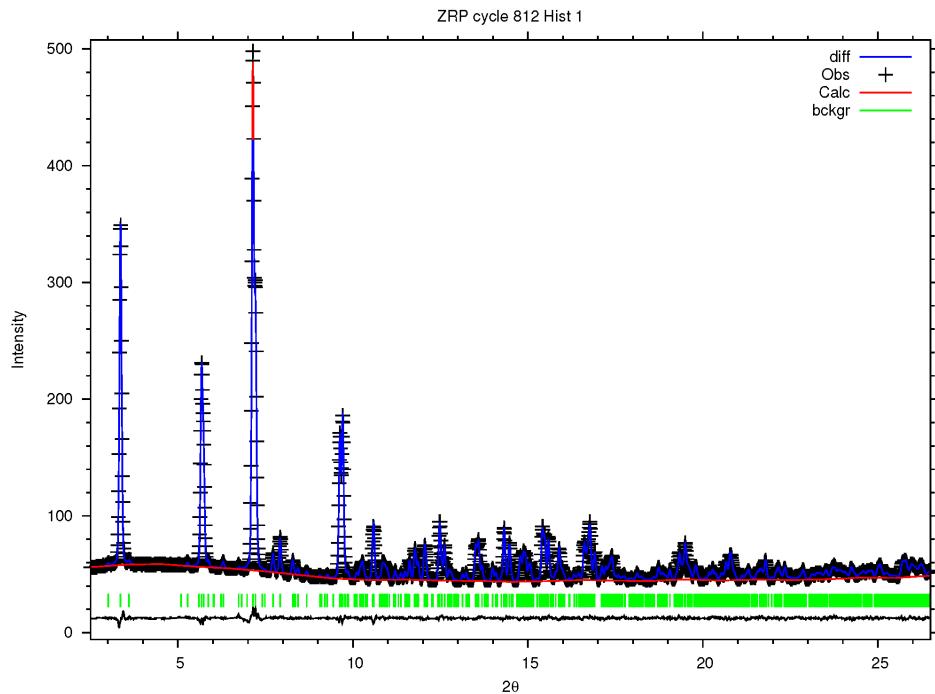


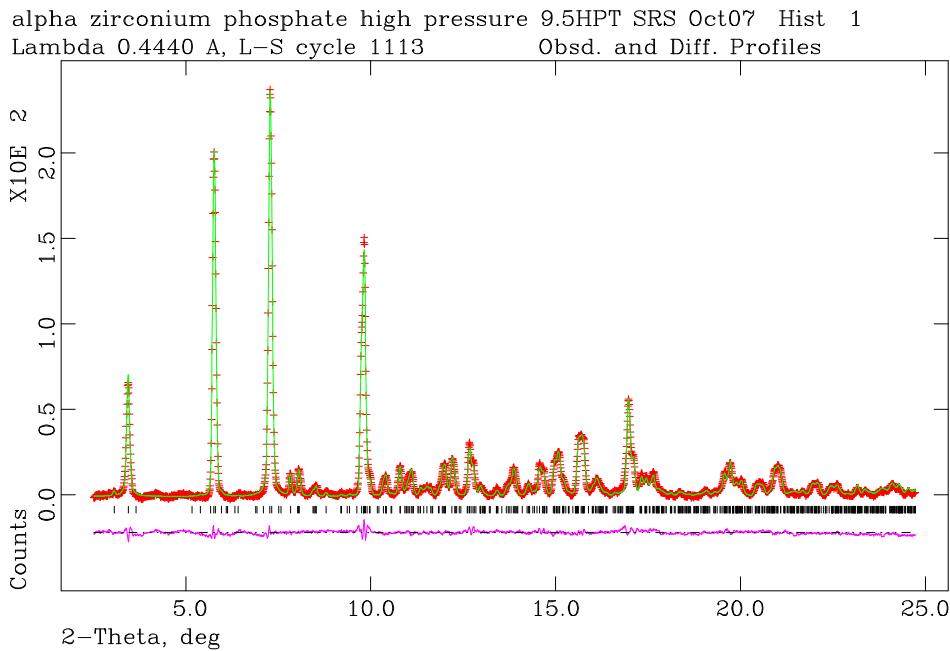
Supplementary Information

1. Rietveld plot of a-zirconium phosphate in a gasket before loading into a DAC

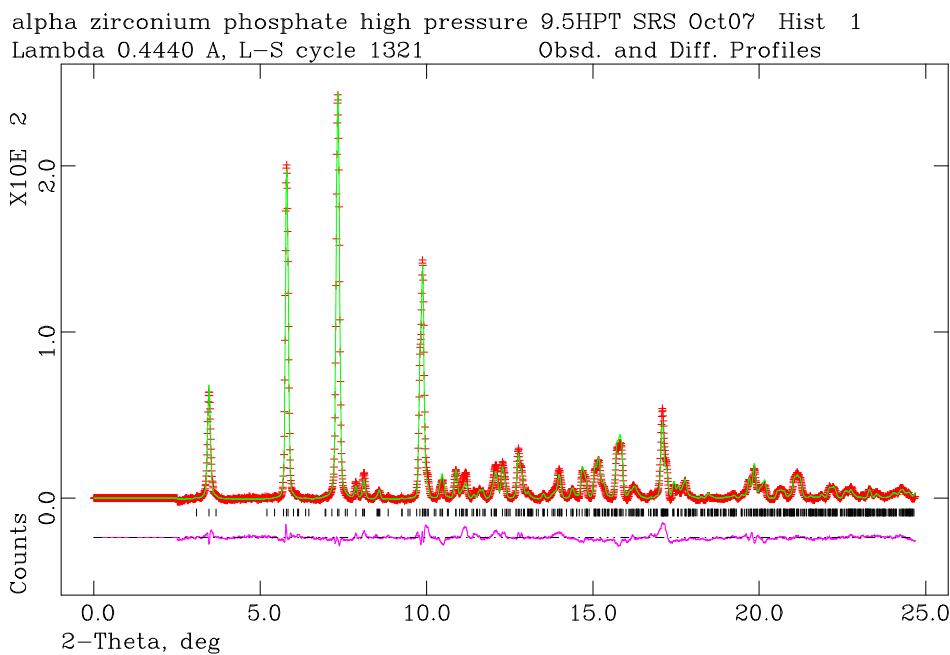


2. Rietveld plots of a-zirconium phosphate under hydrostatic conditions

