Thermal Nonequilibrium in Coronal Loops

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Recently there has been a growing interest in the role of thermal nonequilibrium in coronal loops. We will summarize our present understanding of thermal nonequilibrium, as it relates to solar EUV and X-ray observations. We will review the theoretical foundations of the phenomenon of thermal nonequilibrium, and relate it to the properties of coronal loops and its possible manifestations in observations, particularly in the observed pulsations of coronal loops and the characteristics of time delays between the appearance of coronal loops in different channels.