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Erratum: "Self-consistent 3D Radiative Transfer for Kilonovae: Directional Spectra from Merger Simulations" (2023, ApJL, 954, L41)

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After the article was published, we discovered an error in our conversion of log *gf* values to *A* values from the Kurucz atomic data set. A "wavelength" column was erroneously interpreted to have units of angstroms instead of nanometers, which (when squared) resulted in *A* values that were too high by a factor of 100. In particular, this affected the *A* values of Sr, Y, and Zr for the "AD2" data set. The wavelengths of the transitions were not affected, since these were separately calculated from the differences between energy levels that were correctly interpreted. An erroneous multiplicative factor was also found in the free–free opacities, leading to an upward revised bolometric luminosity at the early times ($\lesssim$0.5 days), before the free–free opacity becomes negligible.

The conclusions of the Letter are not affected by these errors, although there are quantitative differences. The times at which our 3D AD2 modeled spectra appear similar to AT2017gfo (which were already too early) are shifted later by around 0.3 days. Therefore, we present new versions of the figures with updated models at the corrected times in Figures 1, 2, 3, 4, and 5.

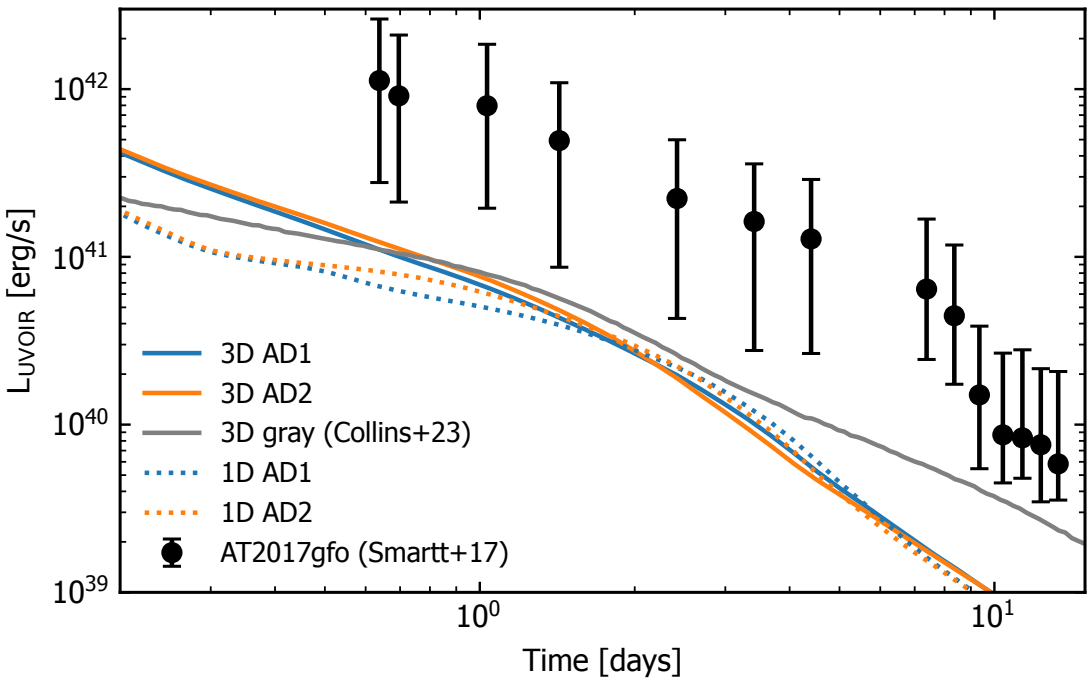

Figure 1. Corrected version of Figure 1. Direction-integrated luminosity vs. time for the models 3D AD1, 3D AD2, 1D AD1, and 1D AD2, the 3D gray opacity model of C. E. Collins et al. (2023), and inferred bolometric luminosity of AT2017gfo (S. J. Smartt et al. 2017).

