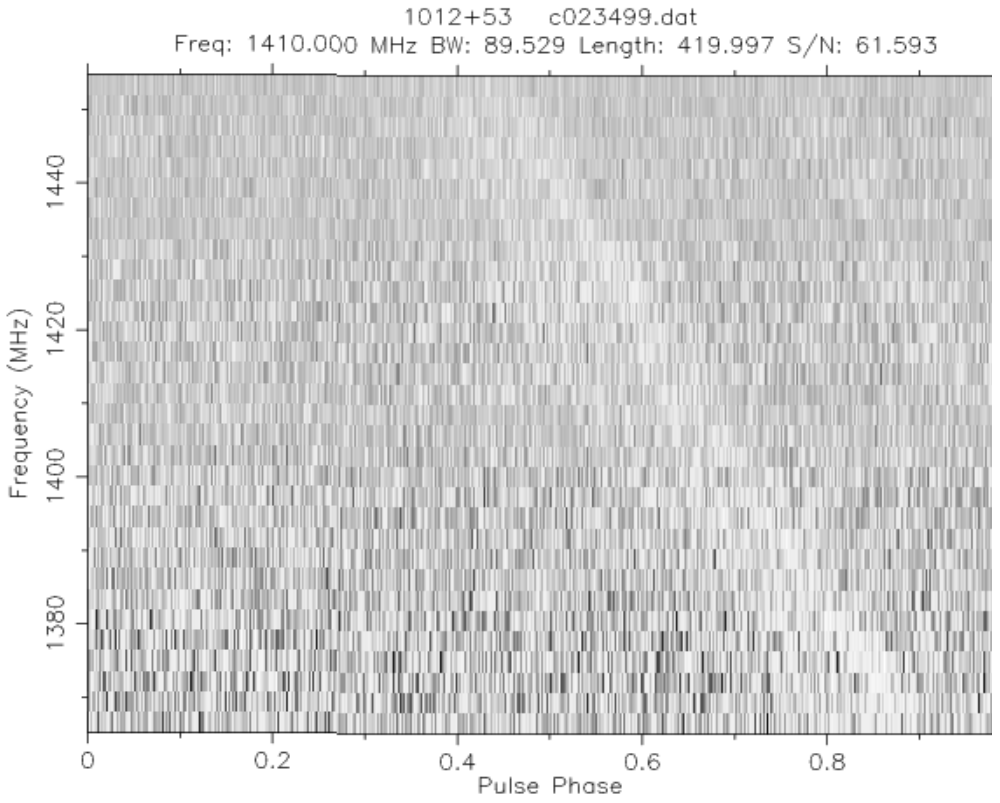
Millisecond Pulsar Timing

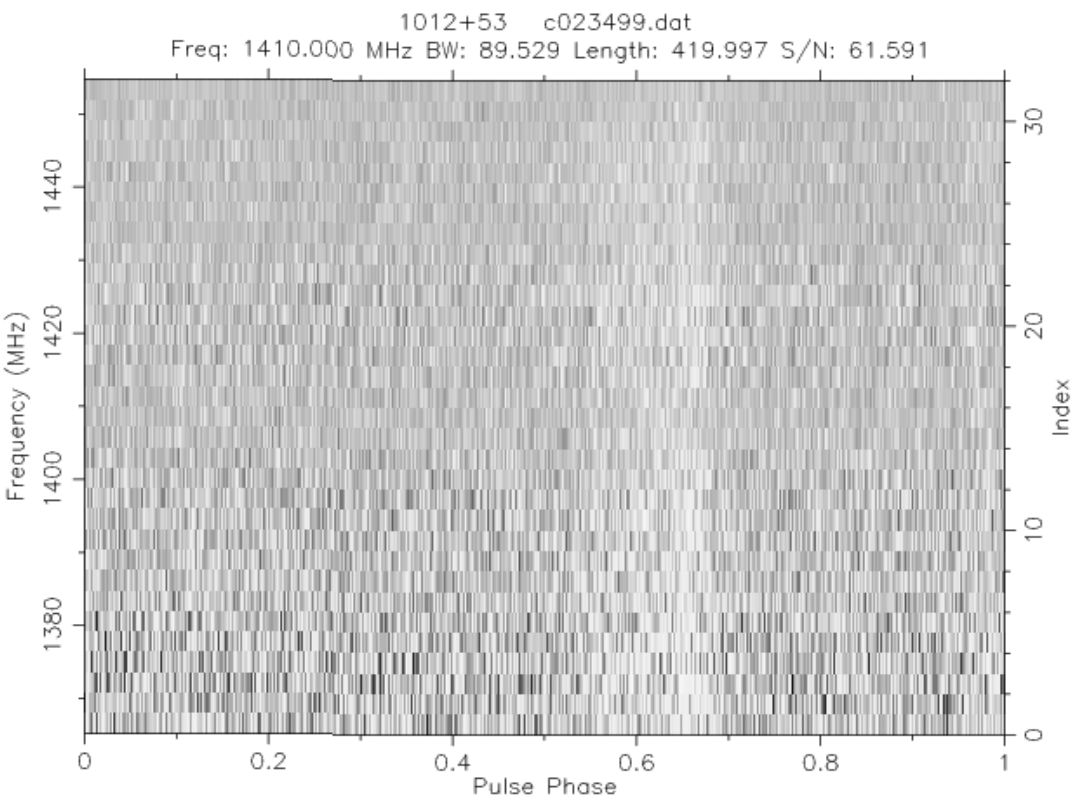
- starting point: bunch of files, each for 10 min of observation (PSRchive)
- plot these files as:

