Valence transitions, where $f$ electrons undergo a transformation from quasi-localised to itinerant, are associated with a change in unit cell volume. Perhaps the most famous and dramatic example of this is the $\gamma - \alpha$ transition in cerium and its alloys, which for elemental cerium is accompanied by an isostuctural collapse of the unit cell volume often reported to be as large as $\sim 15\%$ [1]. The Ce-based compound CeOs$_4$Sb$_{12}$ has previously been shown using resistivity, magnetostriction, and contactless conductivity (PDO) measurements to undergo a valence transition from the high-temperature, high-field $H$-phase to the low-temperature, low-field $L$-phase with a very unusually-shaped phase boundary [2, 3]. In this seminar I will discuss the results of single-crystal x-ray diffraction measurements in pulsed magnetic fields of up to 30 T performed to study this valence transition at a microscopic level. We observe a field-induced change of the lattice parameter associated with the transition from the $L$-phase to the $H$-phase and in addition to this we identify a small distortion from the previously reported cubic structure. The observation of both of these subtle effects is only possible due to the high sensitivity of the backscattering geometry used.