

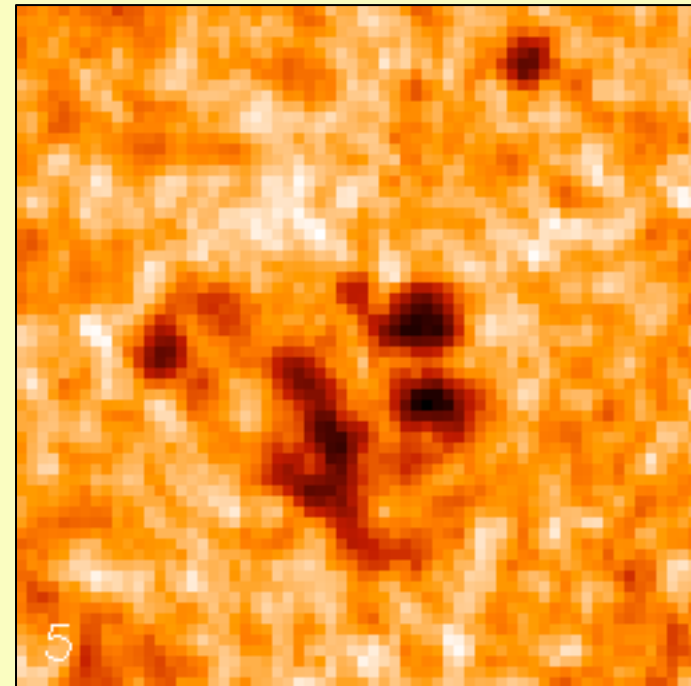
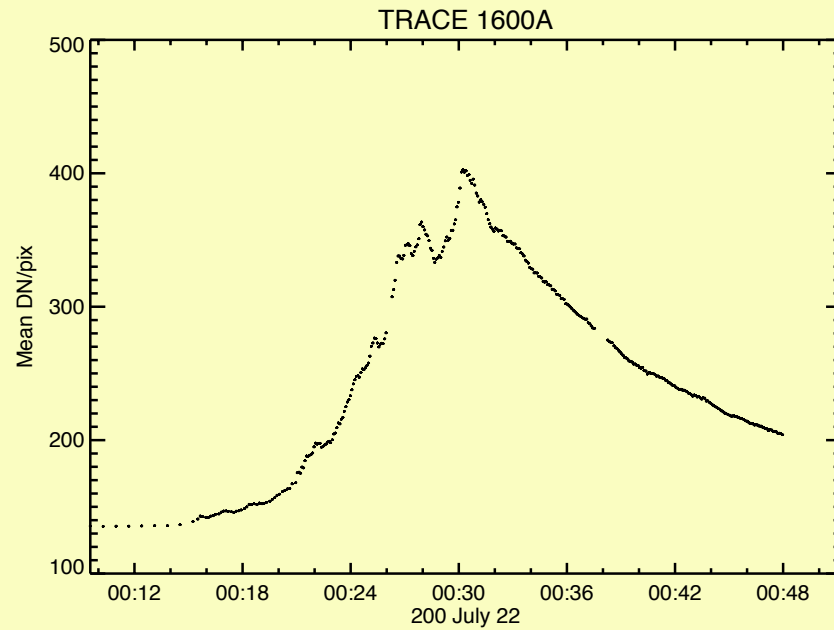
# **The Energetic Solar Flare as a Paradigm**

