



← RA~21, Dec~+60; 14 May 2017

NEAR-INFRARED SPECTROSCOPY OF THE TYPE II-P SUPERNOVA 2017eaw: CO EMISSION AND EARLY DUST FORMATION

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Motivation:

Understand timings of and amounts of molecule (CO) and dust formation produced by ccSNe

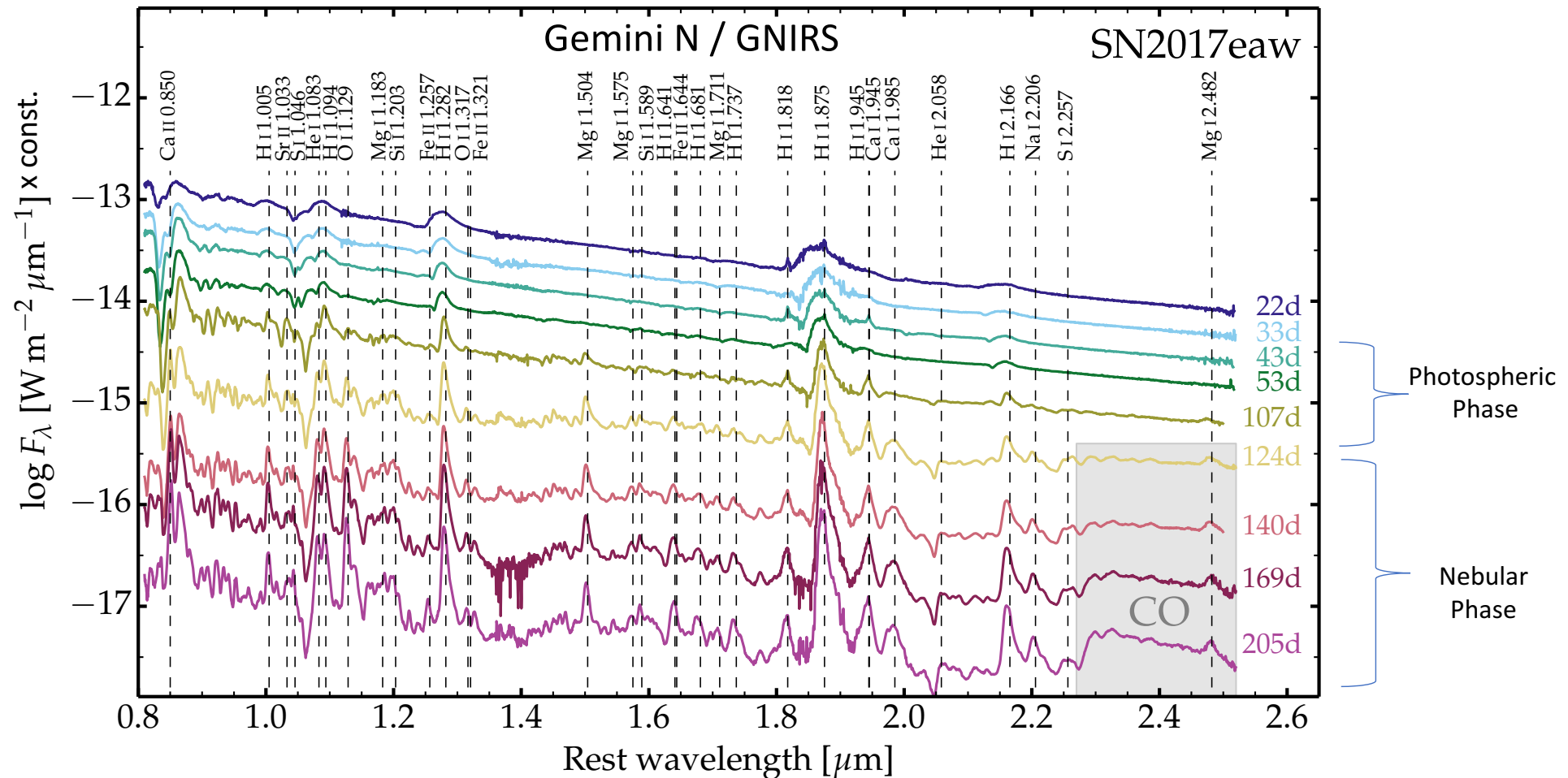
Relevance to amount of dust produced by SNe in local universe

Relevance to the puzzle of dust in the early ($z > 5$) universe

Why SN 2017eaw ?

- Brightest ccSN in many years.
- Most common type of ccSN → best analogue to ccSNe in the early universe.
- Fortuitous position in the sky / timing for N hemisphere telescopes.

Most extensive and highest quality spectra of a Type II-P SN ever obtained thanks to GN-2017A-DD-8; GN-2017B-DD-5, 2018A-FT-104 (not shown)



Results

- CO probably started forming at ~ 107 d, clearly present at 124 d.
- Dust started forming near 124 d (flattened K continuum); observed by Spitzer on day 193.
- CO masses calculated to compare with models.
- A gold mine of information about elemental abundances.

Paper soon to appear in ApJ Letters.