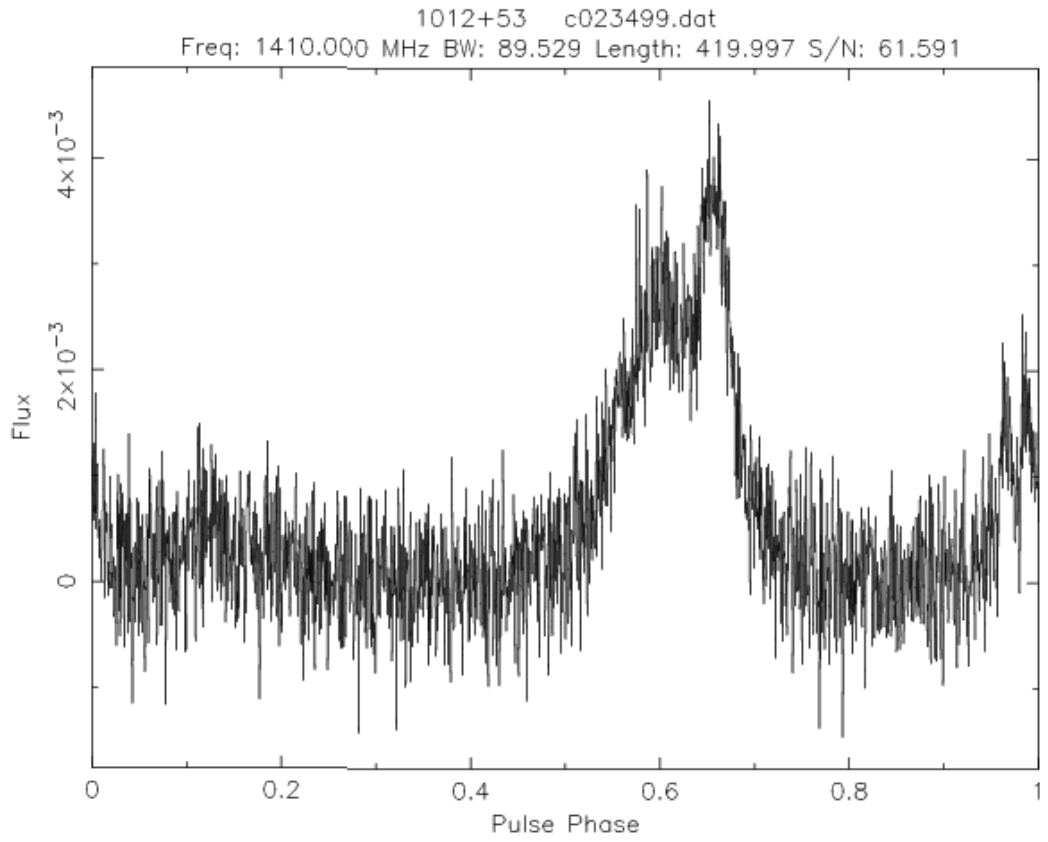
dedispersion

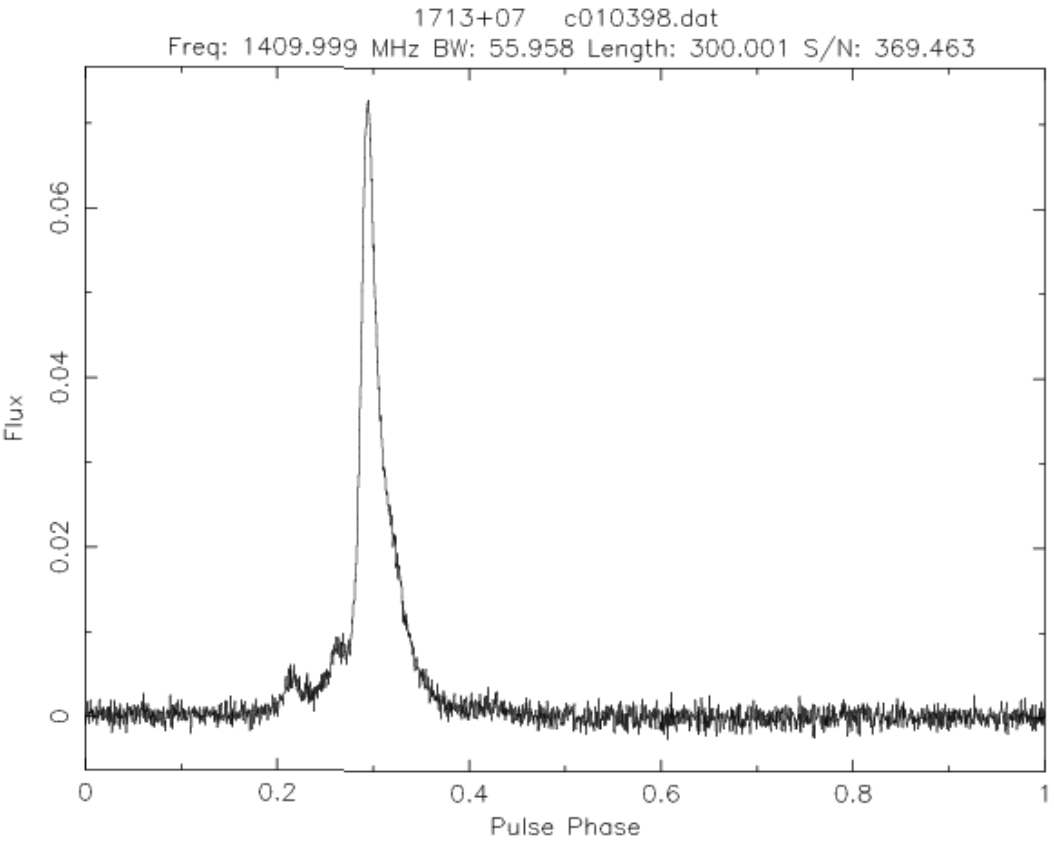
before



after

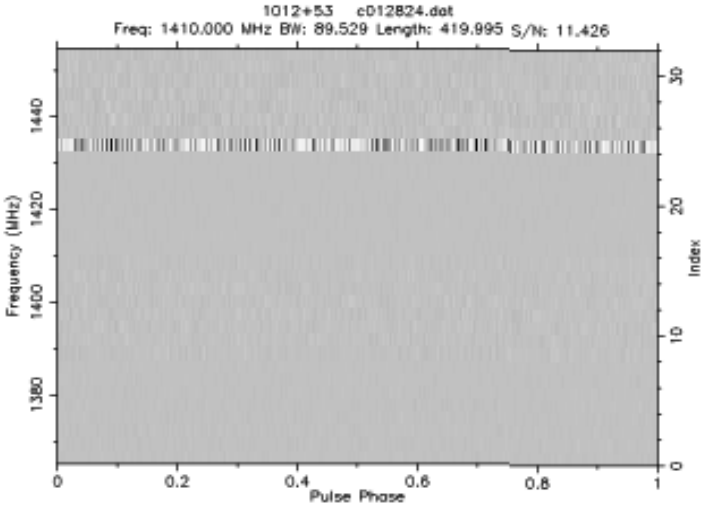