H. S. Hudson  
SSL, UC Berkeley

# Solar flare morphology

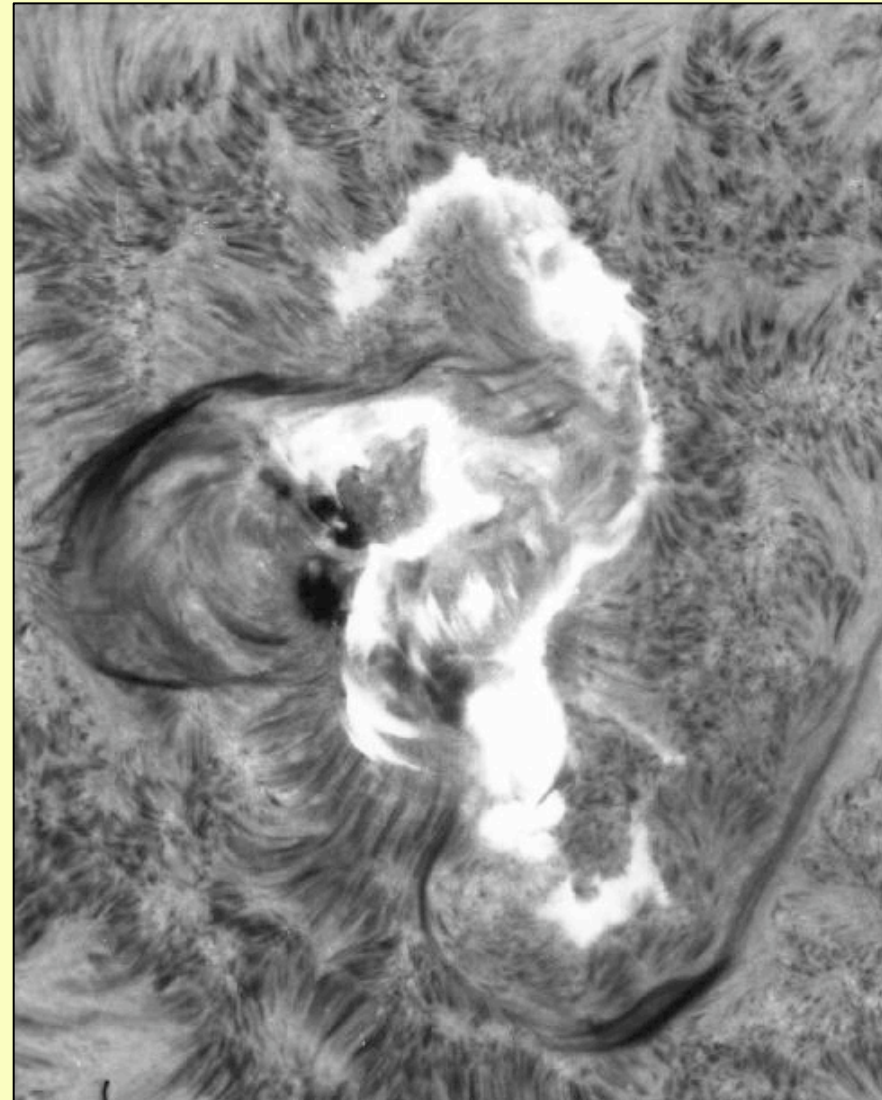
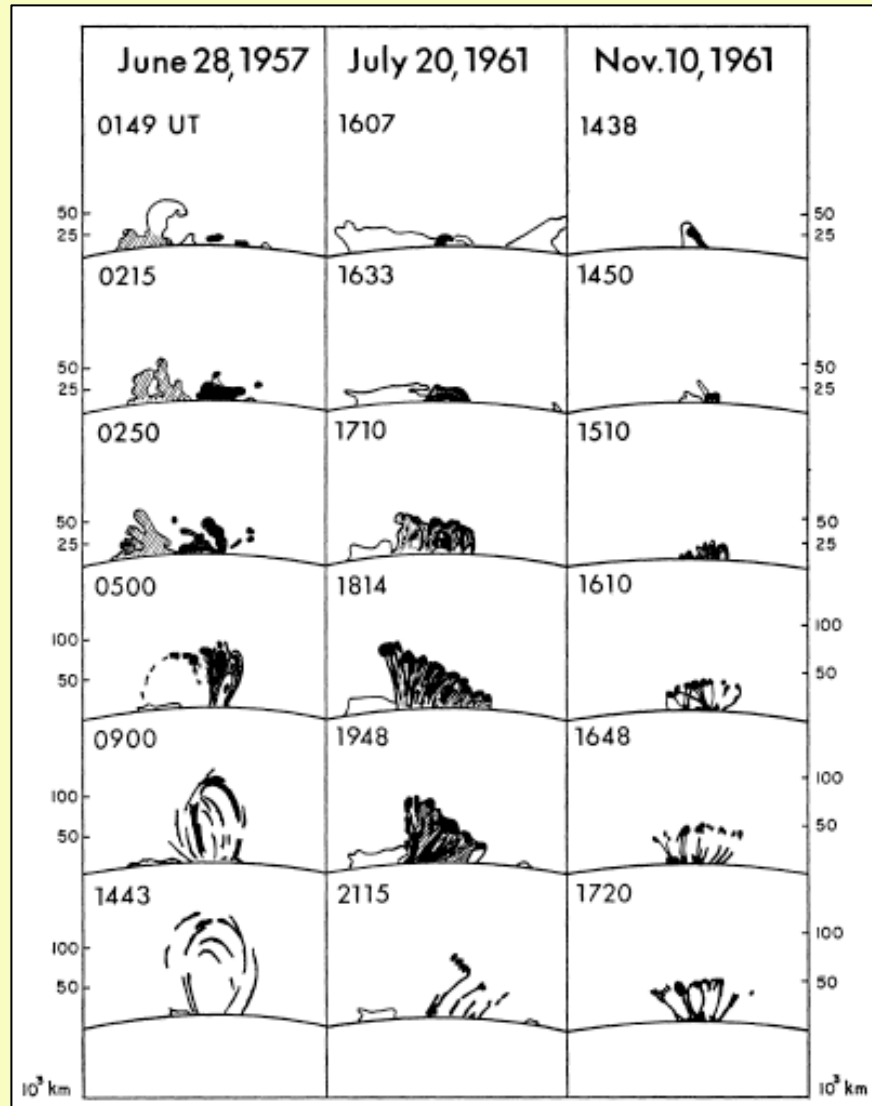
- Loops
  - Hard X-ray footpoints
- Long Decay events
  - Two H-alpha ribbons
  - Hard X-ray footpoints
  - CME
  - Hard X-ray / meter-wave coronal sources

