Three-dimensional reconnection in solar flares

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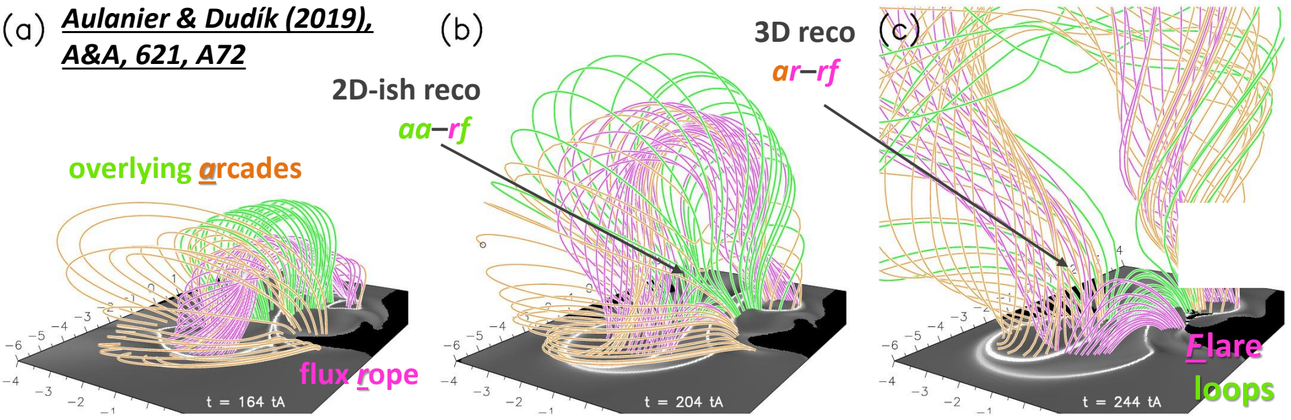
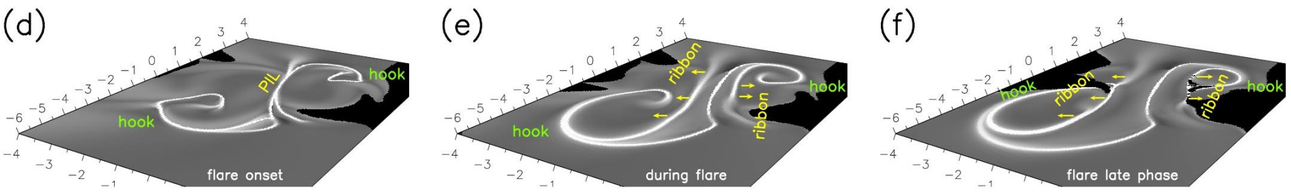
(a) ***Aulanier & Dudík (2019), A&A, 621, A72***

