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INTRODUCTION. In present work we report results of Xe isotopic analyses in different fractions of the Kainsaz CO carbonaceous chondrite. This meteorite was chosen for study because it has lowest degree of metamorphism in group CO and has considerable metal content (~10%). The latter fact indicates that condensation and agglomeration of the Kainsaz chondrite matter occurred in more reductive conditions as compared with other carbonaceous chondrites. Earlier content and isotopic composition of noble gases in this meteorite have been studied /1/, however, stepwise heating experiment has not been carried out. In this study acid-resistant residues was also subjected to the H$_3$PO$_4$ treatment.

EXPERIMENTAL TECHNIQUE. The fragment N15256 of the Kainsaz carbonaceous chondrite was used for this study. A 9.880g-sample of silicate phase was demineralized with the HCl/HF - acid mixture then residues were treated with HNO$_3$ and H$_3$PO$_4$ according to procedures described by Lewis et al. /2/. However, in this study the H$_3$PO$_4$ - treatment was carried out in appreciably "soft" conditions: at 500°C for 7 days. After the HNO$_3$ and H$_3$PO$_4$ treatment the samples were ultrasonicated in acetone and the suspension in acetone was separated from other residues. They are marked as "fine" and "coarse" fractions respectively.

Analyses of Xe isotopic composition were carried out on the MU-1201 mass spectrometer functioning in gausstic mode /3/.

RESULTS AND DISCUSSION. The highest measured 136-Xe/130-Xe and 124-Xe/130-Xe ratios are in Xe released at 900-950°C from the "fine" fraction after the HNO$_3$ treatment: 3.003±0.003 and 0.0408±0.0006 respectively. For number of carbonaceous chondrites, e.g., Allende CV and Murchison CM chondrites, enrichment in heavy Xe isotopes is correlated with enrichment of light Xe isotopes in acid resistant residues. Such a correlation is not observed for the Kainsaz chondrite (Fig.1). It is to be noted that despite of the absence of correlation between the light and heavy Xe isotopes released at different temperature the total releasing Xe point for different fractions (with the exception of one) of the Kainsaz chondrite lies within error 2σ on the mixing line between the XeX and trapped Xe of the Allende chondrite.

The Kainsaz chondrite contains a smaller proportion of XeX than the Allende chondrite. In some temperature fractions the 124-Xe/130-Xe and 136-Xe/130-Xe ratios were found to be lower than those of the terrestrial atmosphere.
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(Fig. 1). Generally, all points lie inside of the triangle XeP-XeZ-XeX /./.

Our data are best interpreted in context of two component model according to which Xe in each temperature fraction represents a mixture of XeX and XeD (primordial Xe). XeD is unpartitioned for fractions laying along the line XeD (or XeB in /5/) - XeX but for other fractions it is fractionated to a various extent in accordance with the XeP-XeZ line. Thus Xe in the Kainsaz chondrite is fractionated to a greater extent as compared with Xe in the Allende or Murchison chondrites.

Comparison of Xe isotopic composition in the HNO3 and H3PO4-treated samples shows considerable differences between them. The excess of intermediate isotopes (126-Xe, 128-Xe, 129-Xe, 131-Xe and 132-Xe) in the "fine" fraction after the H3PO4 treatment appears to be more clear than in the HNO3-treated samples. Probably this Xe subcomponent has cosmogenic origin.


Fig. 1. The correlation between light and heavy Xe isotopes in acidresistant residues Kainsaz chondrite is not observed. Temperatures are given by the points for the stepwise heating runs, in units of 100°C.