

MAGNETIC INSTRUMENTATION AND INTERPRETATION



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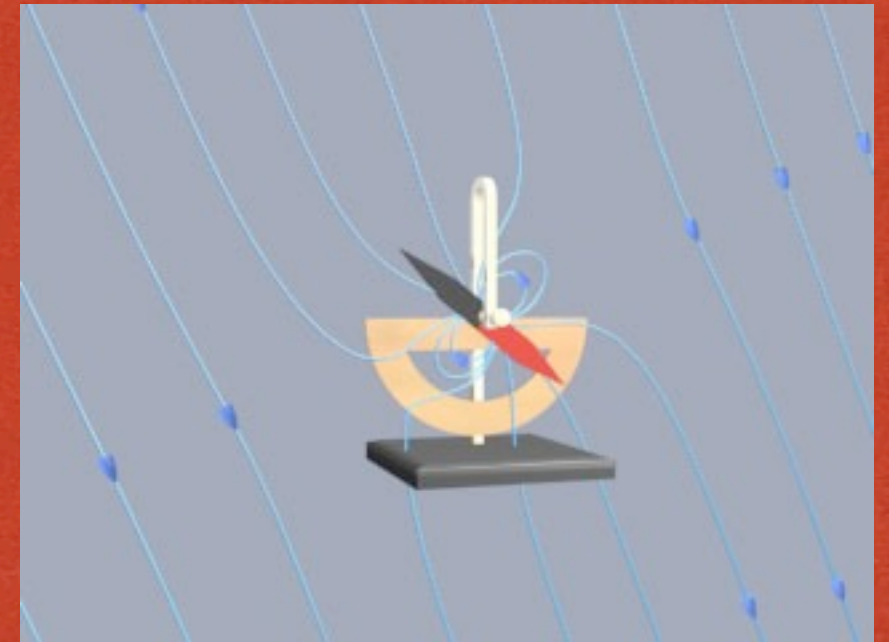
MAGNETIC SURVEYING



