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Supporting information for article:

**Strong hydrogen bonding in a dense hydrous magnesium silicate
discovered by neutron Laue diffraction**

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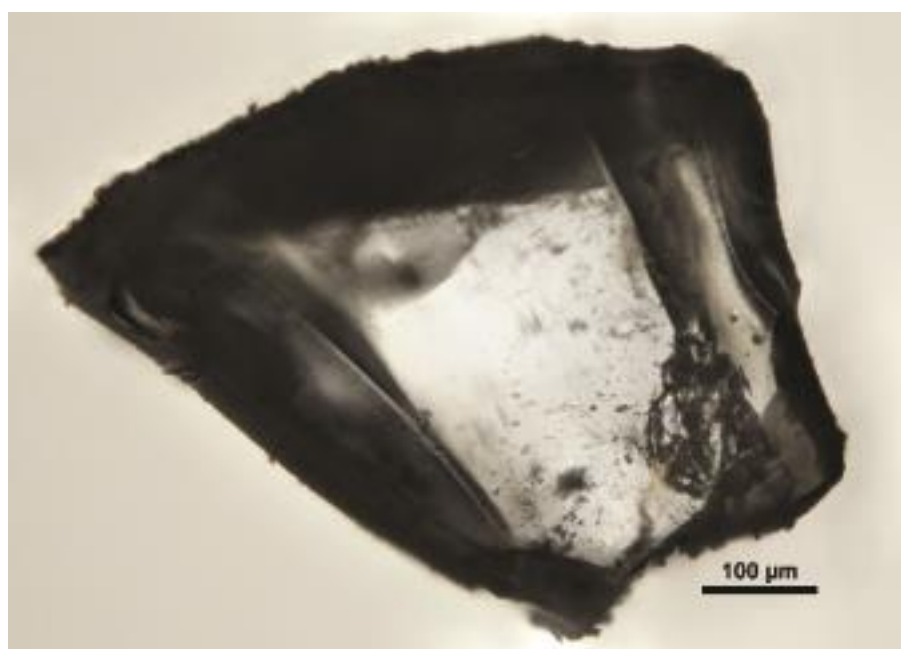


Figure S1 Recovered single crystal of deuterated dense hydrous magnesium silicate (DHMS) phase E, measured by time-of-flight (TOF) single-crystal neutron Laue diffraction.