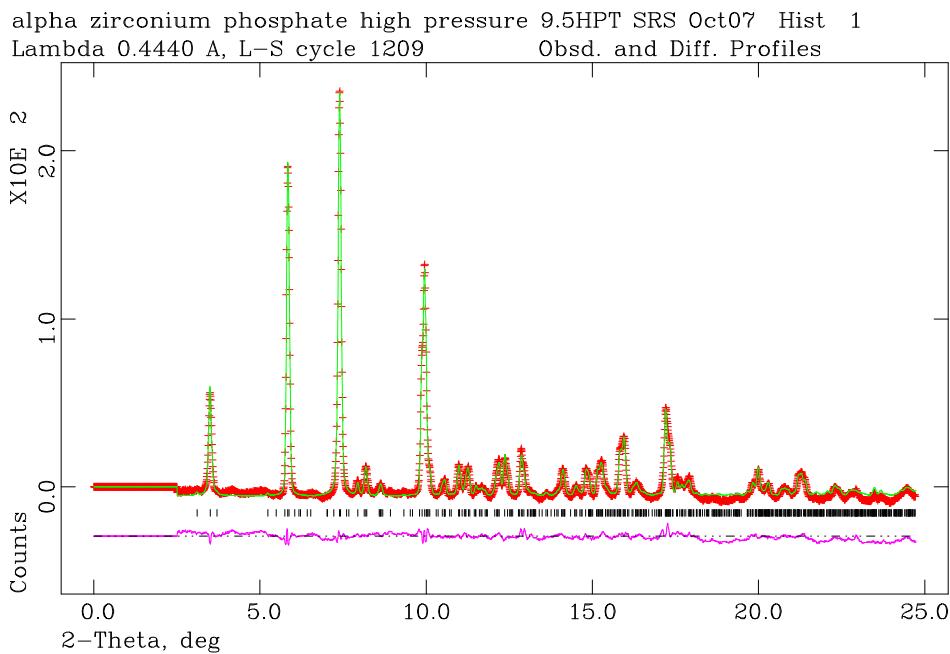
2.1: 0.71 GPa



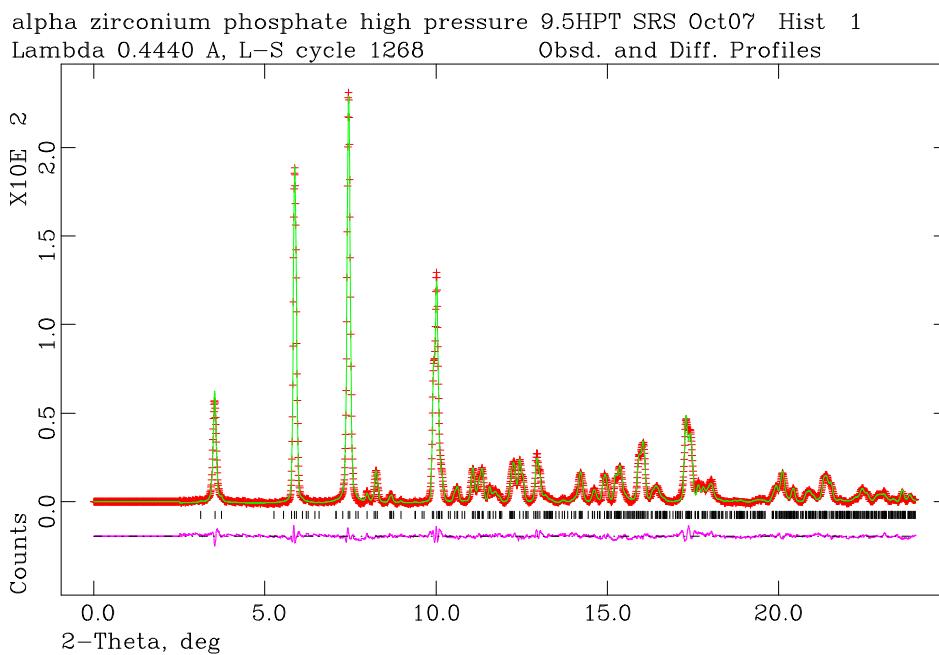
2.2: 1.40 GPa



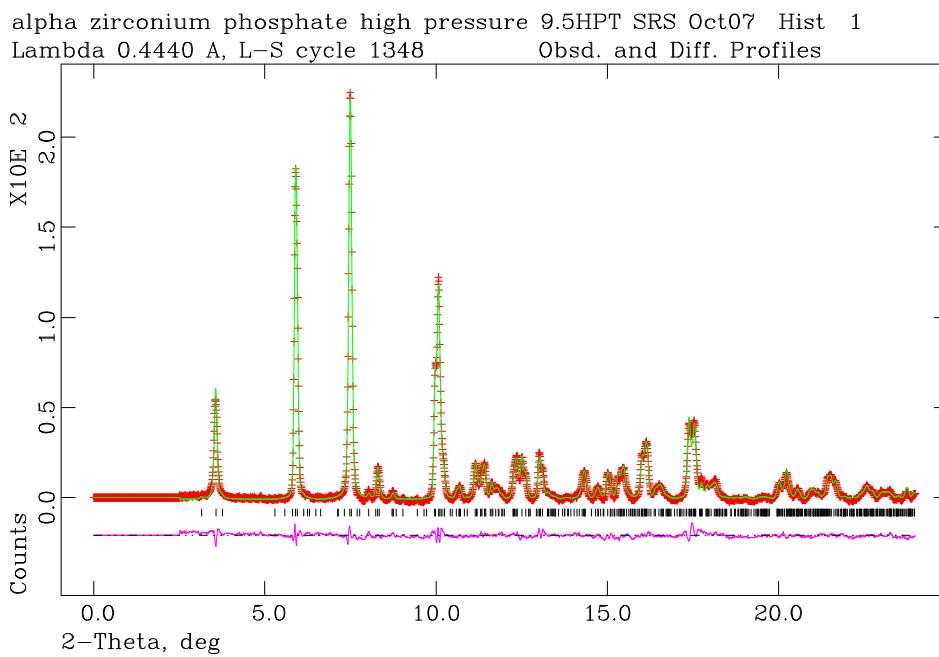
2.3: 1.98 GPa



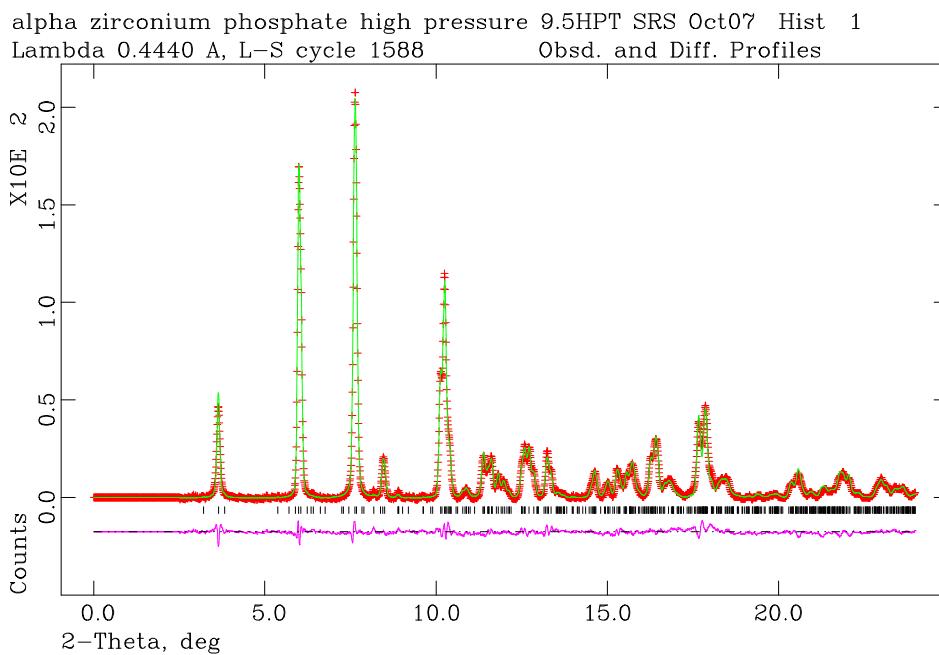
2.4: 2.53 GPa



