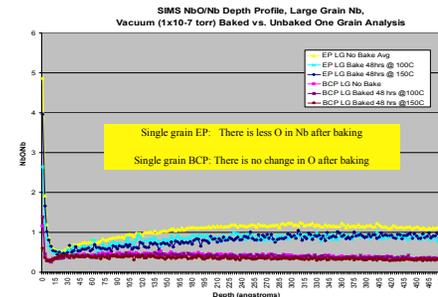
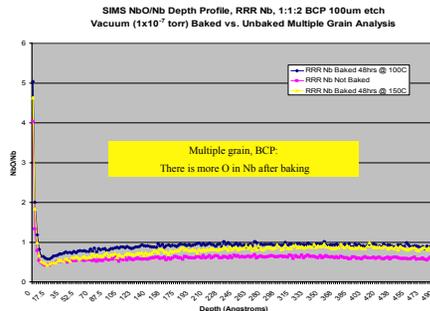
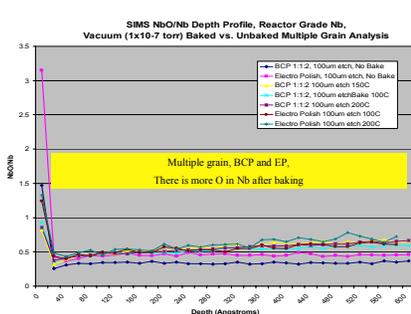




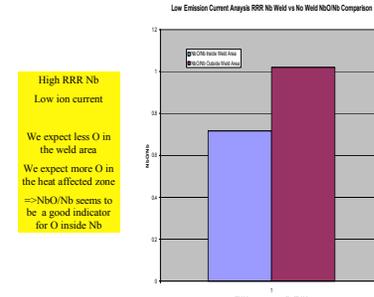
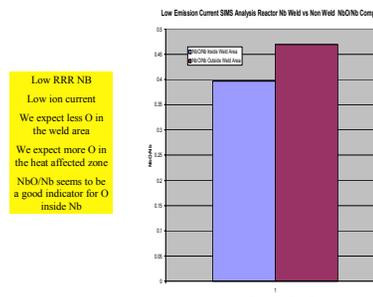
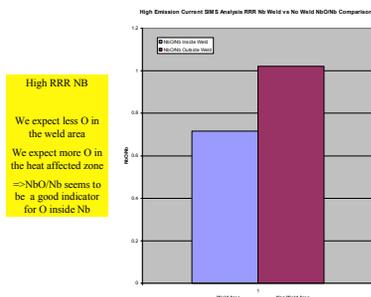
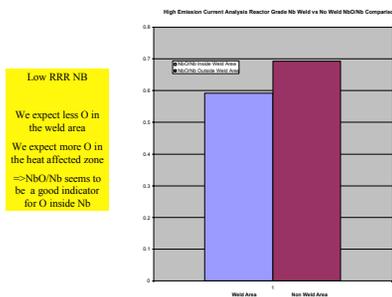
SIMS Analysis of the Effects of Heating on the Oxygen Content of Niobium Using the NbO/Nb Signal

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Vacuum baked and non baked samples of niobium were analyzed using the recently installed SIMS instrument at Cornell. Depth profile analysis of the samples of niobium indicated that with heating under vacuum the O is driven into the bulk of the niobium sample for multigrain analysis on both BCP and EP samples. Reactor and High RRR niobium were analyzed to determine the effects that differing oxygen content has in conjunction with heating.

Single and multiple grains of niobium were analyzed to study the effects that grain boundaries have on oxygen content with heating.



E-beam welded samples of niobium were analyzed using the Cornell SIMS instrumentation..

The analysis indicated that O content of the niobium was less in the superheated weld area than in the outlying non-weld areas.

SIMS analysis using both high and low energy argon sputter beams was utilized to determine any effects the analysis beam may have

on EPD. NbO/Nb appears to be a good indicator of oxygen content.

