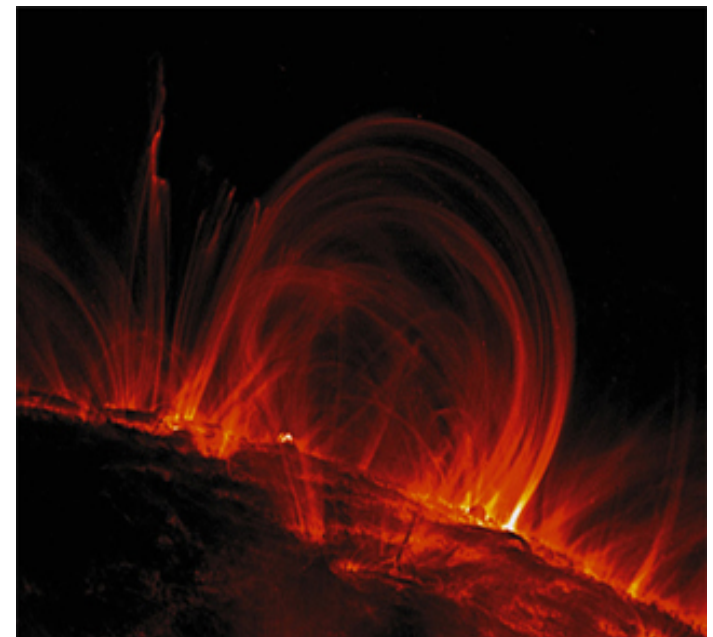
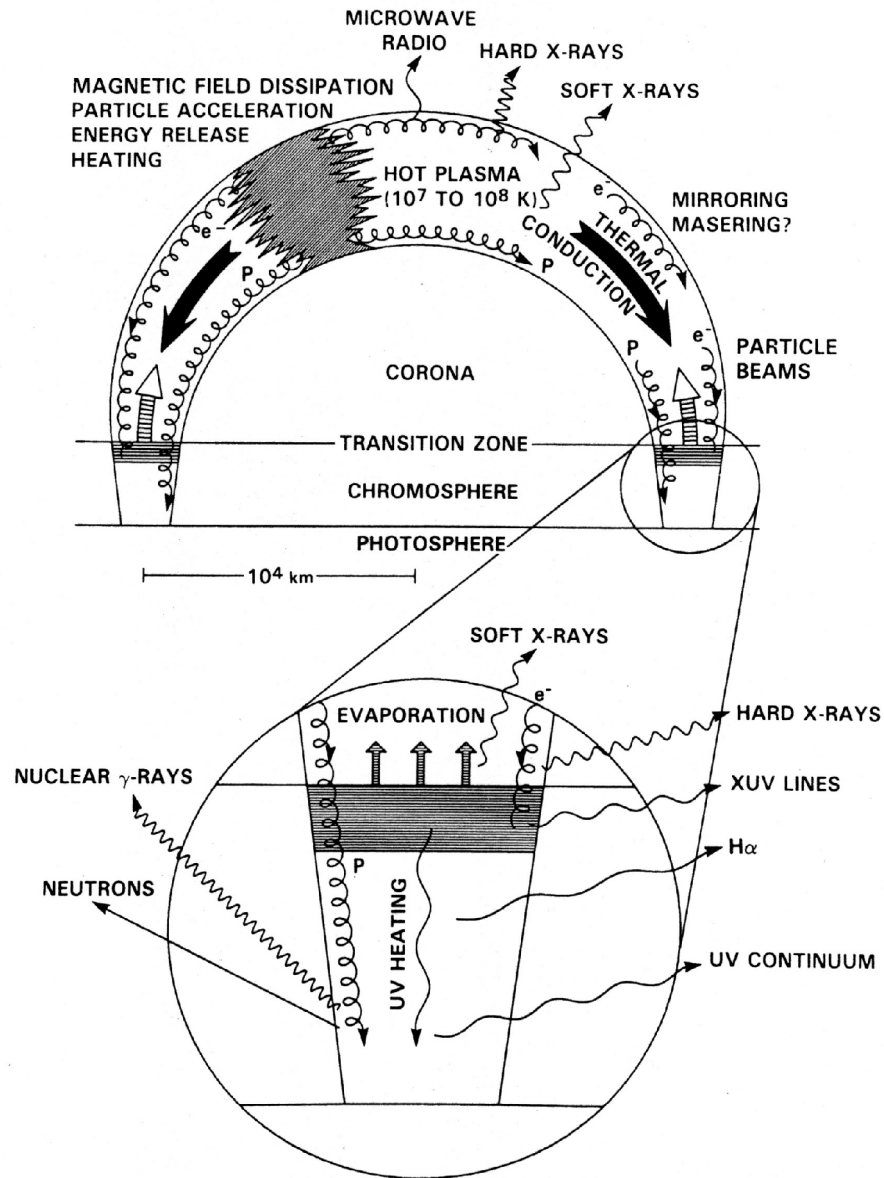