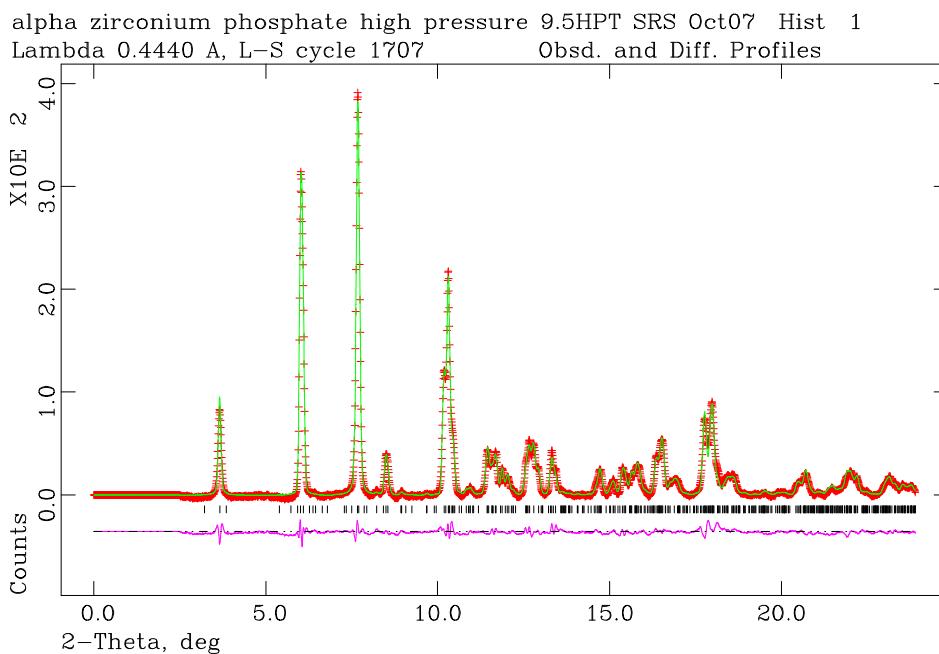
2.5: 3.23 GPa



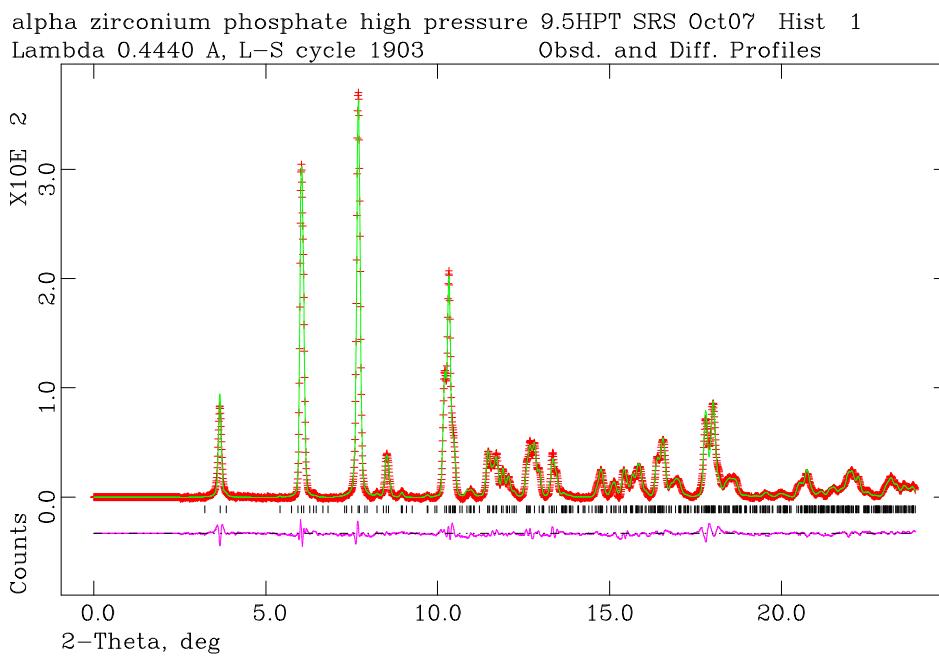
2.6: 5.60 GPa



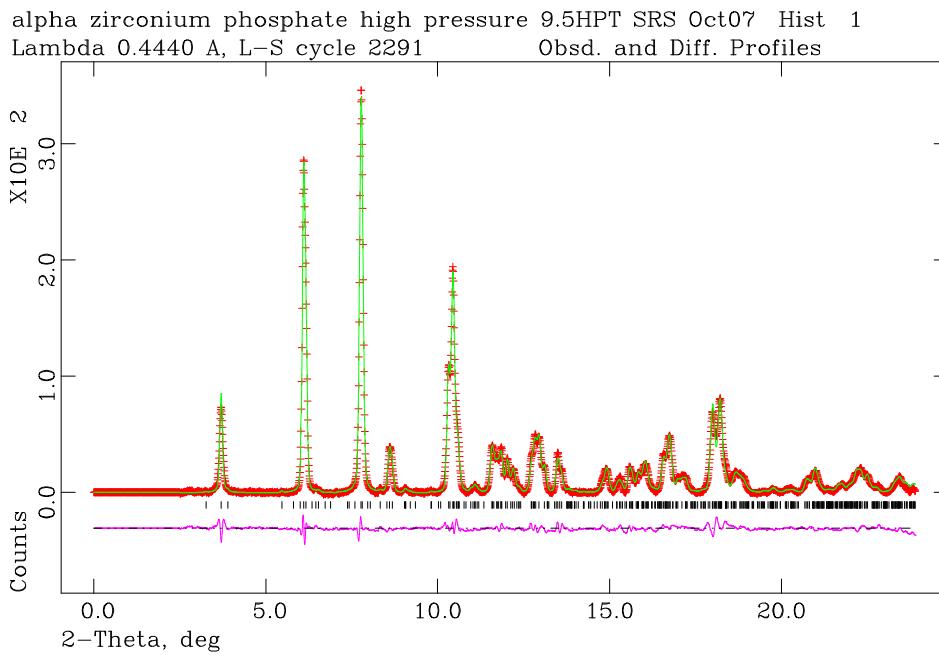
2.7: 6.35 GPa



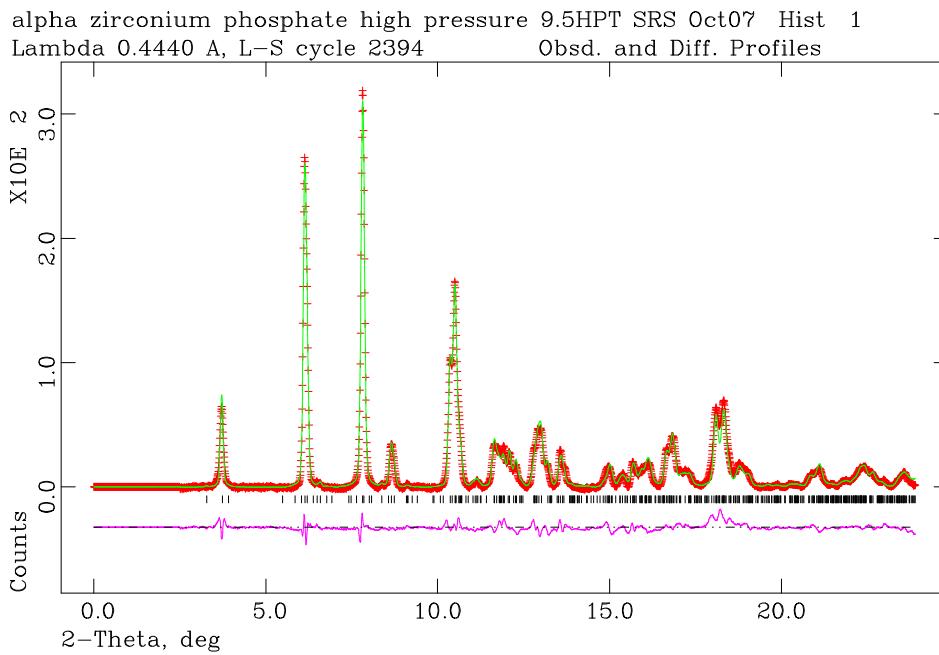
2.8: 6.77 GPa



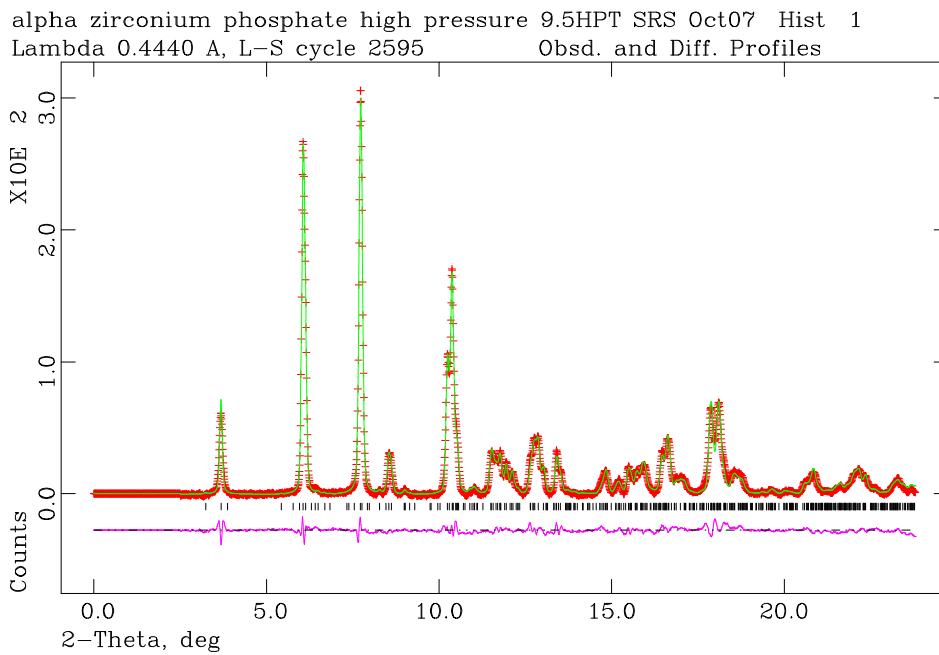
