$e^{\pm}$

$e^{\pm}$

”

“

$e^{\pm}$

H

$$I(\gamma) = \frac{1}{4\pi d^2} \int N_E \frac{dI}{d\nu} dV dE = \frac{1}{4\pi d^2} \int N_E \frac{e^2 \nu}{3c^3} dV dE$$

d

N_E

$\mathcal{P}(E, r)$ E

$(\nu, \nu + d\nu)$ B

$$\mathcal{P}(E, r) = \frac{dW}{dE} = \frac{1}{4\pi} \frac{e^3 B}{m_e} F(\nu/\nu_c)$$

$F(x)$

$$F(x) = x \int_x^\infty dx K_{5/3}(x)$$

$$\nu_s(E) = \frac{3eB}{4\pi m_e^3} E^2$$

$F(x)$

$$F(x) = \frac{8\pi}{9\sqrt{3}} \delta(x - 0.29)$$

$$\mathcal{P}(E, r) = \frac{2e^3 B}{9m_e} \int \frac{d\mathcal{N}}{dE} \delta(f(E))$$

” “

r $n_{DM}(r)$

$$\left(\frac{dN(E)}{dE}\right)_d (r) = c_1(E) \cdot n_{DM}(r)$$

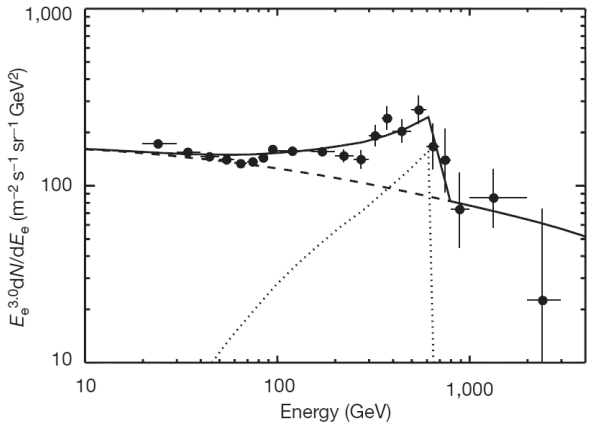
$c_1(E)$

$$\left(\frac{dN(E)}{dE}\right)_a (r) = c_2(E) n_{DM}(r)^2$$

$c_2(E)$

$$n_{NFW}(r) = \frac{\rho_s}{\frac{r}{r_s}(1+\frac{r}{r_s})^2}$$

$$n_{NFW}(r) = \frac{1}{4\pi[log(1+C) - C/(1+C)]} \frac{M_{vir}}{r(1+\frac{r}{r_s})^2}$$



$$(\frac{dN(E)}{dE})_0(r)$$

$$(\frac{dN(E)}{dE})_0(r)$$

$$\frac{dF(E)}{dE} = \frac{c}{4\pi}\frac{dN}{dE}$$

$$\frac{d\mathcal{N}(E)}{dE} = c_1(E)\int n_{DM}(r)dV$$

$$\frac{d\mathcal{N}(E)}{dE} = c_2(E)\int n^2_{DM}(r)dV$$

dN/dE

E	E^3dF/dE	dF/dE	$dN/dE\|_\odot$
$[GeV]$	$[GeV^2/(m^2{\cdot}s{\cdot}sr)]$	$[1/(GeV{\cdot}m^2{\cdot}s{\cdot}sr)]$	$[1/(GeV{\cdot}m^3)]$
45	10	$1.1{\cdot}10^{-4}$	$4.6{\cdot}10^{-12}$
100	29	$2.9{\cdot}10^{-5}$	$1.2{\cdot}10^{-12}$
320	83	$2.5{\cdot}10^{-6}$	$1.1{\cdot}10^{-13}$
600	156	$7.2{\cdot}10^{-7}$	$3.0{\cdot}10^{-14}$