Relation between chromospheric evaporation and coronal heating – Neupert effect

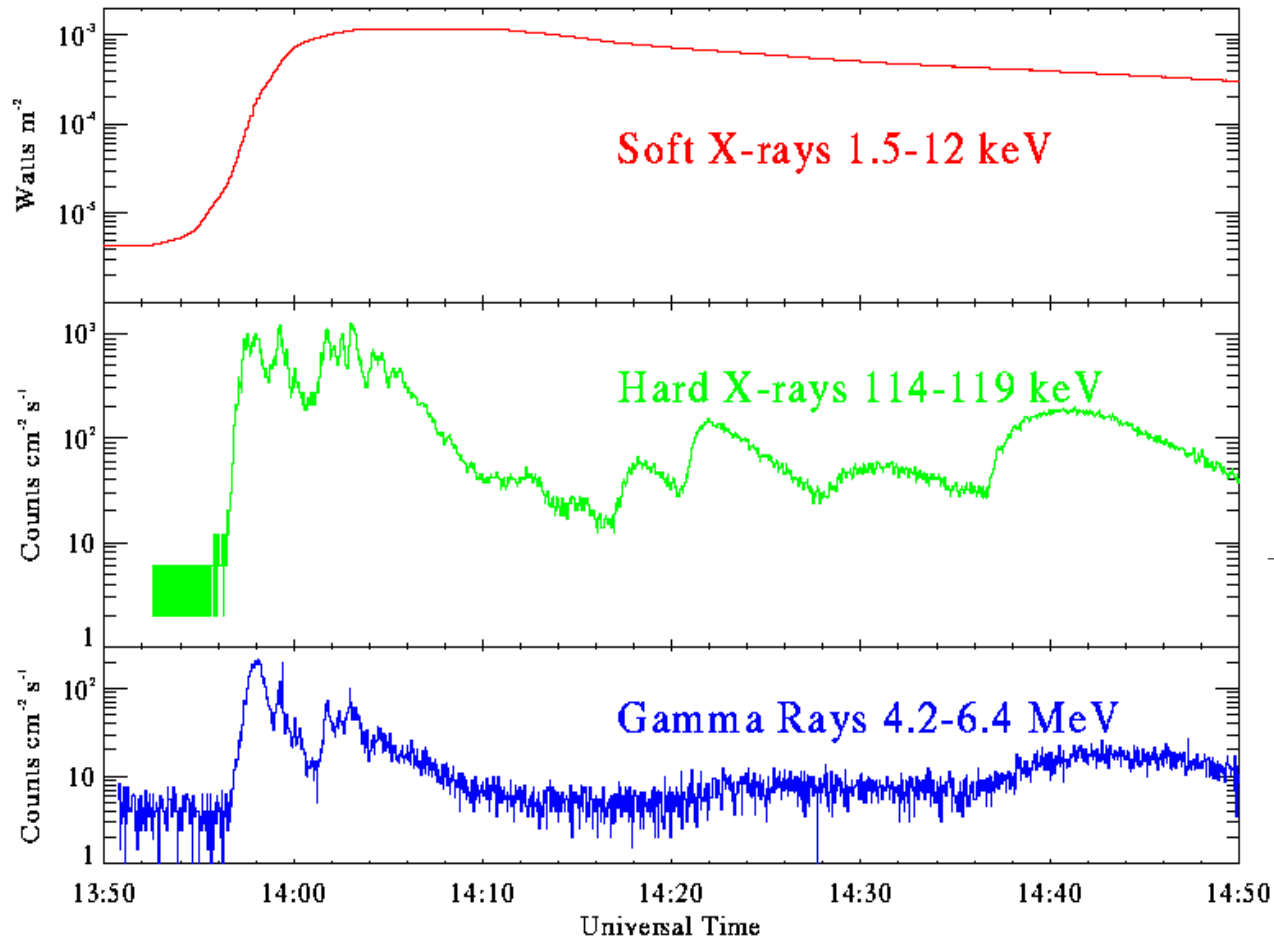
Lalitha Sairam
Hamburger Sternwarte

INTRODUCTION



INTRODUCTION

