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Theory of the band offset at the Si(100)-SiO_2 interface BLAIR TUTTLE, Penn State Erie — The valence band offset at device quality interfaces between Si(001) and SiO_2 are investigated using local density functional electronic structure calculations. Several model interfaces have been examined. One includes a relaxed amorphous oxide and several hundred atoms. The experimental band offset results are re-examined in the context of these calculations.

[1] B. Tuttle, Phys. Rev. B **70**, 125322 (2004).

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