

# Sun Stuff

## A

**active regions**

**Alfvén waves**

## C

**coronal holes**

**coronal loops**

- *Modelled* as flux tubes; probably consist of many flux tubes.

**coronal mass ejections (CMEs)**

**faculae**

- Appear in *photosphere*; same thing as plages.
- Bright spots - reason why total brightness is higher at solar maximum.

**filament**

- Viewed on disk; same thing as prominences.
- Thin, cool, dark ribbons

**flares**

**flux tubes**

- Formed deep in the convection zone.
- Rise by magnetic buoyancy in an  $\Omega$ -shaped loop.
- Magnetic field lines can be thought of as infinitely thin flux tubes.

## **frozen-in flux**

In a perfectly conducting material (i.e.  $\eta = 0$ ), Ohm's law goes from  $\vec{E} + \vec{v} \times \vec{B} = \vec{J}\eta$  to  $\vec{E} + \vec{v} \times \vec{B} = 0$  Nothing can be perpendicular to the field lines ... See Alfvén's Theorem.

## **plages**

- Appear in *chromosphere*; same thing as faculae.

## **pores**

## **prominence**

- Viewed on the limb; same thing as filaments.
- May erupt sometime during its life and be associated with a CME

## **solar wind**

## **spicules**

## **sunspots**

Dark regions of intense magnetic field.