



## LJMU Research Online

Nicholl, M, Smartt, SJ, Jerkstrand, A, Inserra, C, Sim, SA, Chen, T-W, Benetti, S, Fraser, M, Gal-Yam, A, Kankare, E, Maguire, K, Smith, K, Sullivan, M, Valenti, S, Young, DR, Baltay, C, Bauer, FE, Baumont, S, Bersier, D, Botticella, M-T, Childress, M, Dennefeld, M, Della Valle, M, Elias-Rosa, N, Feindt, U, Galbany, L, Hadjiyska, E, Le Guillou, L, Leloudas, G, Mazzali, PA, McKinnon, R, Polshaw, J, Rabinowitz, D, Rostami, S, Scalzo, R, Schmidt, BP, Schulze, S, Sollerman, J, Taddia, F and Yuan, F

**On the diversity of superluminous supernovae: ejected mass as the dominant factor**

<http://researchonline.ljmu.ac.uk/2873/>

### Article

**Citation** (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

**Nicholl, M, Smartt, SJ, Jerkstrand, A, Inserra, C, Sim, SA, Chen, T-W, Benetti, S, Fraser, M, Gal-Yam, A, Kankare, E, Maguire, K, Smith, K, Sullivan, M, Valenti, S, Young, DR, Baltay, C, Bauer, FE, Baumont, S, Bersier, D, Botticella, M-T, Childress, M, Dennefeld, M, Della Valle, M, Elias-Rosa, N.**

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

<http://researchonline.ljmu.ac.uk/>

For more information please contact [researchonline@ljmu.ac.uk](mailto:researchonline@ljmu.ac.uk)

<http://researchonline.ljmu.ac.uk/>

# Erratum: On the diversity of superluminous supernovae: ejected mass as the dominant factor

by M. Nicholl,<sup>1★</sup> S. J. Smartt,<sup>1</sup> A. Jerkstrand,<sup>1</sup> C. Inserra,<sup>1</sup> S. A. Sim,<sup>1</sup> T.-W. Chen,<sup>1</sup> S. Benetti,<sup>2</sup> M. Fraser,<sup>3</sup> A. Gal-Yam,<sup>4</sup> E. Kankare,<sup>1</sup> K. Maguire,<sup>5</sup> K. Smith,<sup>1</sup> M. Sullivan,<sup>6</sup> S. Valenti,<sup>7,8</sup> D. R. Young,<sup>1</sup> C. Baltay,<sup>9</sup> F. E. Bauer,<sup>10,11,12</sup> S. Baumont,<sup>13,14</sup> D. Bersier,<sup>15</sup> M.-T. Botticella,<sup>16</sup> M. Childress,<sup>17,18</sup> M. Dennefeld,<sup>19</sup> M. Della Valle,<sup>16</sup> N. Elias-Rosa,<sup>2</sup> U. Feindt,<sup>20,21</sup> L. Galbany,<sup>11,22</sup> E. Hadjiyska,<sup>9</sup> L. Le Guillou,<sup>13,14</sup> G. Leloudas,<sup>4,23</sup> P. Mazzali,<sup>15</sup> R. McKinnon,<sup>9</sup> J. Polshaw,<sup>1</sup> D. Rabinowitz,<sup>9</sup> S. Rostami,<sup>9</sup> R. Scalzo,<sup>18</sup> B. P. Schmidt,<sup>18</sup> S. Schulze,<sup>10,11</sup> J. Sollerman,<sup>24</sup> F. Taddia<sup>24</sup> and F. Yuan<sup>18</sup>

<sup>1</sup>*Astrophysics Research Centre, School of Mathematics and Physics, Queens University Belfast, Belfast BT7 1NN, UK*

<sup>2</sup>*INAF – Osservatorio Astronomico di Padova, vicolo dell’Osservatorio 5, I-35122 Padova, Italy*

<sup>3</sup>*Institute of Astronomy, University of Cambridge, Madingley Road, Cambridge CB3 0HA, UK*

