HelioViewer@ MEDOC

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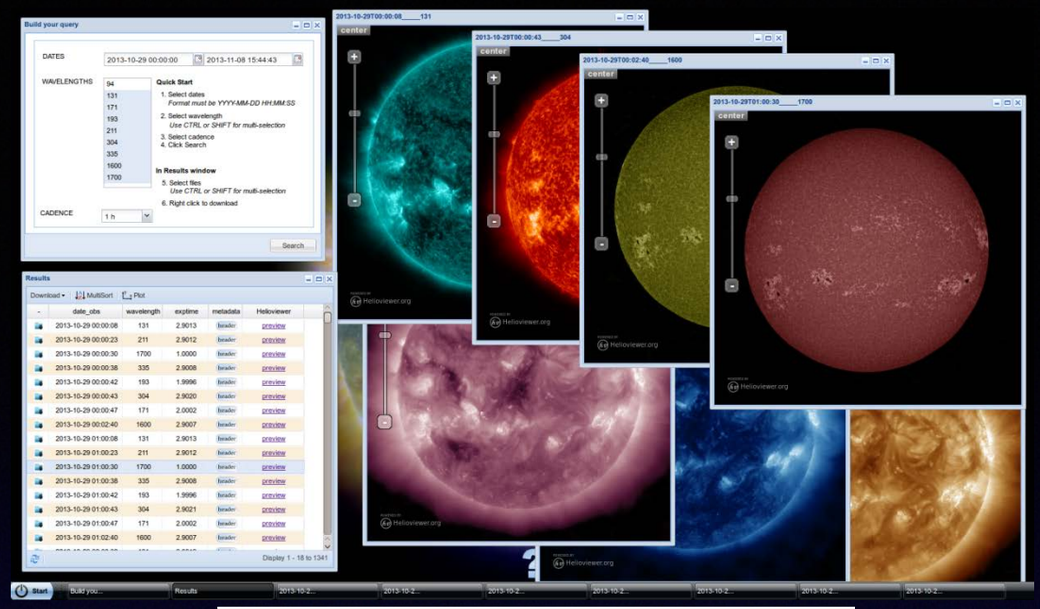
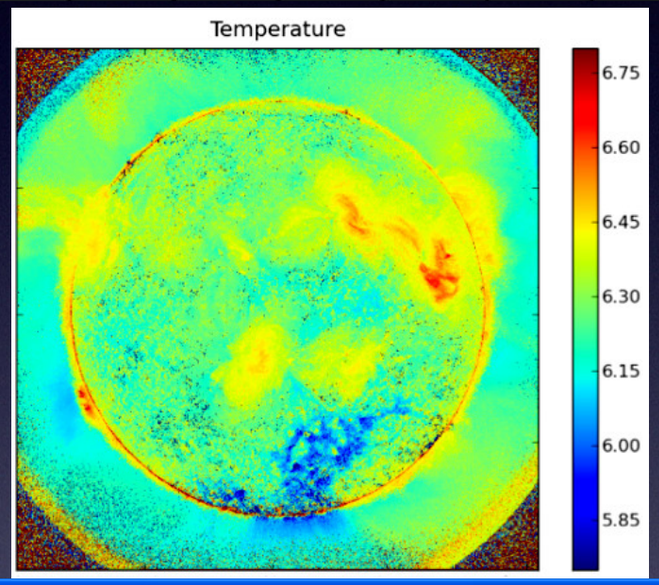
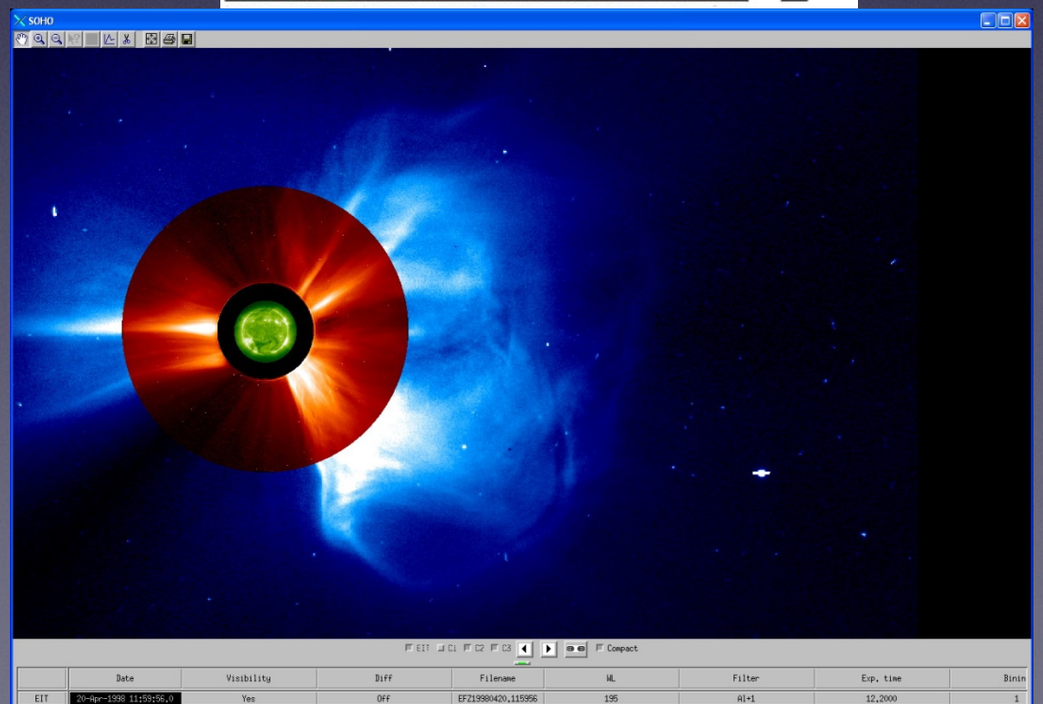
MEDOC (IAS, Orsay)

