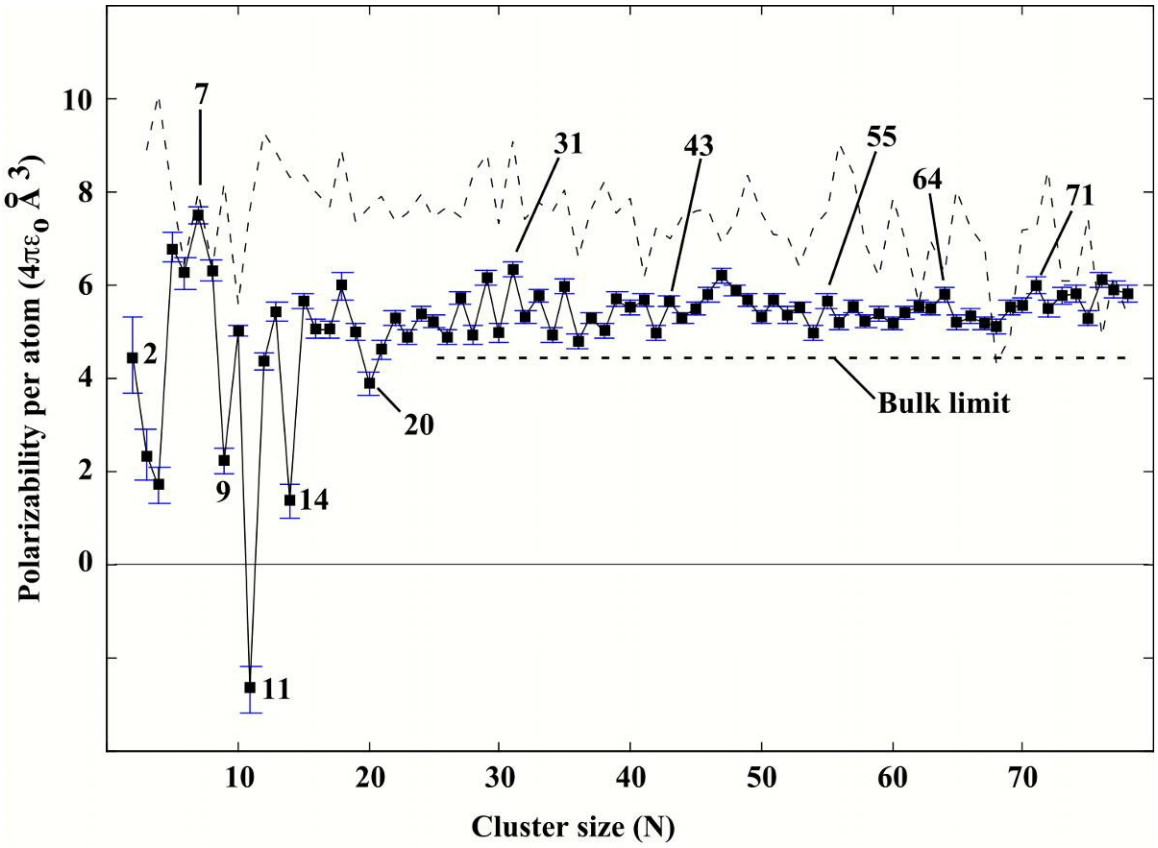

Figure 25: Filled squares are **experimentally measured polarizabilities** per atom of niobium clusters at 20 K. These values were calculated from the average deflections of clusters that are left after applying an electric field of 80 kV/cm (which deflects most of the anomalous fraction beyond the detector limits). In the case of Nb_9, Nb_{11} and Nb_{14} there is a certain fraction of the clusters that are deflected negatively (towards weaker fields) and these clusters are not swept away, that is why their polarizabilities are anomalously low. The thin dashed line is the polarizability at 300 K that is reproduced here for comparison. Notice that the values at 20 K are systematically lower than the room temperature data. It is also remarkable the odd-even alternation in the region Nb_{25}-Nb_{45} with higher polarizabilities for odd clusters. The thick dashed line indicates the bulk limit.