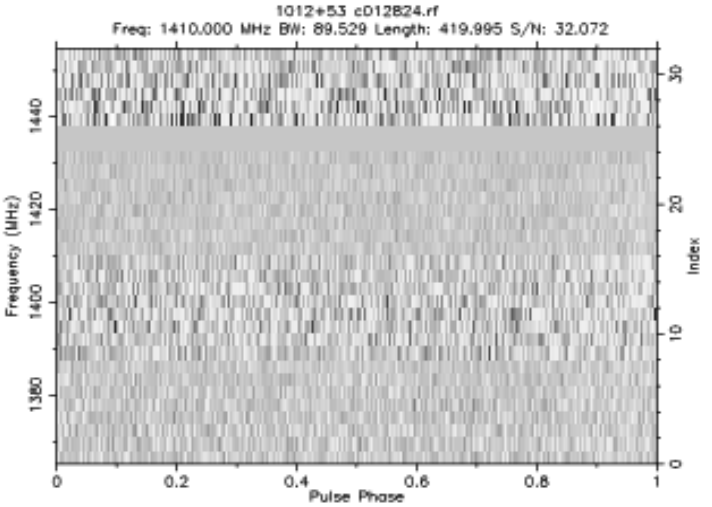


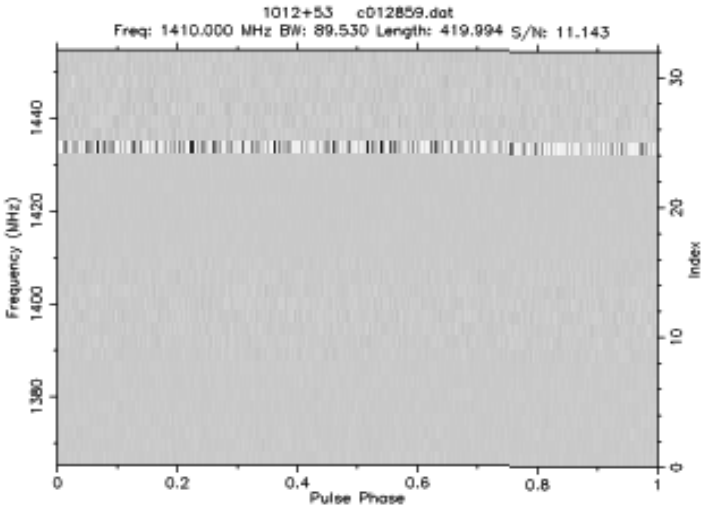


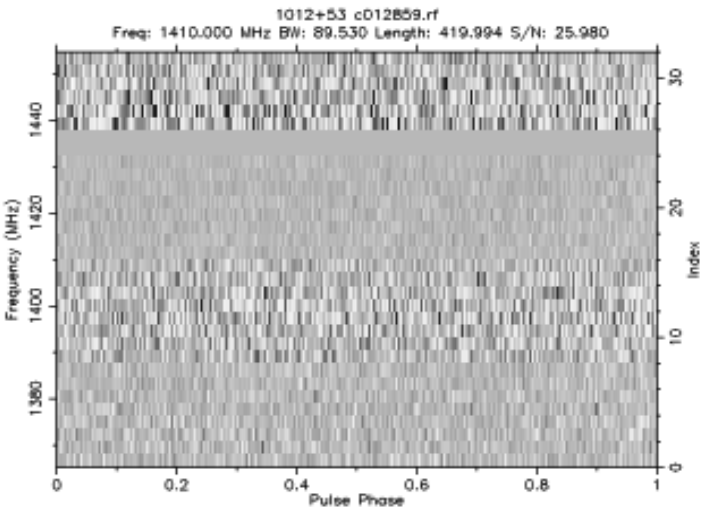
