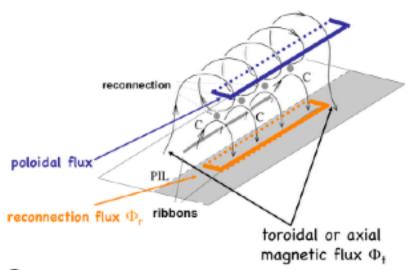
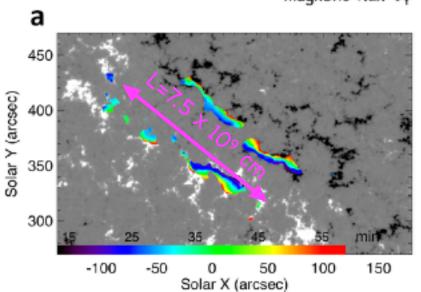
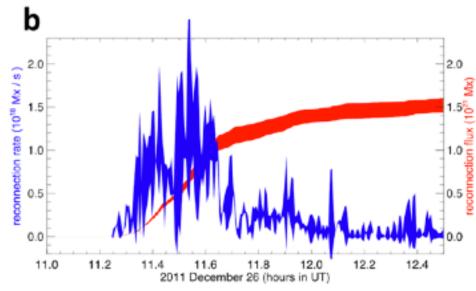
Energy dissipation in Reconnection



$$\dot{\Phi} = -\oint \mathbf{E} \cdot d\mathbf{l}$$

$$P = I\dot{\Phi}$$





$$W = \int I d\phi \sim \frac{1}{2} I_0 \delta \phi \sim \frac{(\delta \phi)^2}{8\pi L} = \frac{(1.5 \times 10^{21})^2}{8\pi \cdot 7.5 \times 10^9} = 1.2 \times 10^{31} \text{ erg}$$

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$$\delta W = I\delta \phi \ \delta \phi/ au_r \sim \int \mathcal{E}_{\parallel} \mathrm{d}s \ \mathbf{Reconnection} \ V_s = rac{\mathcal{L}}{ au_r}$$

Heating

Apparent Motion