Created in 1996 for SoHO, now the French national thematic centre for space solar physics (CNES, CNRS, Univ. Paris-Sud)

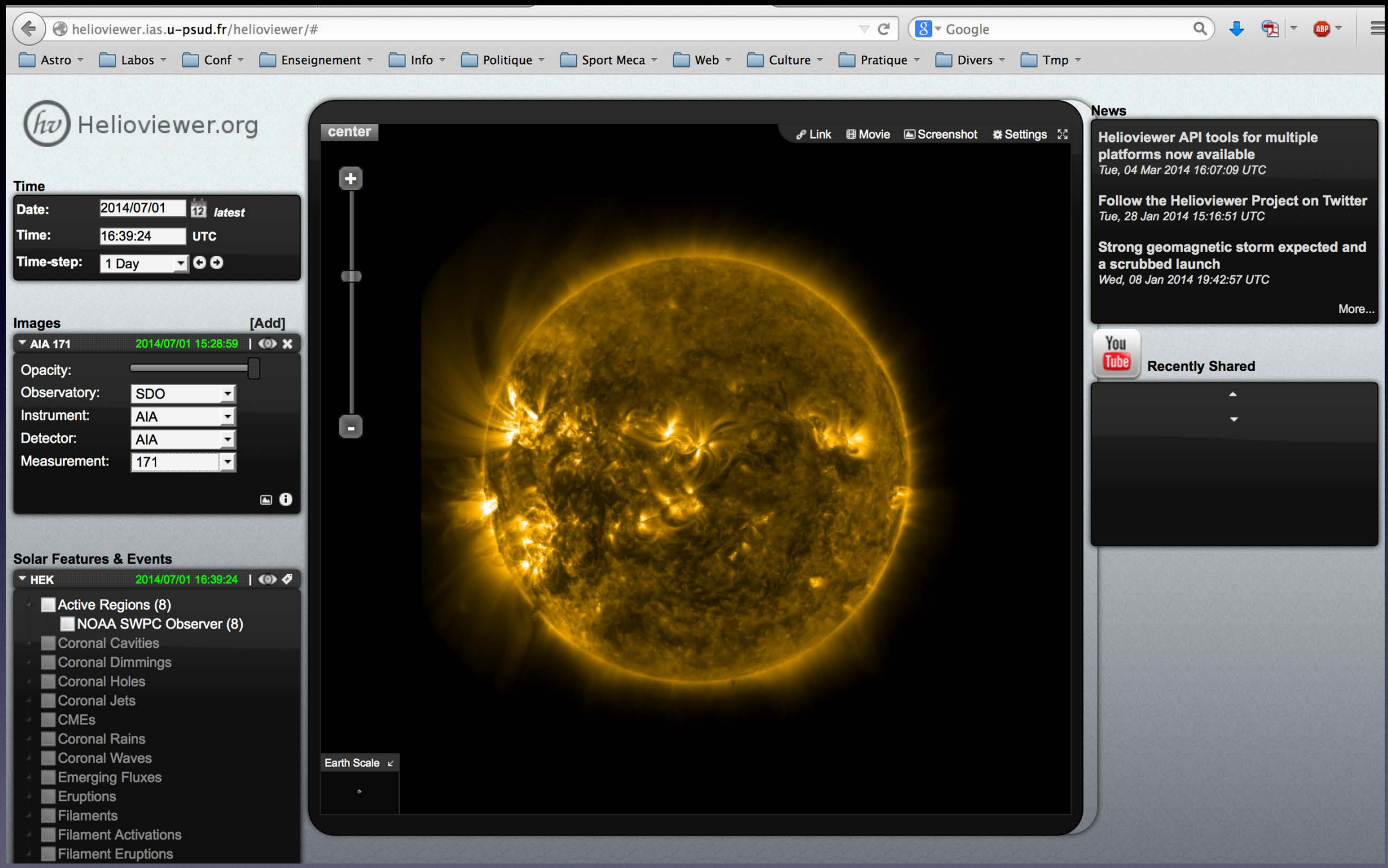
- **Data** archive and redistribution: SoHO, STEREO/SECCHI, TRACE, SDO/AIA…
- **Processed** / value-added data
- **Tools** for analysis and interpretation
- **Science operations** for in-flight instruments