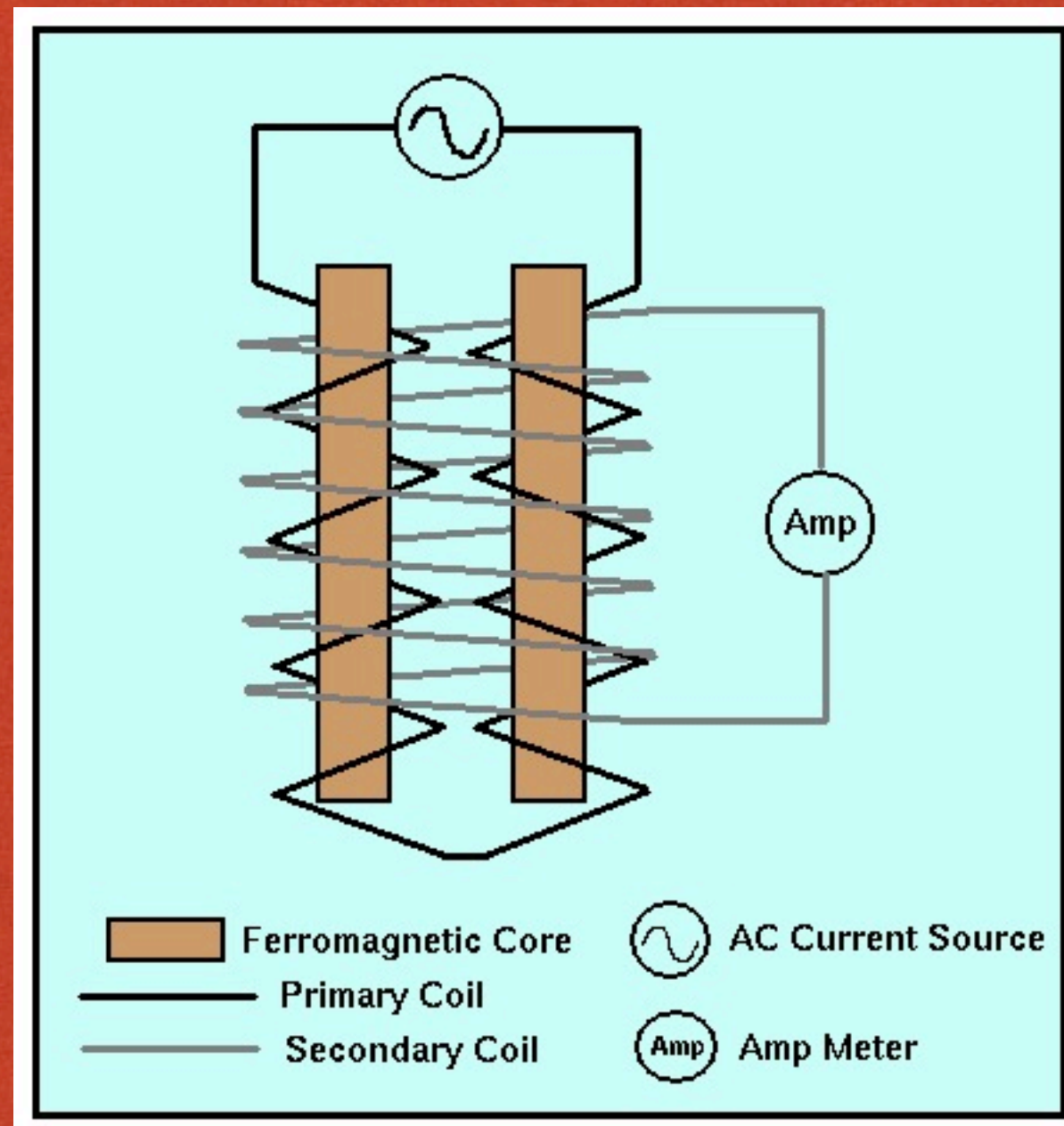
TYPES OF MAGNETOMETERS

- Early (Swedish compass, torsion, etc)
- Fluxgate
- Proton Precession
- Alkali Vapor

