# ACAM Acquisition Tool Quick Guide

# Startup & Settings:

Start the acquisition tool by typing in the pink window: SYS>  acqtool &

Go to the menu option *View* and bring up the *Pick Object* window for later use.

Go to the menu option *Grab* and select *Grab ACAM Acquisition Image*, then in here choose:

## Slit width It is ESSENTIAL to use the slit width that will be used for the spectroscopic observations, since the different slits do not have their slit centres aligned. Filter Acquire if possible using a filter of similar wavelength to the spectral wavelength most of interest, particularly if you are not using the parallactic angle and are observing at large airmass. Otherwise the effects of atmospheric refraction may mean that the object is not well acquired.

### Duration In seconds. 1s is sufficient for bright targets, while 30s may be needed for 20mag. 'Archive Acquisition Image' Tick the box if you want to save the acquisition image.

### Acquisition Procedure:

## 1. Move to the new target and wait until both the telescope and the turntable are TRACKING.

### 2. When performing a new acquisition, first check the slit overlay and if necessary redefine it. It is very likely that the slit overlay will be in the wrong position, so it should be checked for EVERY acquisition:

### In the *ACAM Image Acquisition* window, set the exposure time to about 3 seconds (for this step only), and, click on *Grab Through Slit Image*. If the slit overlay is not coincident with the real slit, then in the *Pick Object* window click on *Select New Slit Centre Position*. Click on the actual y-centre of the slit somewhere near the centre in the x-direction. Click on *Apply New Slit Centre*. Check that the redrawn overlay now accurately traces the real slit.

### 3. In the *ACAM Image Acquisition* window, reset the exposure time and then click on *Grab Field Image* and identify the science target. The orientation is shown by the arrows.

### 4. In the *Pick Object* window, click on *Select Object*. In the main display window, click on the target that you wish to place on the slit. Check the enlarged image shown in the *Pick Object* window and confirm that the target has been correctly selected. Click on *Move Object to Slit Centre*. The telescope will move to acquire the target and another ACAM exposure will be taken automatically and displayed. The target should now be positioned on the 'cross' which represents the slit centre.

### 5. Start the autoguiding and finetune the position of the target if necessary, using the acquisition tool again and/or the TCS handset (ask the TO). The handset is more accurate for small sub-arcsec moves. The target should now be centred in the y direction of the slit overlay. For faint targets and/or narrow slits, it is advisable to use a couple of iterations to acquire a target on the slit.

### 6. In the *ACAM Image Acquisition* window, click on *Grab Through Slit Image* to see an image of the slit and the target. Confirm that the target is well centred on the slit, and finetune again if necessary as in step 4.

### 7. Configure ACAM for spectroscopy. e.g. TO> acamspec V400 1 (for the V400 grism and 1 arcsec slit). REMEMBER THE GRISM!