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# New $^{26}$Al-$^{26}$Mg SIMS isochron ages of single chondrules from L and LL ordinary chondrites

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The formation of chondrules is a key process during the early evolution of the solar system. In-situ Al-Mg isotope data obtained by Secondary Ion Mass Spectrometry (SwissSIMS, University of Lausanne) provide highly precise $^{26}$Al-$^{26}$Mg ages of single ferromagnesian chondrules from the L and LL uniquilibrated ordinary chondrites (UOCs), NWA 5206, NWA 8276, MET 96503, MET 00452, MET 00526 and QUE 97008 that cover petrologic types between 3.00 and 3.15. Key questions in this study include: Do chondrules in one meteorite class show a spread in ages? Do systematic age differences exist among different chondrule types? First results show resolvable excess $^{26}$Mg ($\delta^{26}$Mg*) for most of the analyzed chondrules (type I and II) with $(^{26}Al/^{27}Al)_0$ between $(9.50\pm2.8)\times10^{-6}$ and $(2.47\pm1.0)\times10^{-6}$ that correspond to ages of 1.76 (+0.36/-0.27) to 3.16 (+0.54/-0.35) Ma relative to CAIs using the canonical $^{26}$Al/$^{27}$Al = $5.23\times10^{-5}$ [1] and assuming a homogeneous distribution of $^{26}$Al in the early solar system.

[1] Jacobsen, B. et al. (2008) EPSL 272(1), 353–364.

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