



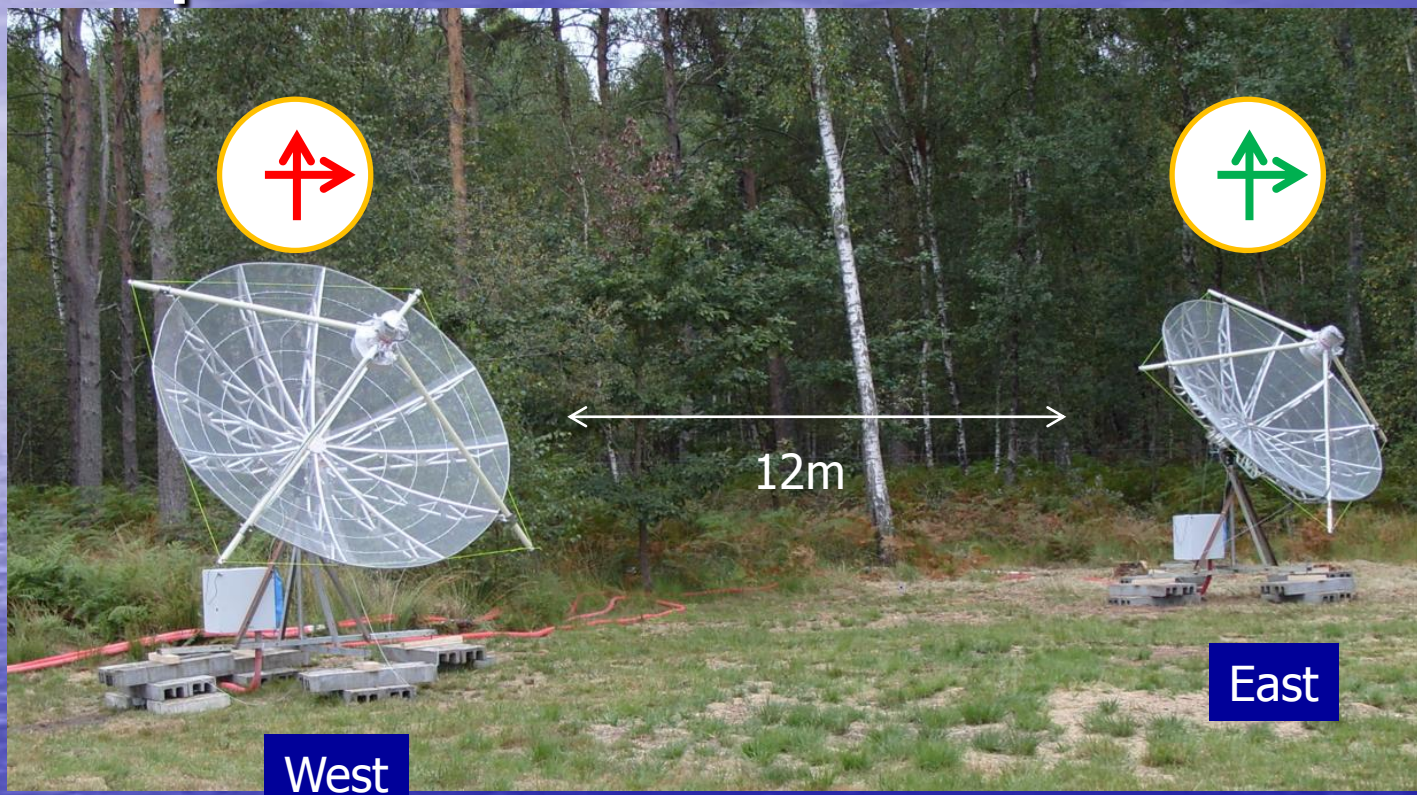
PAON-2

J.E Campagne

3/10/12

Merci à toutes et tous!

Setup



Azimuth: Sud, Declinaison: $+41^\circ$
Prévu pour transit Soleil du 26/9/12 11h42UT

Pipeline...

- Firmware FFT: 4096 chan/250MHz
- Bande [1250-1500]MHz
- 1kHz trigger, loss rate $\sim 0.4\%$
- "Raw" data (FITS) transférées sur Irods@CCIN2P3