2.9: 8.88 GPa



2.10: 10.04 GPa

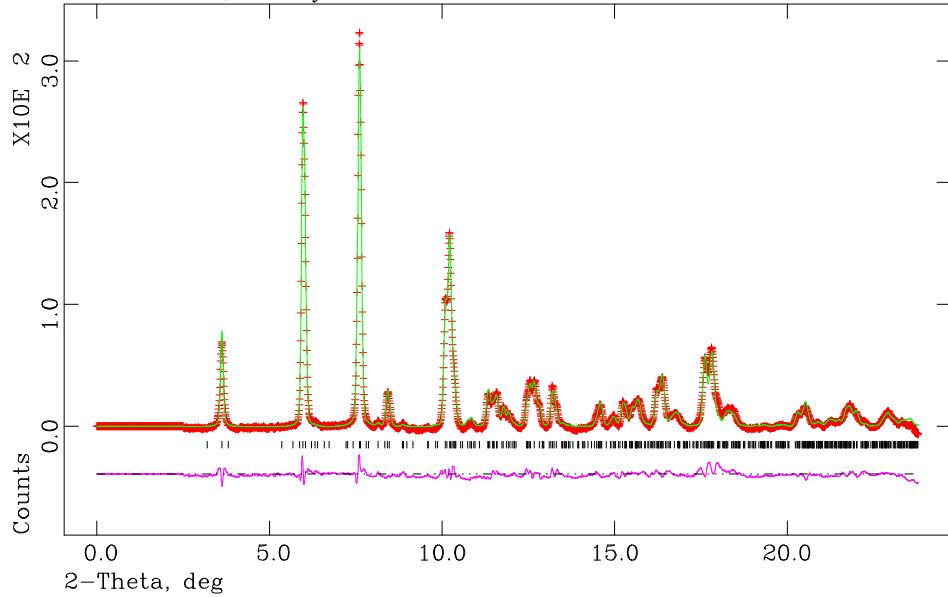


2.11: 7.39 GPa



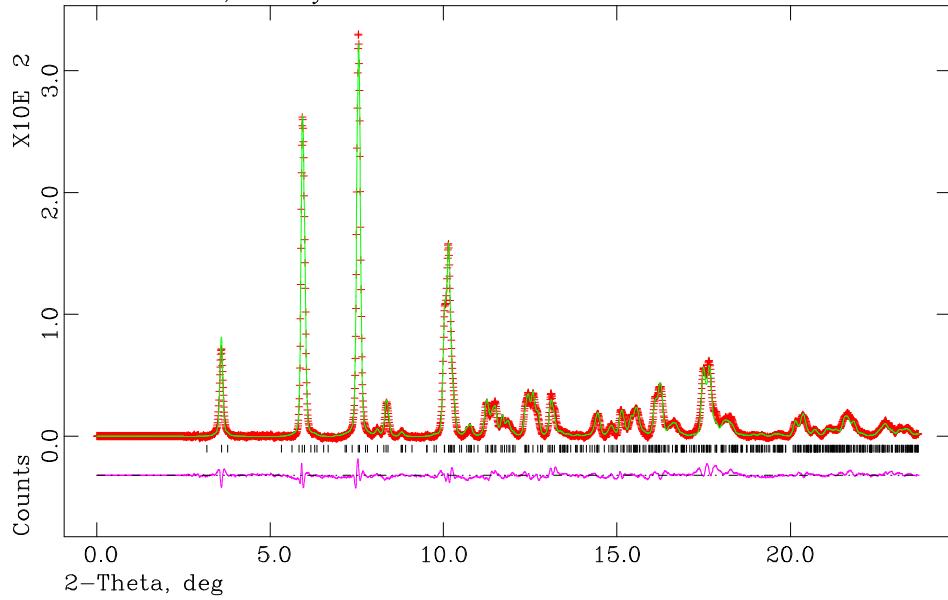
2.12: 4.92 GPa

alpha zirconium phosphate high pressure 9.5HPT SRS Oct07 Hist 1
Lambda 0.4440 A, L-S cycle 3048 Obsd. and Diff. Profiles

