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## Temperature and Differential Emission Measure Evolution of a Limb Flare on 13 January 2015

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Spatially unresolved data shows that the cooling phase in solar flares can be much longer than theoretical models predict. It was not yet determined whether this is also the case for different sub-regions within the flare structure.

Two questions are in the focus of this case study: 1. Are the cooling times, which are observed separately in coronal loops and the supra-arcade fan (SAF), in accordance with the existing cooling models? 2. Do the supra-arcade downflows (SADs) have different temperature and emission measure than their surrounding? An M5.6 limb flare on 13 January 2015 is analysed by using SDO/AIA data. A differential emission measure (DEM) reconstruction code derives spatially resolved temperature and emission measure maps. This output is used to investigate the thermal evolution of coronal loops, the supra-arcade fan (SAF), and the supra-arcade downflows (SADs).

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