

SN 2024ehs: A correlation between the strength and velocity of spectral lines in core-collapse supernovae

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Photospheric modelling using SUMO displays a correlation between explosion velocities and the spectral contributions from different elements: suggesting a **new key to understand classifications of core-collapse supernovae.**

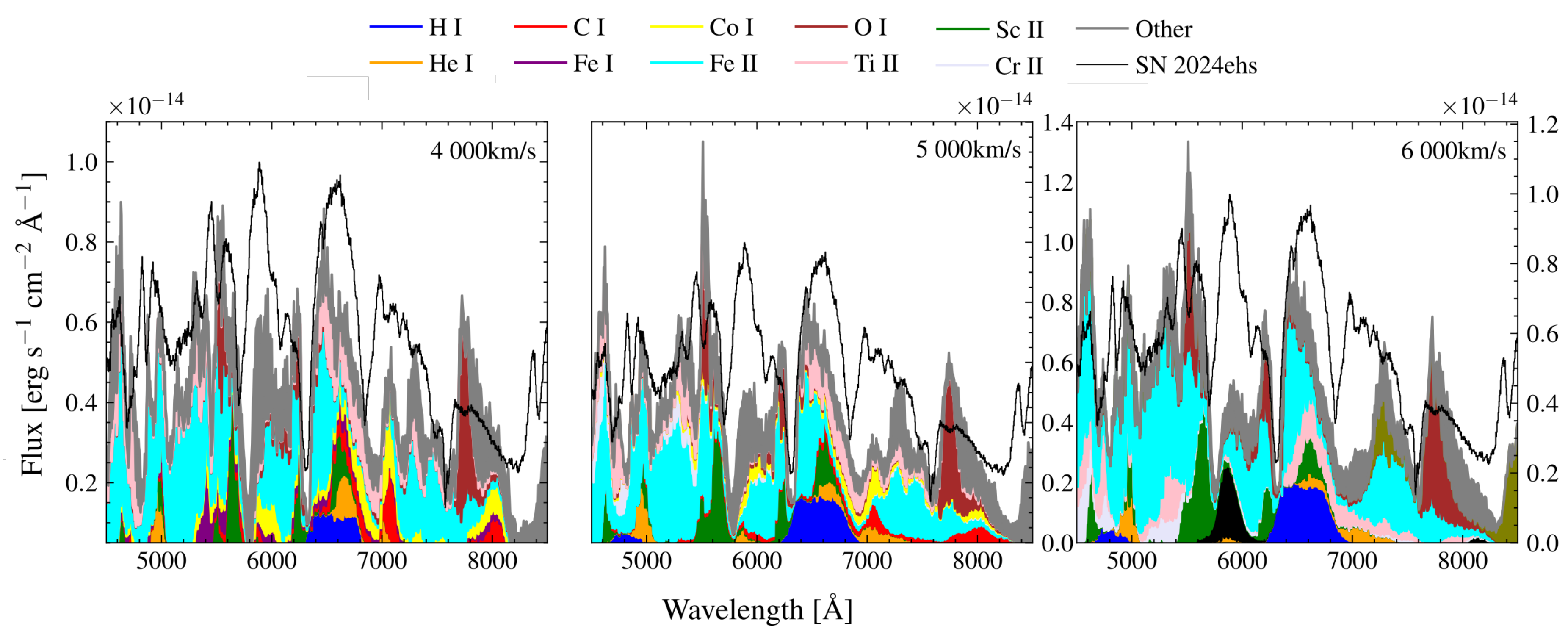


Figure 2: SUMO models of the late photospheric phase (~80 days post explosion), with the most prominent elements filled in. A SN 2024ehs spectrum from the same phase is shown in black. The three models share features and abundances but varying explosion velocities, 4000, 5000 and 6000 km/s respectively. Note how the contribution from different elements varies with velocity.