B-U (Boron-Uranium)

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The B-U phase diagram in [Massalski2] was redrawn from the experimental works of [1975Mar] (0-8 at.% U) and [1959How] (8-100 at.% U). The boron-rich side of this phase diagram was speculative. Figure 1 shows the B-U phase diagram calculated by [2001Che]. This diagram agrees well with the experimental data. Because the sharpness of the B₄U and B₂U in [Massalski2] was dissimilar around the congruent melting point, which is unlikely according to a criterion given by [1993Oka], the diagram of [2001Che] may be a better presentation of the experimental phase boundary data.

References

- **1959How:** B.W. Howlett, A Note on the Uranium-Boron Alloy System, *J. Inst. Met.*, 1959-1960, **88**, p 91-92
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- **1993Oka:** H. Okamoto and T.B. Massalski, Guidelines for Binary Phase Diagram Assessment, *J. Phase Equilib.*, 1993, **14**(3), p 316-335
- 2001Che: P.Y. Chevalier and E. Fischer, Thermodynamic Modeling of the C-U and B-U Binary Systems, *J. Nucl. Mater.*, 2001, 288, p 100-129

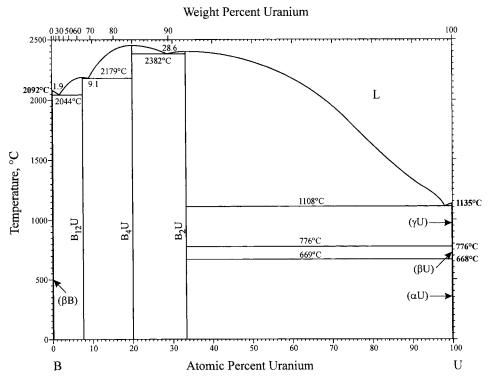


Fig. 1 B-U phase diagram