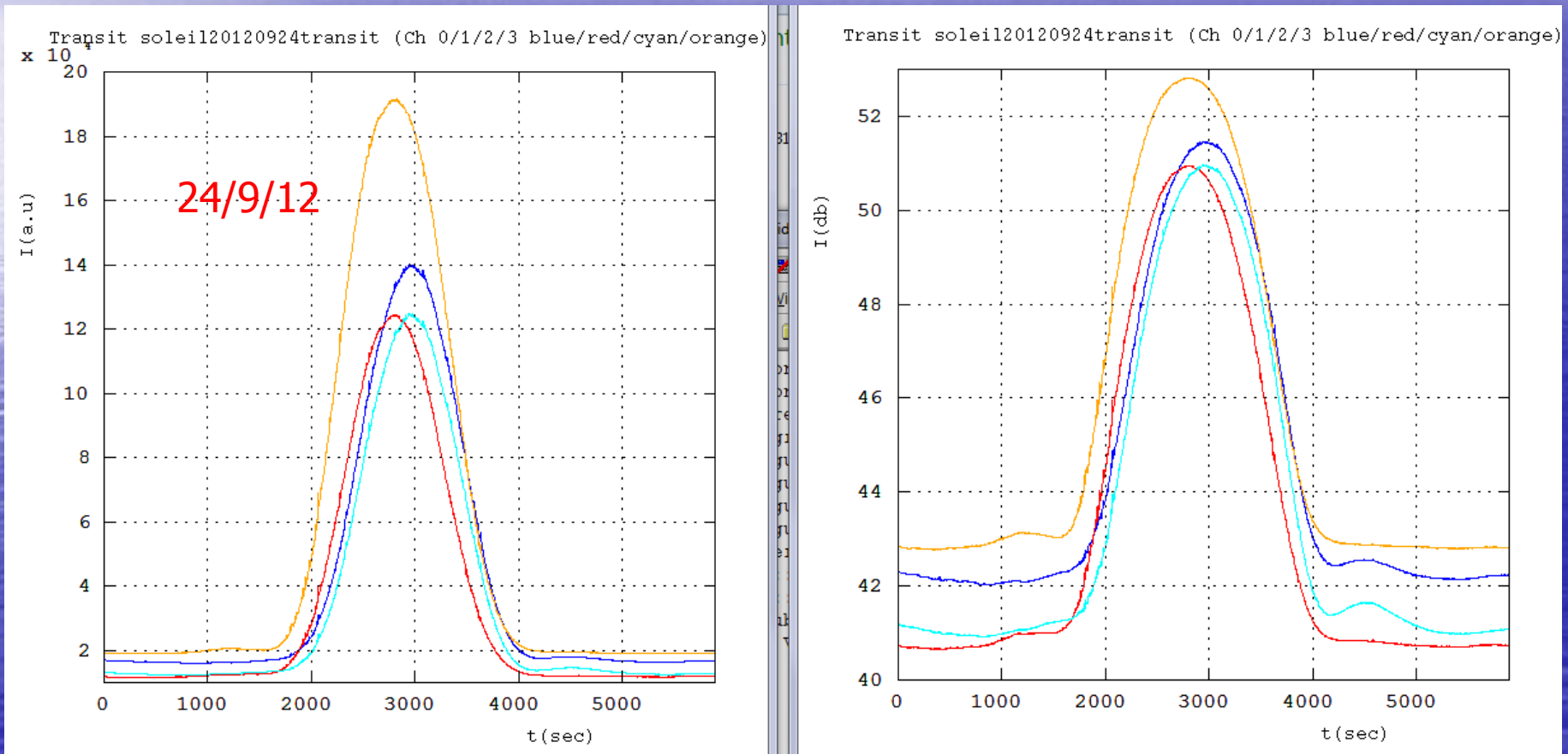
```
/baoradio/data/PAON2/Soleil:  
C- /baoradio/data/PAON2/Soleil/20120925NoSuntransit  
C- /baoradio/data/PAON2/Soleil/20120925Soleiltransit  
C- /baoradio/data/PAON2/Soleil/20120926Soleiltransit  
C- /baoradio/data/PAON2/Soleil/20120927NoSoleiltransit  
C- /baoradio/data/PAON2/Soleil/Soleil20120924transit
```

Pipeline suite

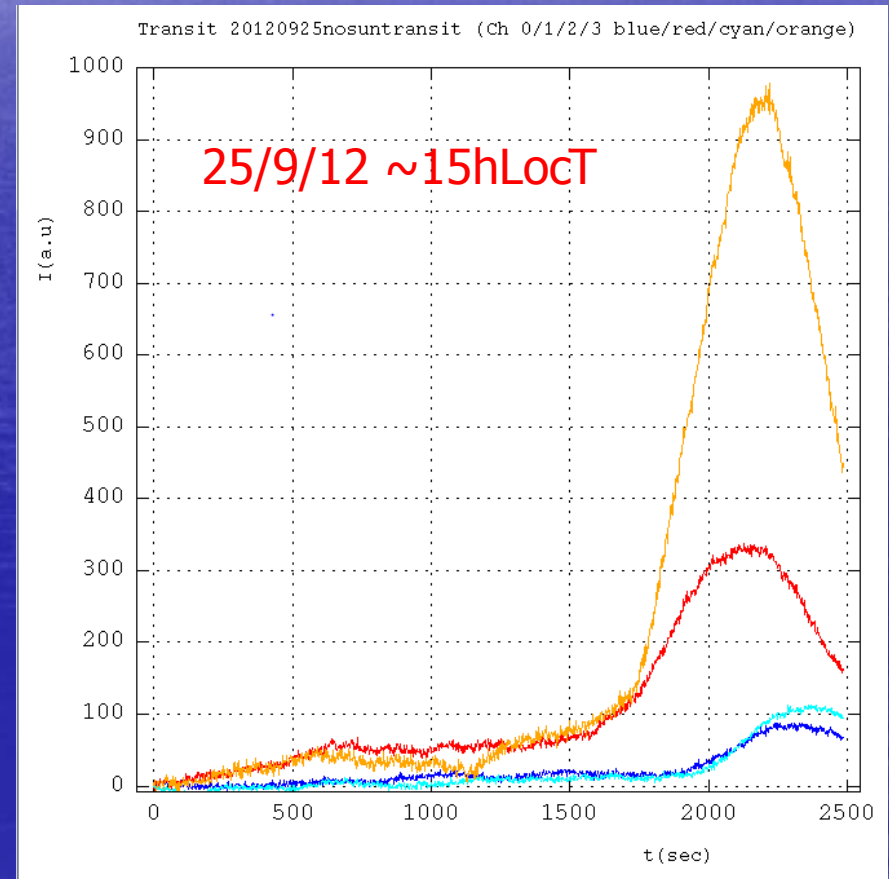
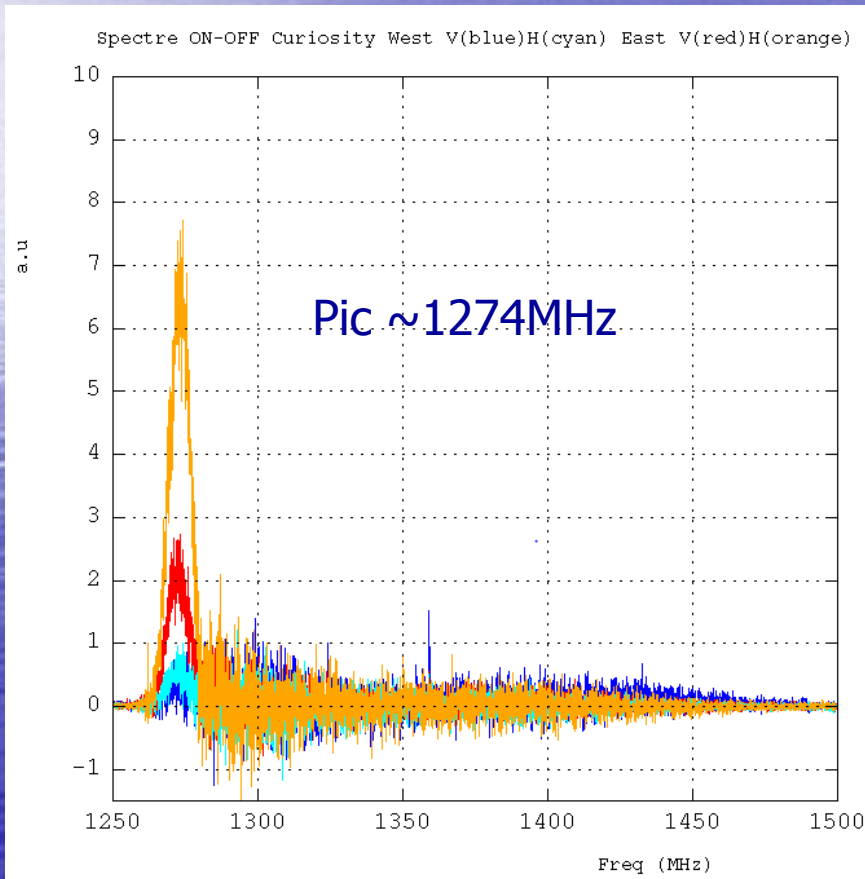
- Irods →/sps/hep/baoradio (92Go / 50' de data)
- Calcul des visibilités (vismfib.cc, R.A+Ch.M)
- Sorties: fichiers format ppf (Sophya) ($\sim 0.5\text{Go} \Rightarrow \text{Fact.} \sim 200 \text{ reduc.}$)
 - Vismtx<i>, i=0,...
 - moyennage sur 2000paq. $\sim 2\text{sec}$
 - Pas de filtrage pour le moment
 - 1 Matrice $(N(N-1)/2 + N) = 10 \times 4096$ coefficients complexes
- mergeAnaFiles.cc (JEC) qui permet de faire l'analyse temporelle par exemple.
- A faire (entre autres choses)
 - migrer en mode Batch comme pour l'analyse Amas.
 - implémenter des filtrages contre les RFI. (plus difficile *a priori* que pour analyse Amas à cause de la cohérence temporelle à garder d'une voie à l'autre)