Helioviewer now at MEDOC

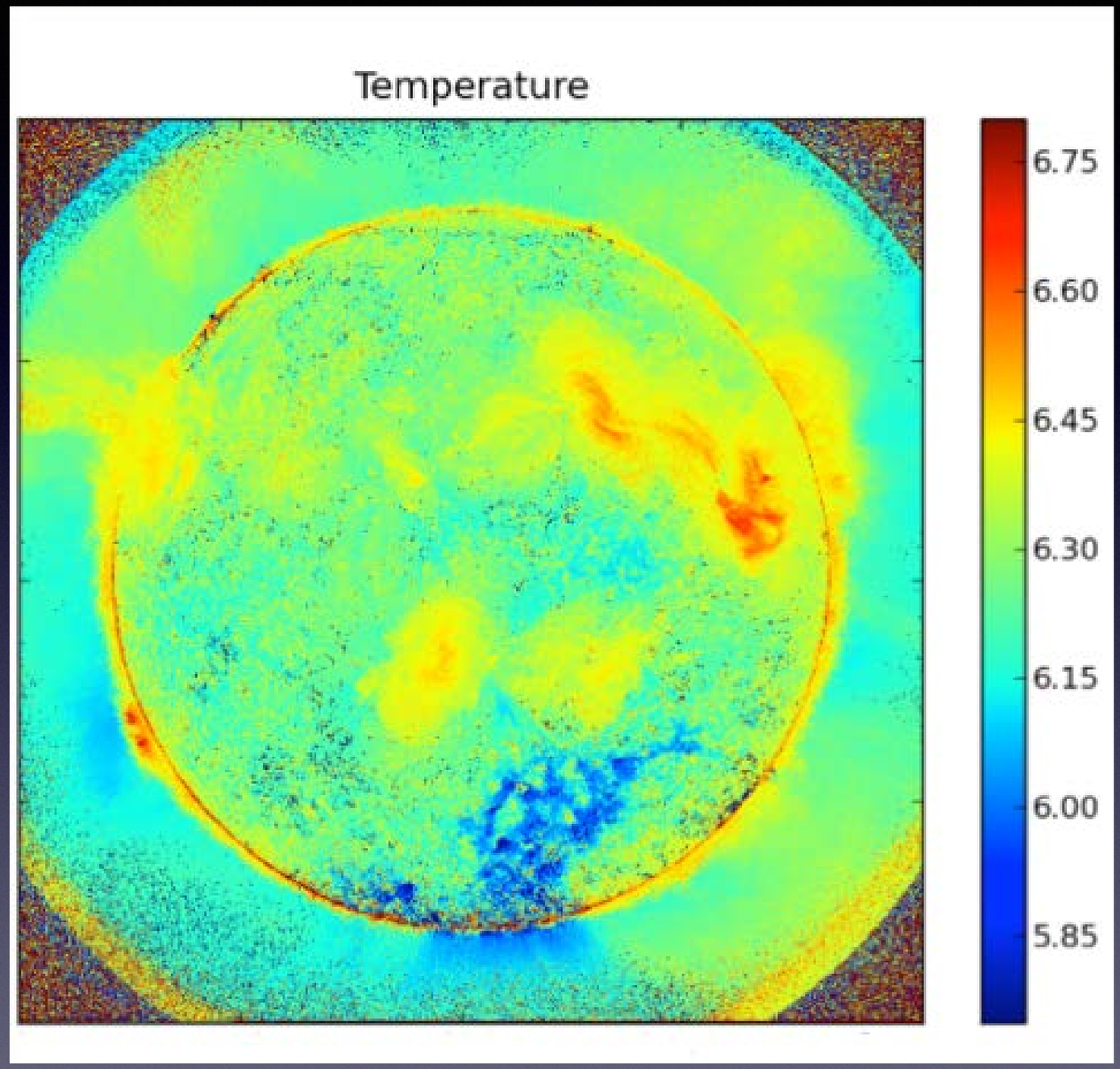


All data available (32TB) and kept updated

JPIP server: jpip://helioviewer.ias.u-psud.fr:8080

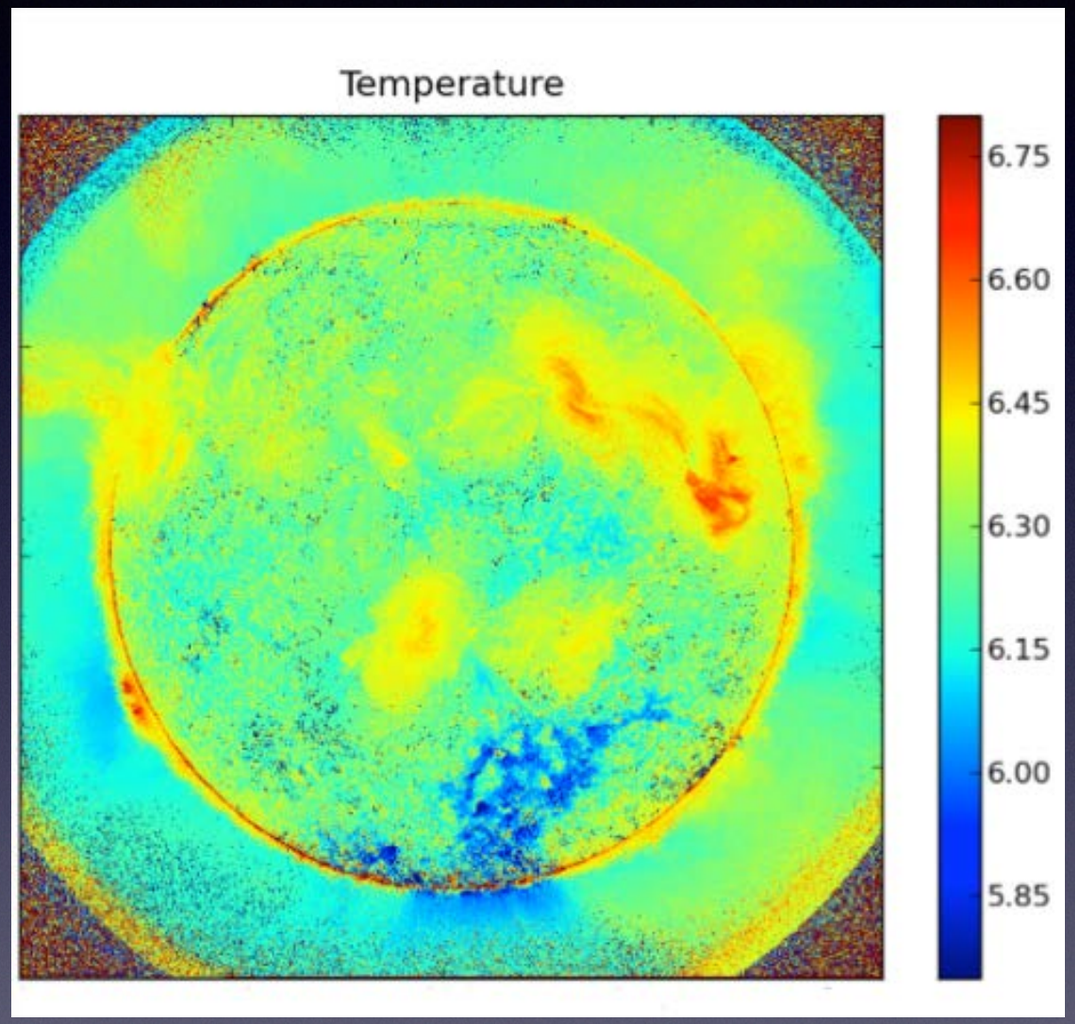
Web interface: http://helioviewer.ias.u-psud.fr

Adding new data to HelioViewer: DEM maps



Temperature and EM (density) maps produced at MEDOC from SDO/AIA and now available from dedicated interface.

Handling new data sets