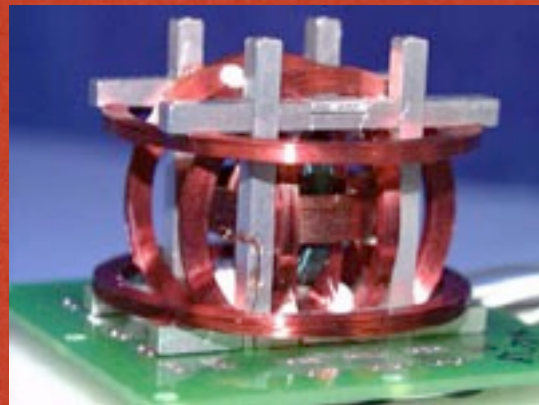
EARLY MAGNETOMETERS



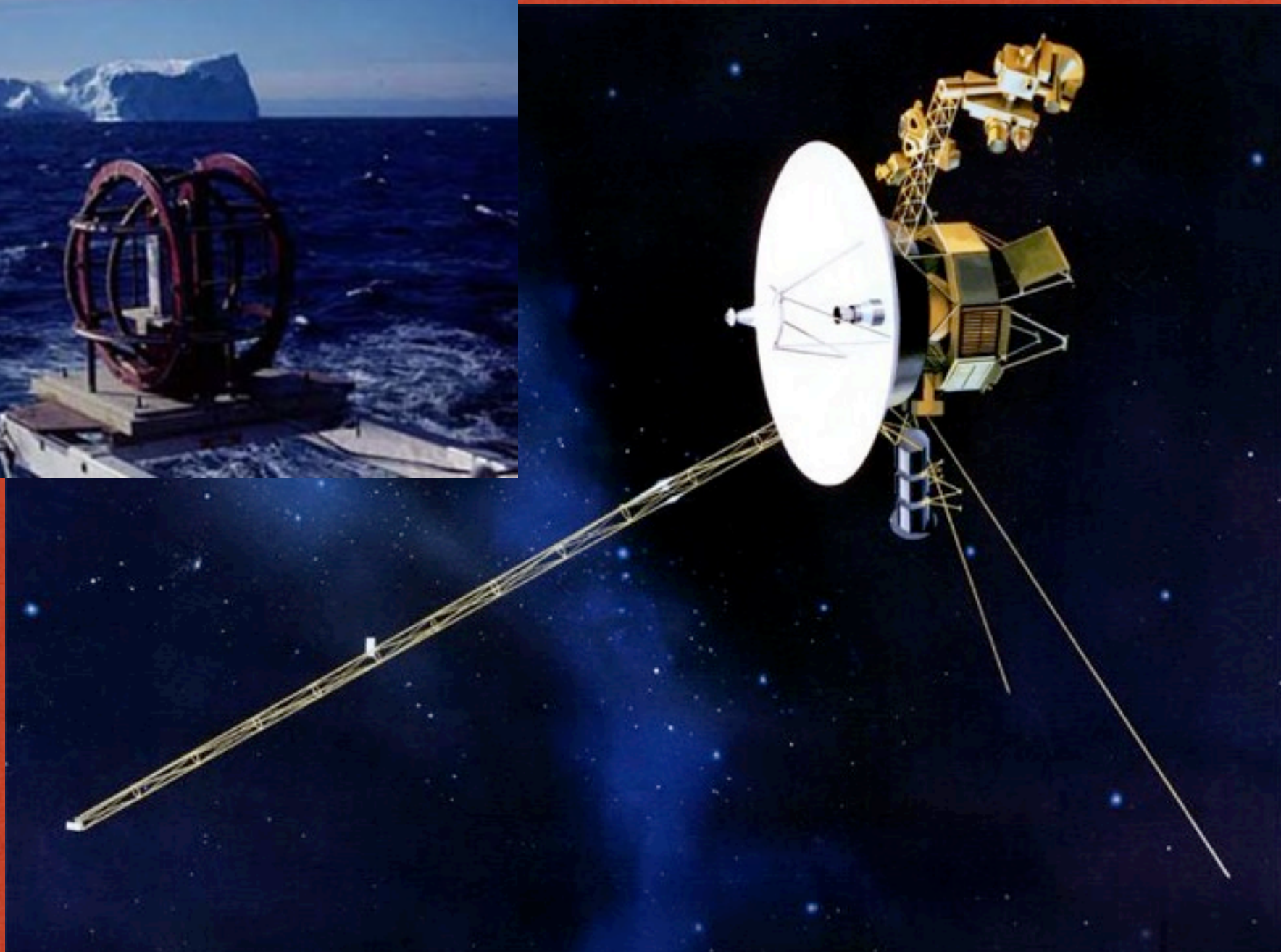
