

# **Thermal X-ray emission due to magnetic energy dissipation in magnetars**

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X-ray emission from magnetars is believed to be powered by magnetic energy not rotational energy. I will discuss possible mechanisms that can lead to dissipation of magnetic energy. I will consider in particular a model in which the Alfvén or fast-mode waves excited by crust disturbances or elastic waves underneath the star's surface decay through three-wave processes involving low-frequency ion sound waves. As the sound waves are heavily damped, the magnetic energy can be dissipated leading to plasma heating. The hot plasmas expand producing thermal X-rays.