pulse profiles

- get rid of RFI

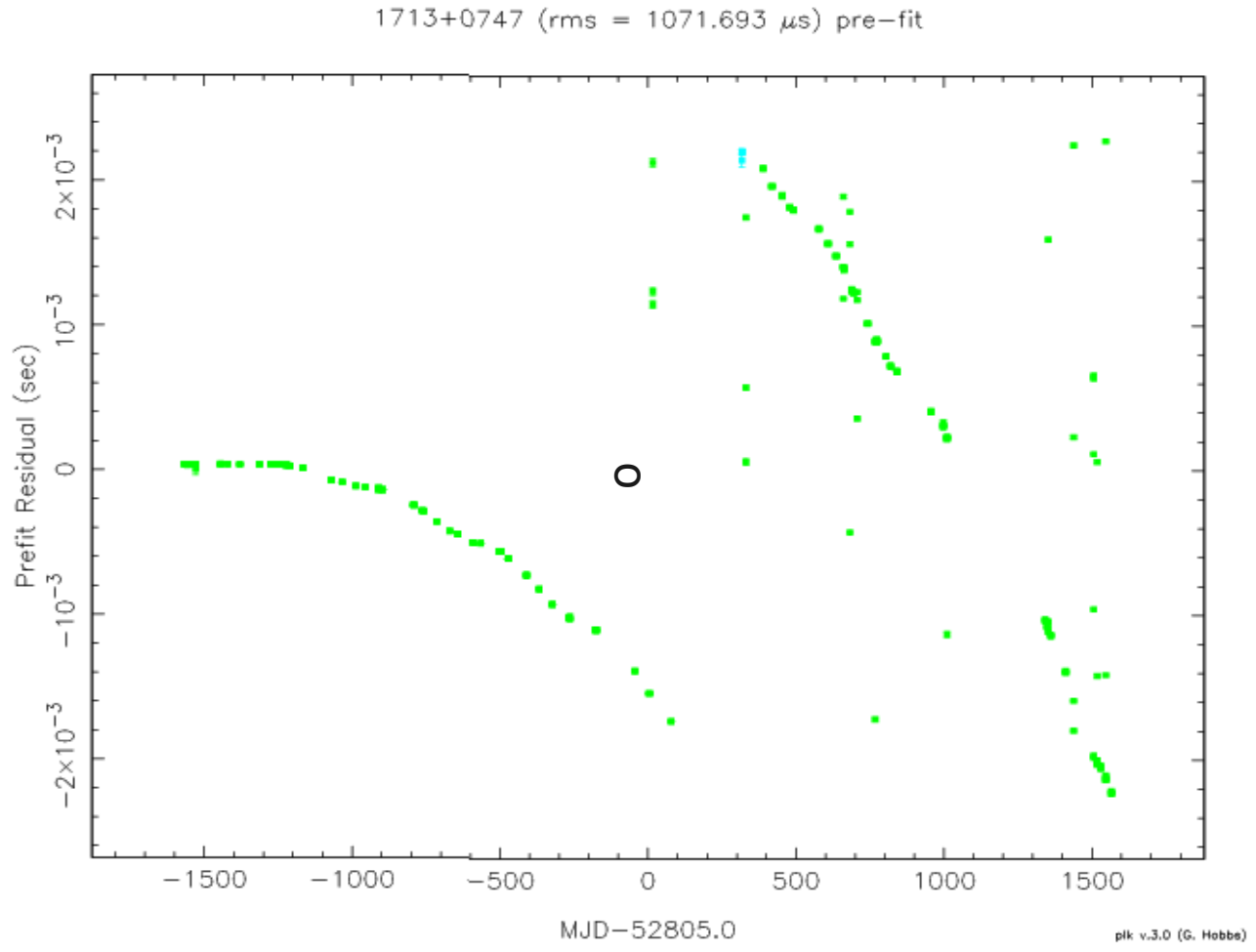




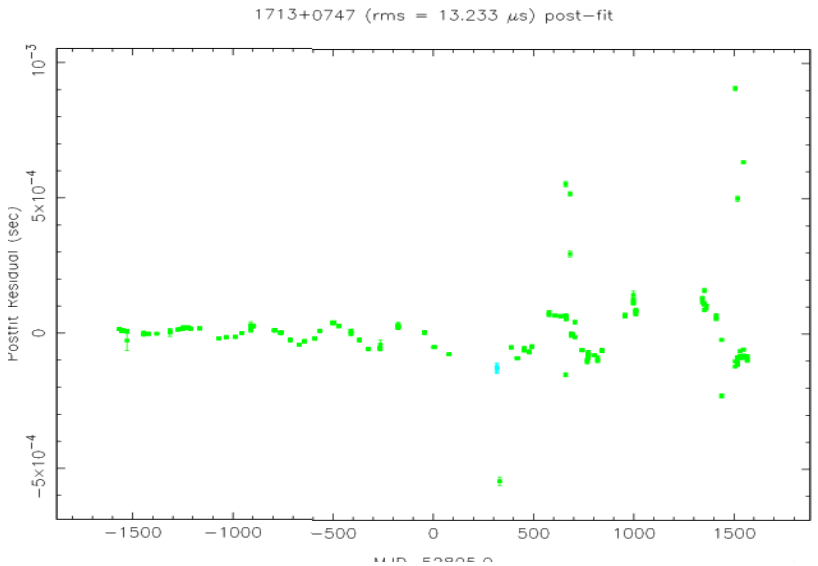




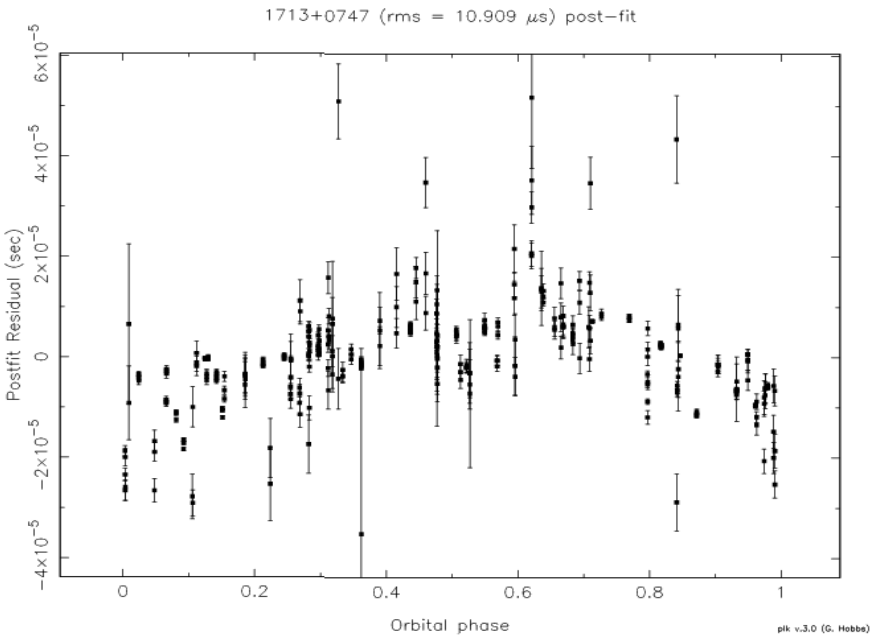
- overlap and average all observations to get one template profile
- get **T**imes **O**f **A**rrival
- use *TEMPO2* for residuals



