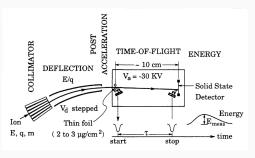
## Pickup Ion measurements with SWICS (Ulysses)

## SWICS: Solar Wind Ion Composition Spectrometer

- a Time-of-flight mass spectrometer



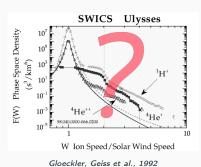


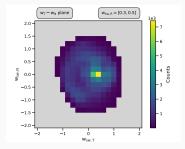
Gloeckler, Geiss et al., 1992

• 
$$\left\{\frac{E}{q}, ToF, E_{SSD}\right\} \Rightarrow \left\{\frac{M}{q}, M, |v|\right\}$$

• identification & energy of the ion

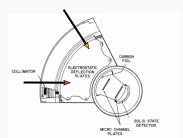
## From 1D to 3D:







- Rotation of SWICS
- Aspect Angle



## Ulysses Orbit

