

# Solar Origin of Interplanetary disturbances observed in the vicinity of the Earth

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## 40 IP disturbances : WIND (B, Wind)

- 27 ICMEs : 21 MC, 2 Ejecta, 4 flux ropes
- 13 Interplanetary shocks

## 36/40 associated with CMEs (LASCO, EIT, NRH)

- Propagation of disturbances
- Characteristics of CMEs (size, location.)

## Solar origin of CMEs, Imaging Ha, radio, EUV

- 32 /36 CMEs: **22** associated with **Flares** (AR), 10 with Filament ejections

Vilmer et al., Annales Geophysicae 2003 1, 847\_862