LT stacking project : start-up notes

Some startup material has been put on the shared CPLabs area here:
/Disk/ds-sopa-ifa-ug/axl/project-material/LT-stacking-project

This also includes data on a startup test object: J094511+1745
There is a finding chart, some basic information, and plots of light curves, and the light curve data. There is also a collection of all the Liverpool Telescope images that we have taken.

Try finding the object in the SDSS Navigator
Does it look like a galaxy or a star? Try comparing to other objects nearby.

Try opening one of the LT FITS files with a standard image viewer.
(Try Aladin, or Gaia, or DS9 ; you can install on your own machine, or use the CPLabs version)
Locate the object. Now does it look like a galaxy or a star?Note that one set of images is from when the object was very bright, and one when it was much fainter. This might make a difference.

How big should a galaxy be at this redshift? Some galaxies are bigger than others, but guess a size in kpc and work out what it is at the redshift of this object.

Read the FITS Header for the image. For example, with Aladin, you do Edit/Fits Header.
This has lots of useful info, but it includes the measured seeing (L1SEEING in pixels, L1SEESEC in arcsec)

The idea of the project will be to align and add images to get deeper. This could be done in IRAF, or using Gaia or Aladin or DS9, but is probably best done using a Python script and Astropy routines. A previous student (Emma Barrow) made good progress writing some Python code to shift and stack images, and getting profiles, so it should be reasonably easy to build on that.

Alternatively it could be done with IRAF, or with Registax, or with something else you are used to. We should experiment to see what works.

Full data set:

Can be accessed on CPLabs at
/Disk/ds-sopa-ifa-ug/axl/LC-data
/Disk/ds-sopa-ifa-ug/axl/LC-images
Note that these paths have to be entered in full; you can't navigate to these directories.

Enabling Starlink software (eg Gaia)

see https://www.wiki.ed.ac.uk/display/PandAIntranet/IfA+Teaching+Lab+Handbook+ROE

```
export STARLINK_DIR=/opt/star-2016A
source $STARLINK_DIR/etc/profile
starsetup
```