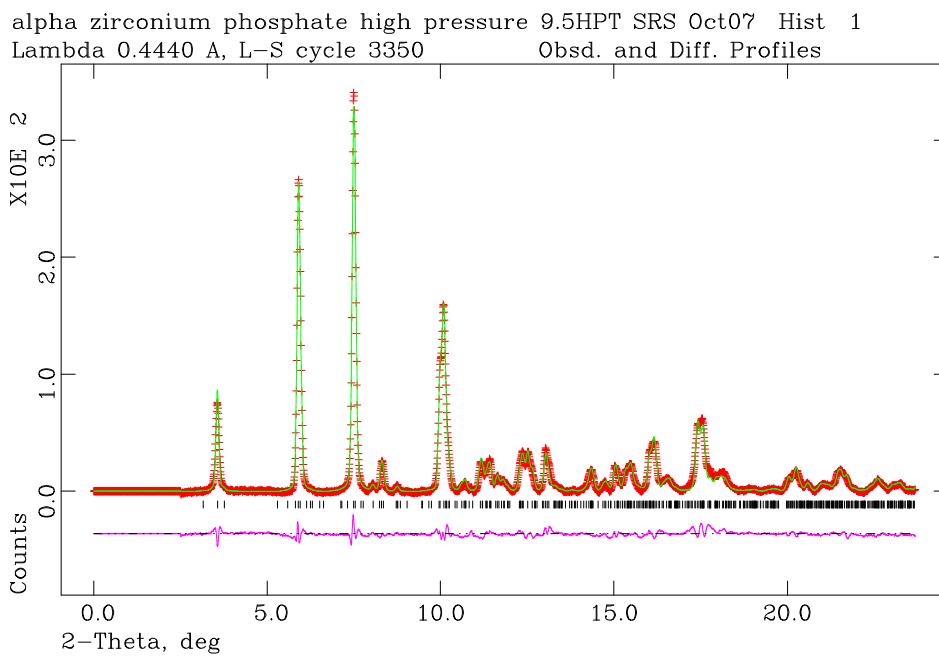


2.13: 4.00 GPa

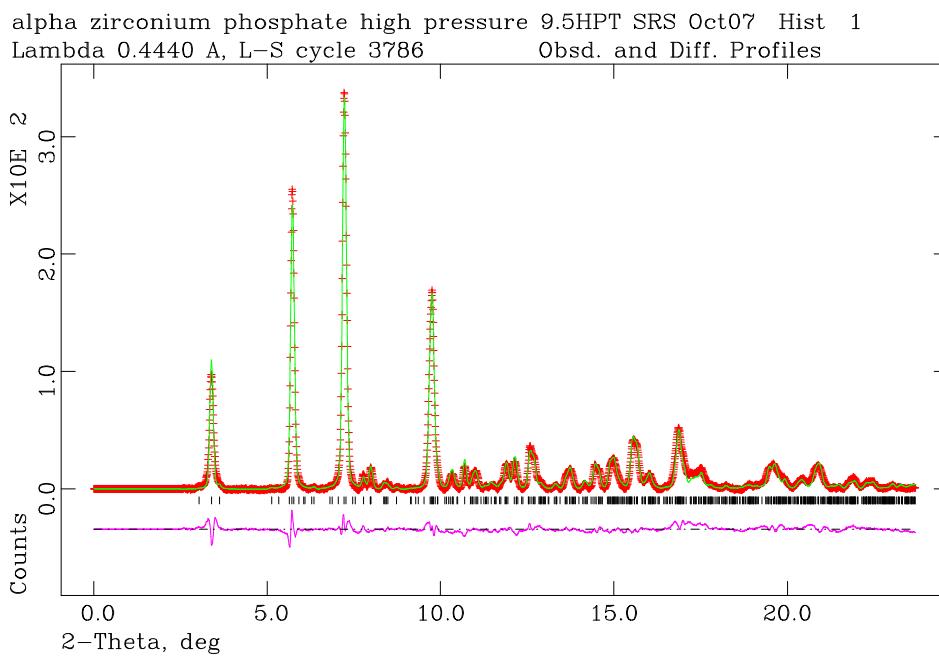
alpha zirconium phosphate high pressure 9.5HPT SRS Oct07 Hist 1
Lambda 0.4440 A, L-S cycle 3069 Obsd. and Diff. Profiles