FLUXGATE



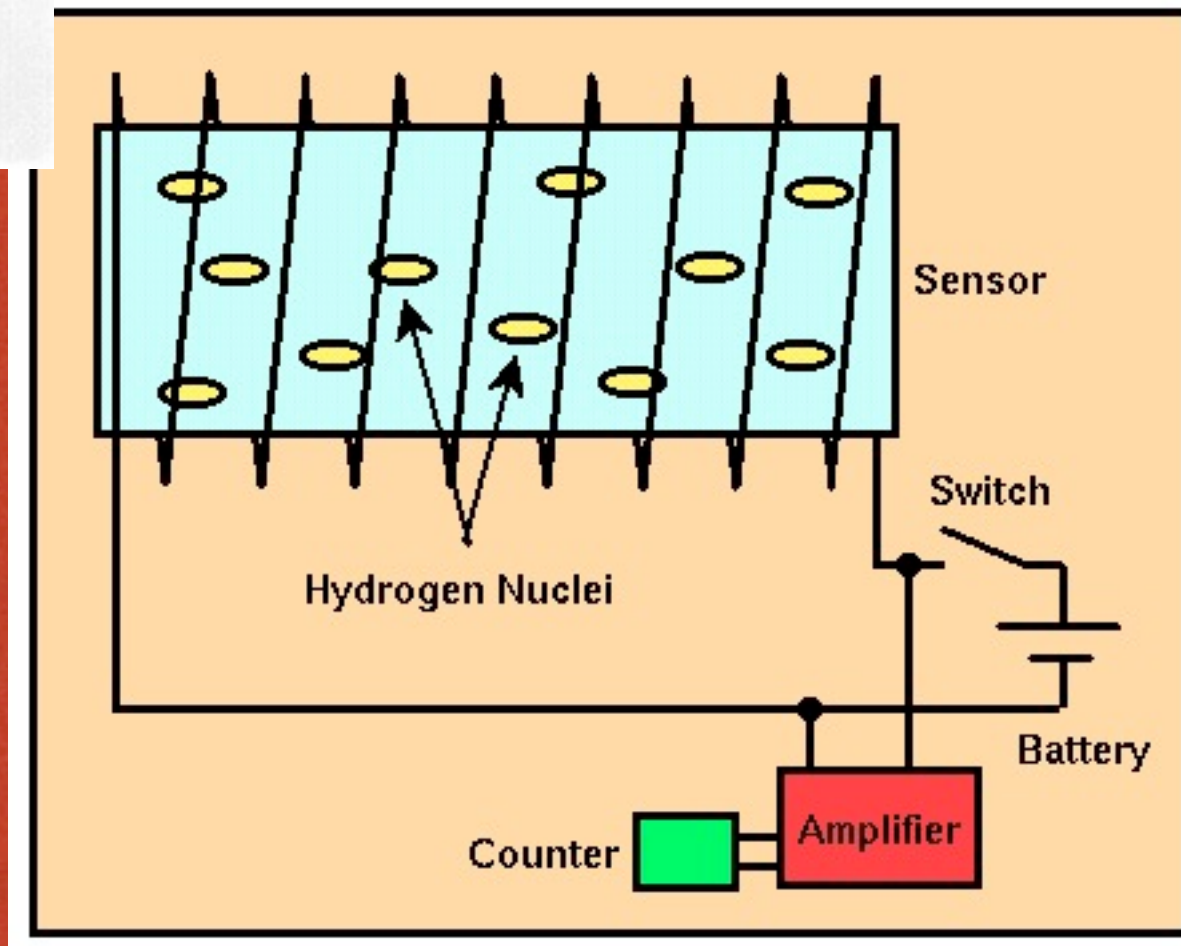
FLUXGATE INSTRUMENTS



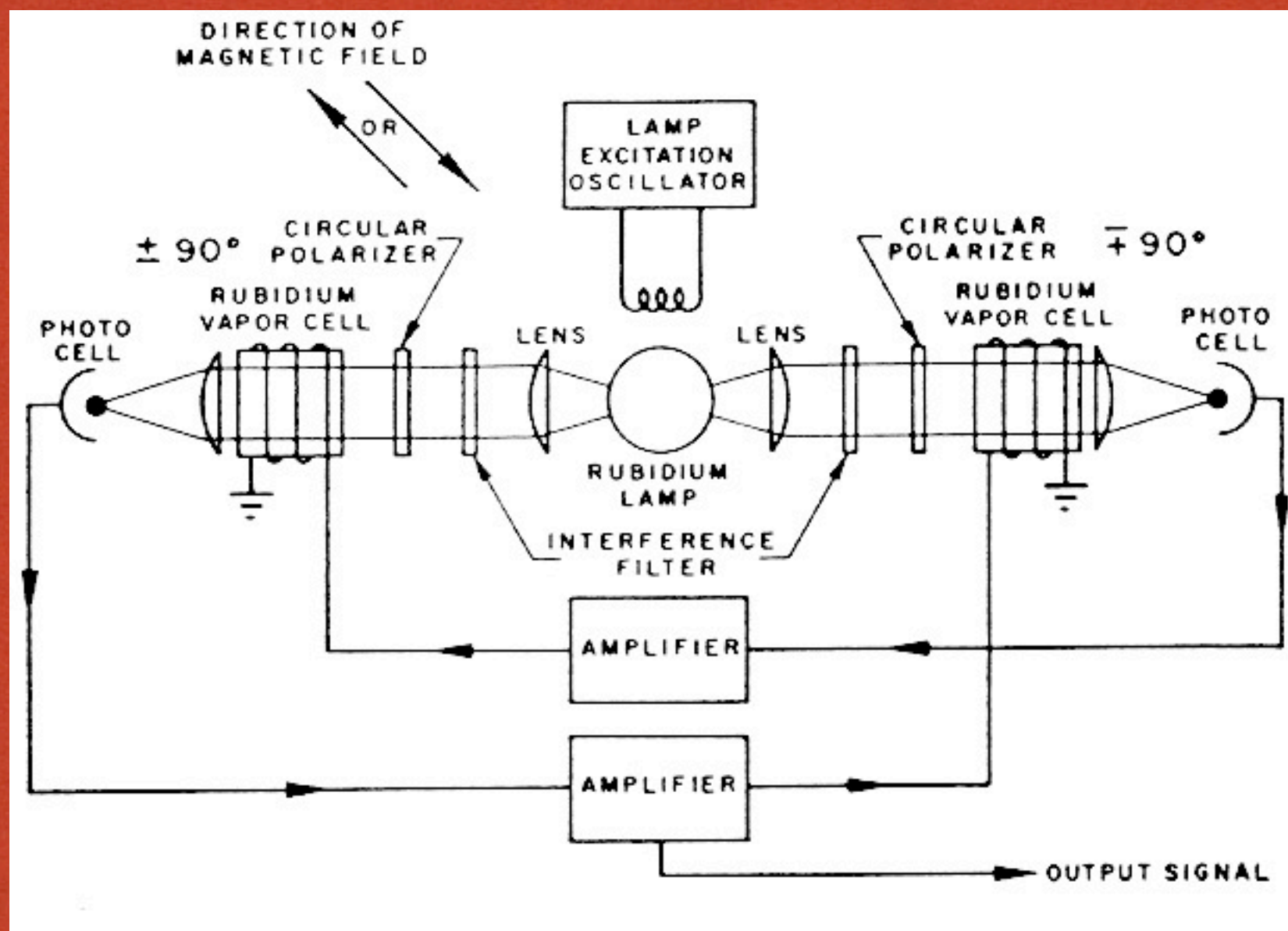
