

Fast co-evolving behavior of the corona with type-I X-ray bursts

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Taking advantage of the type-I X-ray bursts from the hard surface of a NS of the NS XRB Aql X-1 to probe the purported corona, we found, during the bursts, a clear anti-correlation between the soft and the hard X-rays, which indicates an additional cooling of the corona with the soft X-ray shower fed by the bursts. The phenomenon was also found in IGR J17473-2721, 4U 1636-536 and 4U 1608-522. The time delay between the burst emission and corona emission are different each other, but the time delay are all within 5 seconds. The similarity and difference may be understood that the corona have same mechanism but behave different structure or scale along with the outbursts evolutions.

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