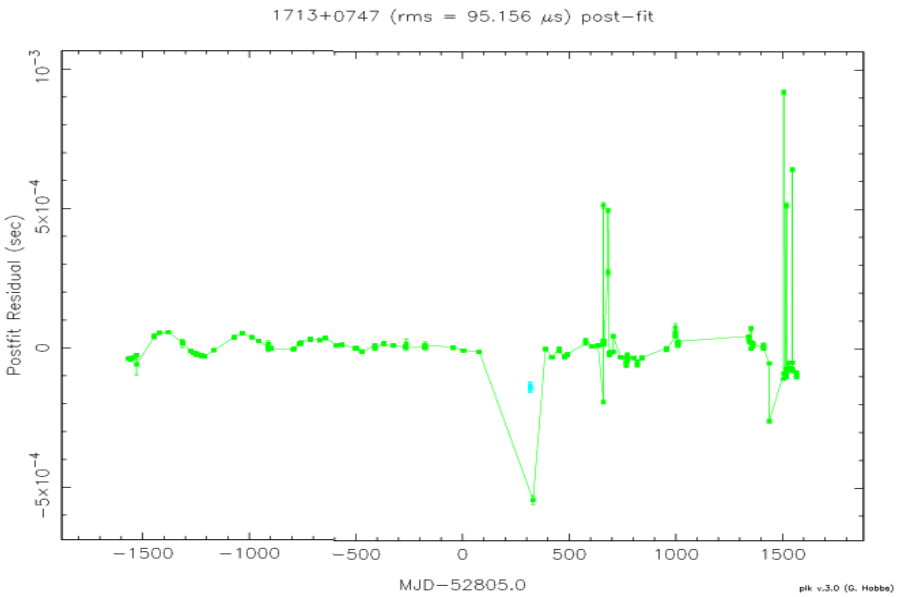
pulse period



proper motion

