

SPAM in BBS

1) Antenna gains fit phase center

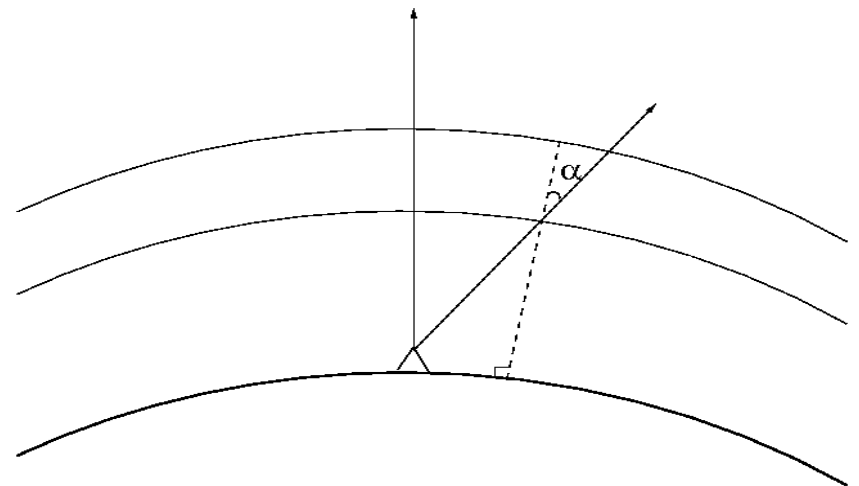
2)Peeling:

- solve phases in direction of N sources
- 1 by 1
- include other known sources in model
- phase shift the data (?):
 - not yet implemented, but should not be too difficult
 - could use extra transpose of the input data (also useful for “CORRECT” step)
- Already available. Other strategies to obtain directional phase solutions can be easily tested

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3) Determine “pierce points”

- at fixed altitude $h \sim 400$ km
- correction angle α' :
 - $1/\cos(\alpha')$ = correction to path length
- $MIM = f(pp_{xyz}, mimpar)$



Not yet implemented

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4) Use PP + peeling phases to estimate phase slope over field

- resolve 2π ambiguities

5) Subtract slope from phases, fit KL model to phases

- @ 4+5: **either** temporary use external fit (python script by Huib Intema)
 - information exchange?
- **or:** change BBS such that it can handle data other than visibilities
 - Also useful for parameter regridding

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- 6 a) Use fitted model to calculate phase corrections in the direction of known sources (peeling +fainter), subtract model from UV-data

- 6 b) Use fitted model to calculate phase corrections on a grid for facet imaging

Next Steps

- implement PP calculations in BBS
- define $f(\text{mimpar}, \text{pp})$ in BBS
 - 1st implementation already existent, no meaningful model (eg. KL) yet
- decide on model fitting: external or adjust BBS?
- test peeling:
 - phase shift, simultaneous solve