

Pointlike and gtlike SED comparison

6 August 2011

Start time: 239557417 (MET)

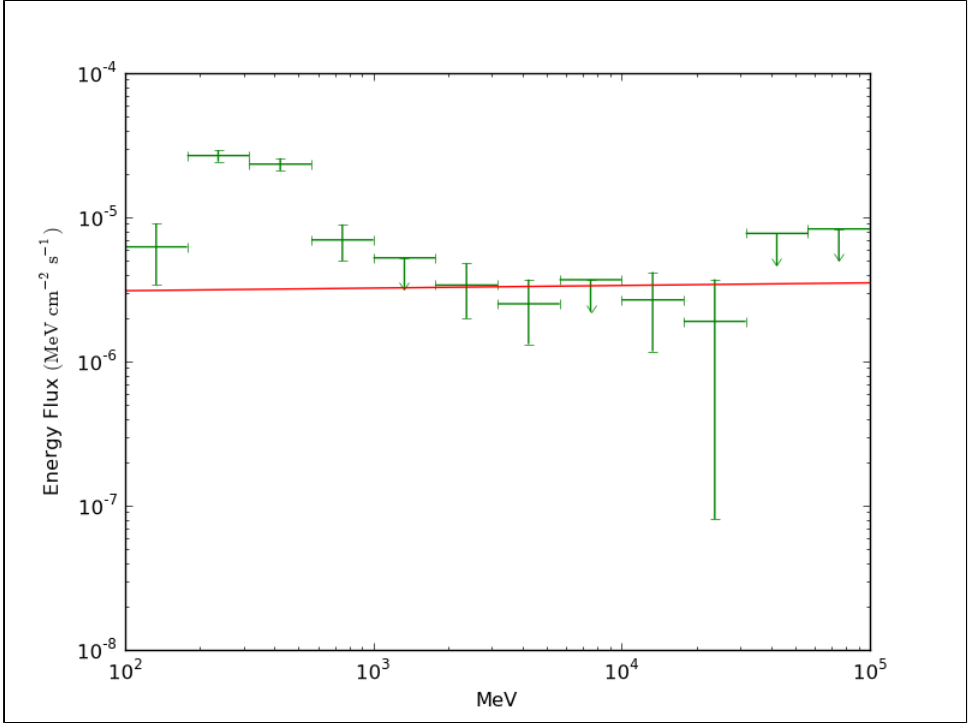
Stop time: 333927212 (MET)

Energy: 100MeV - 100GeV

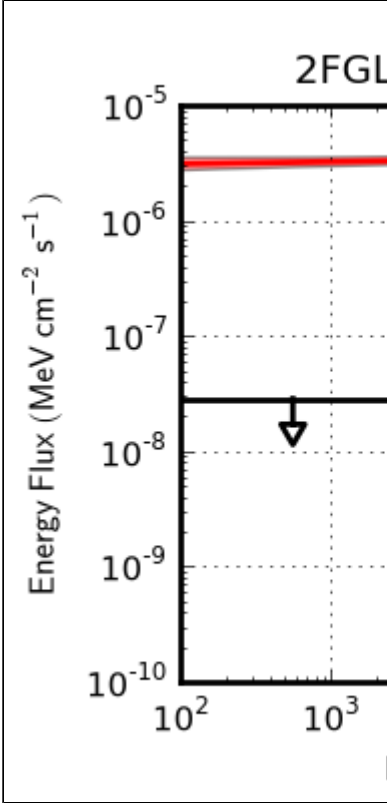
ROI: 20 degrees diameter

The following two SEDs were generated for [SNR G349.7+0.2](#)

home directory: /afs/slac/g/glast/users/ariel/G349702



Generated using gtlike



Generated using pointlike

Energy	Flux	Flux_Err
[MeV]	[ph/cm^2/s /MeV]	[ph/cm^2/s /MeV]
133.4	3.5e-10	1.6e-10
237.1	4.8e-10	4.4e-11
421.7	1.3e-10	1.3e-11
749.9	1.2e-11	3.5e-12
1333.5	<2.9e-12	
2371.4	6.0e-13	2.5e-13
4217.0	1.4e-13	6.7e-14
7498.9	<6.6e-14	
13335.2	1.5e-14	8.4e-15
23713.7	3.4e-15	3.2e-15

