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AOS Configuration

Note: The configuration parameters described below are read when AOS is started, any modification will have effect only at the next restart of AOS,.

lbt.conf file

Located in: **/lbt/tcs/BP7/etc/lbt.conf**

It contains several lines related to AOS. Two blocks of configuration items are marked with comments lines:

 # AOS_R

 # AOS_L

AOS specific configuration files

Located in directory: **/lbt/tcs/BP7/etc/AOS**

The directory contains the following files:

- **DXOffloadModes.dat** (and: SXOffloadModes.dat): thresholds and coefficients to convert modes to offload from Ao Supervisor units to TCS units (see below)
- **DXZernikes.dat** (and: SXZernikes.dat): coefficients to convert Zernike values provided int he TCS command SetZernikes, to the values to be sent to the AO Supervisor (see below)

DXOffloadModes.dat/SXOffloadModes.dat

Here follows an example of Offload modes parameter file:

```
# Gains and thresholds for Zernike values sent for Offlaod Modes commands
#
# 1. Thresholds.
# If no value exceeds the threshold, no correction is applied. If some do
# exceed the threshold, the correction is applied. Thresholds are applied
# before multiplying by the gains. As a consequence, thresholds values
# are in AO Supervisor units (meters).
#
# Threshold values for tests
#  z1    z2    z3    z4   z5   z6   z7   z8   z9  z10  z11  z12  z13  z14  z15
z16  z17  z18  z19  z20  z21  z22
  1.0  1.e-7 1.e-7 1.e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-
7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7 1e-7
#
#  z1    z2    z3    z4   z5   z6   z7   z8   z9  z10  z11  z12  z13  z14  z15
z16  z17  z18  z19  z20  z21  z22
# 1.0  1.e-7 1.e-7 1.e-7 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-
1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1 5e-1
#
# 2. Gains.
# Zernike components are managed differently. Z1 is ignored,  Z2,Z3 must
# result in tip/tilt values in arcsec. Z4 must result in the focus value, in
# mm. All other values must result in standard zernike values in nanometers.
#
# Gain values for tests
#  z1     z2      z3    z4     z5    z6   z7   z8   z9   z10  z11  z12  z13
z14  z15  z16  z17  z18  z19  z20  z21  z22
  0.0   -.3e6   .3e6    2e4   1.e9  1.e9 1.e9 1.e9 1.e9 1.e9 1.e9 1.e9 1.e9
1.e9 1.e9 1.e9 1.e9 1.e9 1.e9 1.e9 1.e9 1.e9
#
# The following values correspond to tip/tilt/focus corrections only
#  z1     z2      z3    z4     z5    z6   z7   z8   z9   z10  z11  z12  z13
z14  z15  z16  z17  z18  z19  z20  z21  z22
# 0.0   -.3e6   .3e6    2e4    0     0    0    0    0    0    0    0    0    0
0    0    0    0    0    0    0    0
```

DXZernikes.dat/SXZernikes.dat

Here follows an example file for conversion coefficients for the SetZernike command:

```
#
# Gains for Zernike values sent for SetZernikes command
#
#  The following values convert from nanometers to meters
#  z1    z2    z3    z4   z5    z6    z7    z8    z9    z10   z11   z12   z13
z14   z15   z16   z17   z18   z19   z20   z21   z22
  0.0   0.0   0.0   0.0  1e-9  1e-9 -1e-9 -1e-9 -1e-9 -1e-9  1e-9  1e-9  1e-9
1e-9  1e-9  1e-9  1e-9  1e-9  1e-9  1e-9  1e-9  1e-9
```


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