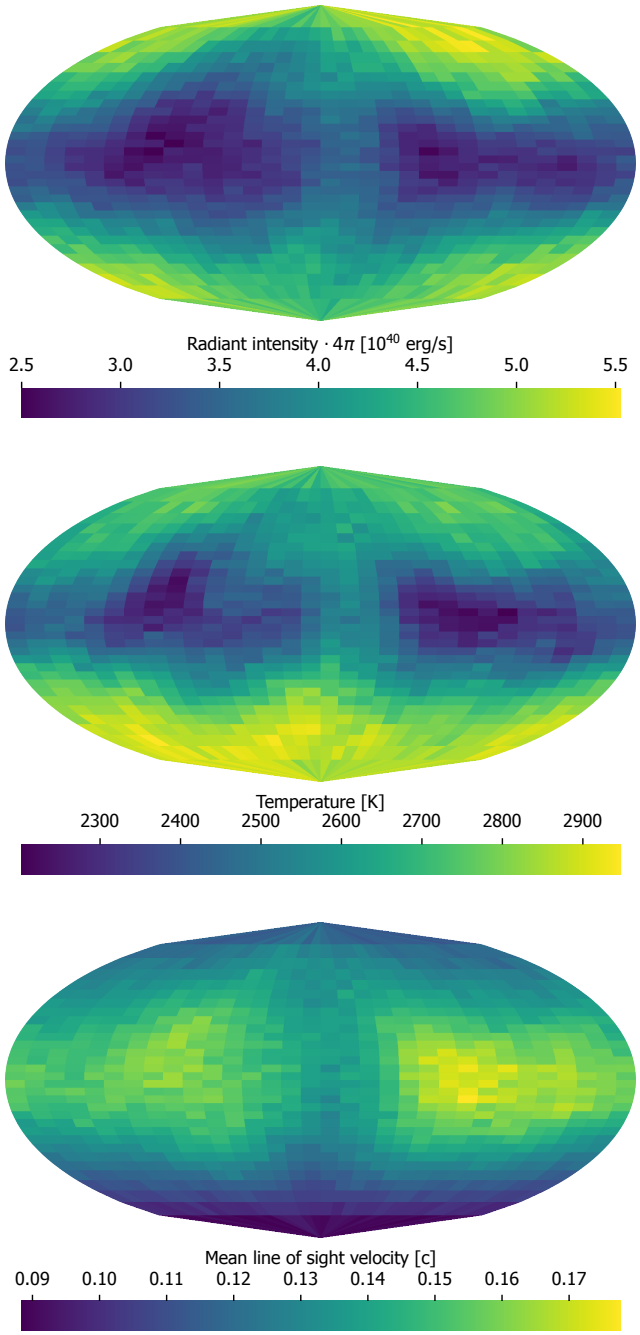

Figure 2. Corrected version of Figure 2 at 1.5–1.8 days. Note that the time range has been corrected and the color bar ranges have been updated. Mollweide projections of direction-dependent quantities for 3D AD2: UVOIR radiant intensity times 4π solid angle (top), mean temperature at last interaction (middle), and line-of-sight velocity at last interaction (bottom).