42169.6	<4.3e-15	
74989.4	<1.5e-15	

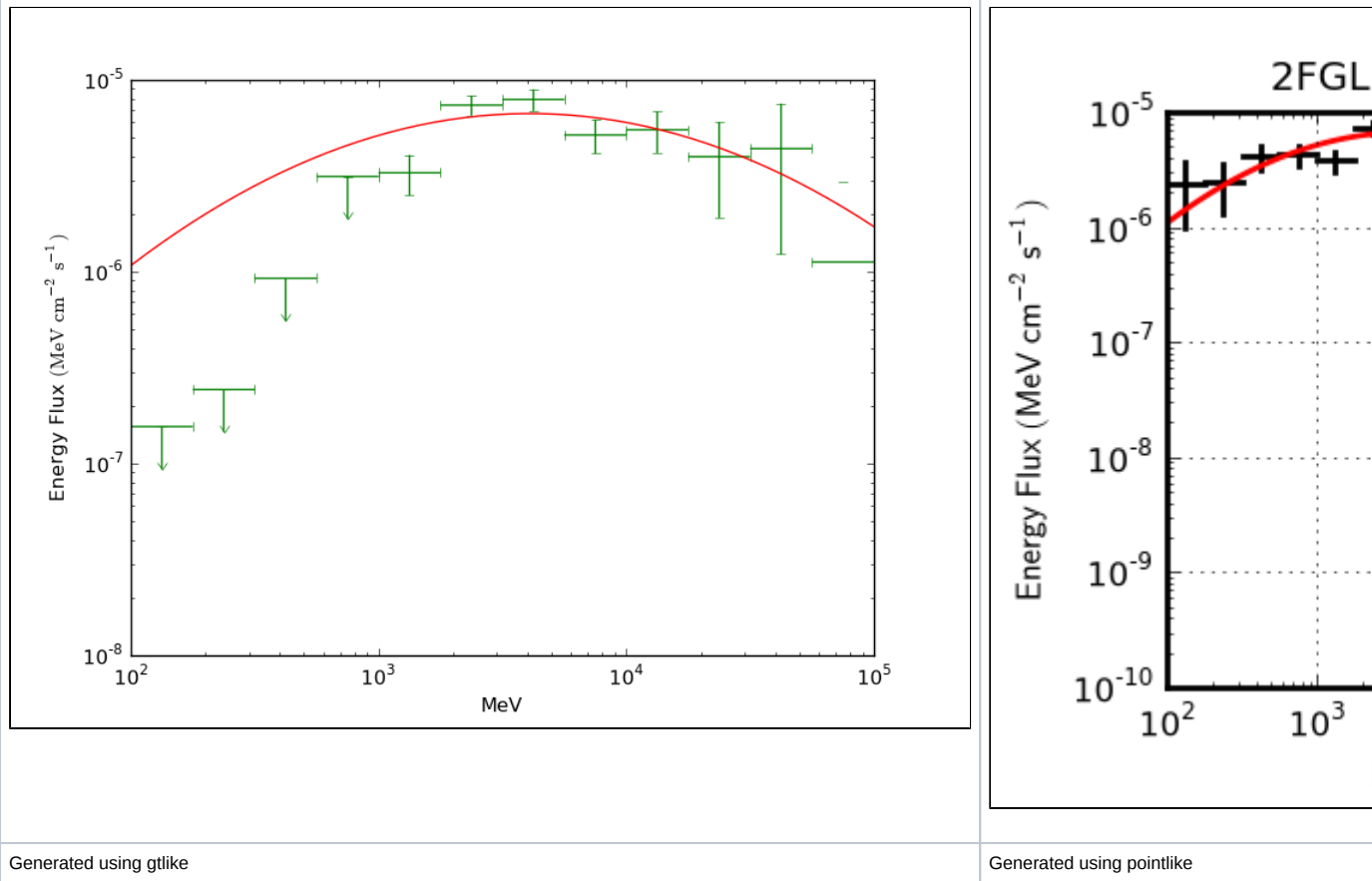
TS: -686

Norm : (1 + 0.090 - 0.083) (avg = 0.086) 1.5e-13
Index : (1 + 0.014 - 0.014) (avg = 0.014) 1.98
Ph. Flux : (1 + 0.052 - 0.049) (avg = 0.050) 3.15e-08 (DERIVED)
En. Flux : (1 + 0.097 - 0.088) (avg = 0.092) 4.28e-11 (DERIVED)

Start = 239557417 seconds (MET)
Stop = 328855431 seconds (MET)

home directory: /afs/slac/g/glast/users/ariel/cassa2FGL

The following two SEDs were generated for [Cassiopeia A](#)



Energy	Flux	Flux_error
[MeV]	[ph/cm^2/s /MeV]	[ph/cm^2/s /MeV]
133.4	<8.8e-12	
237.1	<4.3e-12	
