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## **Extreme Warm Absorber** variability in the Seyfert Galaxy **Mrk 704**

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(Submitted on 6 Jul 2011)

In about half of Seyfert galaxies, the X-ray emission is absorbed by an optically thin, ionized medium, the so-called "Warm Absorber", whose origin and location is still a matter of debate. The aims of this paper is to put more constraints on the warm absorber by studying its variability. We analyzed the X-ray spectra of a Seyfert 1 galaxy, Mrk 704, which was observed twice, three years apart, by XMM-Newton. The spectra were well fitted with a two zones absorber, possibly covering only partially the source. The parameters of the absorbing matter - column density, ionization state, covering factor changed significantly between the two observations. Possible explanations for the more ionized absorber are a torus wind (the source is a polar scattering one) or, in the partial covering scenario, an accretion disk wind. The less ionized absorber may be composed of orbiting clouds in the surroundings of the nucleus, similarly to what already found in other sources, most notably NGC 1365.

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