<sup>4</sup>*Benozio Center for Astrophysics, Weizmann Institute of Science, Rehovot 76100, Israel*

<sup>5</sup>*European Southern Observatory, Karl-Schwarzschild-Str. 2, D-85748 Garching b. München, Germany*

<sup>6</sup>*School of Physics and Astronomy, University of Southampton, Southampton SO17 1BJ, UK*

<sup>7</sup>*Department of Physics, University of California, Santa Barbara, Broida Hall, Mail Code 9530, Santa Barbara, CA 93106-9530, USA*

<sup>8</sup>*Las Cumbres Observatory, Global Telescope Network, 6740 Cortona Drive Suite 102, Goleta, CA 93117, USA*

<sup>9</sup>*Department of Physics, Yale University, New Haven, CT 06520-8121, USA*

<sup>10</sup>*Instituto de Astrofísica, Facultad de Física, Pontificia Universidad Católica de Chile, 306, Santiago 22, Chile*

<sup>11</sup>*Millennium Institute of Astrophysics, Vicuña Mackenna 4860, 7820436 Macul, Santiago, Chile*

<sup>12</sup>*Space Science Institute, 4750 Walnut Street, Suite 205, Boulder, CO 80301, USA*

<sup>13</sup>*Sorbonne Universités, UPMC Univ. Paris 06, UMR 7585, LPNHE, F-75005 Paris, France*

<sup>14</sup>*CNRS, UMR 7585, Laboratoire de Physique Nucleaire et des Hautes Energies, 4 place Jussieu, F-75005 Paris, France*

<sup>15</sup>*Astrophysics Research Institute, Liverpool John Moores University, 146 Brownlow Hill, Liverpool L3 5RF, UK*

<sup>16</sup>*INAF-Osservatorio Astronomico di Capodimonte, Salita Moiariello 16, I-80131 Napoli, Italy*

<sup>17</sup>*ARC Centre of Excellence for All-sky Astrophysics (CAASTRO), Australian National University, Canberra, ACT 2611, Australia*

<sup>18</sup>*Research School of Astronomy and Astrophysics, Australian National University, Canberra, ACT 2611, Australia*

<sup>19</sup>*Institut d’Astrophysique de Paris, CNRS, and Université Pierre et Marie Curie, 98 bis Boulevard Arago, F-75014 Paris, France*

<sup>20</sup>*Institut für Physik, Humboldt-Universität zu Berlin, Newtonstr. 15, D-12489 Berlin, Germany*

<sup>21</sup>*Physikalisches Institut, Universität Bonn, Nuallee 12, D-53115 Bonn, Germany*

<sup>22</sup>*Departamento de Astronomía, Universidad de Chile, Casilla 36-D, Santiago, Chile*

<sup>23</sup>*Dark Cosmology Centre, Niels Bohr Institute, University of Copenhagen, Juliane Maries vej 30, DK-2100 Copenhagen, Denmark*

<sup>24</sup>*Department of Astronomy and the Oskar Klein Centre, Stockholm University, AlbaNova, SE-106 91 Stockholm, Sweden*

**Key words:** errata, addenda – supernovae: general – supernovae: individual: LSQ14bdq – supernovae: individual: LSQ14mo – supernovae: individual: SN 2013hx.

This is an erratum to the paper ‘On the diversity of superluminous supernovae: ejected mass as the dominant factor’, published in MNRAS, 2015, 452.

We have noticed that some of the supernova peak magnitudes in Table 1 are given in the wrong rows. The error affected the rows

‘PS1-11ap’ to ‘PS1-10ky’, with each magnitude displaced downwards by one cell. The nature of this error is purely typographic. Originally, the objects were grouped into high- and low-redshift bins, rather than by wavelength coverage; the error occurred when moving PS1-11ap from the high-*z* group into the ‘Gold’ coverage group. This does not affect any of the other tables, figures, or analysis in the paper.

