

PWNCAT2

Lots of people...

ABSTRACT

Abstract goes here

Subject headings: Catalogs; Fermi Gamma-ray Space Telescope; Gamma rays: observations; pulsar wind nebula

1. Introduction

The introduction goes here...

Primary motivations for improved analysis

- More data (3 years vs 18 months)
- Many new GeV pulsars
- Going to higher energies thanks to improved IRFs.
- Better spatial/morphological analysis due to new `pointlike` code.

2. LAT Description and Observations

Description goes here...

3. Timing Analysis

Timing analysis goes here...

4. Off-peak Phase Selection

Off-peak goes here...

20 **5. Analysis of the *Fermi*-LAT data**

21 Analysis goes here. . .

22 **6. Results**

23 Results goes here. . .

Table 1. All Energy spectral fit for the 52 LAT-detected Pulsars

PSR	TS	$F_{0.1-316}$ ($10^{-9} \text{ph cm}^{-2} \text{s}^{-1}$)	Γ
J0007+7303	55.8	49.25 ± 49.24	2.75 ± 1.45
J0030+0451	13.8	< 7.95	...
J0034-0534	32.6	15.30 ± 5.18	2.38 ± 0.21
J0205+6449	19.2	< 13.15	...
J0218+4232	7.4	< 13.34	...
J0248+6021	3.5	< 10.97	...
J0357+3205	0.0	< 2.85	...
J0534+2200	5814.5	456.08 ± 17.22	2.12 ± 0.02
J0613-0200	0.0	< 3.49	...
J0631+1036	12.4	< 20.33	...
J0633+0632	4.4	< 11.27	...
J0633+1746	4816.5	925.99 ± 24.42	2.29 ± 0.02
J0659+1414	0.0	< 1.77	...
J0742-2822	6.9	< 8.40	...
J0751+1807	7.4	< 6.88	...
J0835-4510	305.9	285.76 ± 22.79	2.55 ± 0.06
J1023-5746	16.4	< 30.44	...
J1028-5819	0.0	< 12.79	...
J1044-5737	0.0	< 7.90	...
J1048-5832	0.0	< 8.81	...
J1057-5226	0.0	None	...
J1413-6205	0.7	< 2.08	...
J1418-6058	4.7	< 7.50	...
J1420-6048	0.0	< 15.33	...
J1429-5911	0.0	< 2.50	...
J1459-6053	0.0	< 1.31	...
J1509-5850	0.0	< 2.20	...
J1614-2230	0.0	< 3.15	...
J1709-4429	0.0	< 5.96	...
J1718-3825	0.0	< 4.61	...
J1732-3131	0.0	< 1.89	...
J1741-2054	0.0	< 5.74	...
J1744-1134	0.0	< 7.37	...
J1747-2958	0.0	< 12.97	...
J1809-2332	0.0	< 12.43	...
J1813-1246	0.0	< 22.65	...
J1826-1256	0.2	< 21.07	...
J1836+5925	0.0	< 14.63	...
J1846+0919	0.0	< 1.85	...
J1907+0602	0.0	< 1.71	...
J1952+3252	0.0	< 1.05	...
J1954+2836	0.0	< 1.86	...
J1957+5033	0.0	None	...
J1958+2846	0.0	< 2.17	...
J2021+3651	0.0	< 5.90	...

Table 1—Continued

PSR	TS	$F_{0.1-316}$ (10^{-9} ph cm $^{-2}$ s $^{-1}$)	Γ
J2021+4026	8.2	< 118.88	...
J2032+4127	0.5	< 14.55	...
J2043+2740	0.1	< 2.22	...
J2055+2539	0.0	< 2.93	...
J2124-3358	4.7	< 5.65	...
J2229+6114	0.0	< 3.78	...
J2238+5903	0.0	< 3.79	...