Transit Soleil [1250, 1500]MHz

Données monitoring

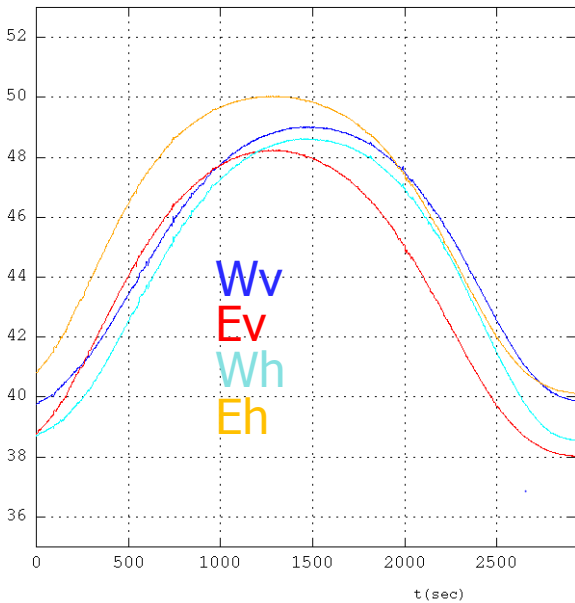


Curiosité: Radar Meteo ?!

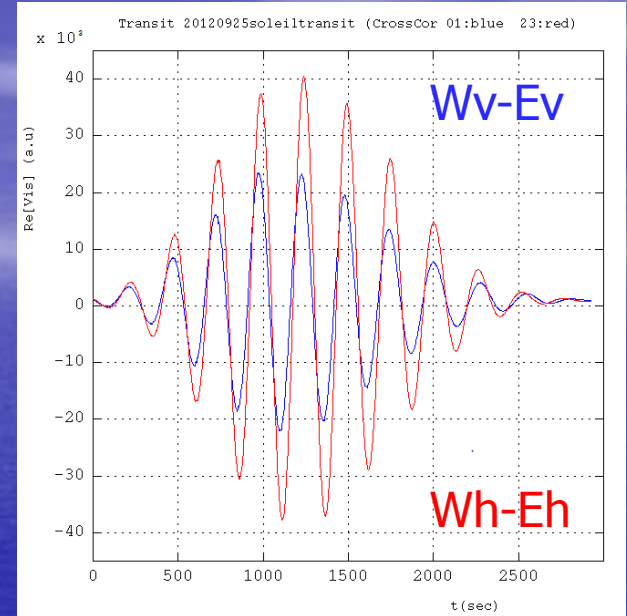


Visibilities (all Freq., No Filtering) : 25/9/12 Sun

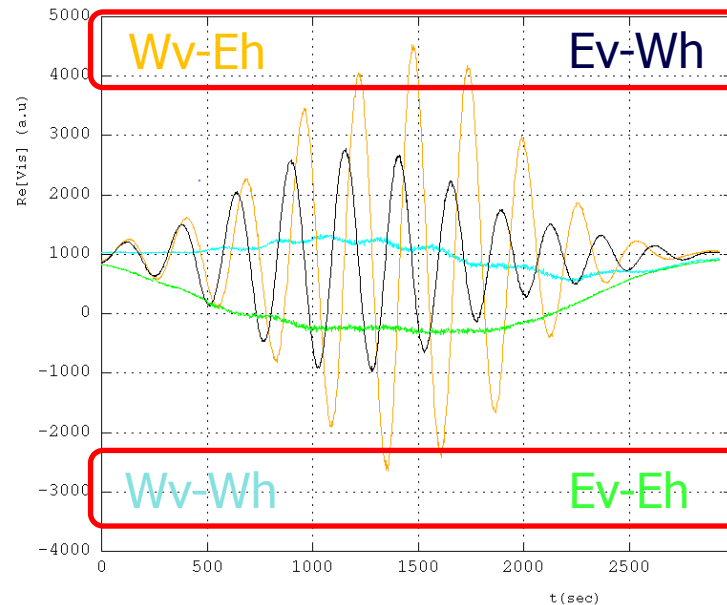
Transit 20120925soleiltransit (AutoCor 0/1/2/3 blue/red/cyan/orange)



<2000paq.> (~2sec)
