Thermal metamorphism of Q in Allende meteorite

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Although the "phase Q" is the elusive major carrier of the planetary noble gas in carbonaceous chondrites, its origin is not well known. One hypotheses is that the phase Q is an surface layer of diamonds implanted by noble gases, subsequently changed into a carbon phase that could be removed by some oxidants. We implanted noble gases to the diamond in a laboratory experiment. The chemical treatment with oxidant decreased the concentrations of noble gases, but only hot water treatment also decreased that of noble gases. To investigate whether noble gases are affected by thermal metamorphism, we heated the Allende chondrite at 200oC in a pressure vessel(under 15atmospheric water-vapor pressure) for a week, and investigate the influence of thermal water alteration on noble gas compositions.