T21a The elemental abundances in the intracluster medium as observed with XMM-Newton

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XMM-Newton observations of a sample of galaxy clusters are used to measure the elemental abundances and their spatial distributions in the intracluster medium (ICM). The sample consists of about 20 X-ray bright cD clusters such as A496 and A1795. Along with detailed Si, S and Fe abundance distributions, the O abundances are accurately derived for the first time in most of the clusters. The Fe abundance maxima towards the cluster center, supposedly due to the metals from the cD galaxy, are spatially resolved. In contrast, some clusters show an uniform distribution of the O abundance. This difference between the Fe and O profile indicates at least two origins of metals in the ICM, presumably in SN Ia and SN II. Variations in abundances among clusters are also used to discuss the chemical evolution of cD clusters.