Solar Flare on 6 March 1989

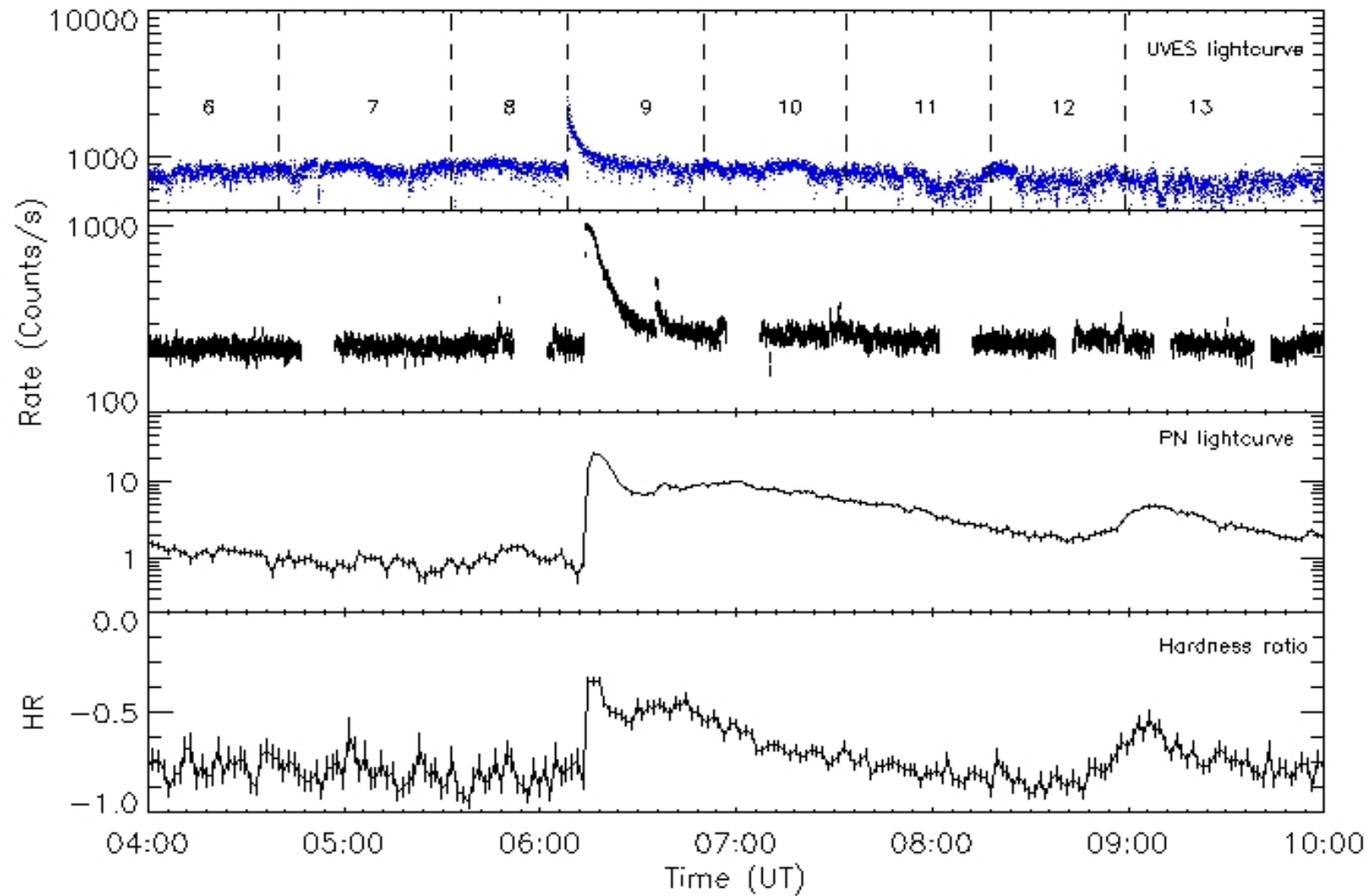


$$\mathbf{F}_{\text{SXR}} = \int \mathbf{F}_{\text{HXR}}(t) dt$$

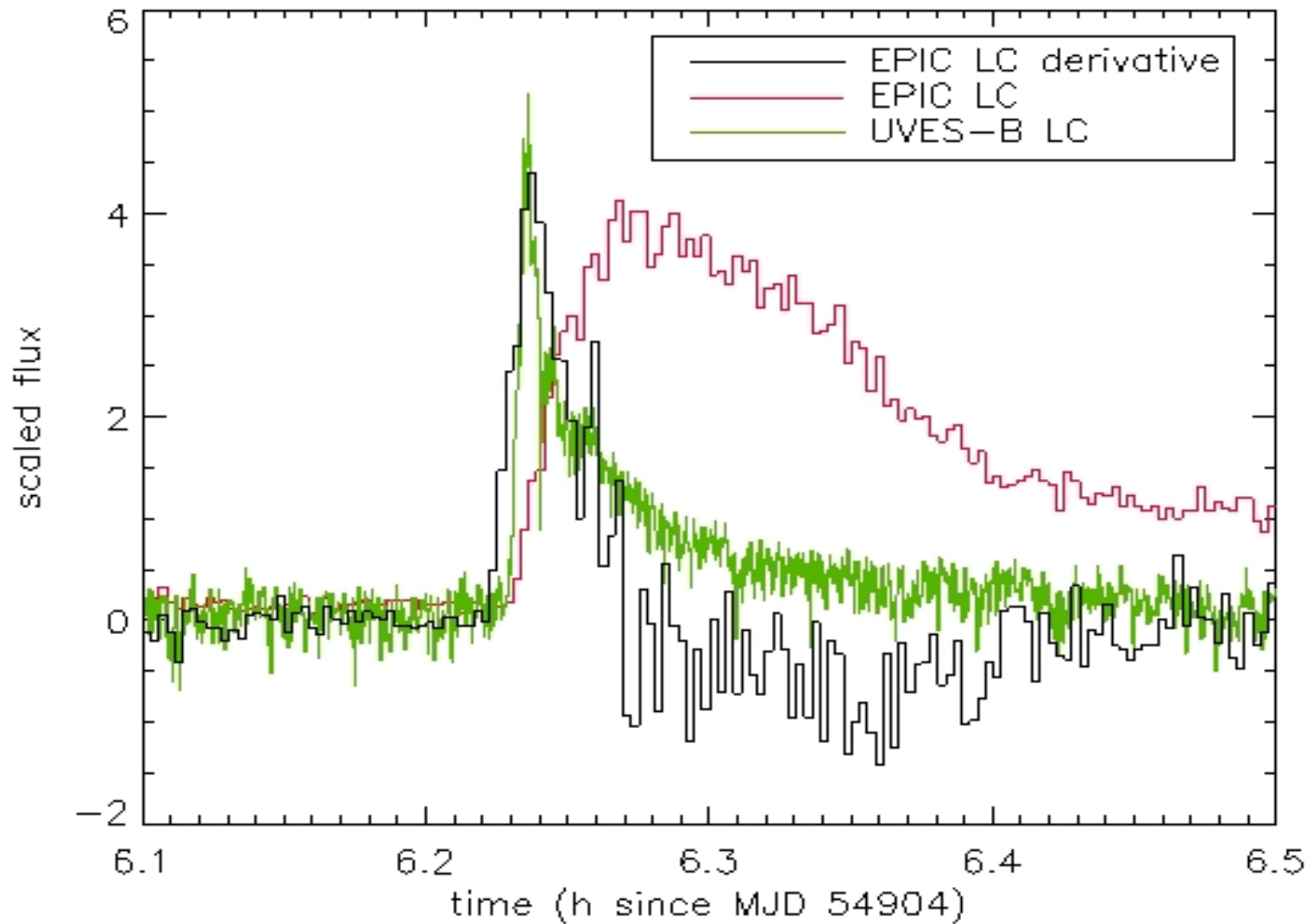
or