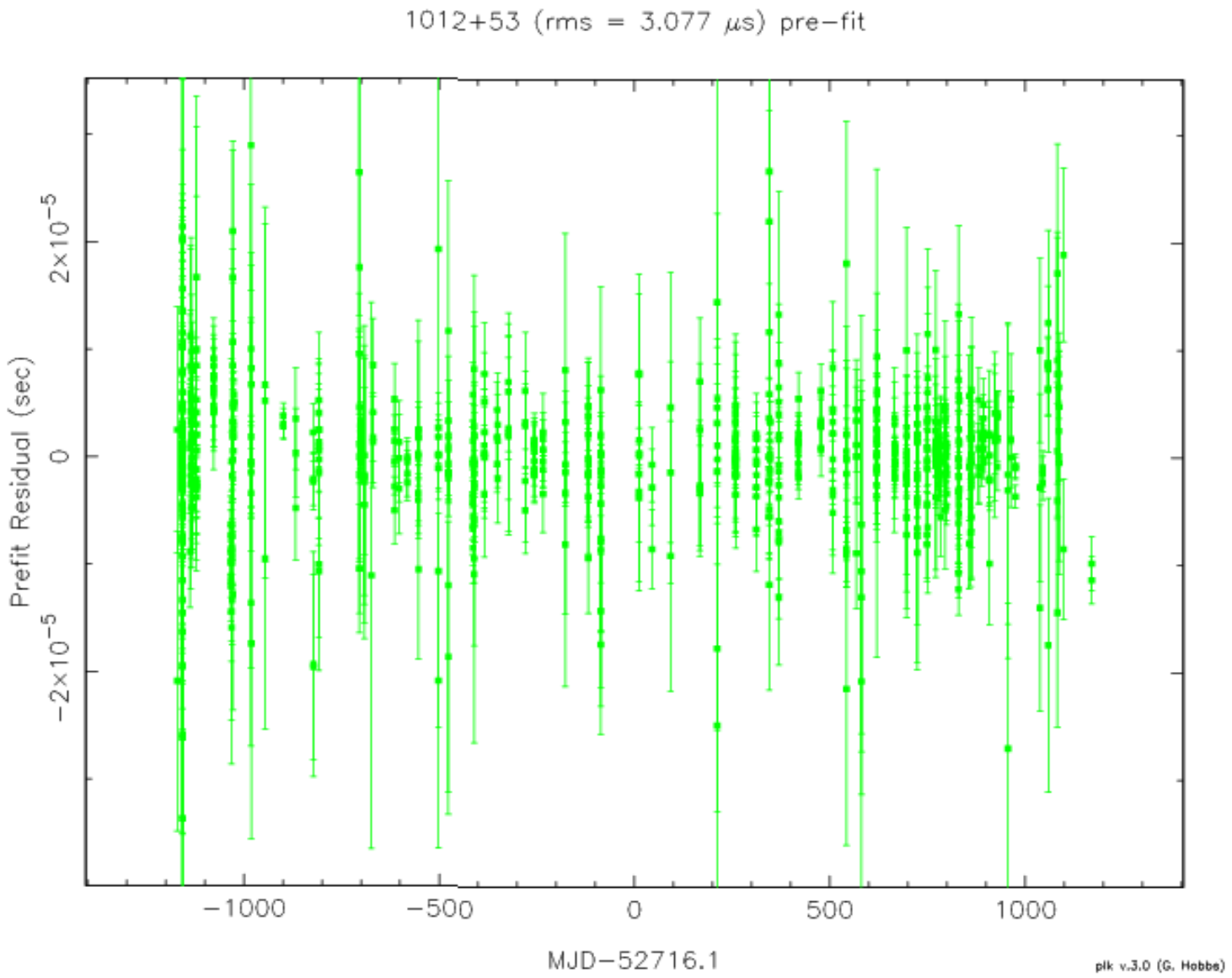


position (RA/DEC)