\* E-mail: [matt.nicholl@cfa.harvard.edu](mailto:matt.nicholl@cfa.harvard.edu)

**Table 1.** SLSNe in our sample.

Name	Type	$z$	$M_{griz}^*$	Reference
‘Gold’ sample: rest-frame $gri(z)$ coverage				
SN2007bi	Ic <sup>†</sup>	0.127	−20.20	Gal-Yam et al. (2009)
SN2008es	II	0.205	−21.43	Gezari et al. (2009), Miller et al. (2009)
SN2010gx	Ic	0.230	−20.64	Pastorello et al. (2010), Quimby et al. (2011)
SN2011ke	Ic	0.143	−20.69	Inserra et al. (2013)
SN2011kf	Ic	0.245	−20.80	Inserra et al. (2013)
SN2012il	Ic	0.175	−20.73	Inserra et al. (2013)
SN2013dg	Ic	0.265	−20.30	Nicholl et al. (2014)
SN2013hx	II	0.130	−20.84	Inserra et al. (in preparation)
LSQ12dlf	Ic	0.255	−20.68	Nicholl et al. (2014)
LSQ14mo	Ic	0.253	−19.95	Chen et al. (in preparation)
LSQ14bdq	Ic	0.347	−21.68	Nicholl et al. (2015)
PTF10hgi	Ic	0.100	−19.61	Inserra et al. (2013)
PTF11rks	Ic	0.190	−20.01	Inserra et al. (2013)
PTF12dam	Ic <sup>†</sup>	0.107	−20.56	Nicholl et al. (2013)
CSS121015	II	0.287	−22.00	Benetti et al. (2014)
SSS120810	Ic	0.156	−20.45	Nicholl et al. (2014)
PS1-11ap	Ic <sup>†</sup>	0.524	−20.54	McCrum et al. (2014)
‘Silver’ sample: rest-frame $g$ band with bolometric correction				
SN2005ap	Ic	0.283	−21.22	Quimby et al. (2007)
SCP06F6	Ic	1.189	−21.56	Barbary et al. (2009)
PTF09cnd	Ic	0.258	−21.34	Quimby et al. (2011)
PTF09cwl	Ic	0.349	−21.15	Quimby et al. (2011)
PS1-10ky	Ic	0.956	−21.24	Chomiuk et al. (2011)
PS1-10bjz	Ic	0.650	−20.32	Lunnan et al. (2013)
iPTF13ajg	Ic	0.740	−21.50	Vreeswijk et al. (2014)

\*Pseudo-bolometric magnitude at maximum light; <sup>†</sup>Described in the literature as a slowly declining event.

**REFERENCES**

Barbary K. et al., 2009, ApJ, 690, 1358  
 Benetti S. et al., 2014, MNRAS, 441, 289  
 Chomiuk L. et al., 2011, ApJ, 743, 114  
 Gal-Yam A. et al., 2009, Nature, 462, 624  
 Gezari S. et al., 2009, ApJ, 690, 1313  
 Inserra C. et al., 2013, ApJ, 770, 128  
 Lunnan R. et al., 2013, ApJ, 771, 97  
 McCrum M. et al., 2014, MNRAS, 437, 656  
 Miller A. et al., 2009, ApJ, 690, 1303

Nicholl M. et al., 2013, Nature, 502, 346  
 Nicholl M. et al., 2014, MNRAS, 444, 2096  
 Nicholl M. et al., 2015, ApJ, 807, L18  
 Pastorello A. et al., 2010, ApJ, 724, L16  
 Quimby R. M., Aldering G., Wheeler J. C., Höflich P., Akerlof C. W., Rykoff E. S., 2007, ApJ, 668, L99  
 Quimby R. M. et al., 2011, Nature, 474, 487  
 Vreeswijk P. M. et al., 2014, ApJ, 797, 24

This paper has been typeset from a  $\text{\TeX}/\text{\LaTeX}$  file prepared by the author.