

Performance of the LOTAAS v.1 pipeline on cartesius

Time taken by the individual pipeline components per beam (24-core node):

fits2fil: 6min

rfifind: 15min

mpiprepsubband (253 trials): 3min

single pulse search: 1min

realfft: 10sec

rednoise: 10sec

accelsearch (-zmax=0 ; -numharm=16): 1min20sec

accelsearch (-zmax=50 ; -numharm=16): 12min

plots: 20sec

python sifting and folding: 21min

pfd scrunching: 5sec

data copying: a few secs

candidate scoring: a few secs

Total time spent for the first large set of DM trials (0-4000)

mpiprepsubband: 40min

sp: 16min

realfft: 3.5min

rednoise: 3.5min

accelsearch (zmax=0;numharm=16): 21min

accelsearch (zmax=0;numharm=16): 192min

Total time spent for the second large set of DM trials (4000-10000)

mpiprepsubband: 24min

sp: 8min

realfft: 2min

rednoise: 2min

accelsearch (zmax=0;numharm=16): 11min

accelsearch (zmax=0;numharm=16): 96min

% time alloc.	zmax=0;numharm=16	zmax=50;numharm=16	zmax=50;numharm=8	zmax=200;numharm=8
fil conversion	3	1		
rfifind	9	3		
dedispersion	37	16		
sp search	14	5		
realfft	3	1		
rednoise	3	1		
accelsearch	18	67		
folding	12	5		
data copying/etc	1	1		

Total processing time per beam (zmax=0;numharm=16): ~3hours

Total processing time per beam (zmax=50;numharm=16): ~7hours

Last
update: dragnet:benchmarks_of_the_lotaas_pipelines https://www.astron.nl/lofarwiki/doku.php?id=dragnet:benchmarks_of_the_lotaas_pipelines&rev=1440030959
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