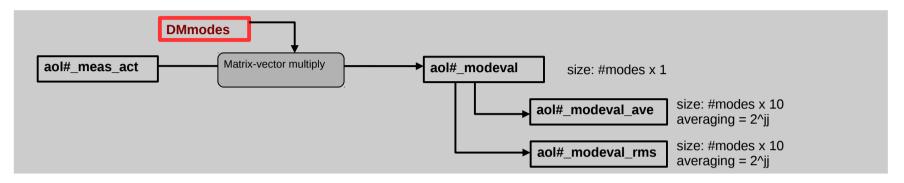
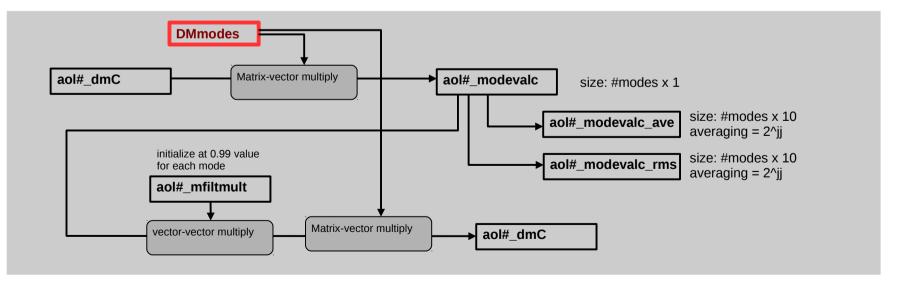


# **Auxillary processes**

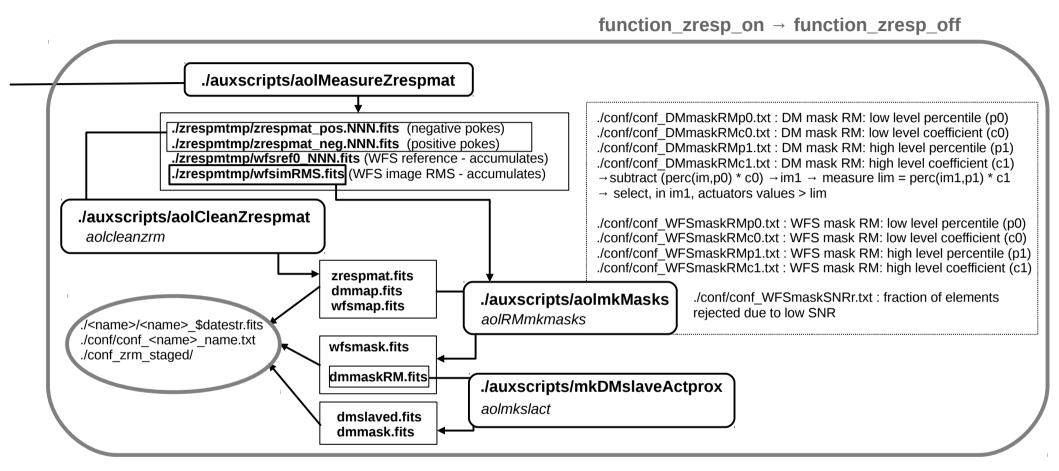
#### Decompose WFS measurements in modes



### Decompose DM commands in modes + apply modal mult gains

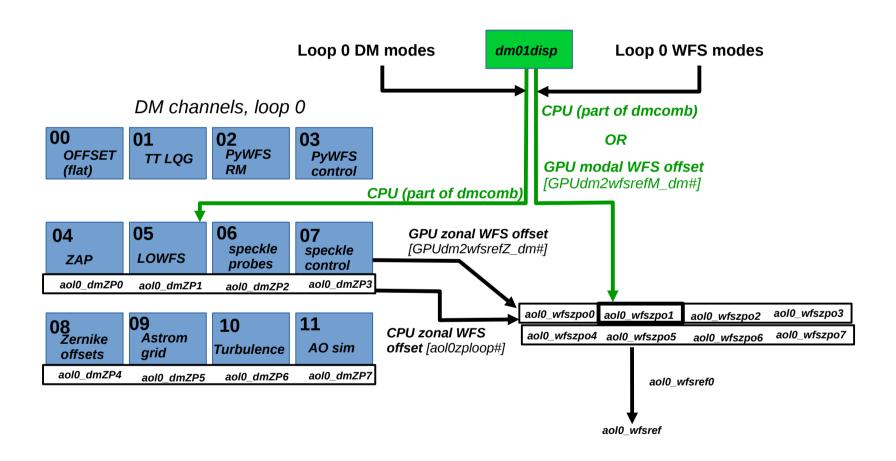


# **Zonal response matrix acquisition** → **masks**



#### **Making control modes (Zonal DM)** Create or load dmmask **RMMmodes** active DM actuators low order modes Create Create or load **CPAmodes** Create or load emodes zrespM **RMMresp** wfsmask Fourier modes Excluded modes zonal RM low order response active DM actuators dmslaved slaved DM actuators remove extrapolate 3034 separate fmodes0all multiply project **ORTHOGONALIZE** LOcoeff.txt fmodes0 xx remove null space MODES IN WFS SPACE fmodes2 xx within each block fmodesWFS00all [SVDlim01] fmodes2all remove null space 2056 within each block [SVDlim00] remove DM modes fmodesWFS0 xx multiply project contained in previous fmodes2b xx blocks, and enforce DMfmodesWFS0all space orthogonality fmodes2ball between blocks [rmslim0], fmodes1 xx remove WFS modes **CREATE DM MODE BLOCKS** fmodes1all contained in previous blocks, and enforce WFS-Modes are DM-orthogonal within 2386 fmodes3 xx space orthogonality and between blocks between blocks [rmslim1] fmodes3all fmodesWFS1 xx fmodesWFS1all remove WFS null space within each block [SVDlim] (Modal DM) cmatc\_xx SVD pseudo-inv fmodesWFS xx cmatcact xx **DMmodes** zrespmat **fmodesWFSall** cmat.fits SVD pseudo-inv

## OFFSETTING LOWFS (loop 1) → PyWFS (loop 0)



## **Output to DM with predictive control (main loop)**