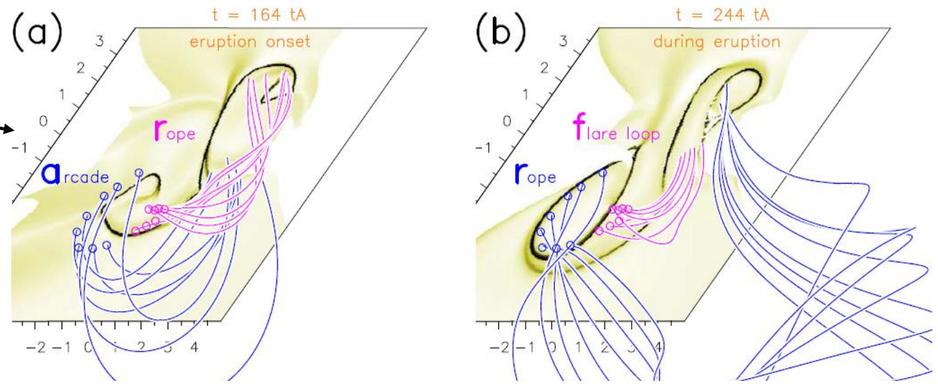


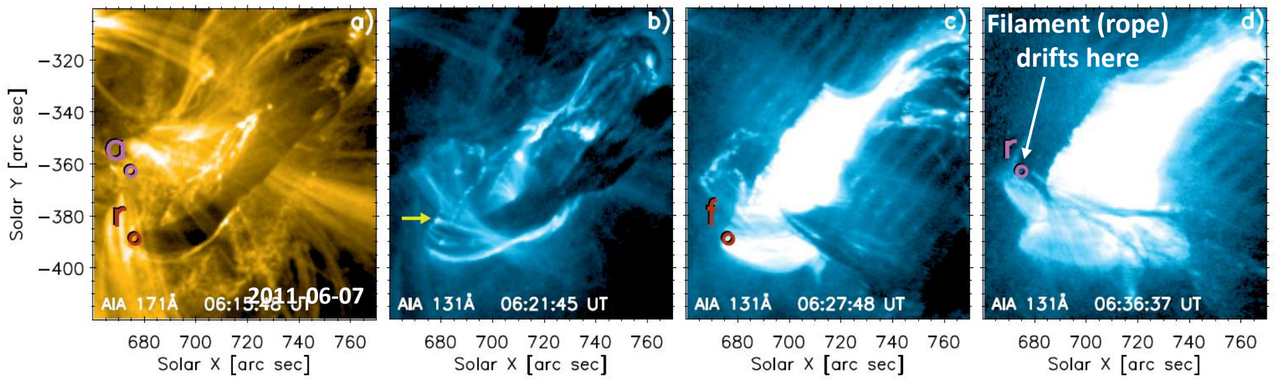
- **New 3D reco: coronal *Arcades* + flux *Rope* → new *Rope* line + *Flare* loop (*ar–rf*)**
- **Spreading of double-J hooked ribbons away from PIL, with *drift of flux rope footpoints:***

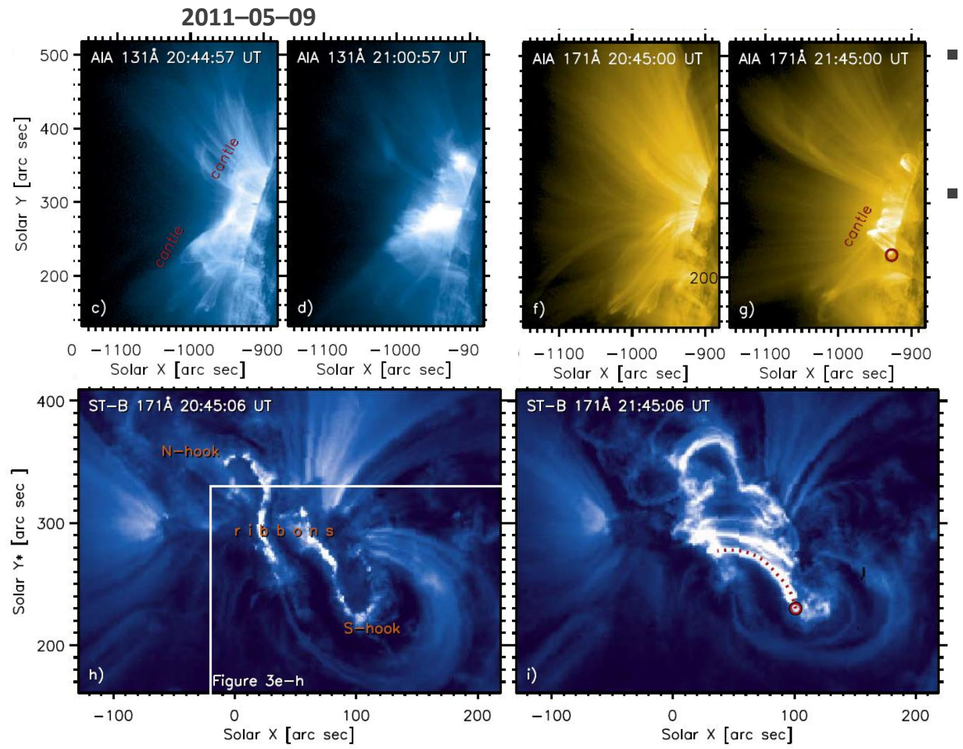


Dudík et al. (2019, ApJ, 887, 71)

