

well with the previous work. Ionic radii values were taken from Templeton and Dauben (30).

The shortest Sb-Sb distances in the LaSb<sub>2</sub> type compounds were calculated using the atomic positions for SmSb<sub>2</sub> from Wang and Steinfink (1) and the lattice parameters in Table 5. The Sb-Sb bond length in antimony metal is 2.90 Å and the shortest Sb-Sb bond reported before Wang and Steinfink's work was 2.81 Å in CdSb and ZnSb (31).

The atomic positions for SmSb<sub>2</sub> reported in Wang's dissertation (25) are not the same as those given in the published work by Wang and Steinfink (1). However, the Sb-Sb bond lengths are the same in both works. A check showed the bond lengths were calculated from the atomic positions given in Wang's dissertation. Apparently the atomic positions were refined after the dissertation was written but the bond lengths were not corrected. Corrected bond lengths were calculated from the atomic positions for SmSb<sub>2</sub> given in the published work (1) and are different from the values given there for the above reasons. The published and corrected values are summarized in Table 7. Figure 20 shows the variation of the shortest Sb-Sb bond length with ionic radius of the rare earth in the LaSb<sub>2</sub> type rare earth diantimonides. It is apparent that the Sb-Sb bond can be as short as 2.76 Å and still be stable or at least metastable. This is 0.14 Å or almost 5 per cent shorter than the bond length in antimony metal which