

About

Definitions

| Name | Cause | Physical Process | Spectroscopic Signature |
|-----------------------|-----------------------|--|--|
| Core dimming | Mass loss | Ejection of emitting plasma from corona | Simultaneous drop of multiple emission lines, with roughly the same percentage decrease |
| Thermal dimming | Temperature evolution | Heating raises lower ionization states (e.g. a fraction of Fe IX becomes Fe X), cooling does the opposite | Heating: Emission loss in lines with lower formation temperatures with roughly simultaneous emission gain in lines with higher formation temperatures. Cooling: reverse of above |
| Obscuration dimming | Obscuration | Dim feature (e.g. filament) moves between observing location and bright feature (e.g. flare arcade) | Drop of emission lines proportional to their absorption cross section in the obscuring material. Also apparent in EUV images |
| Global dimming? | Waves | Shocks propagate globally, causing compression/rarefaction of plasma | Apparent in EUV images, especially using difference movies |
| Doppler shift dimming | Doppler shift | Fast moving plasma causes Doppler shift of emissions, which could start to shift outside instrument bandpass | Doppler shift is seen in spectral measurements (e.g. EVE) |

This is a good place to have the debate about names and the expected spectroscopic signatures. It'd be best to use the comment section below until we reach a consensus, and then we can update the table.