421.7	<5.2e-12	
749.9	<5.6e-12	
1333.5	1.8e-12	4.4e-13
2371.4	1.3e-12	1.6e-13
4217.0	4.4e-13	5.7e-14
7498.9	9.2e-14	1.8e-14

13335. 2	3.1e-14	7.5e-15
23713. 7	7.1e-15	3.7e-15
42169. 6	2.5e-15	1.8e-15
74989. 4	2.0e-16	3.3e-16

TS: 623

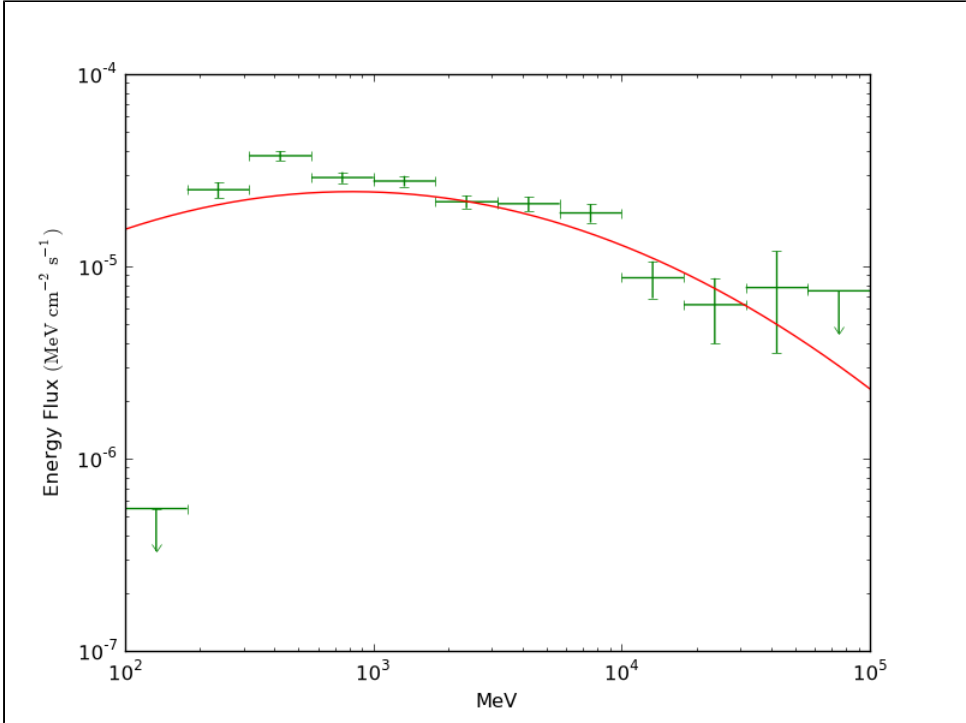
Norm : (1 + 0.000 - 0.000) (avg = 0.000) 7.54e-13
Index : (1 + 0.004 - 0.004) (avg = 0.004) 1.91
beta : (1 + 0.355 - 0.262) (avg = 0.305) 0.133
E_break : (1 + 0.000 - 0.000) (avg = 0.000) 2.96e+03
Ph. Flux : (1 + 0.000 - 0.000) (avg = 0.000) 2.56e-08 (DERIVED)
En. Flux : (1 + 0.441 - 0.306) (avg = 0.367) 4.99e-11 (DERIVED)