FLUXGATE APPLICATIONS



PROTON PRECESSION



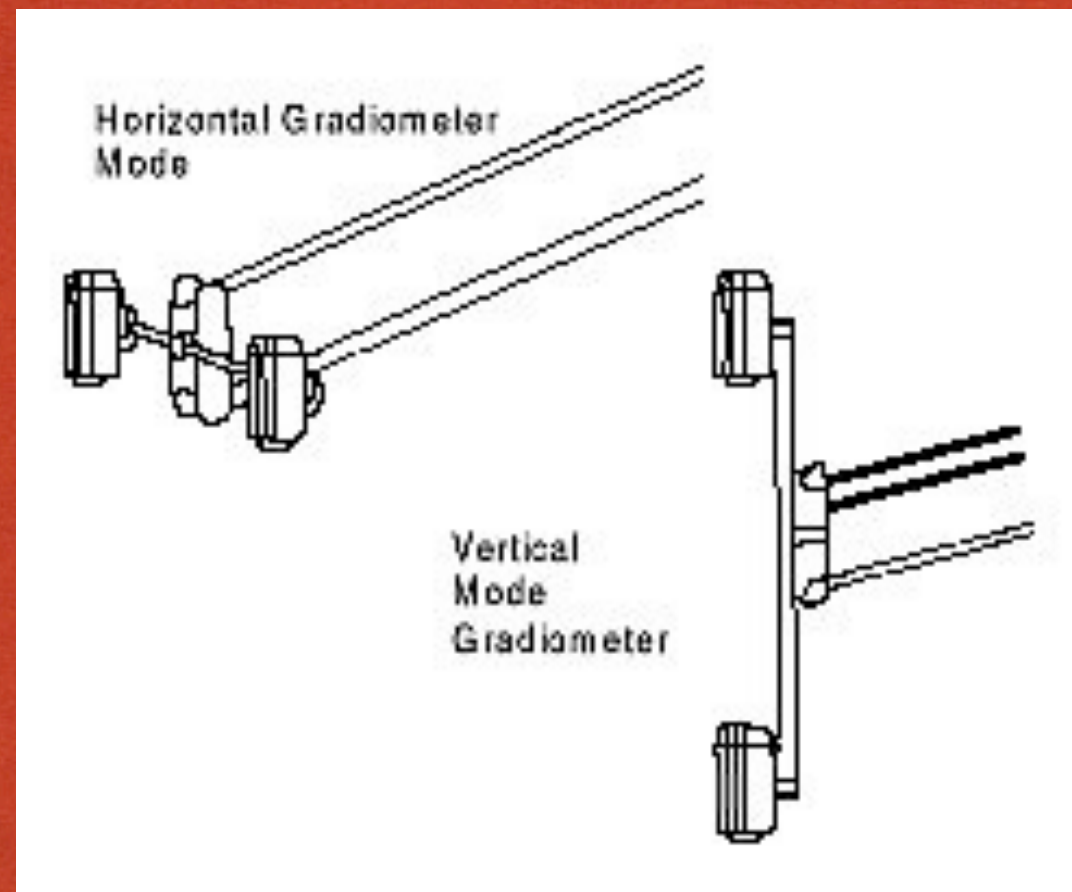
ALAKLIVAPOR