- **Model (not event-specific)**
- **All four ar-rf reconnection components observed:**

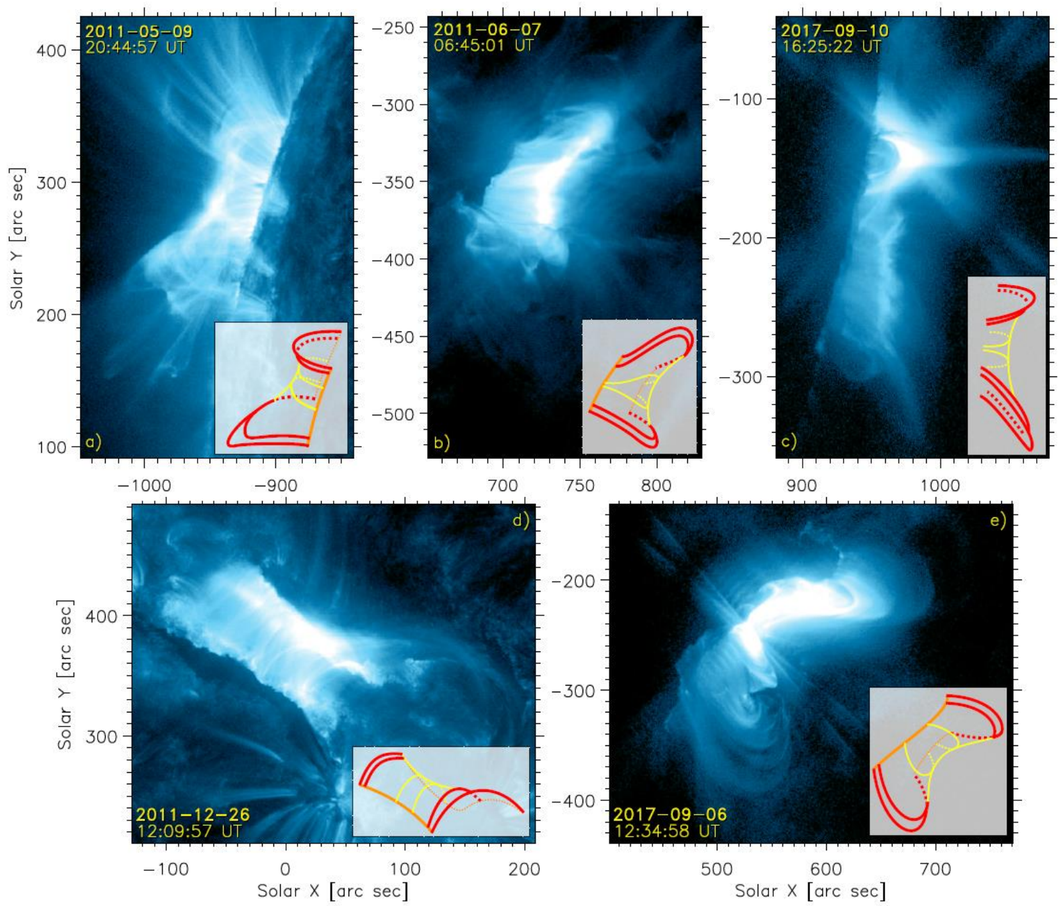






- **Solar flare arcades are saddle-shaped**
- **Outer (cantle) loops are longer, higher, and rooted in ribbon hooks**
- **Cantles originate in ar-rf reconnection**

Lörinčík et al. (2021, ApJL, 909, L4)



Saddle-shaped arcades are common