- Need for easy addition of new data sets.
- Impose full synchronization between servers?
  Otherwise choice of server based on data availability:

  - automated

  - manual (coverage maps?)

Taking advantage of the several HV servers

Having several servers can be useful: better user experience, distributed data storage and computing power, fault (or local funding issues) tolerance…

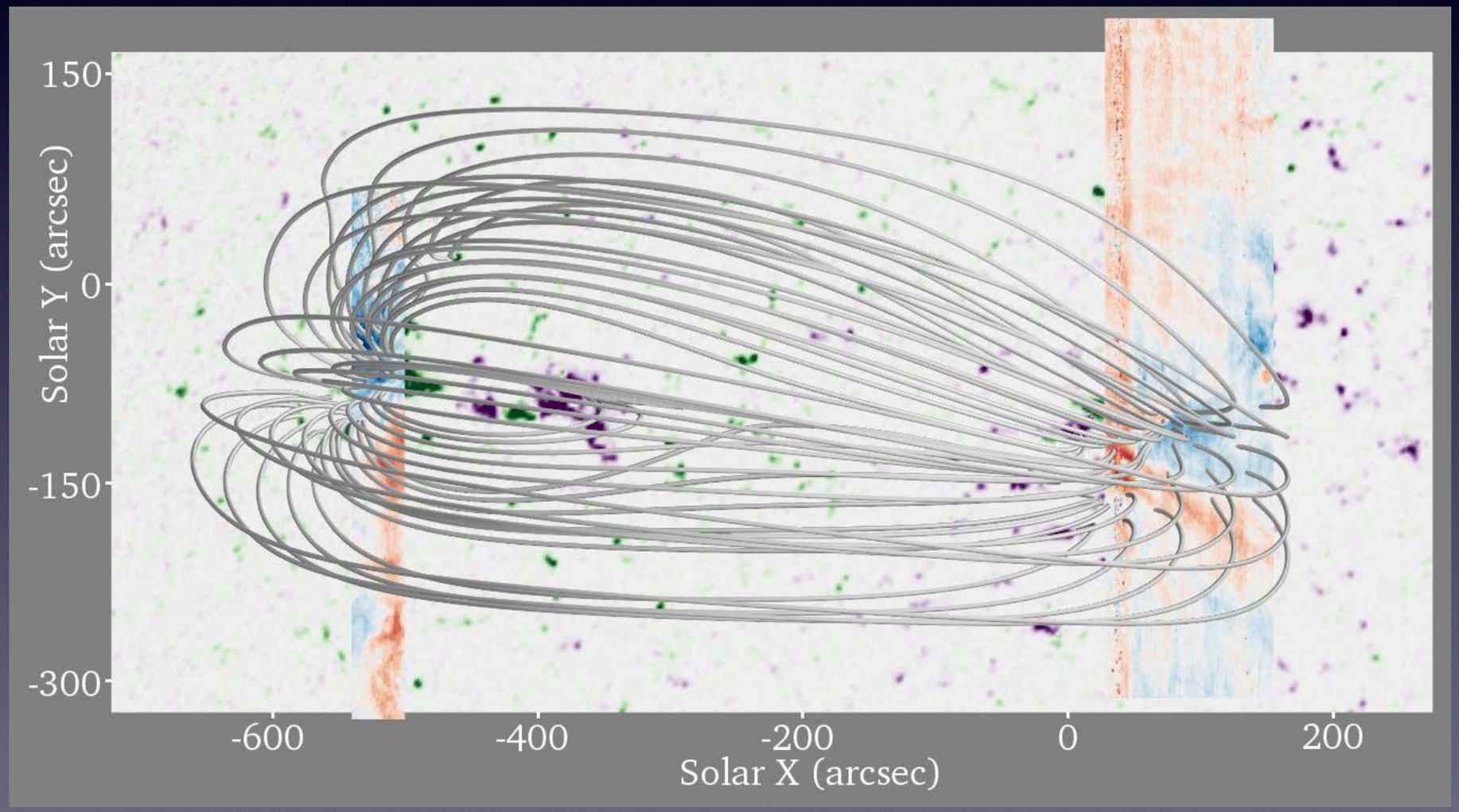
How should JHV choose the server?

