*\*\* References

- the references should follow the style reported here: <https://pos.sissa.it/PoSauthmanual.pdf> (sec 2.3)  
corrected, but I had to make the text smaller to stay in the page limit.

### \*\*\* Figures

- all figures should have larger labels.  
The pdf is vector format and there is no need to print (and waste) paper nowadays :)