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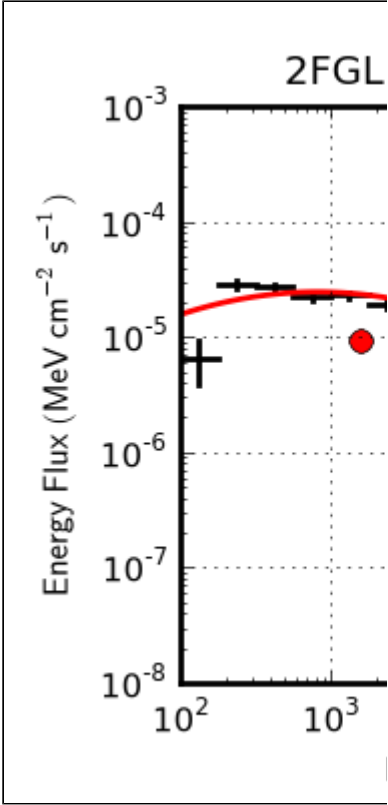
The following analysis is done for W49B.

home directory: /afs/slac/g/glast/users/ariel/W49B

Search Center (RA, Dec)	=	(287.788,9.10667)
Radius	=	20 degrees
Start Time (MET)	=	239557417 seconds (2008-08-04T15:43:37)
Stop Time (MET)	=	334486765 seconds (2011-08-08T08:59:25)
Minimum Energy	=	100 MeV
Maximum Energy	=	100000 MeV



