

ERRATUM: “GAMMA RAY STUDIES OF BLAZARS: SYNCHRO-COMPTON ANALYSIS OF FLAT SPECTRUM RADIO QUASARS” (2009, *ApJ*, 692, 32)

CHARLES D. DERMER¹, JUSTIN D. FINKE¹, HANNAH KRUG^{1,2}, AND MARKUS BÖTTCHER³

¹ U.S. Naval Research Laboratory, Code 7653, 4555 Overlook Avenue SW, Washington, DC 20375-5352, USA; charles.dermer@nrl.navy.mil

² Department of Astronomy, University of Maryland, College Park, MD 20742, USA

³ Astrophysical Institute, Department of Physics and Astronomy, Ohio University, Athens, OH 45701, USA

Received 2011 December 2; published 2012 February 15

Online-only material: color figures

The photo-absorption due to γ -rays interacting with broad line region (BLR) photons was calculated incorrectly in Figures 11 and 12 of the published version of this article. Corrected figures can be found in Figures 1 and 2. We are grateful to Dahai Yan (Yunnan University) for bringing this error to our attention. Absorption effects from the BLR will clearly have less of an observable

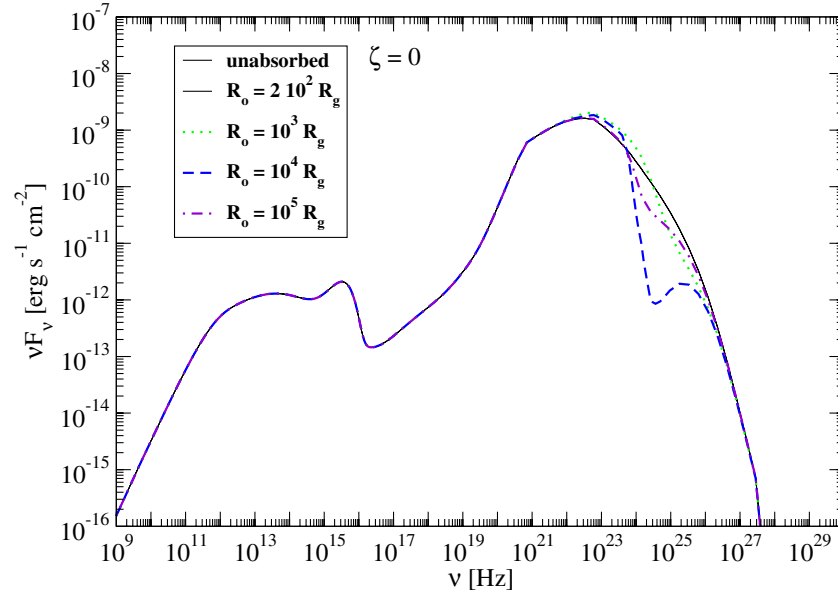


Figure 1. Corrected version of Figure 11.

(A color version of this figure is available in the online journal.)

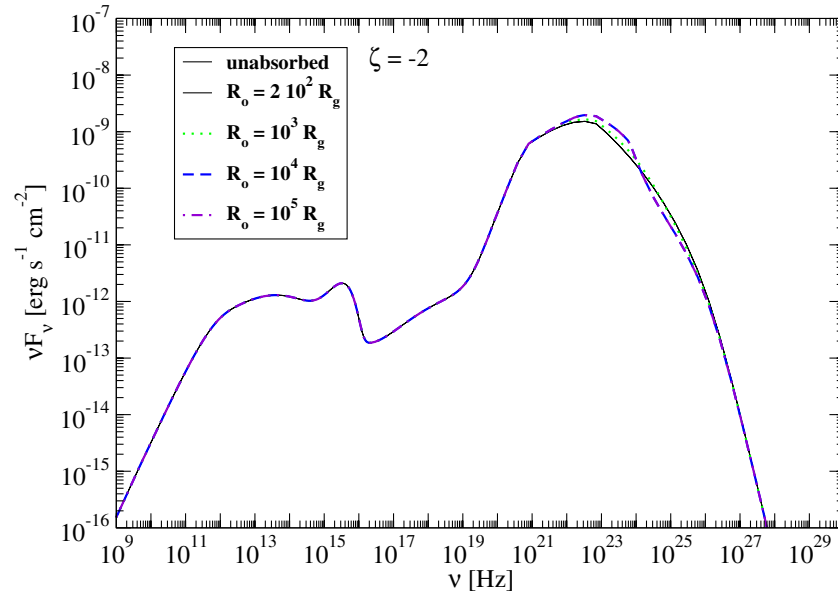


Figure 2. Corrected version of Figure 12.

(A color version of this figure is available in the online journal.)

effect than we concluded, particularly for the $\xi = -2$ case. However, for the $\xi = 0$ case, a spectral break is still clearly seen. All our other conclusions remain unchanged.

We also point out a few errors which do not affect our results, as the correct expressions were used in our calculations. Equation (88) of the published article should read

$$\frac{u_*(\epsilon_*)}{4\pi} = u_{bb}(\epsilon_*, \Omega_*) = \frac{2m_e c^2}{\lambda_C^3} \frac{\epsilon_*^3}{\exp(\epsilon_*/\Theta) - 1}$$

i.e., there was an extra factor of c in the numerator.

The equation in the text just above Equation (93) should read

$$\dot{n}(\epsilon_*; \vec{R}) = \dot{N}_{\text{ph}}(\epsilon_*) \sigma_T n_e(R) / (4\pi R^2),$$

i.e., there was an extra factor of c in the denominator.

Equation (103) should read

$$f_{\epsilon}^{T,\text{iso}} = \frac{c\pi r_e^2 \delta_D^3 u_{*0}}{4\pi d_L^2} \left(\frac{\epsilon_s}{\epsilon_*}\right)^2 \int_{\max(-1, 1-2\epsilon_s/\epsilon_*)}^1 d\mu_* \\ \times \int_{\sqrt{\epsilon_s/2\epsilon_*(1-\mu_*)}}^{\infty} d\gamma \gamma^2 N'_e(\gamma/\delta_D)$$

i.e., δ_D should be raised to the power 3 rather than $3 + p$.

In Equation (104), the conditional should read

$$\epsilon_* \lesssim \epsilon_s \ll 4\epsilon_* (\delta_D^2 \gamma_1')^2,$$

and in Equation (105) the conditional should read

$$4\epsilon_* (\delta_D^2 \gamma_1')^2 \lesssim \epsilon_s \ll 4\epsilon_* (\delta_D^2 \gamma_2')^2.$$