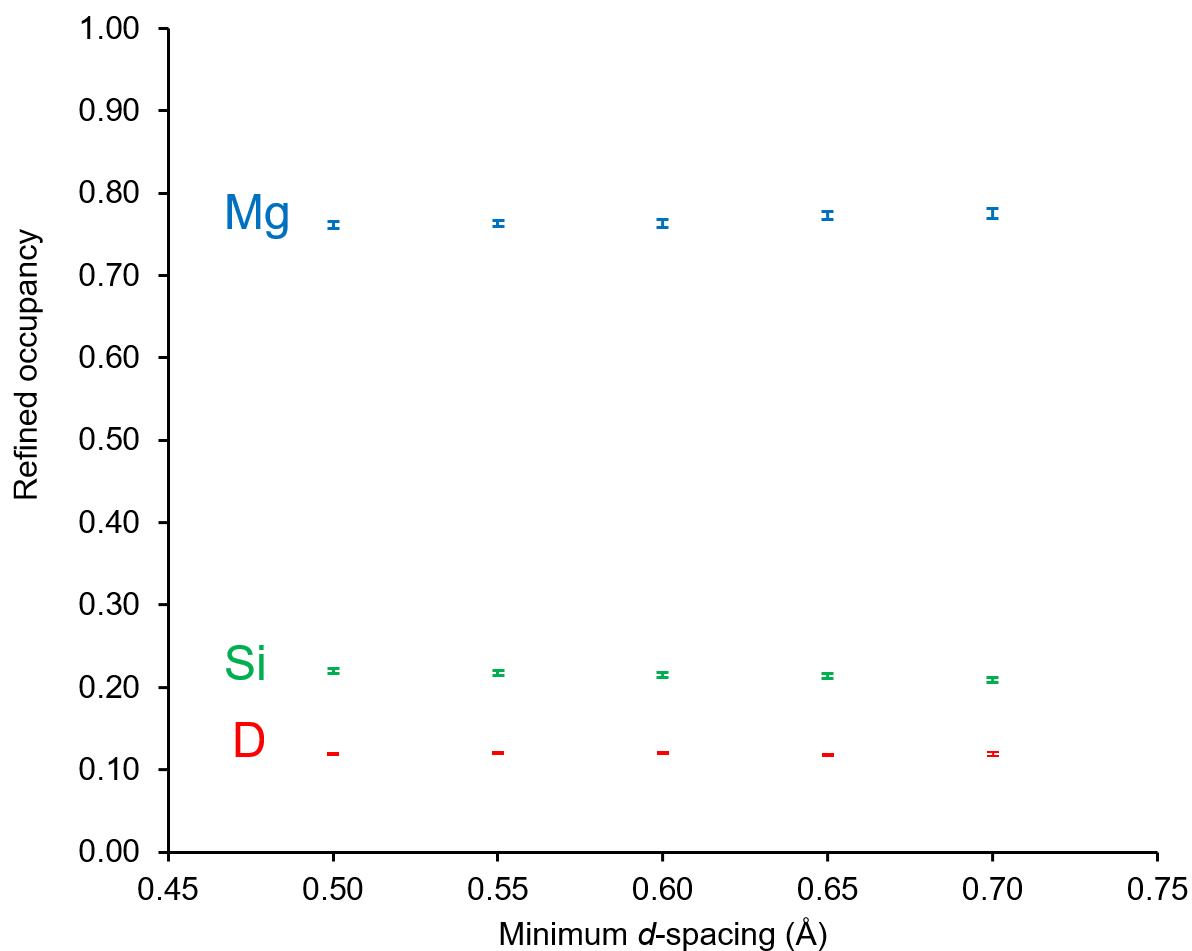


Figure S2 Refined cation occupancies as a function of minimum d -spacing. Each symbol indicates the refined occupancies along with the standard deviations. The numbers of reflections [$I > 3\sigma(I)$] are as follows: 707 at $d_{\min} = 0.50$ Å, 652 at $d_{\min} = 0.55$ Å, 580 at $d_{\min} = 0.60$ Å, 488 at $d_{\min} = 0.65$ Å, 424 at $d_{\min} = 0.70$ Å.

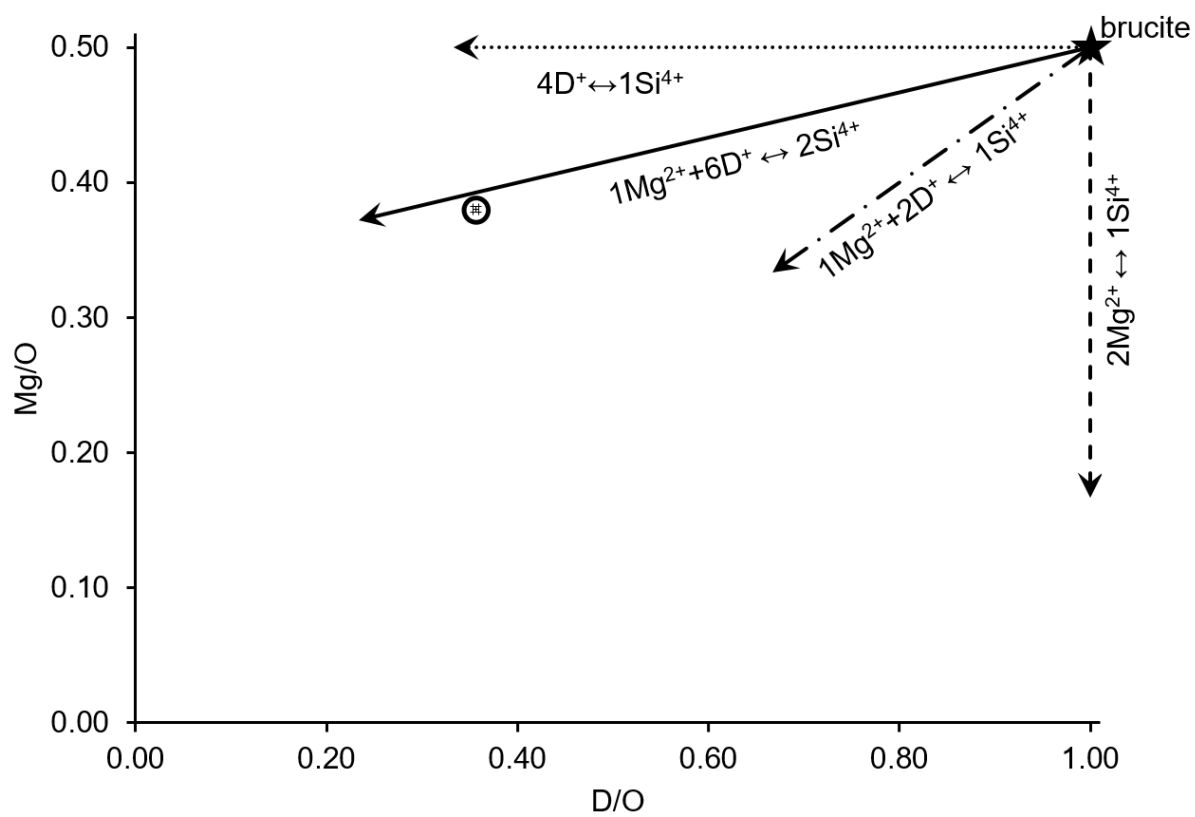


Figure S3 Mg/O and D/O atomic ratio of the four proposed models (lines) and structure refinement result (open circle).