E $[GeV]$	$C_1(E)$ $[1/GeV^2]$	$C_2(E)$ $[m^3/GeV^3]$	$\frac{\nu_s(E)}{3}, M31$ $[Hz]$	$\frac{\nu_s(E)}{3}, SagDEG$ $[Hz]$
45	$1.5{\cdot}10^{-17}$	$5.1{\cdot}10^{-23}$	$4.4{\cdot}10^{10}$	$1.1{\cdot}10^{10}$
100	$4.0{\cdot}10^{-18}$	$1.3{\cdot}10^{-23}$	$2.2{\cdot}10^{11}$	$5.4{\cdot}10^{10}$
320	$3.6{\cdot}10^{-19}$	$1.2{\cdot}10^{-24}$	$2.2{\cdot}10^{12}$	$5.5{\cdot}10^{11}$
600	$9.9{\cdot}10^{-20}$	$3.3{\cdot}10^{-25}$	$7.8{\cdot}10^{12}$	$1.9{\cdot}10^{12}$

D	$770kpc$
r_s	$8kpc$
ρ_s	$1.9GeV/cm^3$
M_{vir}	$7 \cdot 10^{11} M_\odot$
C	22
B	$4\mu G$

E	ν	$\frac{d\mathcal{N}(E)}{dE}$	$\frac{1}{4\pi D^2}\cdot\frac{d\mathcal{W}(E)}{d\nu}$
$[GeV]$	$[Hz]$	$[1/GeV]$	$[Jy]$
45	$4.4{\cdot}10^{10}$	$1.2{\cdot}10^{52}$	$7.1{\cdot}10^{-5}$
100	$2.2{\cdot}10^{11}$	$3.1{\cdot}10^{51}$	$1.8{\cdot}10^{-5}$
320	$2.2{\cdot}10^{12}$	$2.8{\cdot}10^{50}$	$1.7{\cdot}10^{-6}$
600	$7.8{\cdot}10^{12}$	$7.6{\cdot}10^{49}$	$4.5{\cdot}10^{-7}$

E	ν	$\frac{d\mathcal{N}(E)}{dE}$	$\frac{1}{4\pi D^2}\cdot\frac{d\mathcal{W}(E)}{d\nu}$
$[GeV]$	$[Hz]$	$[1/GeV]$	$[Jy]$
45	$4.4{\cdot}10^{10}$	$1.2{\cdot}10^{52}$	$7.1{\cdot}10^{-5}$
100	$2.2{\cdot}10^{11}$	$2.9{\cdot}10^{51}$	$1.7{\cdot}10^{-5}$
320	$2.2{\cdot}10^{12}$	$2.7{\cdot}10^{50}$	$1.6{\cdot}10^{-6}$
600	$7.8{\cdot}10^{12}$	$7.4{\cdot}10^{49}$	$4.4{\cdot}10^{-7}$

D	$24kpc$
r_s	$0.62kpc$
ρ_s	$5.2GeV/cm^3$
M_{vir}	$10^8 M_\odot$
B	$1\mu G$

E	ν	$\frac{d\mathcal{N}(E)}{dE}$	$\frac{1}{4\pi D^2}\cdot\frac{d\mathcal{W}(E)}{d\nu}$
$[GeV]$	$[Hz]$	$[1/GeV]$	$[Jy]$
45	$1.1{\cdot}10^{10}$	$1.7{\cdot}10^{48}$	$1.0{\cdot}10^{-5}$
100	$5.4{\cdot}10^{10}$	$4.4{\cdot}10^{47}$	$2.7{\cdot}10^{-6}$
320	$5.5{\cdot}10^{11}$	$4.0{\cdot}10^{46}$	$2.4{\cdot}10^{-7}$
600	$1.9{\cdot}10^{12}$	$1.1{\cdot}10^{46}$	$6.7{\cdot}10^{-8}$

E	ν	$\frac{d\mathcal{N}(E)}{dE}$	$\frac{1}{4\pi D^2}\cdot\frac{d\mathcal{W}(E)}{d\nu}$
$[GeV]$	$[Hz]$	$[1/GeV]$	$[Jy]$
45	$1.1{\cdot}10^{10}$	$4.0{\cdot}10^{49}$	$2.4{\cdot}10^{-4}$
100	$5.4{\cdot}10^{10}$	$1.0{\cdot}10^{49}$	$1.0{\cdot}10^{-5}$
320	$5.5{\cdot}10^{11}$	$9.4{\cdot}10^{47}$	$9.4{\cdot}10^{-6}$
600	$1.9{\cdot}10^{12}$	$2.6{\cdot}10^{47}$	$1.6{\cdot}10^{-6}$