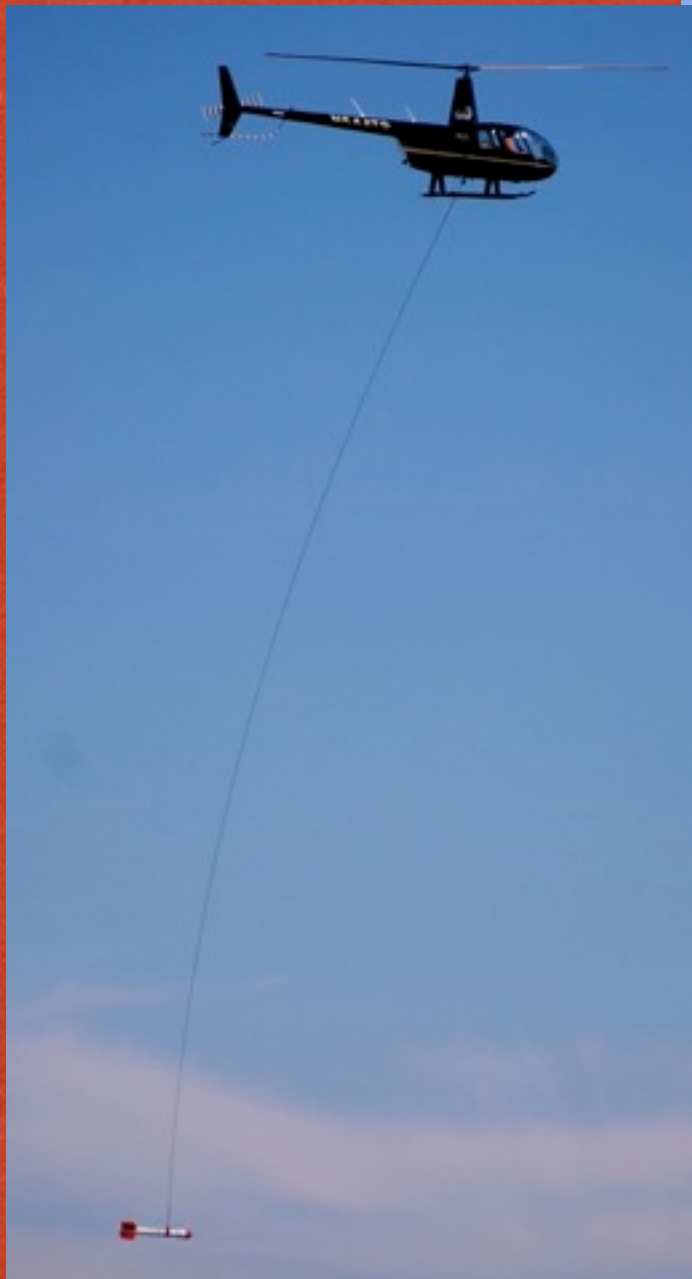
ALKALI VAPOR



GRADIOMETER



AEROMAG



SHIPBORNE MAGNETICS