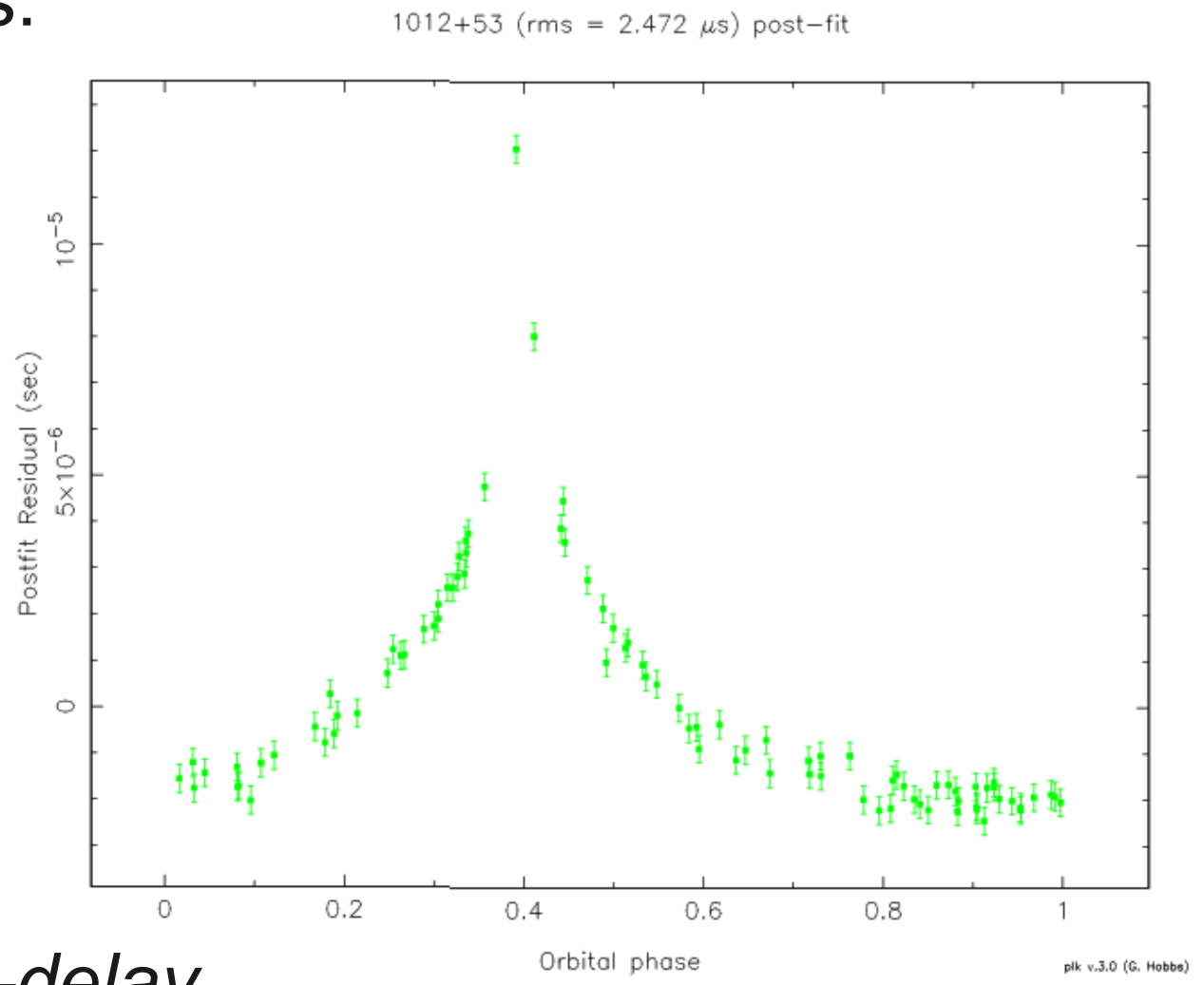
Keplerian parameters...

final residuals



playing with the parameters...

...setting the companion mass to zero in the timing model yields:



Shapiro-delay

conclusions

- using timing model:
  astrometric, spin- and binary parameters
- using simulated data:
  getting feeling for influence of parameters on measurement