<All Freq> (250MHz)



Transit 20120925soleiltransit (CrossCor 02:cyan 03:orange 12:black 13:green)

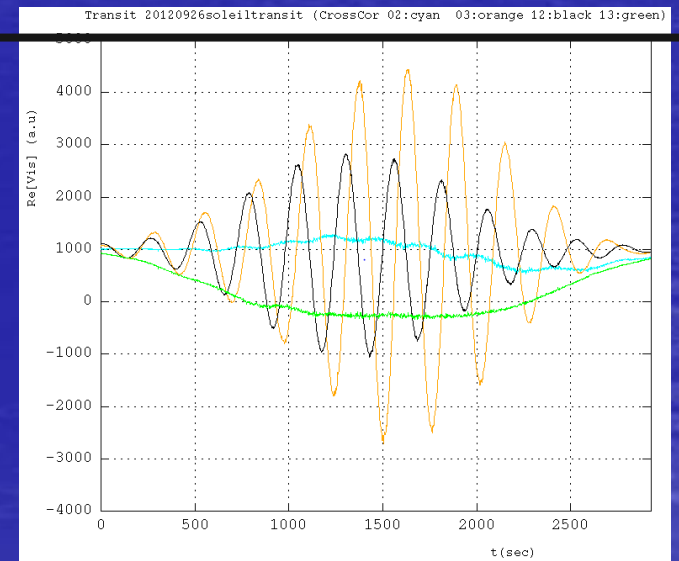
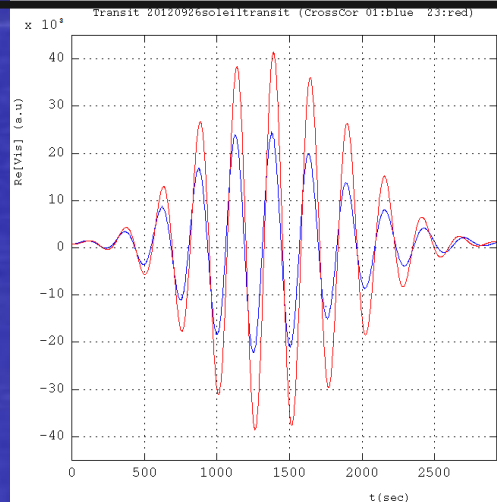
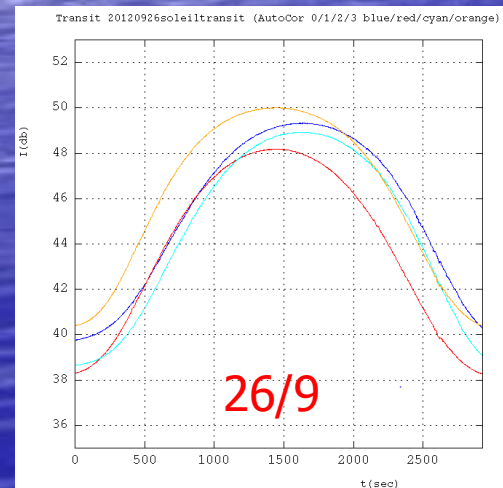
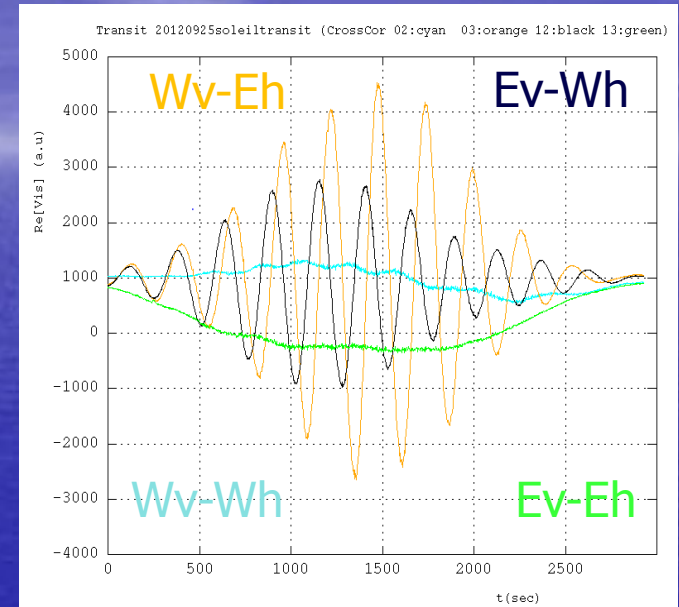
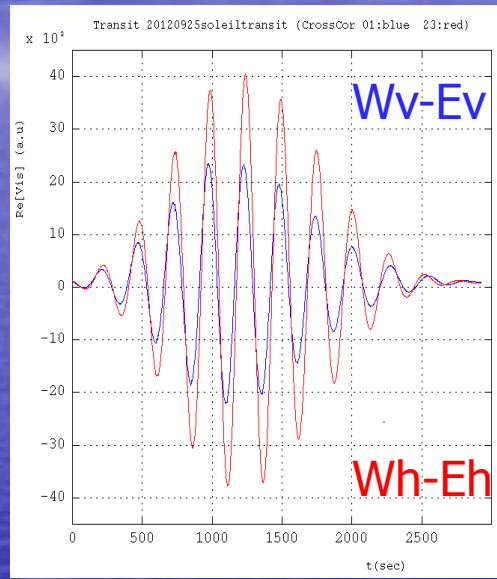
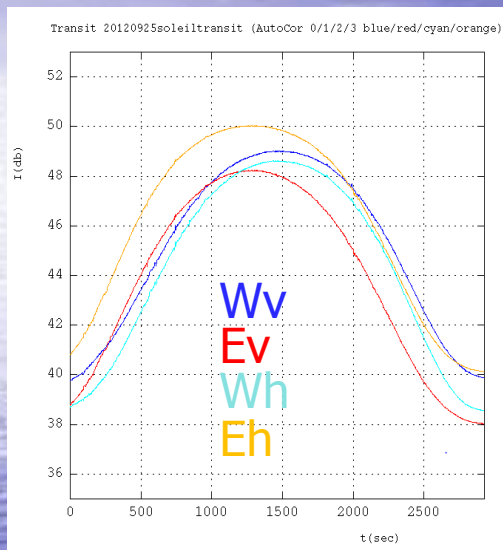


