Erratum: SN 2007uy – metamorphosis of an aspheric Type Ib explosion

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We report three corrections to the paper ‘SN 2007uy – metamorphosis of an aspheric Type Ib explosion’ published in MNRAS, 434, 2032 (2013).

(1) In the original paper, the name of co-author Felipe Olivares E. was miswritten as E. Felipe Olivares.
(2) The column headings for table 2 were found to contain a typographical error. The corrected version of the header for table 2 in the original paper is presented here as Table 1.
(3) In fig. 2 of the original paper, a spectrum of SN 2008D was incorrectly used in place of SN 2007uy at +96 d. This substitution was done in the original presentation of these data (Milisavljevic et al. 2010). Revised versions of the spectroscopic evolution of SN 2007uy (originally fig. 2) and the corresponding line profiles (originally figs 4 and 5) are presented here in Figs 1, 2 and 3, respectively. As the spectra of SNe 2007uy and 2008D were taken at the same epoch with the same spectroscopic setup, there is no change in the journal of spectroscopic observation presented in table 7 of the original paper. We note that these changes do not cause any significant difference in our initial conclusions.

In Fig. 2, the flux of every line has been scaled with respect to the peak flux of the Hα line of the associated star-forming region. However, in order to show the late-time faint features, the spectral regions associated with the Mg, [Fe II], Na I D and Si II λ7774 Å lines at +162 and +392 d, as well as the feature of [O II] λλ6300, 6364 Å at +392 d have been enlarged by 10 times. The spectral shifts of different lines are still prominent in the modified figure, but the merging of the features II and G2, as discussed in the original paper, is not clear from the corrected set of spectra.

The evolution of the Si II and He I lines has been replotted in Fig. 3. Although the existence of the Si II line is clear in all spectra, except for the dimming signature of He I λ7281, most of the He I features are no longer clearly apparent by +96 d. Unlike the standard Type Ib events, the overall evidence of He in SN 2007uy seems to be somehow reduced during its evolution, which rather designates it as another case of event that does not fit straightforwardly into the category of normal Type Ib SNe. Further discussion on the spectral peculiarity of this event is presented in Modjaz et al. (2014), who classify this event as a peculiar SN Ib.

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Table 1. *Swift*/UVOT photometry of SN 2007uy.

| UT date (yy/mm/dd) | JD | Phase* (d) | uvw2 (mag) | uvm2 (mag) | uvw1 (mag) | u (mag) | b (mag) | v (mag) |
|-------------------|----|------------|------------|------------|------------|---------|---------|---------|

*With reference to the epoch of explosion JD 245 4462.17.

Figure 1. Spectroscopic evolution of SN 2007uy. All the spectra have been normalized with respect to the peak flux of the underlying Hα feature and a constant offset has been applied to present them clearly. The +162 and +392 d spectra have been multiplied by a factor of 2 to enlarge several tiny features. The dotted vertical line represents the position of Hα and confirms the wavelength calibration within the limits of the spectral resolution.
Figure 2. Temporal evolution of some spectral lines of SN 2007uy. The zero velocity shown with a dotted line in each panel marks the rest wavelength of the corresponding elements as mentioned at the top of the panels. The flux scale is relative. In this figure, the flux of every line has been scaled with respect to the peak flux of the Hα line of the associated star-forming region. However, to show the late-time faint features, the spectral regions associated with the Mg I, [Fe II], Na I D and O I λ7774 Å lines at +162 and +392 d, as well as the feature of [O I] λλ6300, 6364 Â at +392 d have been enlarged by 10 times.

Figure 3. Temporal evolution of velocities of Si II and He I spectral features in SN 2007uy.
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