- Configuration file or manual choice in a list
- Automated choice is much better:
  load balancing (network, server load)
- Has to be combined with automated choice based on data availability

Using a future HV as a tool for Solar Orbiter?

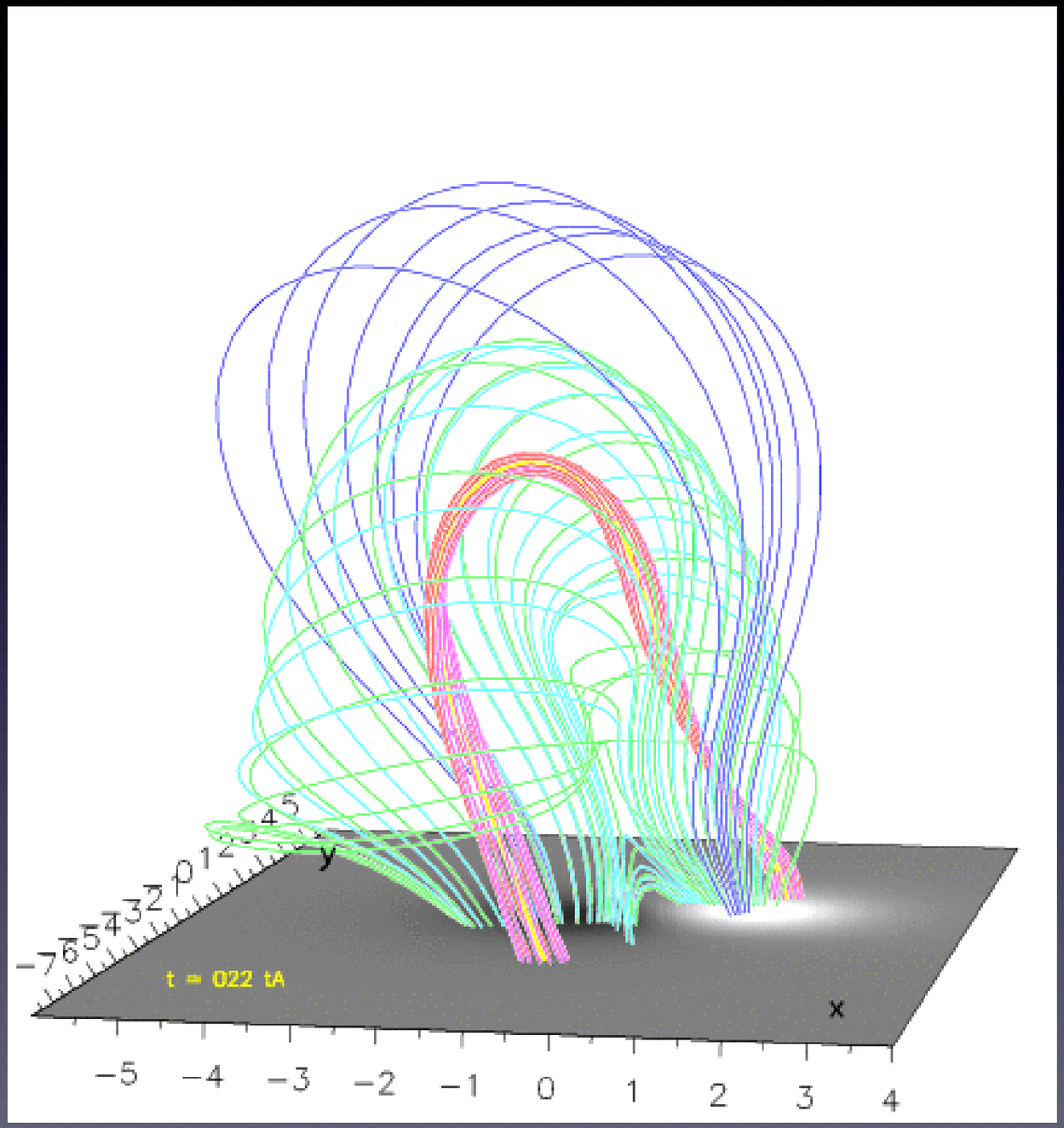
Tool for visualization, could combine remote-sensing and in-situ data (cf. SWHV).
Could also be used for preparing SO planning?