Corrélations
Orientation relative
des feeds?

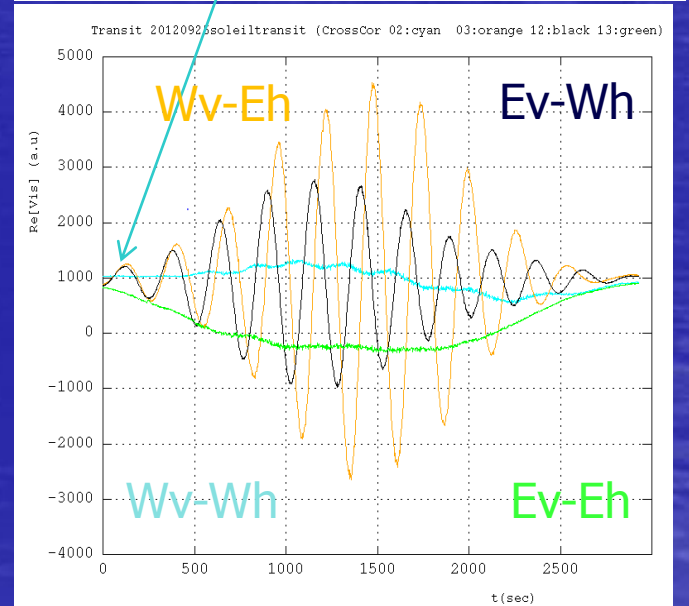
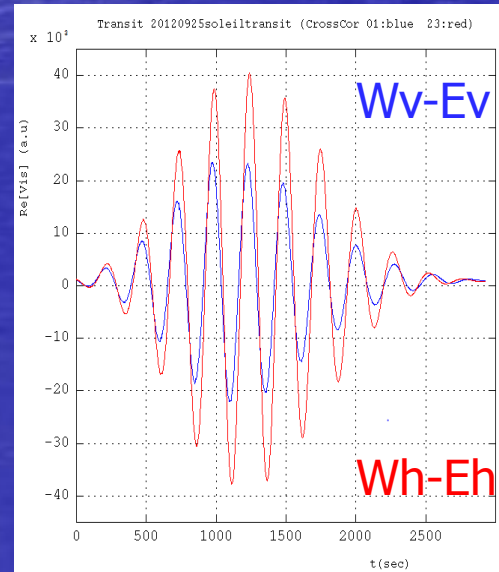
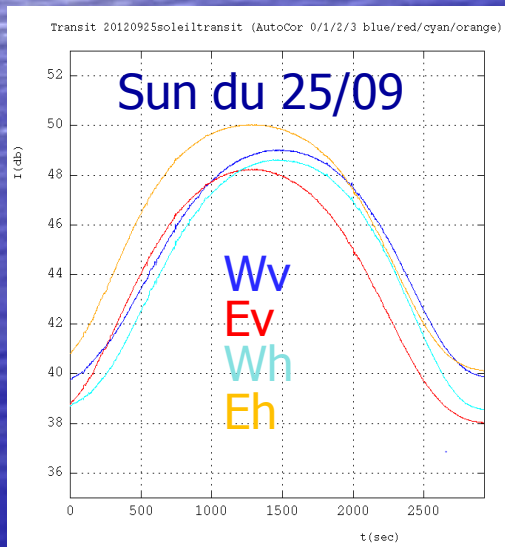
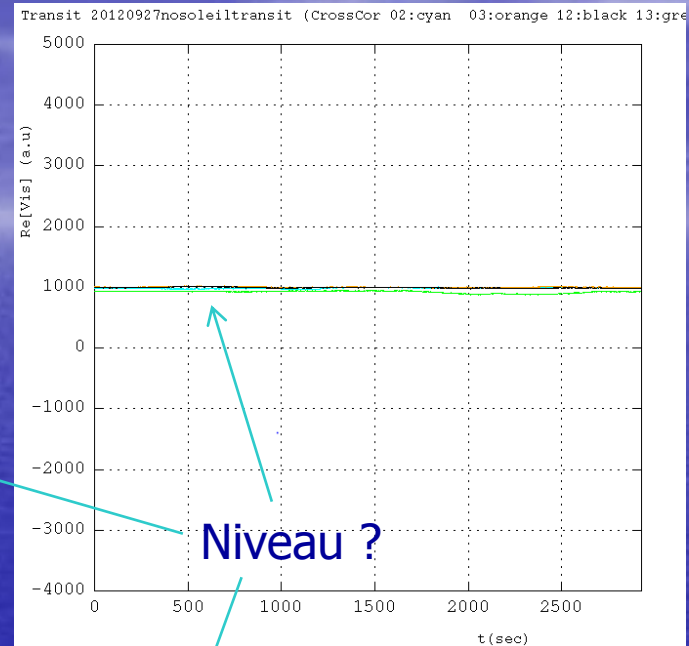
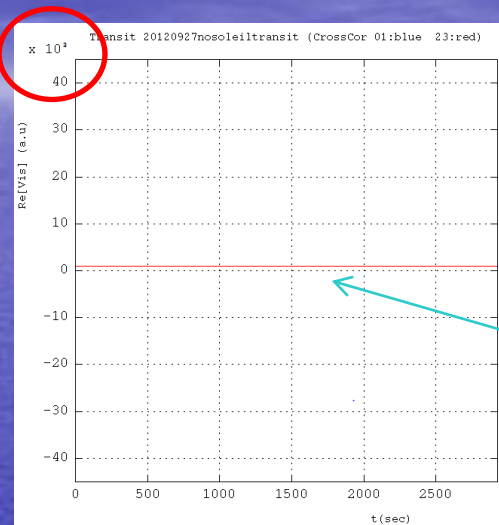
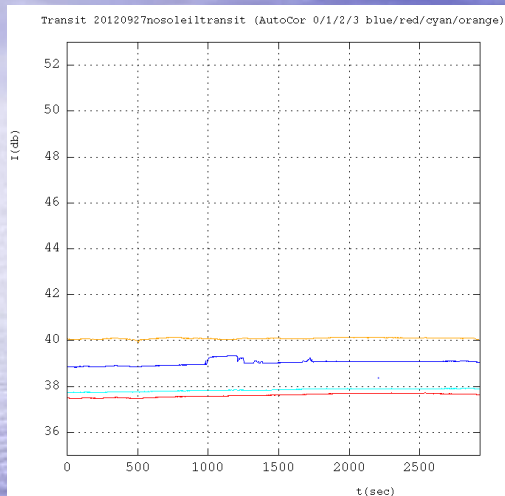
Corrélations dans le
feed?