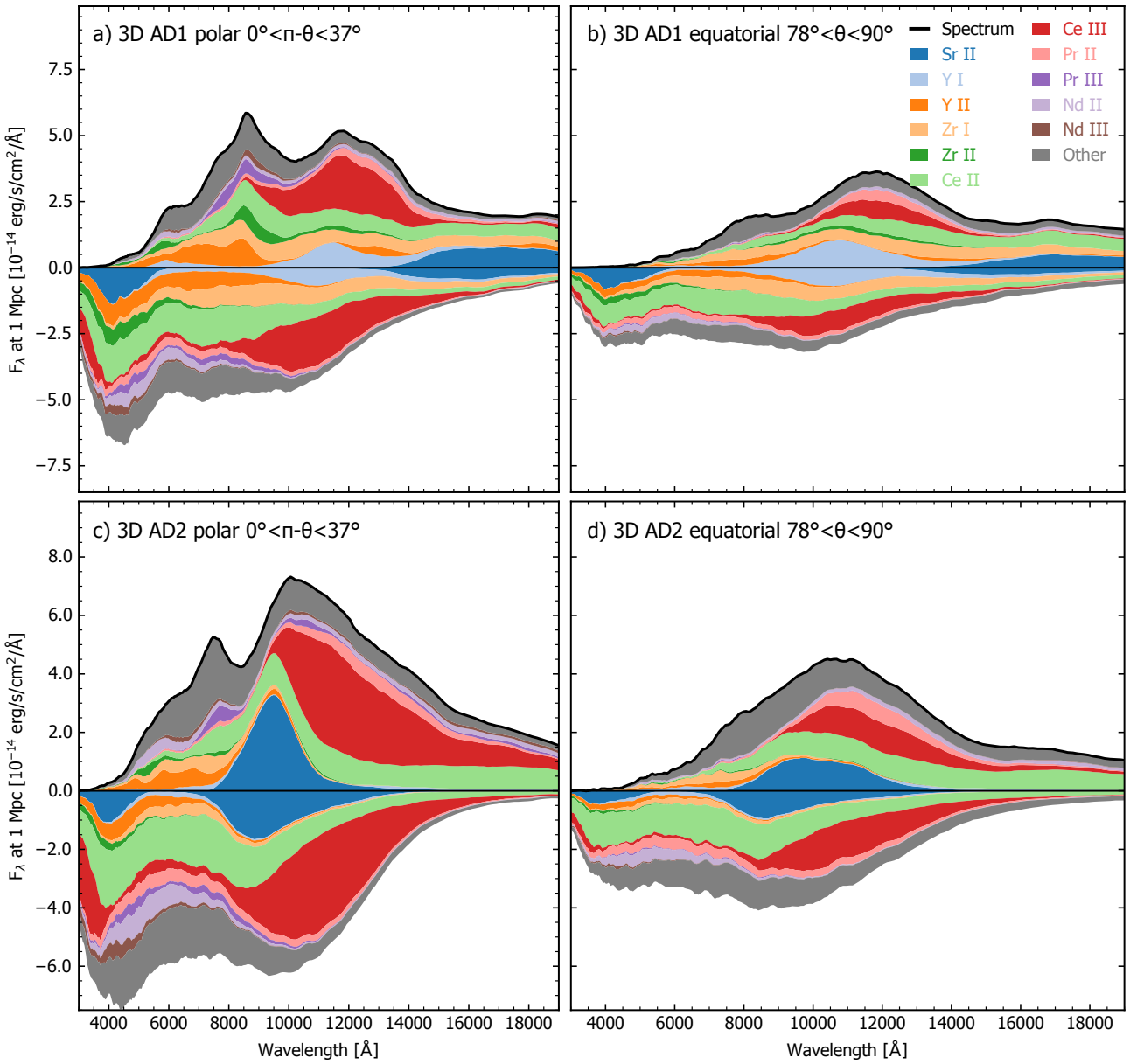

Figure 3. Corrected version of Figure 3 at 1.1 days. Spectra for polar and equatorial viewing directions for the 3D AD1 and 3D AD2 models, colored according to the emitting species of the last interactions of the emerging radiation packets. The area under the horizontal axis shows the distribution of frequencies (colored by absorbing/scattering ion) just prior to the last interactions of the emerging packets. The 11 most-significant ions are separately colored, while the "Other" group combines many smaller contributions from other ions.