Generated using gtlite



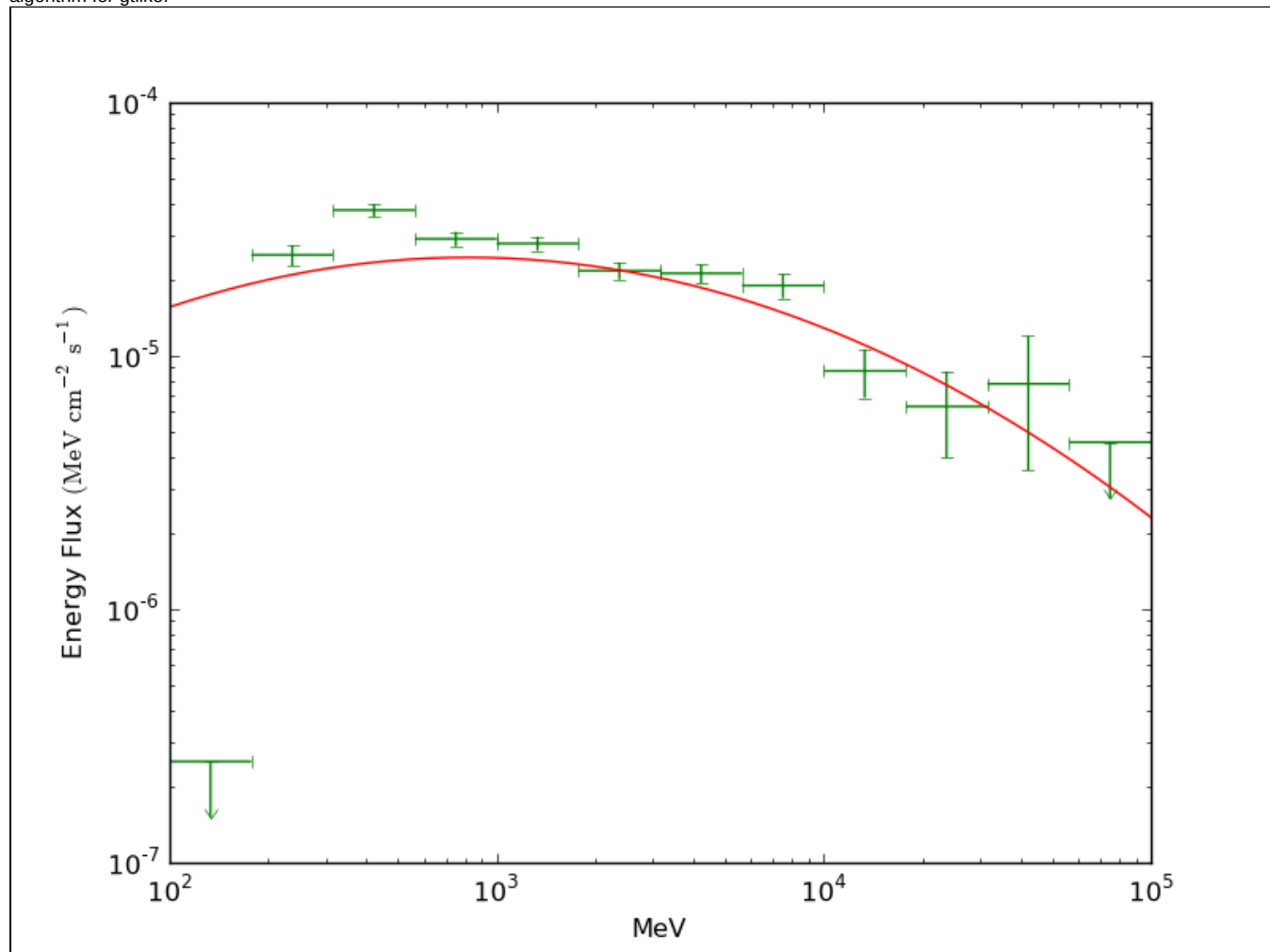
Generated using pointlike

Energy	Flux	Flux_error
[MeV]	[ph/cm^2/s /MeV]	[ph/cm^2/s /MeV]
133.4	<3.1e-11	
237.1	4.5e-10	4.1e-11
421.7	2.1e-10	1.2e-11
749.9	5.2e-11	3.4e-12
1333.5	1.6e-11	9.9e-13
2371.4	3.9e-12	2.9e-13
4217.0	1.2e-12	1.0e-13
7498.9	3.4e-13	3.7e-14
13335. 2	4.9e-14	1.1e-14
23713. 7	1.1e-14	4.2e-15
42169. 6	4.4e-15	2.4e-15
74989. 4	<1.3e-15	

TS: 1719

Norm : (1 + 0.000 - 0.000) (avg = 0.000) 9.18e-12
 Index : (1 + 0.000 - 0.000) (avg = 0.000) 2.14
 beta : (1 + 0.199 - 0.166) (avg = 0.182) 0.102
 E_break : (1 + 0.000 - 0.000) (avg = 0.000) 1.6e+03
 Ph. Flux : (1 + 0.000 - 0.000) (avg = 0.000) 1.98e-07 (DERIVED)
 En. Flux : (1 + 0.028 - 0.027) (avg = 0.028) 1.79e-10 (DERIVED)

In all of the previous SEDs the Bayesian method was used for the gtlake fitting algorithm. The next gtlake plot for W49B is done using the frequentist fitting algorithm for gtlake:



Energy	Flux	Flux_error
[MeV]	[ph/cm ² /s /MeV]	[ph/cm ² /s /MeV]
133.4	<1.4e-11	
237.1	4.5e-10	4.1e-11
421.7	2.1e-10	1.2e-11
749.9	5.2e-11	3.4e-12
1333.5	1.6e-11	9.9e-13
2371.4	3.9e-12	2.9e-13
4217.0	1.2e-12	1.0e-13
7498.9	3.4e-13	3.7e-14
13335.2	4.9e-14	1.1e-14
23713.7	1.1e-14	4.2e-15
42169.6	4.4e-15	2.4e-15
74989.4	<8.1e-16	

The discrepancy in upper limit calculations for flux between the Bayesian and Frequentist fitting algorithms appears to be described [at this page](#) .