

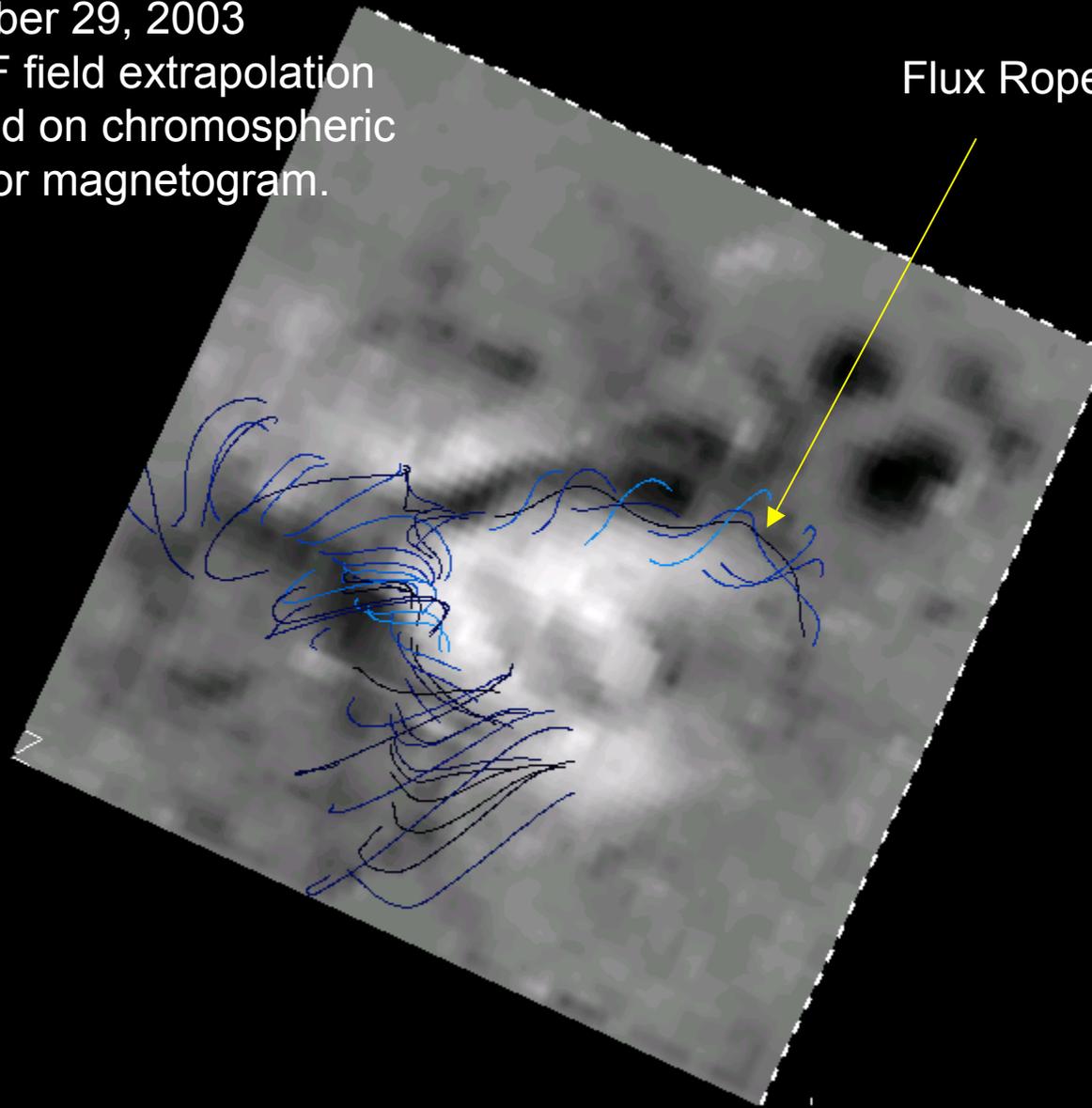
Energetics of the Corona

Campaign Events – focusing on
AR10486, Oct/Nov 2003

AR10486

- AR10486 showed extreme activity in Oct/Nov 2003. What were the energetics and coronal structure?
- We can now directly measure the free energy of the non-potential magnetic field using chromospheric vector magnetograms and the magnetic virial theorem.
- **Oct 29, 2003. X10 flare.** There is plenty of free magnetic energy available to power the extreme activity in AR10486. $\sim 10^{34}$ ergs.
- Oct/Nov 2003 CME's have energies of 10^{31} to 10^{32} ergs.
- The extreme event of Nov 4 has an energy approaching 10^{33} ergs.

October 29, 2003
NLFF field extrapolation
Based on chromospheric
Vector magnetogram.



Flux Rope?