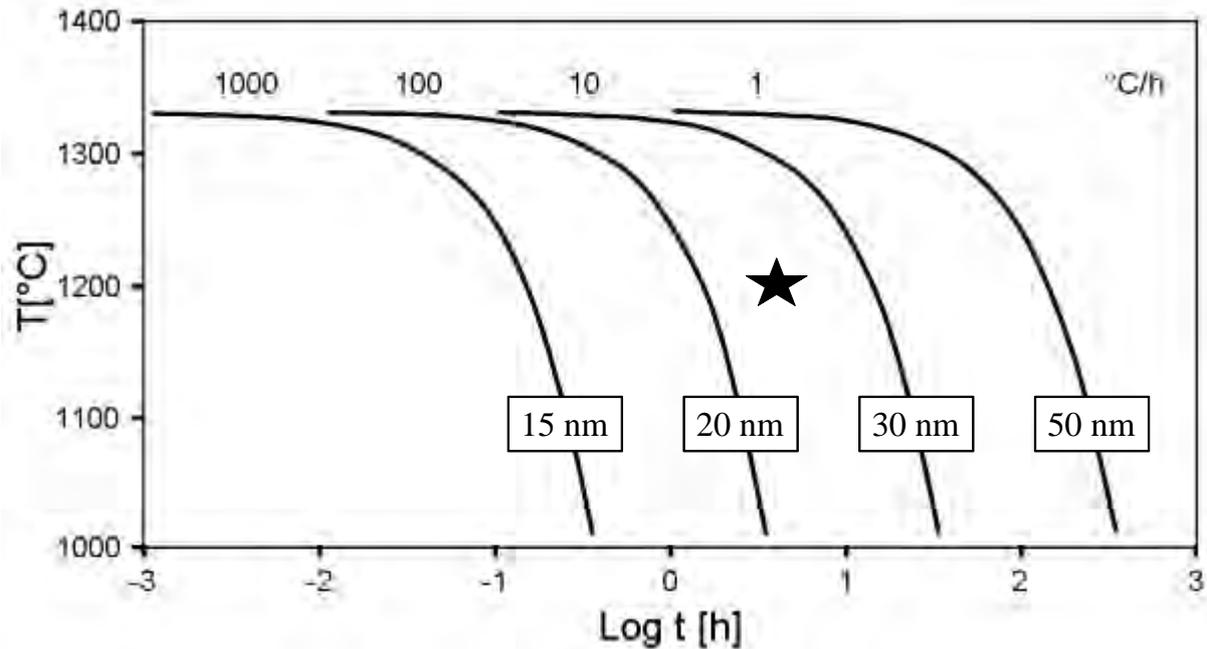


460 **Figure 4**

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Figure 4: Time-temperature transformation (TTT) diagram showing the evolution of the (001) lamellae wavelength, adapted from Weinbruch et al. (1995), for diopside with a composition similar to that of the Stardust sample studied here. The curves correspond to cooling rates of 1000, 100, 10 and 1°C/h for a given lamellae wavelength (in nm). According to the phase diagram, the exsolution process must have started at 1350° C, and was almost completed at T = 1200°C (considered here as the closure temperature). The measured Stardust lamellae wavelength of 25 nm corresponds to a cooling rate within the range 10-100°C/h.