Note. — ala

Table 2. Energy bin spectral fit for the 52 LAT-detected Pulsars

PSR	TS	$F_{0.1-316}$ ($10^{-9}\text{ph cm}^{-2}\text{ s}^{-1}$)	Γ			
J0007+7303	41.0	27.80 ± 4.69	13.8	< 1.30	1.1	< 0.18
J0030+0451	14.4	< 16.69	4.0	< 0.57	-0.0	< 0.12
J0034-0534	16.0	< 16.72	19.9	< 1.07	-0.0	< 0.10
J0205+6449	0.7	< 16.87	5.3	< 1.24	11.8	< 0.29
J0218+4232	17.6	< 39.04	0.0	< 0.74	-0.0	< 0.20
J0248+6021	6.2	< 35.29	0.2	< 0.86	0.9	< 0.19
J0357+3205	0.0	< 5.95	0.0	< 0.39	0.0	< 0.09
J0534+2200	2234.6	388.54 ± 10.67	2647.3	28.41 ± 1.14	1581.1	5.42 ± 0.43
J0613-0200	0.2	< 10.61	-0.0	< 0.42	-0.0	< 0.10
J0631+1036	7.6	< 37.83	3.2	< 1.72	3.7	< 0.29
J0633+0632	0.1	< 17.85	1.3	< 1.30	1.0	< 0.23
J0633+1746	4203.6	808.77 ± 18.44	1408.6	41.25 ± 2.12	-0.0	< 0.31
J0659+1414	0.0	< 5.15	0.0	< 0.23	0.0	< 0.07
J0742-2822	8.0	< 21.93	0.6	< 0.63	2.6	< 0.13
J0751+1807	0.1	< 6.64	11.7	< 1.04	-0.0	< 0.09
J0835-4510	322.5	213.83 ± 13.41	62.9	6.62 ± 1.09	0.0	< 0.34
J1023-5746	0.0	< 26.83	3.2	< 2.62	18.9	< 0.73
J1028-5819	0.2	< 31.93	-0.0	< 1.32	0.1	< 0.34
J1044-5737	0.0	< 18.90	0.0	< 1.00	0.0	< 0.17
J1048-5832	0.0	< 21.14	0.0	< 1.20	0.0	< 0.17
J1057-5226	0.0	< 0.76	0.0	< 0.09	0.0	< 0.11
J1413-6205	0.0	< 6.97	0.0	< 0.23	0.0	< 0.22
J1418-6058	0.0	< 15.50	0.0	< 0.76	0.0	< 0.45
J1420-6048	0.0	< 30.53	-0.0	< 1.03	6.3	< 0.44
J1429-5911	0.0	< 6.41	0.0	< 0.35	0.0	< 0.18
J1459-6053	0.0	< 3.04	0.0	< 0.19	0.0	< 0.21
J1509-5850	0.0	< 7.16	0.0	< 0.33	0.0	< 0.13
J1614-2230	0.0	< 6.98	0.0	< 0.56	0.0	< 0.18
J1709-4429	0.0	< 13.18	0.0	< 1.06	0.0	< 0.12
J1718-3825	0.0	< 17.07	0.0	< 0.52	0.0	< 0.18
J1732-3131	0.0	< 6.02	0.0	< 0.25	0.0	< 0.20
J1741-2054	0.0	< 14.48	0.0	< 0.71	0.0	< 0.13
J1744-1134	0.0	< 16.20	0.0	< 1.23	0.0	< 0.17
J1747-2958	0.1	< 41.60	-0.0	< 2.20	-0.0	< 0.18
J1809-2332	0.0	< 23.09	0.0	< 1.70	0.0	< 0.18
J1813-1246	0.0	< 53.08	0.1	< 3.45	-0.0	< 0.41
J1826-1256	0.0	< 32.74	0.0	< 3.29	0.0	< 0.35
J1836+5925	0.0	< 26.61	0.0	< 3.52	-0.0	< 0.22
J1846+0919	0.0	< 6.73	0.0	< 0.25	0.0	< 0.14
J1907+0602	0.0	< 4.90	0.0	< 0.26	0.0	< 0.17
J1952+3252	0.0	< 2.26	0.0	< 0.18	0.0	< 0.13
J1954+2836	0.0	< 6.57	0.0	< 0.25	0.0	< 0.13
J1957+5033	0.0	< 1.57	0.0	< 0.15	0.0	< 0.10
J1958+2846	0.0	< 6.63	0.0	< 0.32	0.0	< 0.12
J2021+3651	0.0	< 25.10	0.0	< 0.95	0.0	< 0.13

7. Discussion

The discussion goes here...

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REFERENCES

- Górski, K. M., Hivon, E., Banday, A. J., Wandelt, B. D., Hansen, F. K., Reinecke, M., & Bartelmann, M. 2005, *ApJ*, 622, 759

¹<http://healpix.jpl.nasa.gov/>

Table 2—Continued

PSR	TS	$F_{0.1-316}$ (10^{-9} ph cm $^{-2}$ s $^{-1}$)	Γ			
J2021+4026	21.1	< 148.99	15.4	< 11.58	9.2	< 1.11
J2032+4127	0.5	< 25.13	0.7	< 1.49	2.6	< 0.24
J2043+2740	0.0	< 4.63	0.0	< 0.31	0.0	< 0.10
J2055+2539	0.1	< 9.10	-0.0	< 0.41	-0.0	< 0.07
J2124-3358	0.0	< 5.75	0.0	< 0.88	0.0	< 0.10
J2229+6114	0.0	< 10.75	0.0	< 0.59	0.0	< 0.08
J2238+5903	0.0	< 10.11	0.0	< 0.54	0.0	< 0.07

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Table 3. Spectral fitting of pulsar wind nebula candidates with low energy component.

PWN	$G_{0.1-316}$ ($10^{-12} \text{ erg cm}^{-2} \text{ s}^{-1}$)	Γ	E_{cutoff} (GeV)	$\text{TS}_{\text{cutoff}}$
PSRJ0034-0534	5.72 ± 1.75	1.09 ± 0.90	1.00 ± 0.75	5.5
PSRJ0633+1746	434.98 ± 10.35	1.46 ± 0.07	1.05 ± 0.11	284.2
PSRJ1813-1246	0.01 ± 4.25	1.36 ± 0.28	1.00 ± 1310.30	0.0
PSRJ1836+5925	None	None	None	None
PSRJ2021+4026	503.02 ± 6.30	1.48 ± 0.01	1.19 ± 0.01	2.3
PSRJ2055+2539	None	None	None	None
PSRJ2124-3358	3.93 ± 16.68	1.51 ± 1.63	1000.00 ± 25442.21	0.0