$$\frac{d}{dt} \mathbf{F}_{\text{SXR}}(t) \propto \mathbf{F}_{\text{HXR}}(t)$$

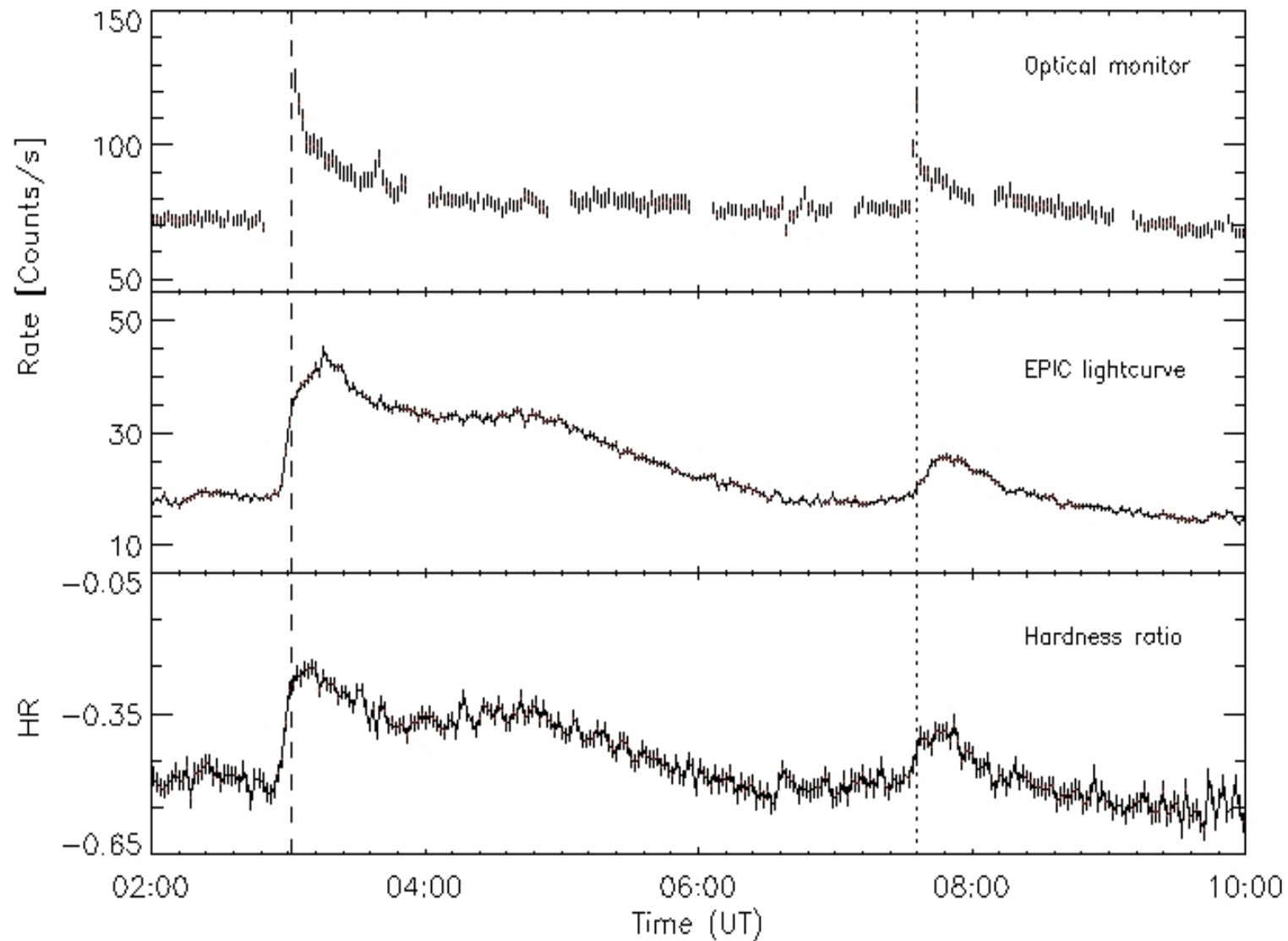
TOI 1 : Proxima Centauri



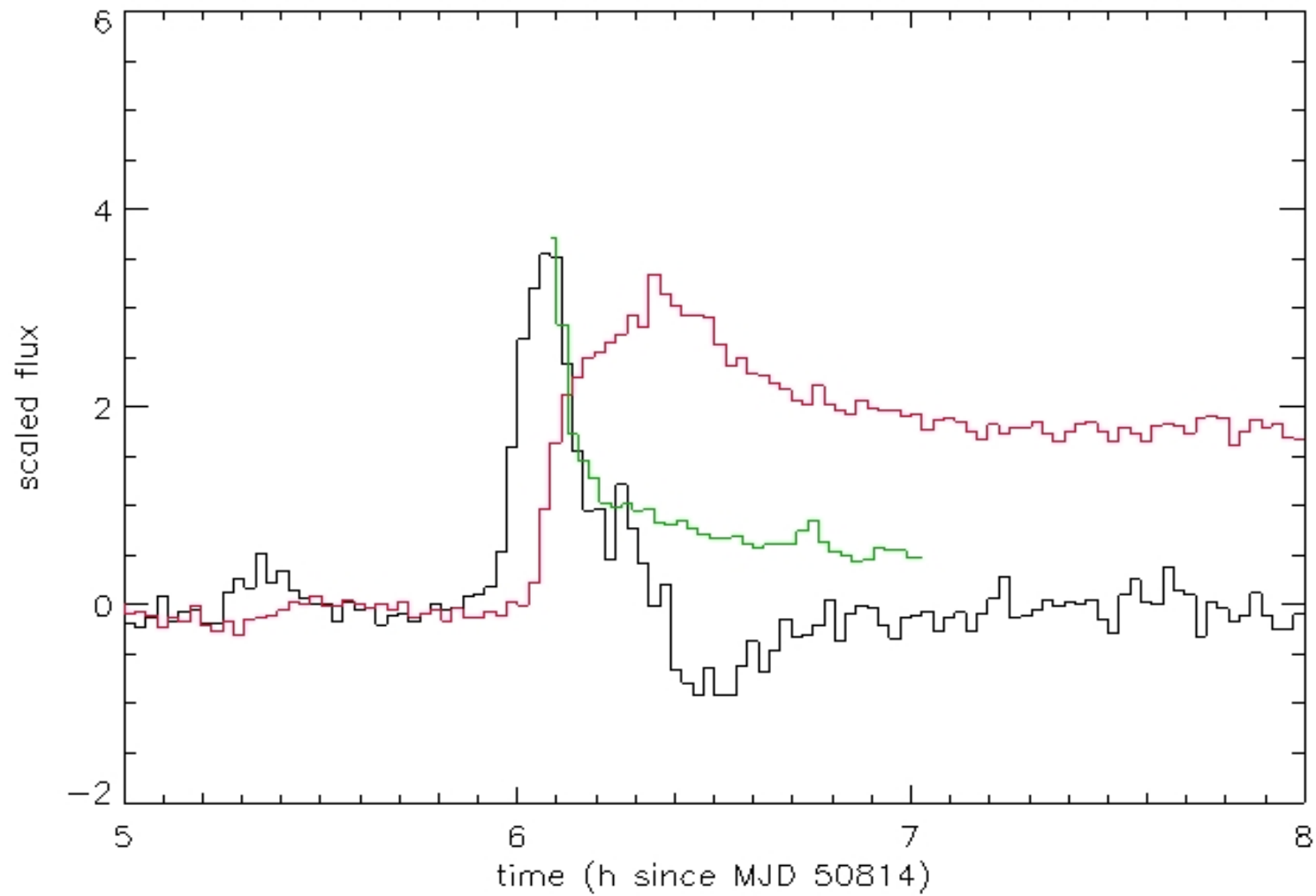
TOI 1: Proxima Centauri



TOI 2: AB Dor A



TOI 2: AB Dor A



Conclusion

- Connection – particle acceleration and coronal heating – agree in active coronae and our Sun
- Chromospheric evaporation – accepted scenario which is similar to Sun.
- From observation – optical light curve resembles microwave gyrosynchrotron bursts during solar gradual flares in shape and duration.
- Non-Neupert effect in flares cannot be totally neglected.