# White-light Flare

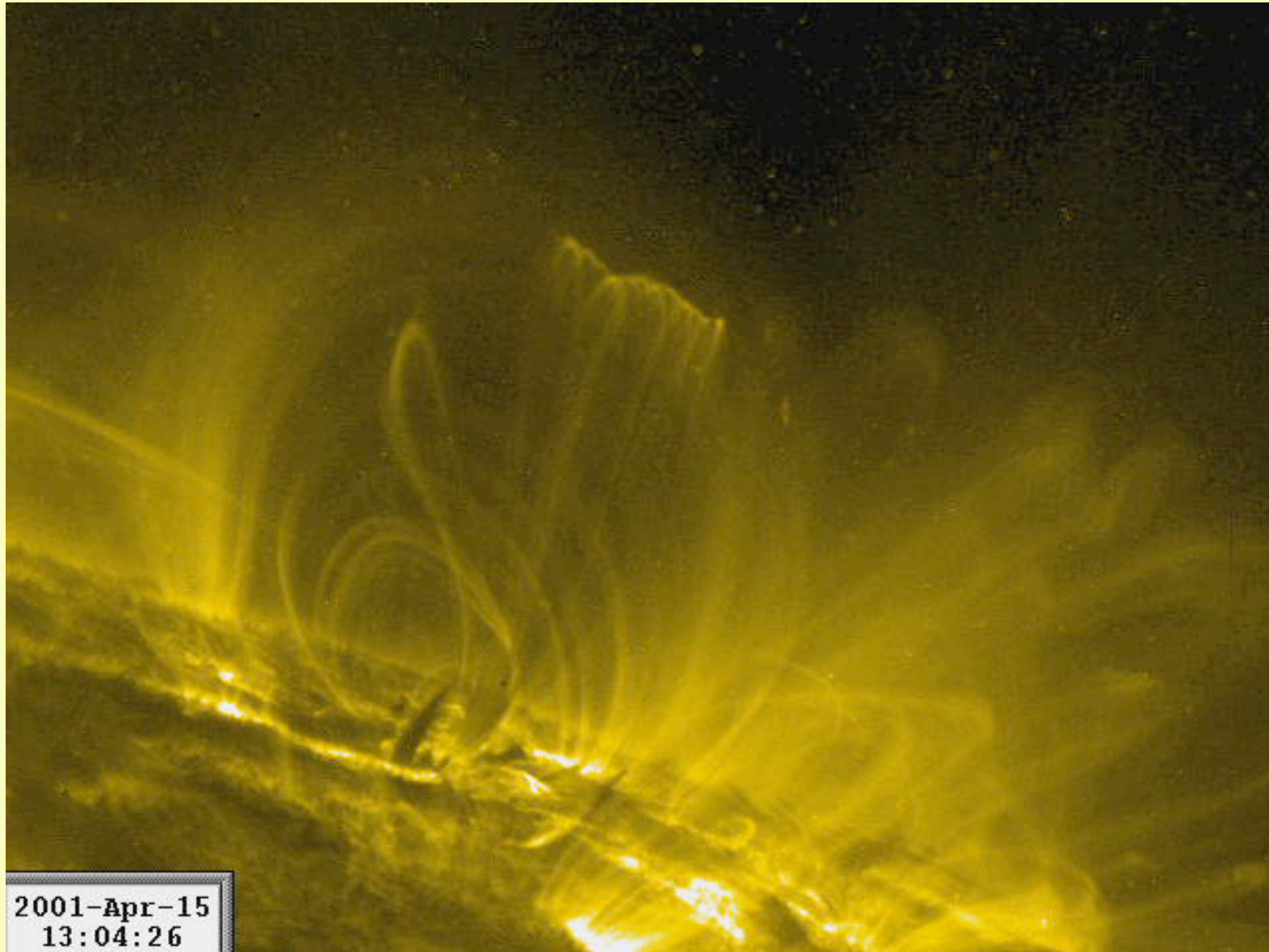


64x64" Trace WL filter

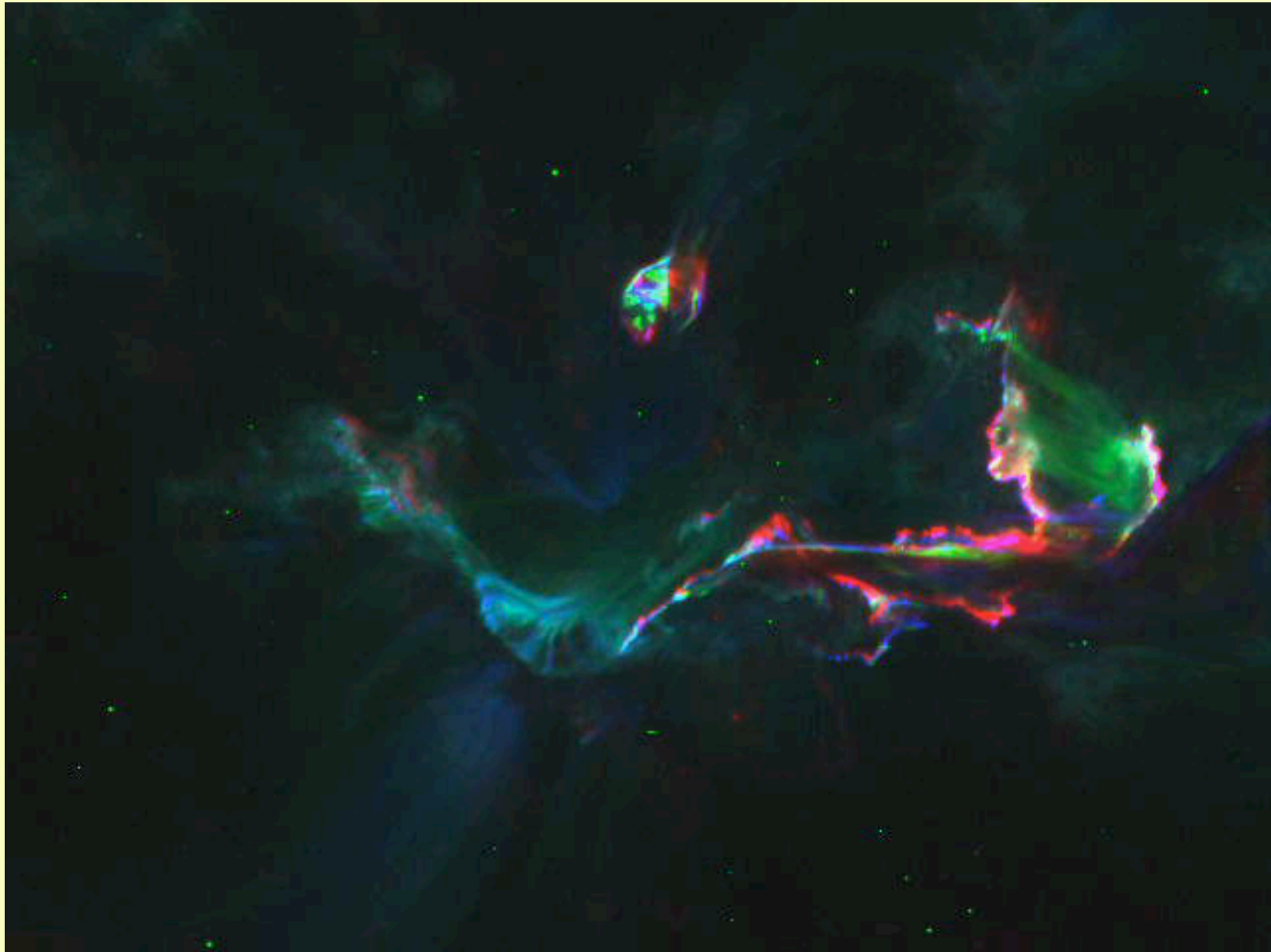
# LDE Flare



# TRACE flare movie

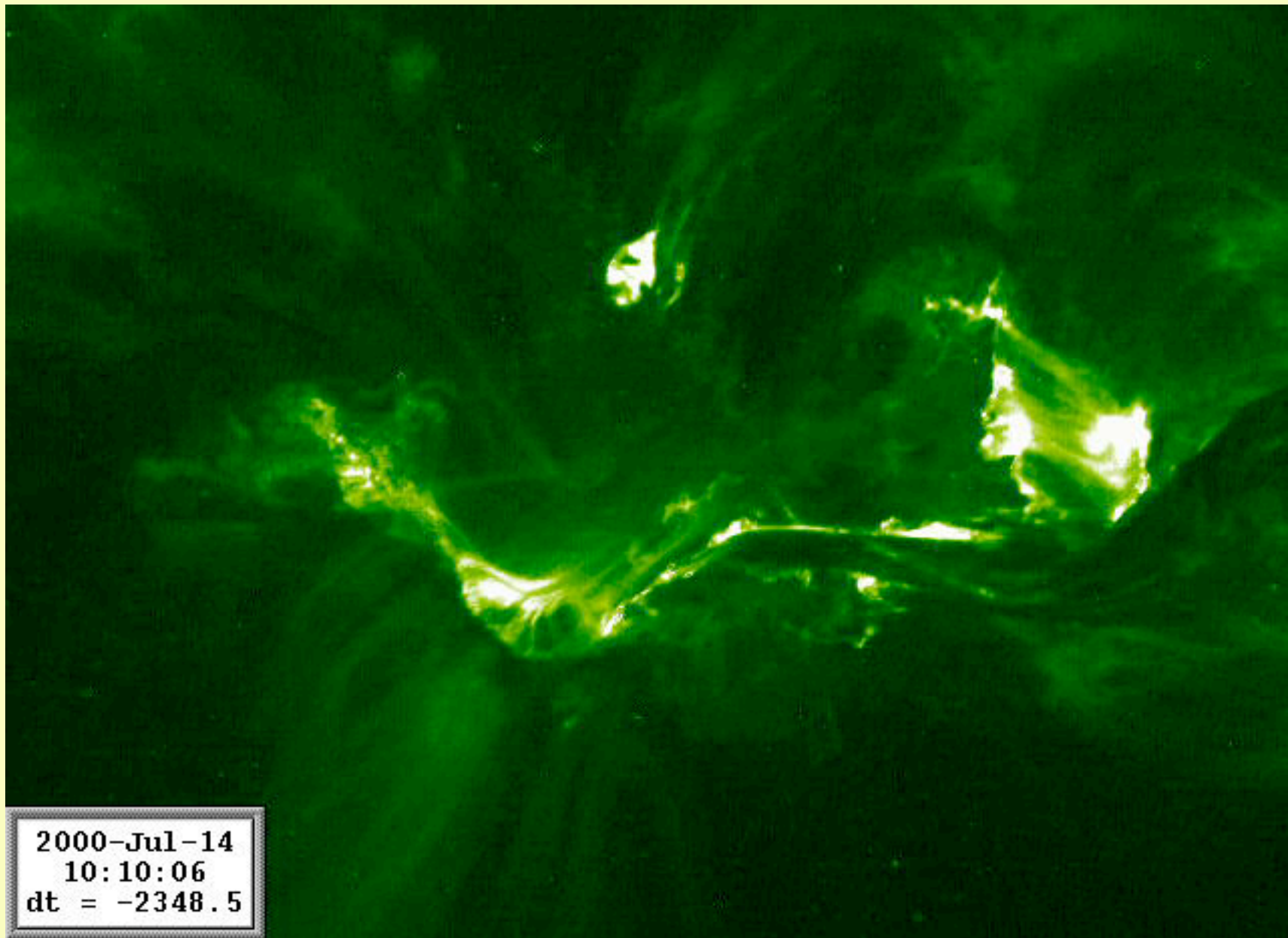