MAGNETIC STORMS

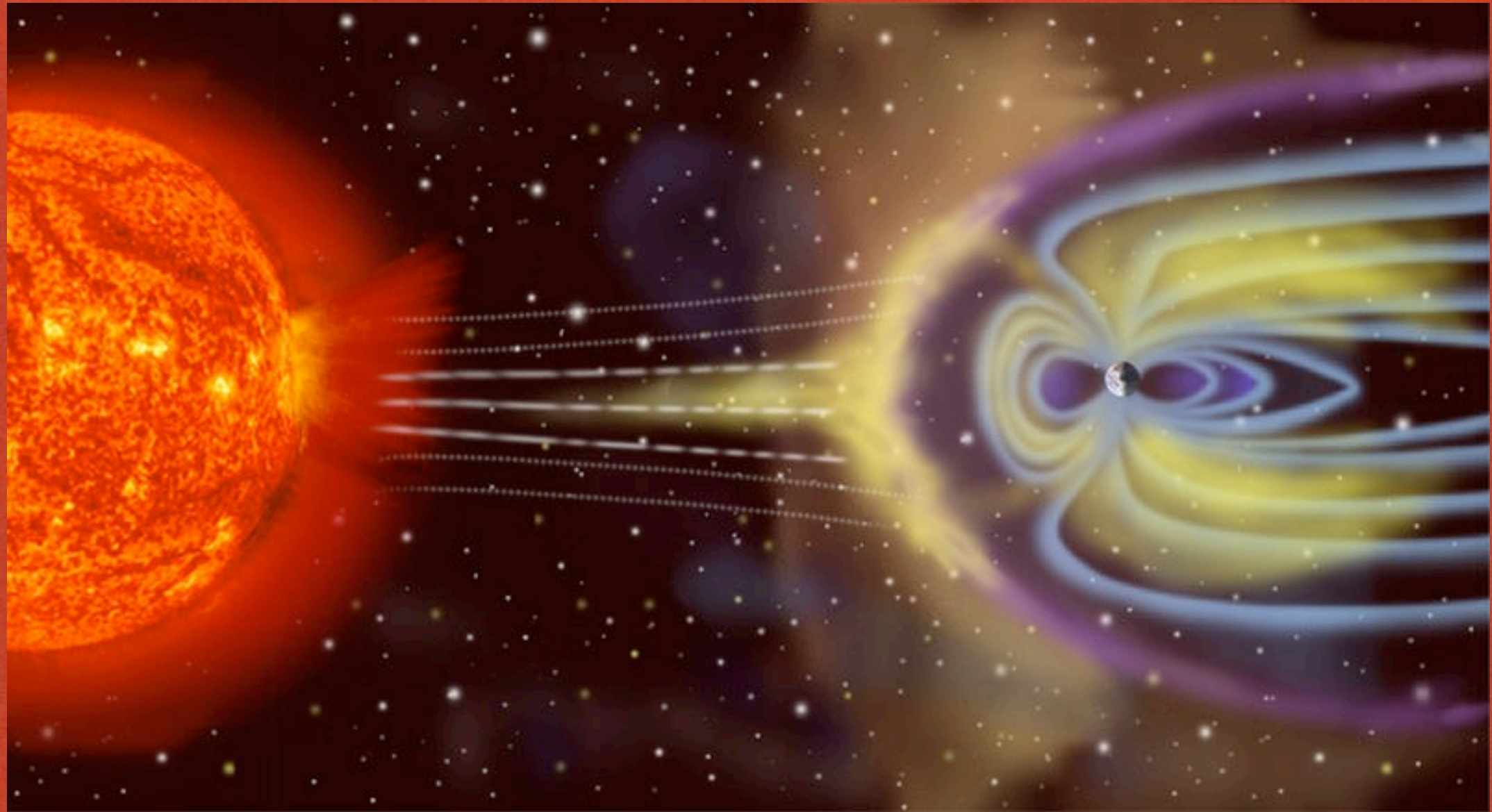
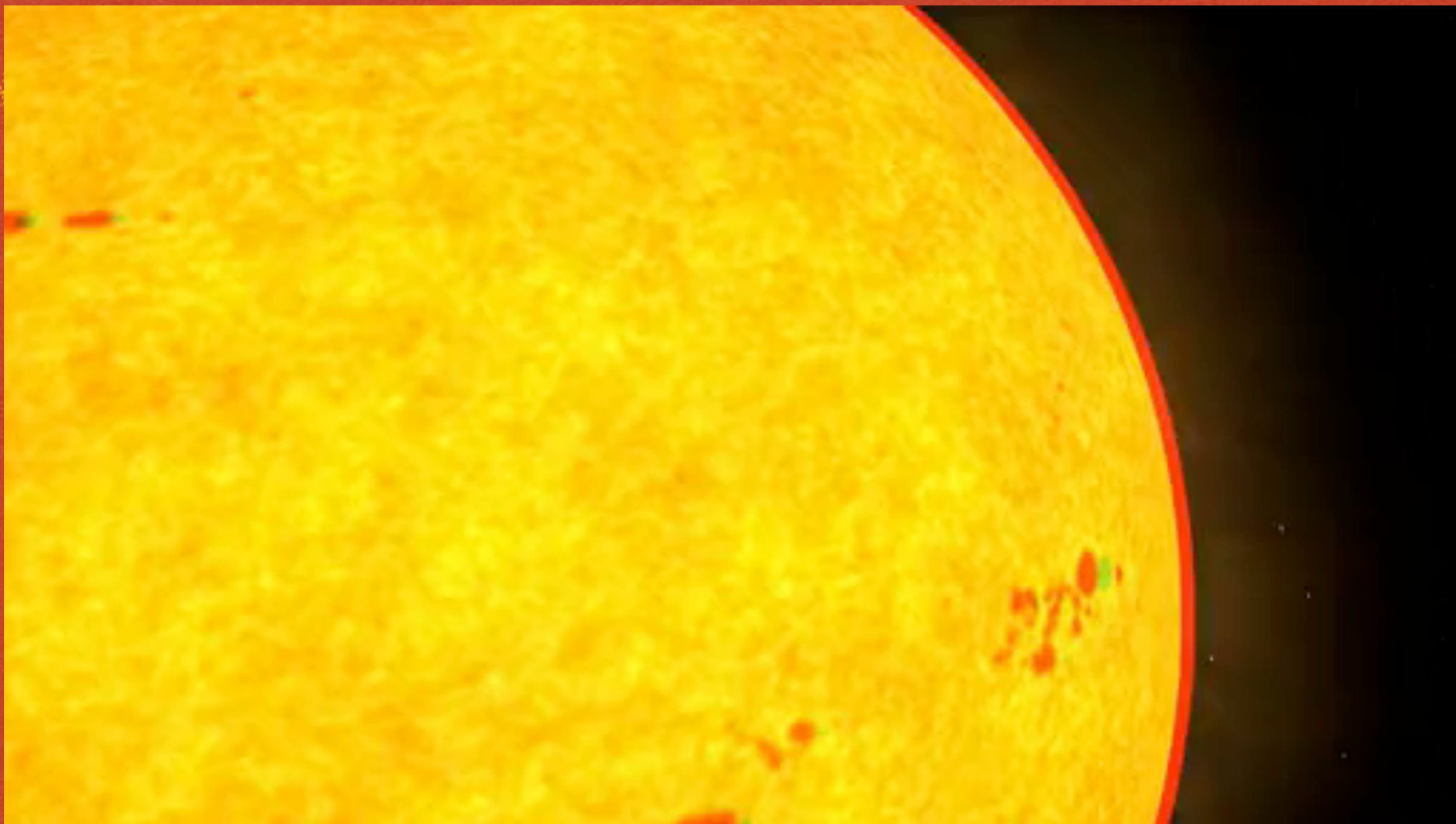


