FLOW
the french LOFAR consortium
M. Tagger, P. Zarka + 30 participants
long interest in France for LOFAR
P. Zarka -> already ‘planets and exoplanets’
difficult to introduce among many other national priorities…
march 2006: Meudon workshop, > 30 participants, positive signals
-> FLOW consortium, science case and proposal to funding agencies: a LOFAR station in Nançay, join the LOFAR collaboration
so far so good…
• very strong interest in most topics addressed by LOFAR: EOR, galaxies and clusters, X-ray binaries and AGN, young stars, planets and exoplanets, Sun, atmospheric phenomena (sprites, elves…)

• excellent complementarity with existing or planned instruments: XMM, HESS, Planck, GLAST, Simbol-X, ECLAIRs, Taranis…

• -> minority of radio-astronomers, many specialists of other wavelengths attracted by the prospects of LOFAR

• some interest (to be explored…) in “other” sciences
Simbol-X

a new generation hard X-ray telescope

formation flight

0.5 - 80 keV
next step: a “super” station?

LOFAR back end + 8 times more antennae -> small second VC

• in quiet ionospheric periods:
  • additional long baselines with high weight (sensitivity) in IFM
    (if super-station inserted in LOFAR array)
  • high angular resolution on weak sources

• in perturbed ionospheric periods:
  • post-detection correlation (intensity interferometry)
    in Tied Array & Incoherent Integration modes
  • -> decorrelation of ionospheric effects and of local RFI
    (more advantageous at low frequencies)
  • -> better sensitivity for detection weak / transient sources

• independent of ionosphere
  • - increases the capabilities of RSMM, TAM, IIM
LOFAR super-station

- original instrumental development
- local use possible (when not used by LOFAR), local data center, training, etc.
- LF only ?
- modest additional cost / standard station ?
- interest of European participants ?
- feasibility study in Nançay
- funding request for a prototype possible in march 2008
- need for a specific science case:

  -> European/International contributions ?