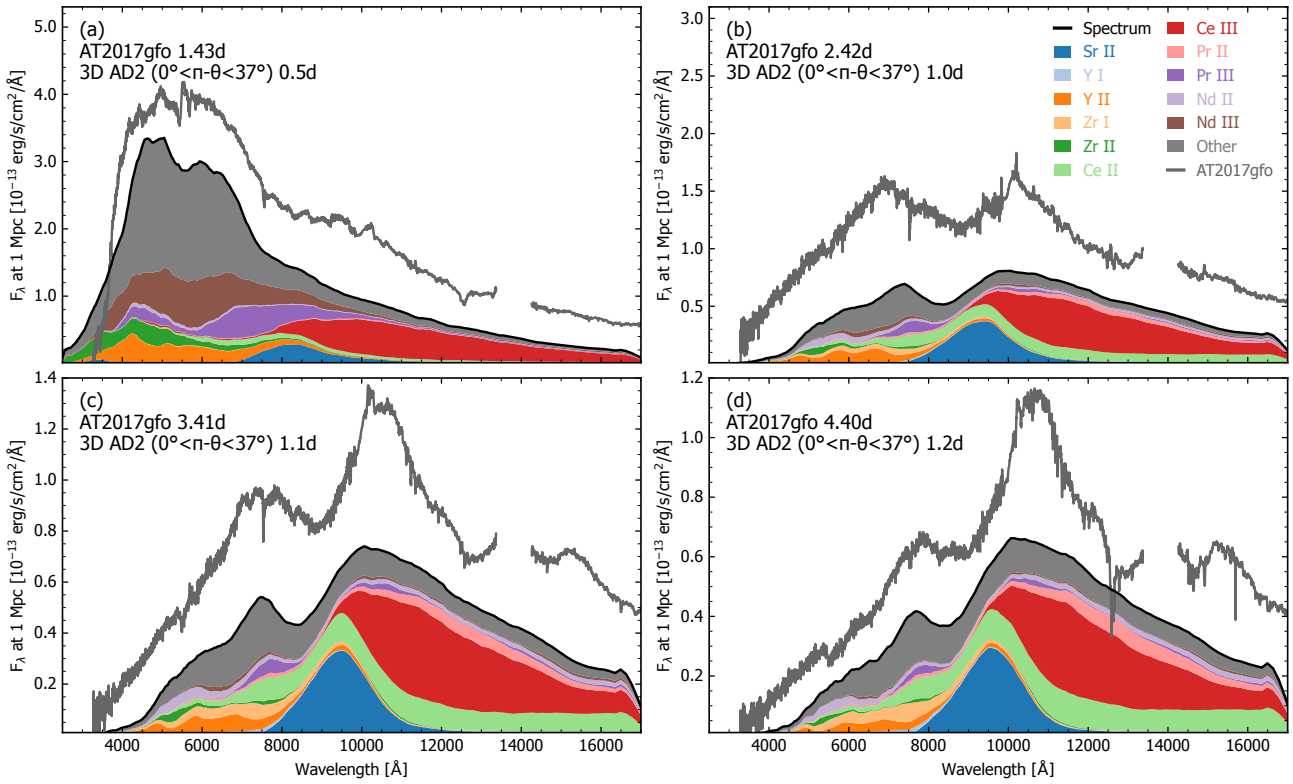

Figure 4. Corrected version of Figure 4 (with different times at which the model resembles AT2017gfo). Time series of spectra in the polar direction of the 3D AD2 model compared to reddening- and redshift-corrected spectra of AT2017gfo (E. Pian et al. 2017; S. J. Smartt et al. 2017). The area under the spectra has been colored by the emitting species of the last interactions of the emerging packets. The times of the ARTIS and AT2017gfo spectra intentionally do not match.

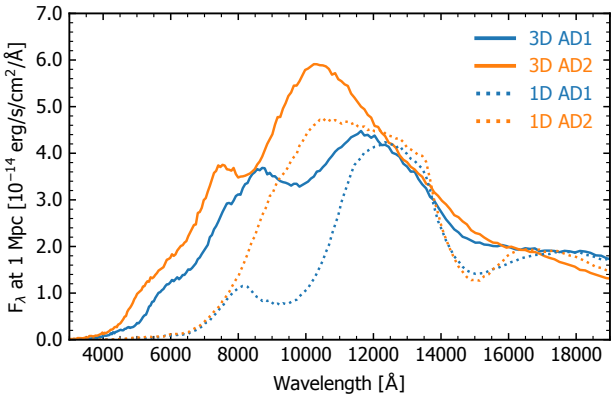

Figure 5. Corrected version of Figure 5 at 1.1 days. Spherically averaged spectra for the 3D AD1 (solid blue), 3D AD2 (solid orange), 1D AD1 (dashed blue), and 1D AD2 (dashed orange) models.

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