2.14: 3.23 GPa

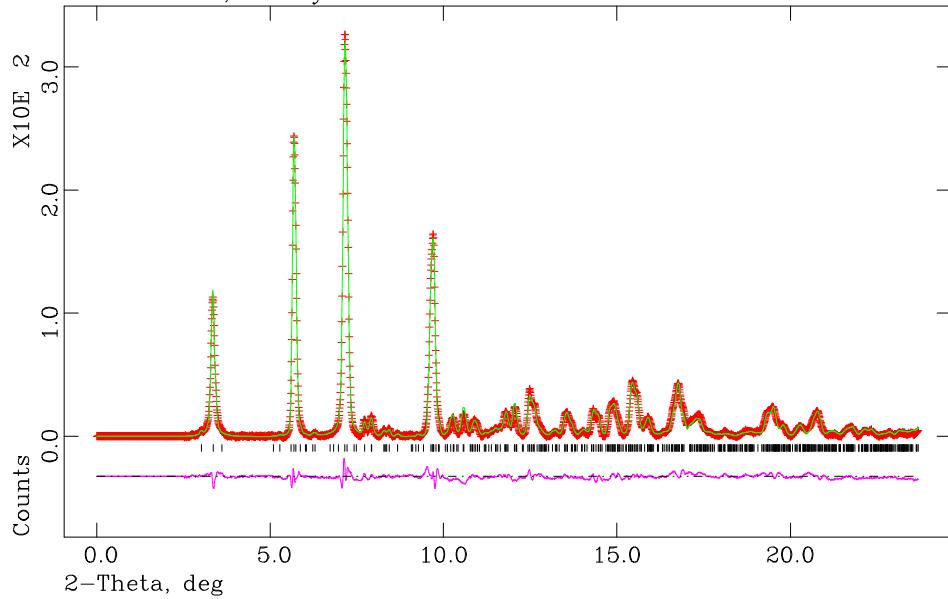


2.15: 0.30 GPa



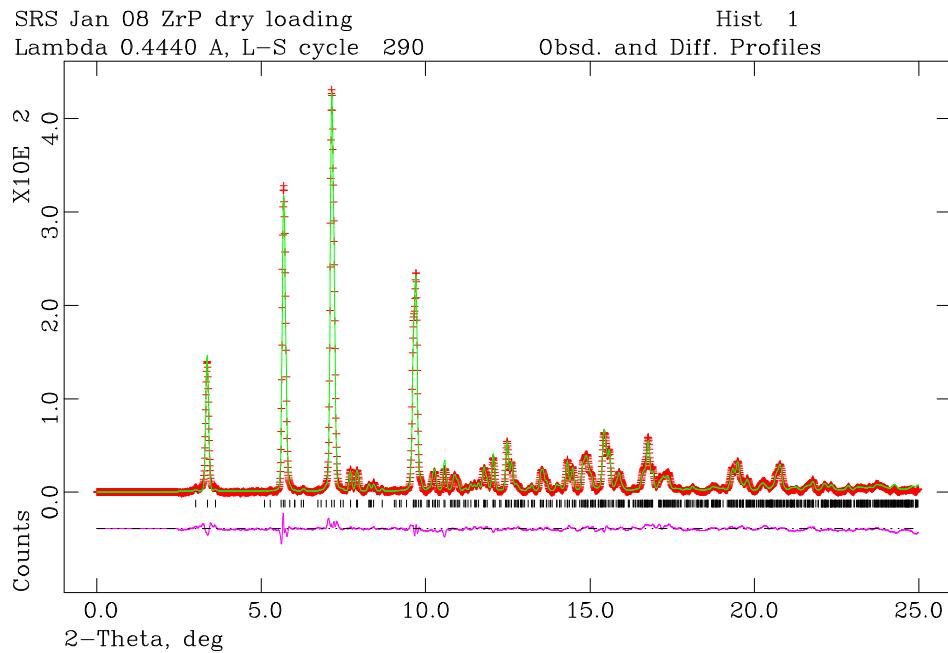
2.16: 0.0001 GPa

alpha zirconium phosphate high pressure 9.5HPT SRS Oct07 Hist 1
Lambda 0.4440 A, L-S cycle 4036 Obsd. and Diff. Profiles