On pourrait prendre
un peu plus de temps
pour avoir la ligne de
base...

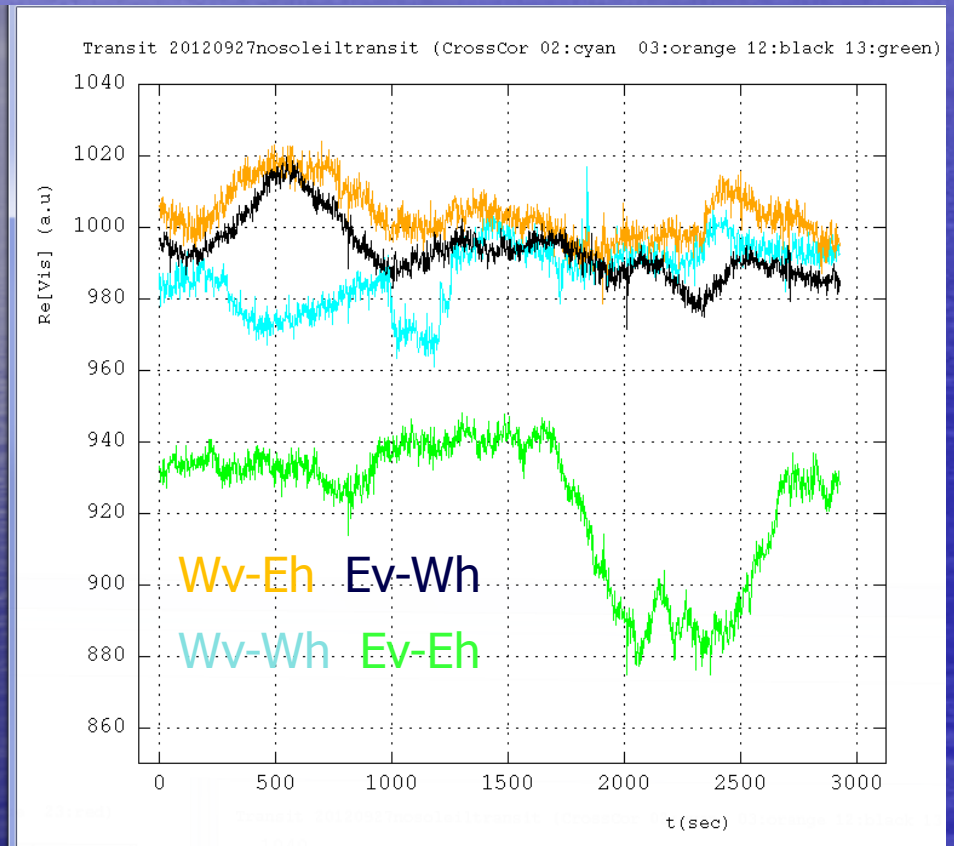
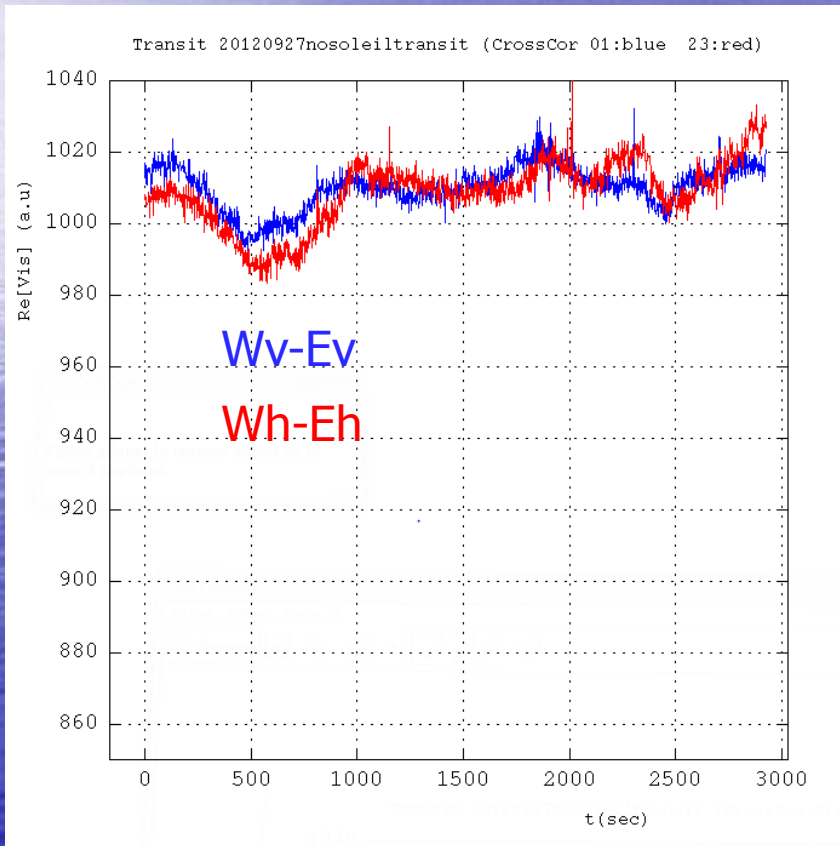
Sun 25/09 & 26/09



