

①

$$B_T = \sqrt{B_x^2 + B_y^2 + B_z^2}, \quad B_T$$

$B_x, B_y, B_z$

Proton  $n_p$  moment

Proton Bulk velocity  $v_{th}$

Proton  $v_x$  moment.

$$v_p = \sqrt{v_x^2 + v_y^2 + v_z^2}$$

Proton thermal speed  $w$ ,  $v_{th}$

$$\frac{1}{2} m v_{th}^2 = \frac{3}{2} k_B T, \quad \text{Boltzmann Constant.}$$

$$\frac{1}{3 k_B} m v_{th}^2 = T_p$$

↳ mass of proton

$$\beta = \frac{B^2}{\text{Thermal press}} = \frac{n_p k_B T_p}{B^2}$$

2  $\mu_0$ .  
↳ mag permeability

$$B > 1000$$

$$n_p > 10000$$

$$v_p > 9999$$

$$n_p \cdot n_{an}$$

Interpolate

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NT

$$B_{mag} \rightarrow \sqrt{B_x^2 + B_y^2 + B_z^2}$$

$$[B_x, B_y, B_z]$$

$$B_x, B_y, B_z$$

$$\theta = \cos^{-1} \left| \frac{-B_z}{B_r} - 90^\circ \right|$$

$$v_p = \sqrt{v_x^2 + v_y^2 + v_z^2}$$

↓

$$\phi = \tan^{-1} \left| \frac{-B_y}{B_x} + 180^\circ \right|$$

Proton  $v_x$  moment

$v_y$

$v_z$

Proton  $n_p$  Moment  $\cdot (n_p)$

$$T_{emp} = \frac{1}{3k_B} M \cdot v_{th}^2 \rightarrow \text{km/s to m/s.}, v_{th} \text{ Proton } w \text{ moment.}$$

$$cm^3 \rightarrow m^3$$

$$B = \frac{n_p k_B T}{B^2 / 2\mu_0} \rightarrow \text{Units}$$

$$B^2 / 2\mu_0$$

$$nT \rightarrow T \times 10^{-9}$$

$$B > 1000 \Rightarrow n_p \cdot n_{an}$$

$B_x, B_y, B_z$

## Parameters

- ①  $\rightarrow$  Magnitude of avg.
- ②  $\rightarrow B_x(t), Y, Z$  (NSE)
- ③  $\rightarrow$  Flow speed (Bulk velocity)
- ④  $\rightarrow$  proton density
- ⑤  $\rightarrow$  plasma  $\beta$
- ⑥  $\rightarrow$  SMH - 1 min

## Catalogue (IP)

Wind. mass. per / per second

(Goodie)

Tag 61  $\rightarrow$  Data

(1)

last.

Start 1997,  $\rightarrow$  end 2023.

Jan	1
Jan	2
	3
	4

Mag

$\propto B_{total}$

Compo

$\propto B_x, y, z$  (~~Wind~~ Velocity)

Density

$\propto n_p$

$\propto v_{th}$  ( $v_f$ )

Plasma  $\beta$

$\propto \beta$

~~Wind~~



## Autonomy of ICMF

Autonomy of  
white matter

Clouds  $\rightarrow$  Curly (no smooth)

3 layer

Stca HL

## Shock

Our work - (1) day wise } (3) hrs interval  
(2) hr wise

magnetic field shock

Sun

Maxentil  
dorinets

$\int f(x) dx$

Therapy / dominating

Suc

2(b)  $\rightarrow$   $\text{C}_{12}\text{H}_{22}\text{O}_{11} \rightarrow \text{C}_{12}\text{H}_{22}\text{O}_{11} \rightarrow \text{C}_{12}\text{H}_{22}\text{O}_{11}$