# TRACE flare movie-2

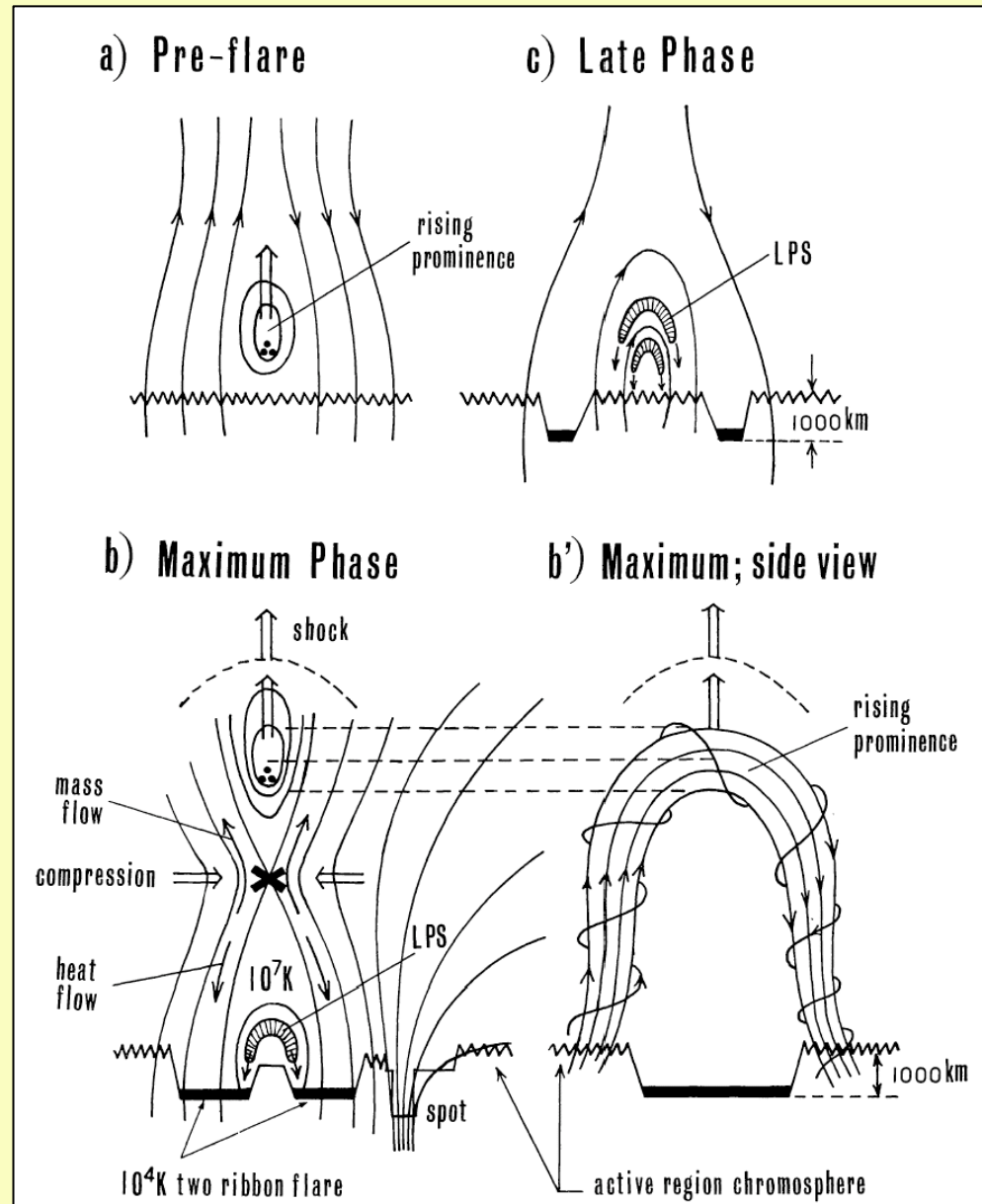




# Ribbon striations



# Hirayama Cartoon





# Interpreting the morphology

- Ribbons (UV, H-alpha) contain high-excitation footpoints
- These features are concentrated at the outer edges of the advancing ribbons of the gradual phase
- The situation during the impulsive phase is not so clear
- It is tempting to associate the high-excitation features with the “photospheric” component of the stellar flare spectra, but where does the recombination component reside?