No Sun du 27/09

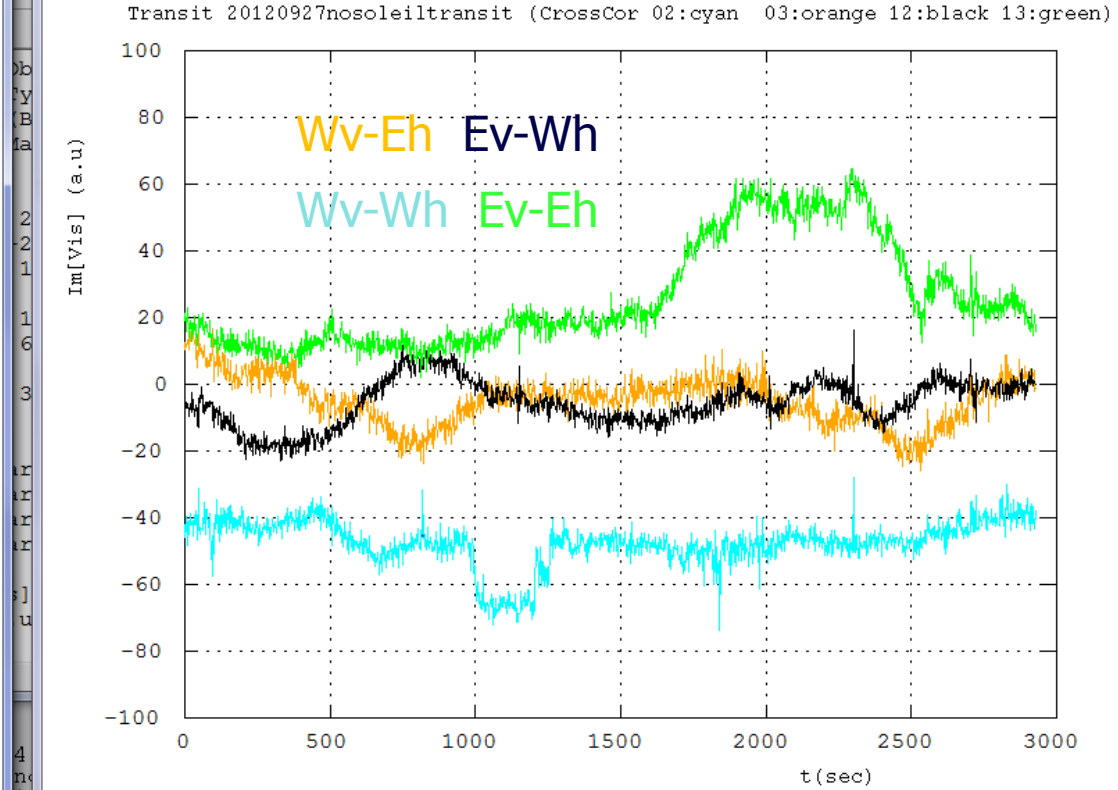
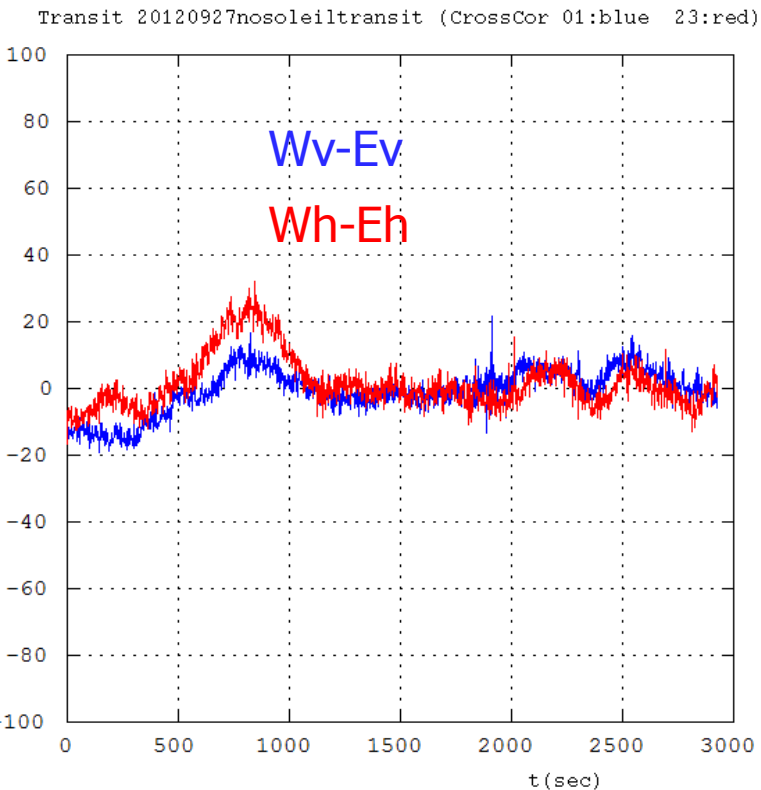


