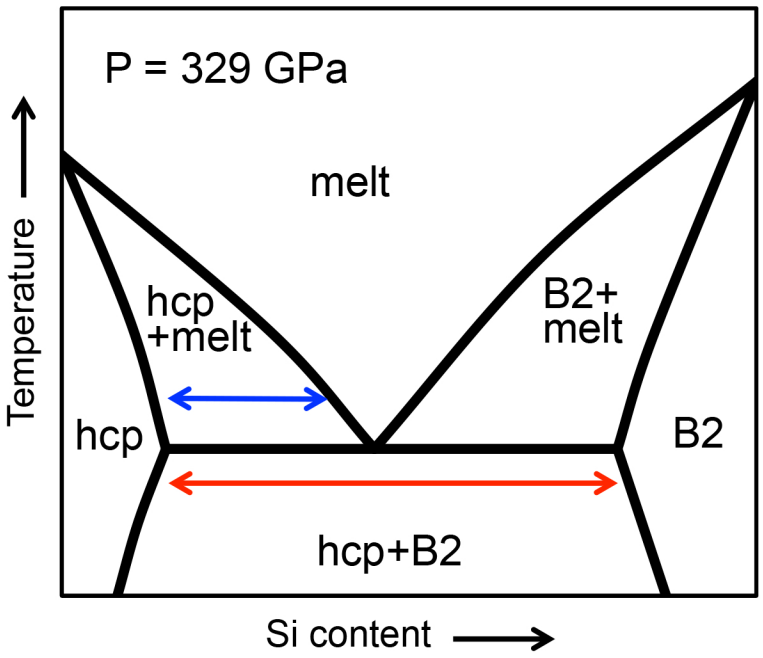
Figure S1

A:



B:

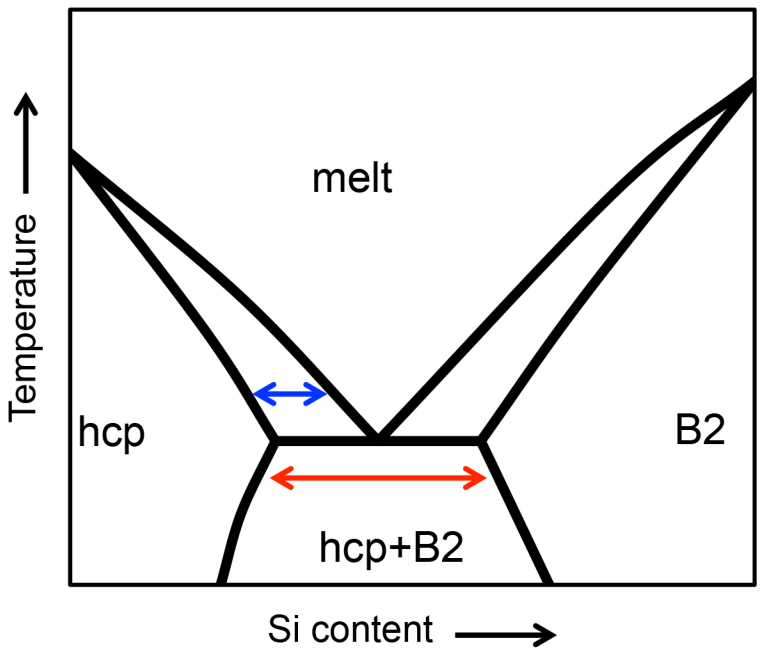


Figure S1: Schematic temperature-composition phase diagrams in the Fe–Si system. A: A wide hcp+B2 two-phase field (red arrow), as shown in this study, allows for a larger compositional contrast (blue arrow) between coexisting solid and melt at inner core boundary pressures. This makes it possible for a Si-rich core to be compatible with seismic observations of a large density contrast between the inner and outer core (e.g., Masters and Gubbins 2003). B: In contrast, a narrow two-phase field would preclude the possibility of a large compositional contrast between coexisting solid and melt in the Fe–Si system, making silicon a less viable candidate for the core's dominant light element.