Image: NASA GSFC



Courtesy: NASA GSFC



Courtesy: NASA

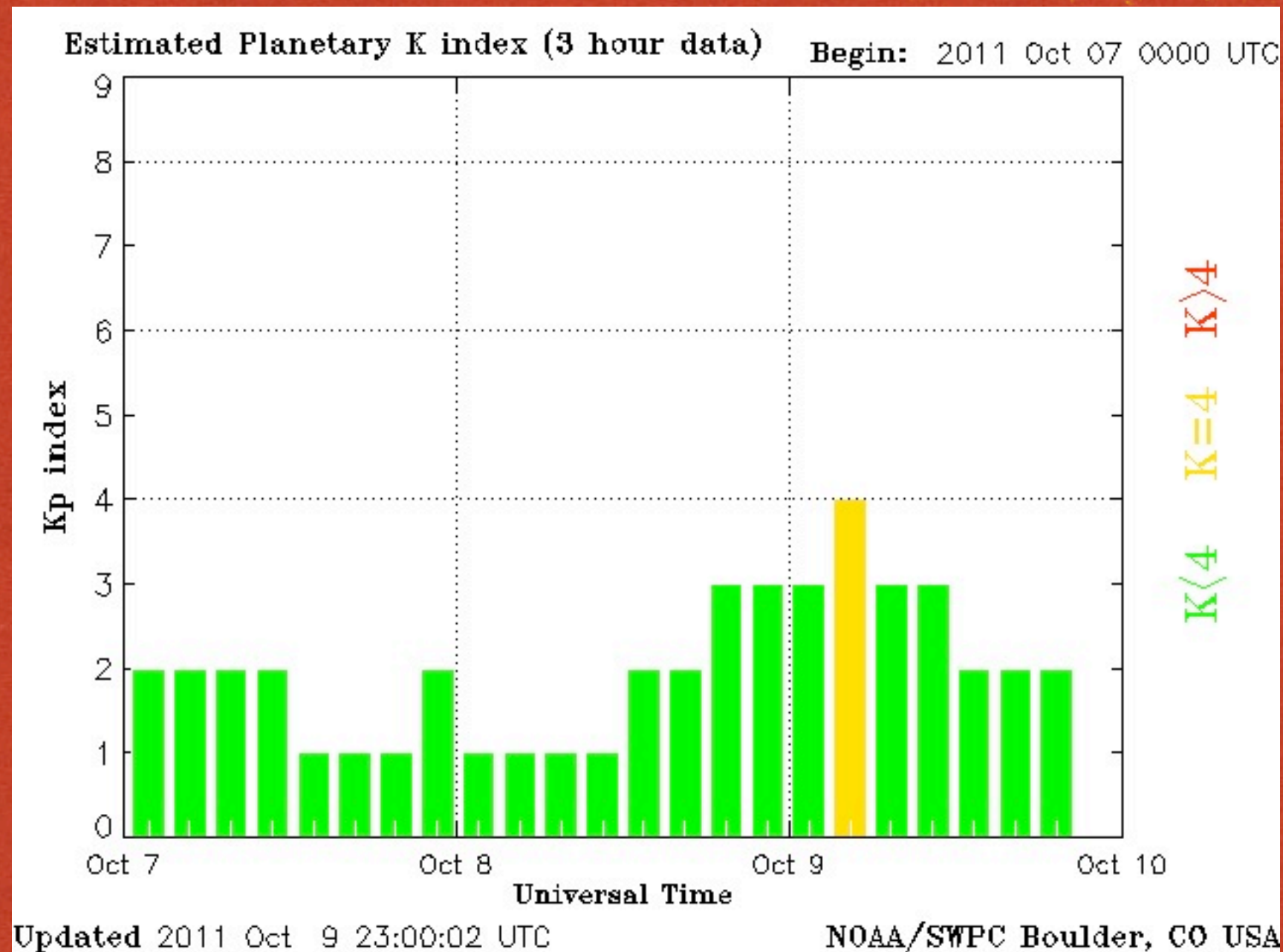
K-INDEX

- Fluctuation of horizontal component of the Earth's magnetic field.
- Averaged over ~3 hours

K-index	a	Boulder, CO observatory measurement (nT)	NOAA G-scale
0	0	0 - 5	G0
1	3	5 - 10	G0
2	7	10 - 20	G0
3	15	20 - 40	G0
4	27	40 - 70	G0
5	48	70 - 120	G1
6	80	120 - 200	G2
7	140	200 - 330	G3
8	240	330 - 500	G4
9	400	>500	G5

Table: Wikipedia

K-INDEX





Courtesy: NASA GSFC