Zoom Re(x-corr) (no sun 27/09)

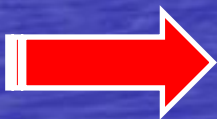
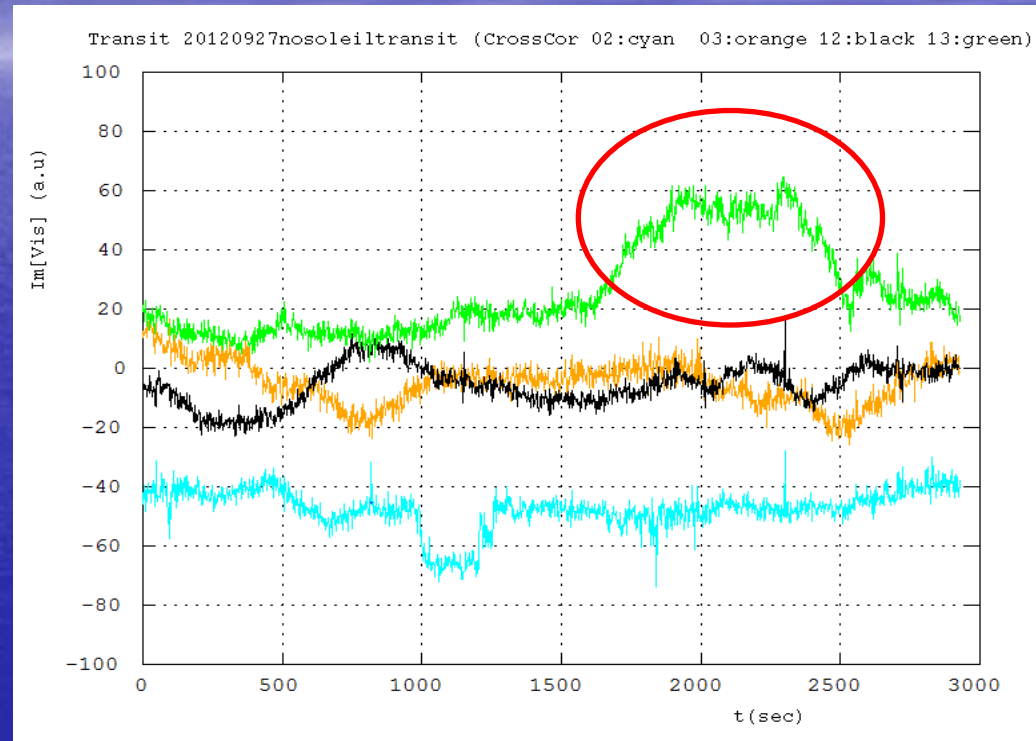
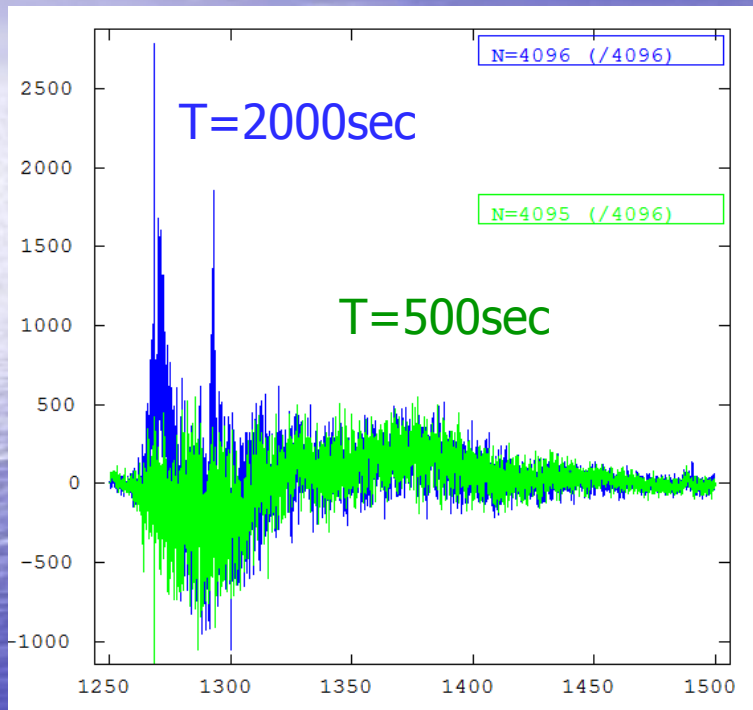


Donc il y a un offset ~ 1000 au dans tous les x-corr

Zoom Im(x-corr) (no sun 27/09)



Radar Im(x-corr) (no sun 27/09)



Mise en oeuvre des méthodes de filtrage mises au point sur les données Amas