MDI+EIS
+extrapolation
Boutry et al 2012



IAS is co-(P)I of EUI, PHI, and SPICE.

HV as tool for SO: relevant MEDOC experience

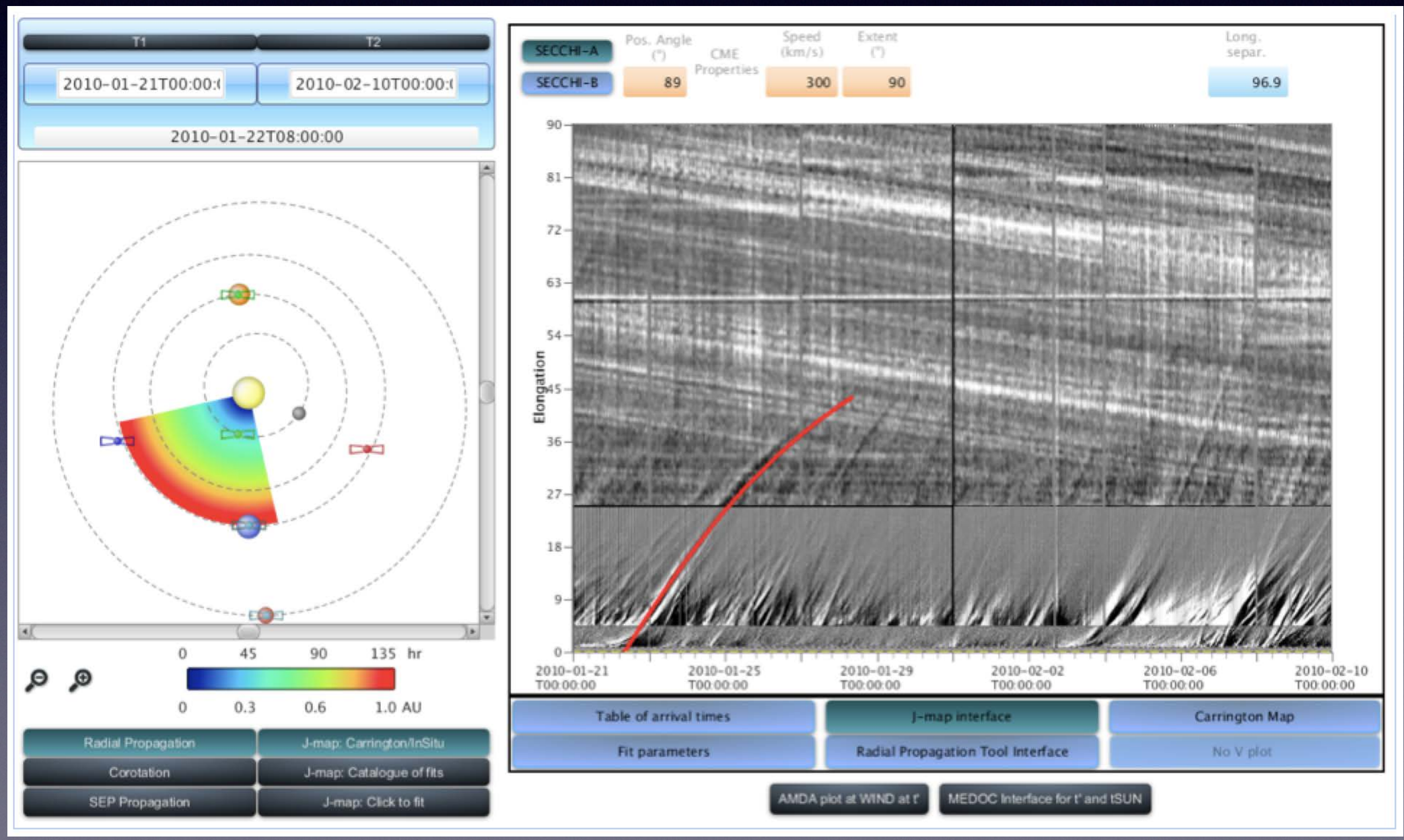


Simulations/extrapolation of B

(collaboration with Obs. Paris/LESIA)

