Now you will have residuals for all galaxies for all ~~years~~ epochs.

residuals epochwise.

↳ take median epochwise $\overline{\Delta RA_i}$

update RA values for each galaxy as epochwise

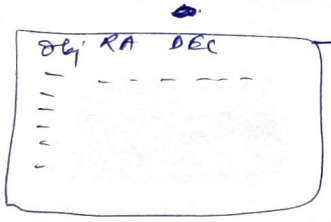
$k$ - epoch
$i$ - galaxy

$$RA_{New}{}^{k}_{i} = RA_i{}^{k} - \Delta RA^{k}$$

$$RA_{New}{}^{k} = \text{median}\left(RA^{k}_{new\,i}\right)$$

Pixelisation.

- generate pixels.
- pixel centers —— ~~of~~ each pixel will have a center
  ↳ which in turn will have a number.
  - angles $(\theta, \phi)$
- convert $(\theta, \phi) \rightarrow (RA, \Delta EC)$




→ testfile

~~pick an obj id (preferably in the center~~

↳ get the range of (RA, ΔEC) of data.
↳ pick the center of this as your pixel center.

Now you are only considering one pixel.

- get all the obj-ids belonging to that pixel.
- you know the (RA, ΔEc) of center.
  get all obj-ids of galaxies who are at (10') dist from this center.
  ↓ SEARCH Radius
  ↳ use sphdist ( ) function here.