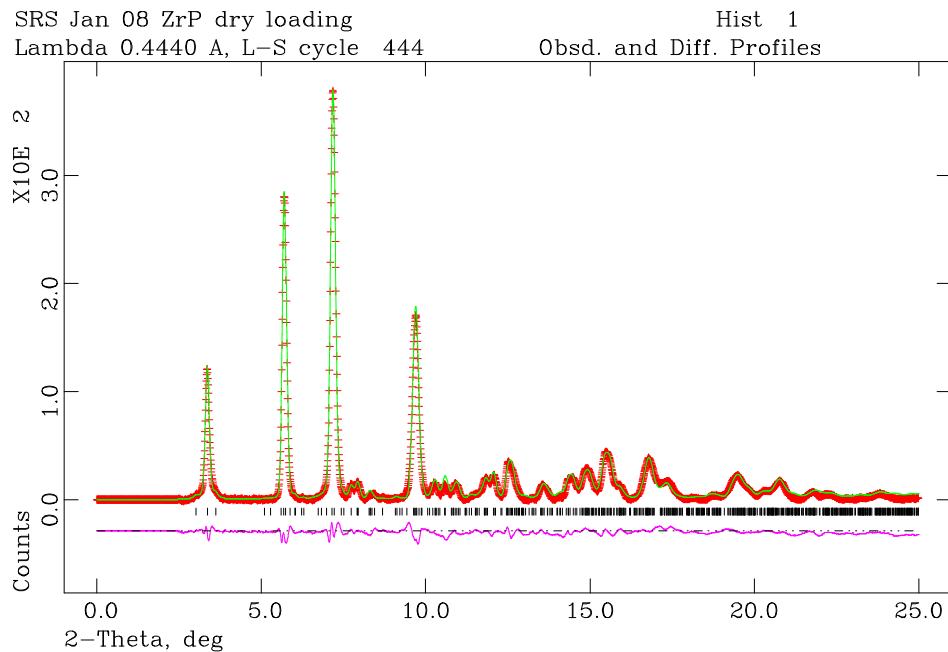


3. Rietveld plots of a-zirconium phosphate under non-hydrostatic conditions

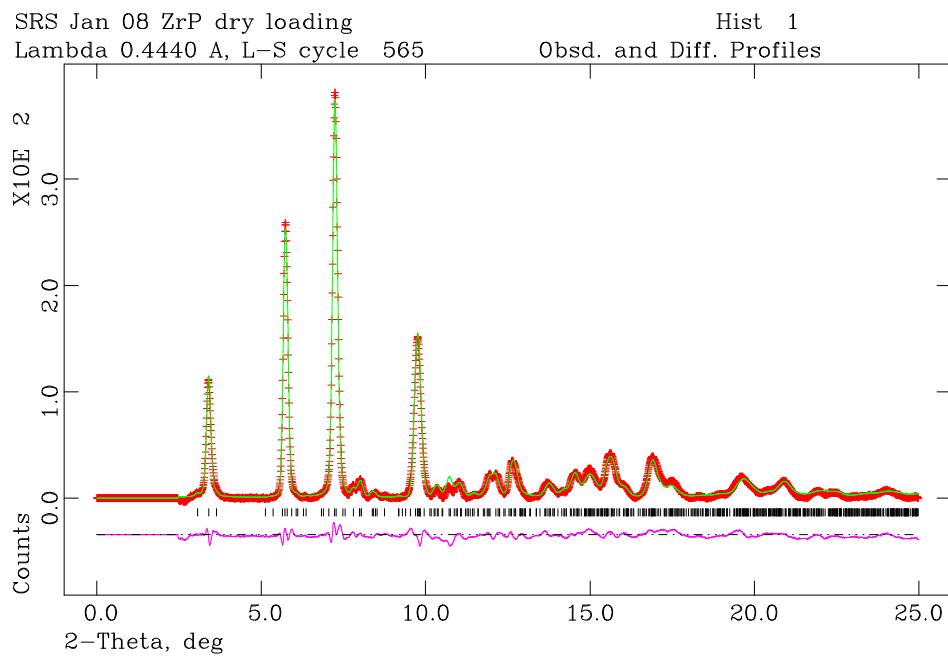
3.1: 0.14 GPa



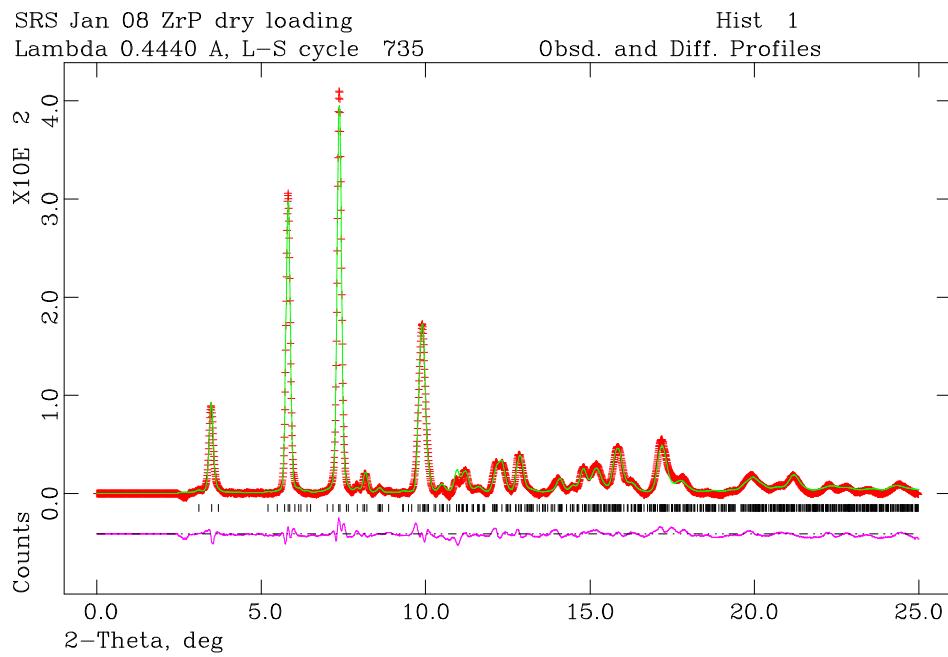
3.2: 0.30 GPa



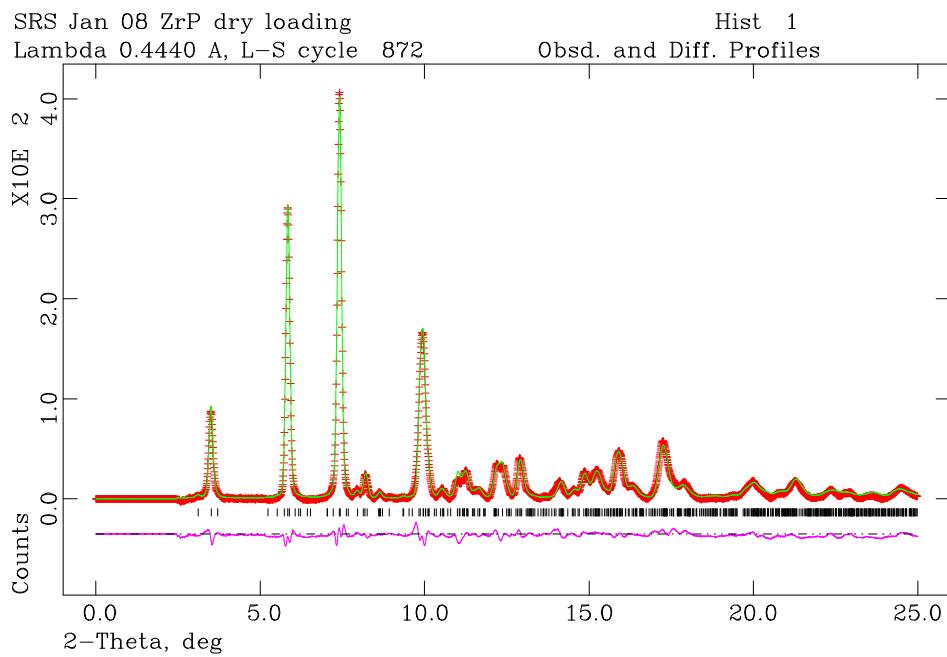
3.3: 0.85 GPa



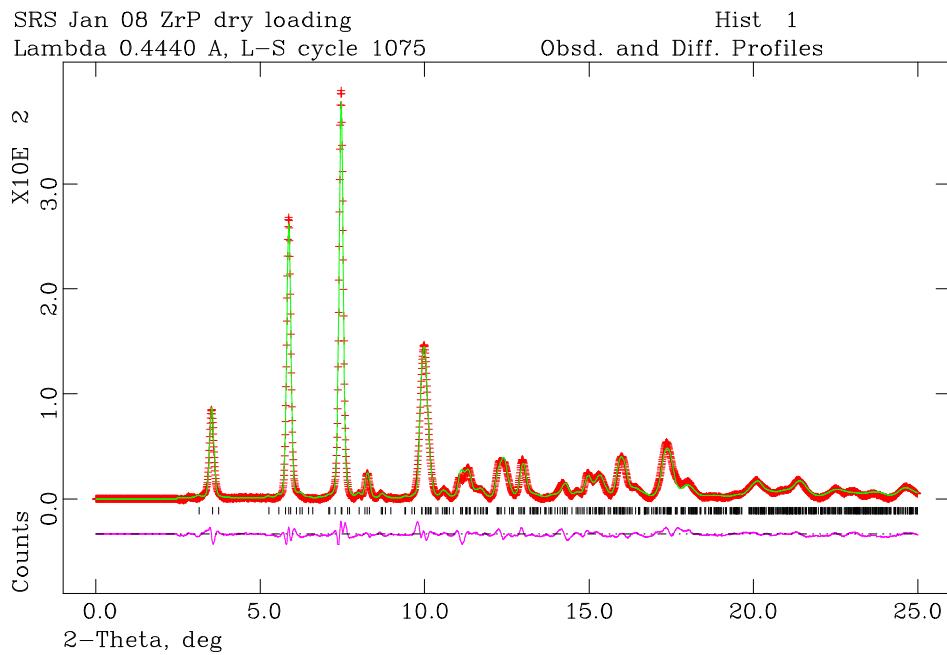
