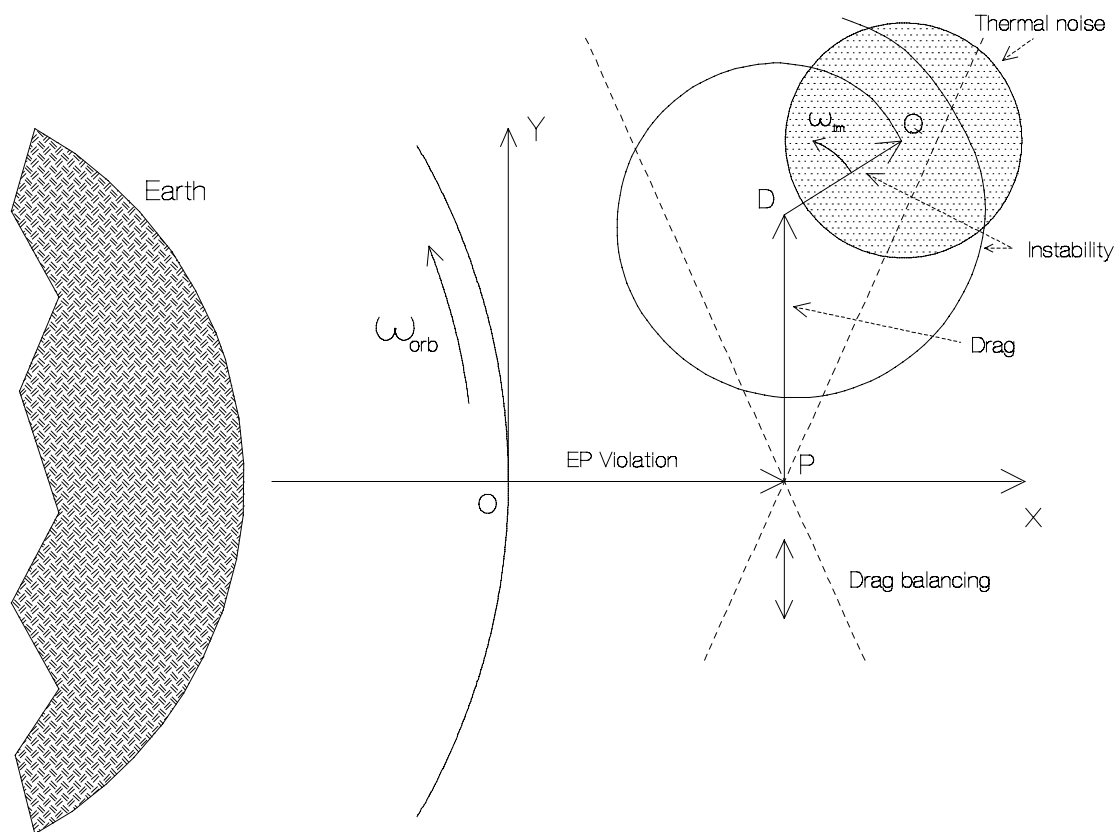


Recovery of an EP Violation Signal



- After synchronous demodulation of the 2-phase 2 Hz (spin frequency) signal, the situation, in a non-spinning reference frame whose horizontal axis points to the center of the Earth, will be as in this picture.

The numbers are:

- Target signal: $\cong 6.3 \cdot 10^{-3}$ Angstrom
 - Whirl radius: $\cong 1$ Angstrom ($\cong 160$ times the signal, but at whirl/natural Frequency: can be easily distinguished)
 - Drag: is far away in angle from signal \Rightarrow after compensation and rejection it can still be distinguished form signal if twice as large as the signal
 - Thermal noise: wait sufficient long integration time for signal to emerge ($\cong 7$ days)
- 2-phase Demodulation, digitalization, (optical) transfer and software acquisition of the signal, have already been realized in GGG (prototype of GG on the ground)