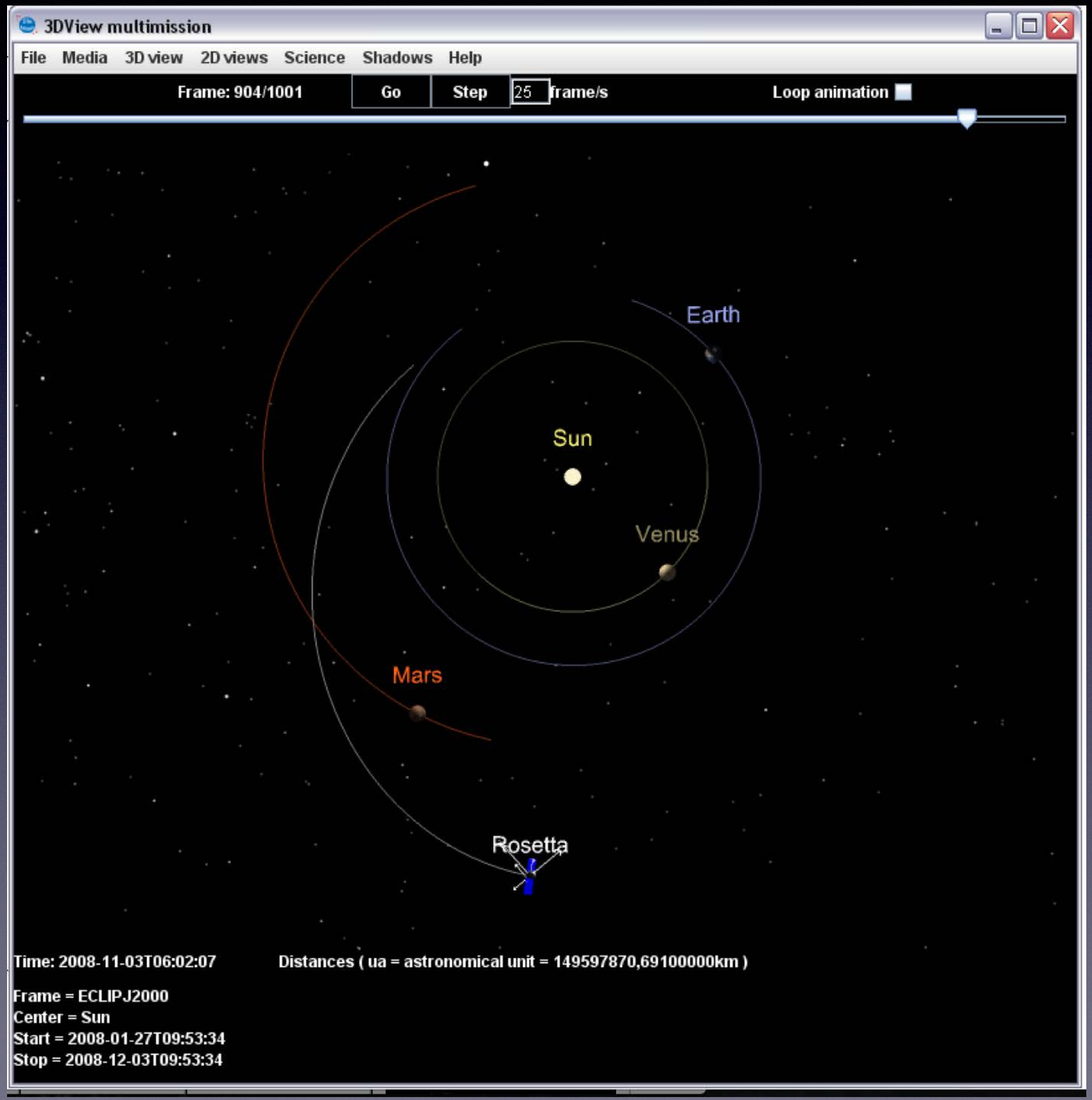
HV as tool for SO: relevant MEDOC experience