3.4: 2.12 GPa



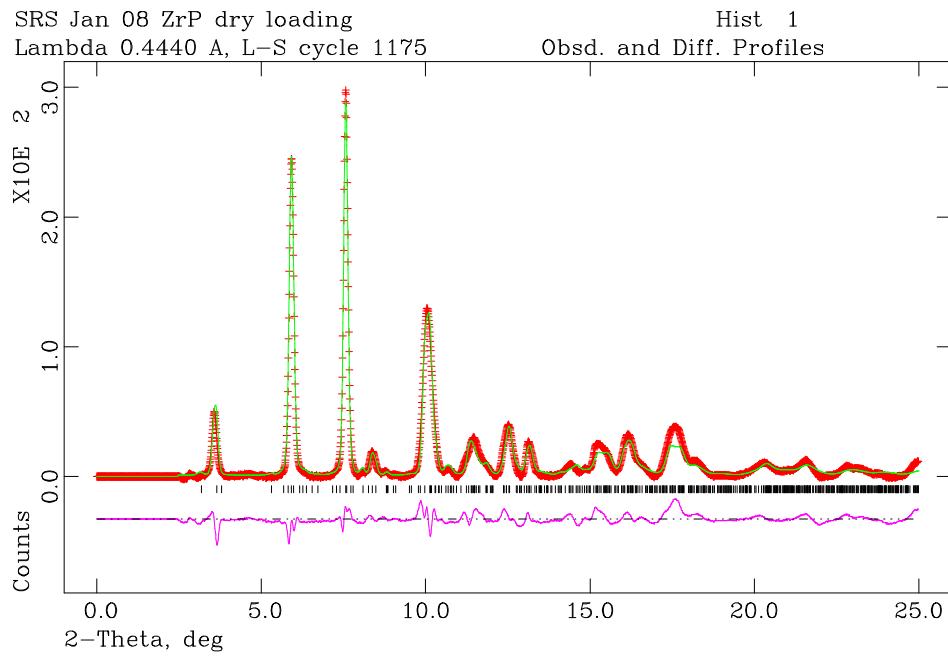
3.5: 2.67 GPa



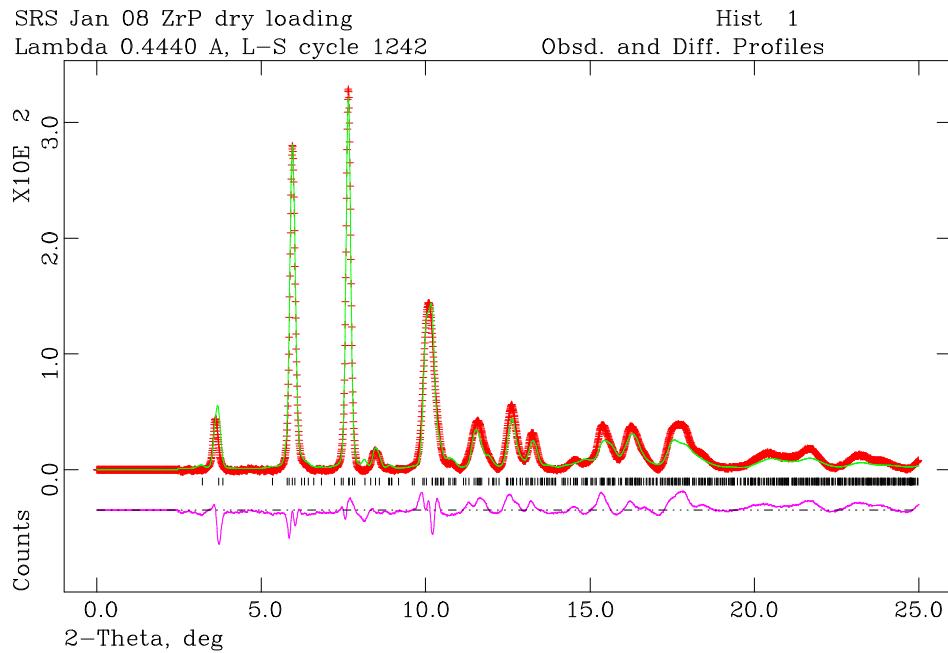
3.6: 3.37 GPa



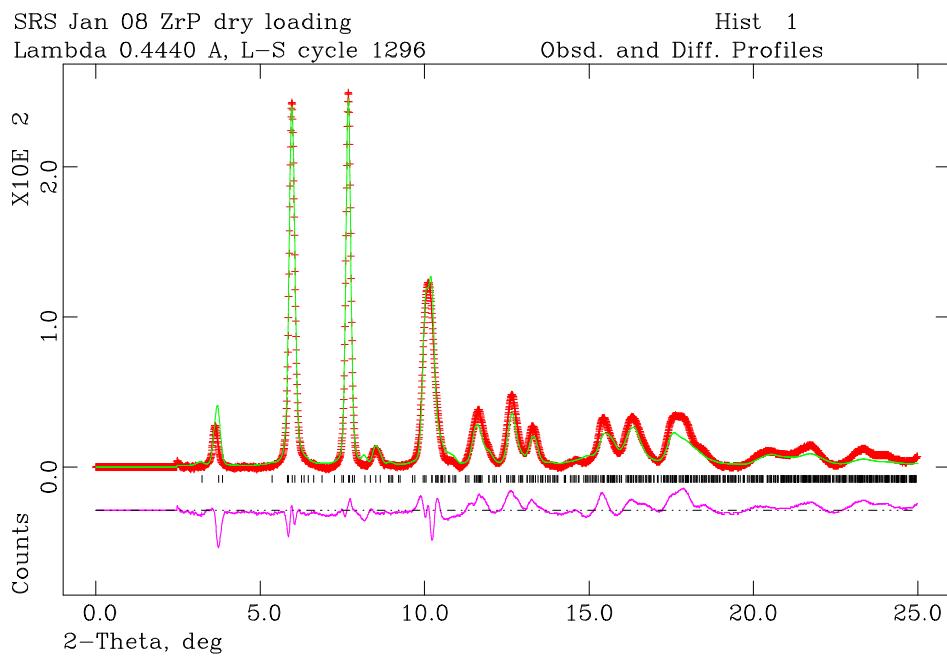
3.7: 4.51 GPa



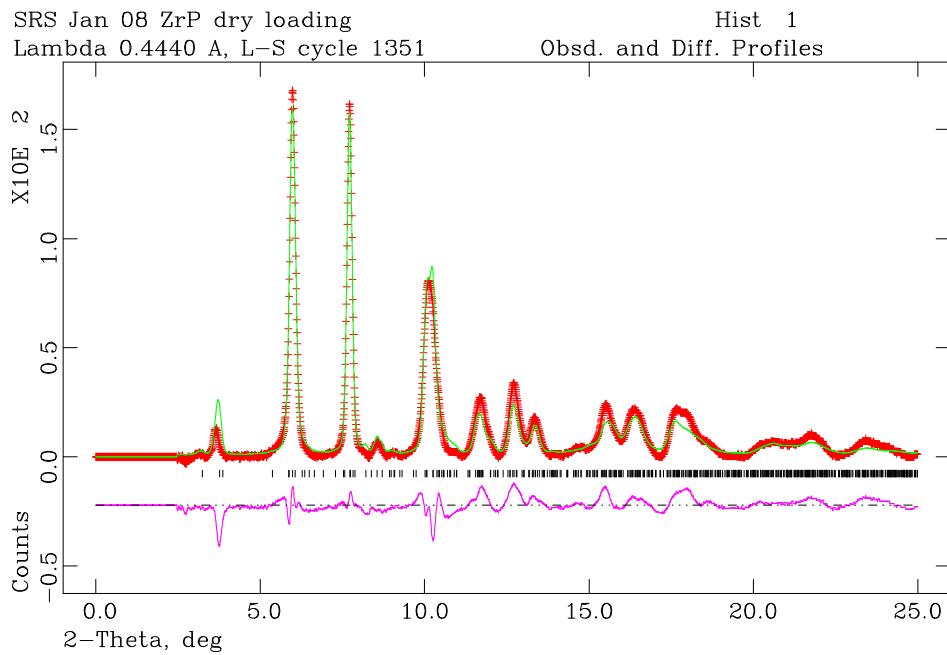
3.8: 5.48 GPa



3.9: 5.76 GPa



3.10: 6.91 GPa



3.11: 7.33 GPa

