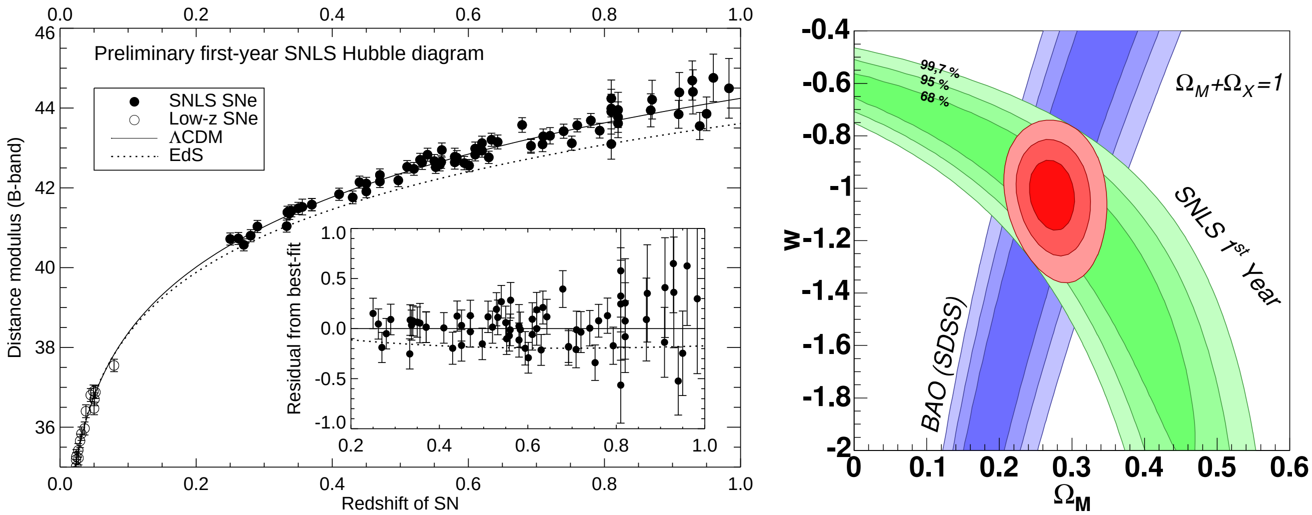
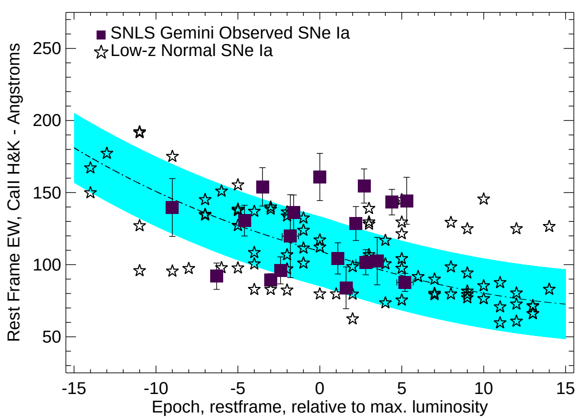
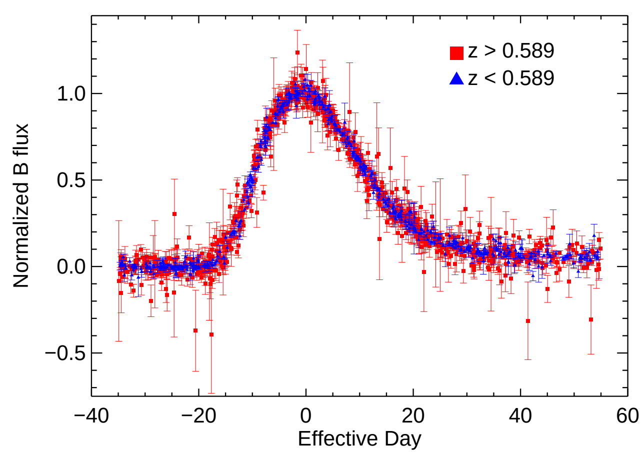


Figure 1: SNLS cosmological results. **Left:** The SN Ia Hubble diagram from the first full year of data (71 high-redshift SNe; Astier et al. 2006), only a quarter of the current SNLS sample, yet already the largest homogeneous SN sample. Inset shows the residuals from the best-fitting cosmology. The best-fit flat cosmology is Ω_M=0.263 ±0.042 (*stat*) ±0.032 (*sys*) (Astier et al. 2006). **Right:** Constraints in $\Omega_{\rm M}$ versus w. Solid lines show the current 1, 2 and 3σ confidence limits. The current constraint is $w = -1.023$ ±0.090 (*stat*) ±0.054 (*sys*) when combined with the SDSS baryon acoustic oscillations result (Eisenstein et al. 2005). The end-of-survey results will provide constraints on w of ±0.05 or better.





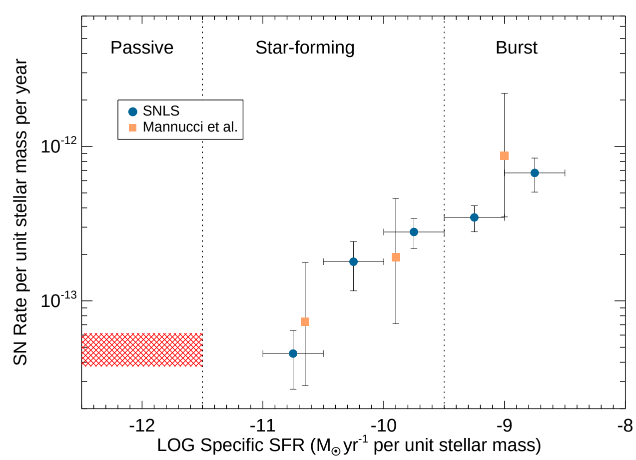


Figure 2: A selection of science results from the SNLS. **Above:** A comparison of equivalent width measurements of the Ca II absorption feature in local SNe Ia spectra with those observed by Gemini during the SNLS (Bronder et al. 2006). The dashed line is the mean local trend; the blue shaded area the $\pm 1\,\sigma$ dispersion. Tests such as these constrain possible SN progenitor evolution; no difference is seen between the two populations. **Above Right:** The result of the study of the rise-times of SNLS SNe Ia from Conley et al. (2006). Shown is the normalised and light-curve-width corrected rest-frame *B*-band SNLS SN Ia light-curves. Blue triangles are SNe at lower redshift, red squares those at higher redshifts. The rise-times of the two samples are consistent. Furthermore, the consistency in the shape of the light-curves is spectacular across our entire redshift range. **Lower Right:** The rate per unit stellar mass as a function of host galaxy type from Sullivan et al. (2006). The SN Ia rate per unit mass is around ten times higher in strongly star-forming galaxies than in passive systems, a surprising result with implications for the nature of the SN Ia progenitor system. Gemini plays a crucial role in defining the highest redshift data set allowing tests for evolution such as those described here.