Partnership with CDPP (Plasma Physics Data Center): Propagation Tool

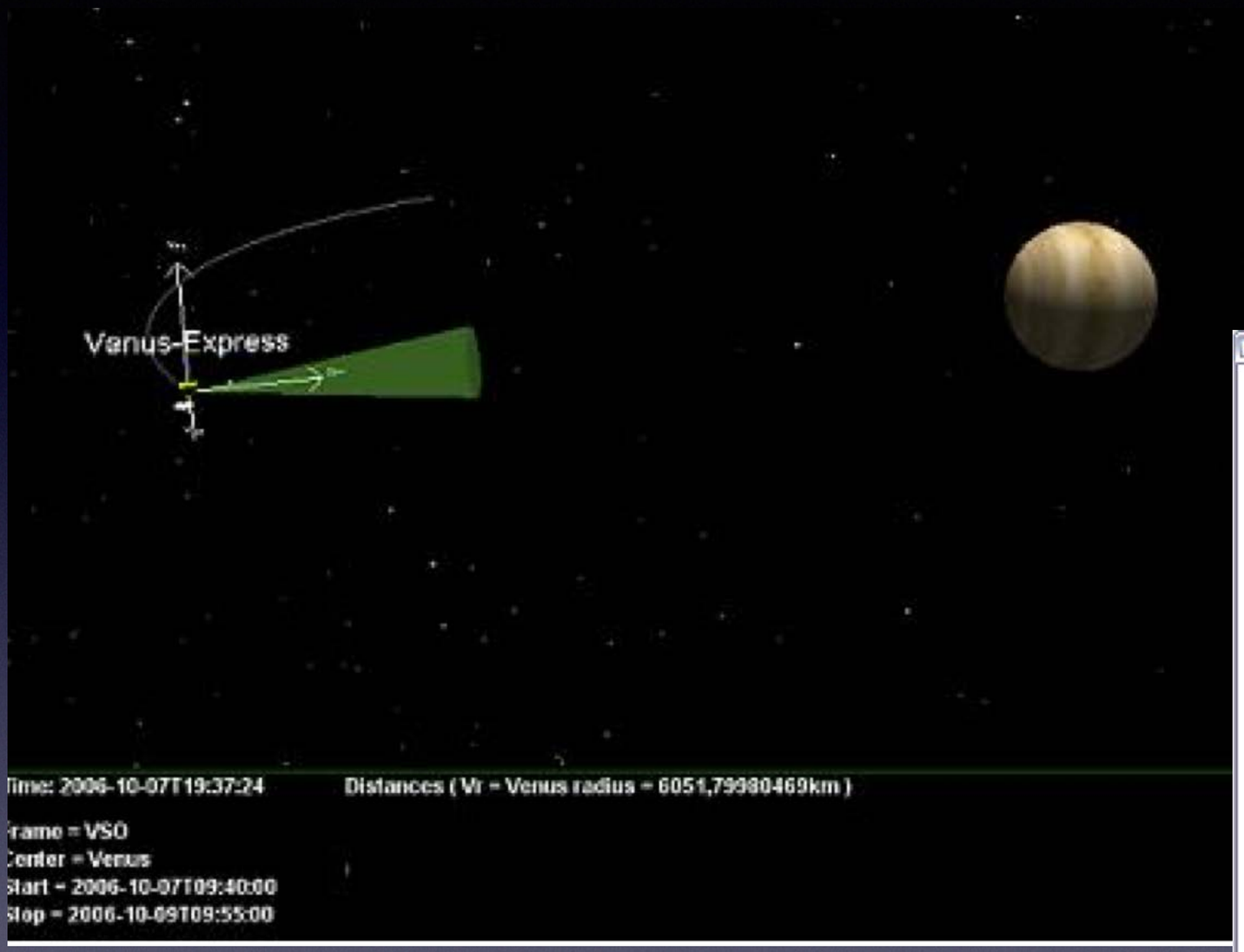


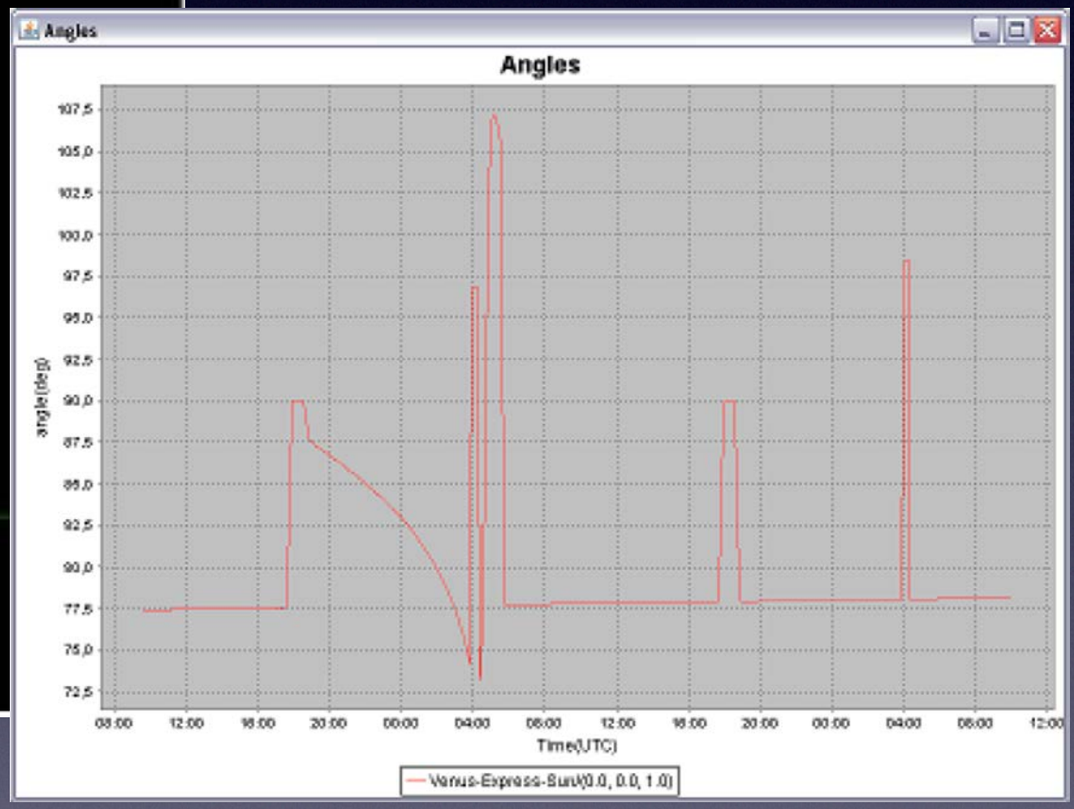
HV as tool for SO: relevant MEDOC experience

Partnership with CDPP (Plasma Physics Data Center): 3DView



HV as tool for SO: relevant MEDOC experience





3DView => 1D series for HV plug-in

Possible developments for using HV as tool for SO

Magnetic extrapolation
+ Propagation Tool
+ 3D view
+ a lot of (scientific & technical) work

= link photosphere/spacecraft

French workshop dedicated to SO tools
on 4-6 November in Toulouse