Open AstroImageJ

Press the Multiplot button 

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First clear all the settings by going to the Multiplot window, in the File menu and select “Restore all AIJ preferences” and restart astroImageJ.

Open AstroImageJ and the Multiplot windows again

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Multi-plot Main Window -> File -> Open Table From File (open the table).

In Y data panel:

select X-data to be Col\_1

select Y-data to be Col\_2

Check the Input in Mag button.

Change the colour to Black

select Fit Mode to be the transitty looking one.

In the Fit Settings Window

In Plot Settings, change Model line colour to Red and thickness to 3

In Plot Settings, change Residual line colour and Symbol colour to purple

In Plot Settings, change Shift to -0.04 (or as far away so the two plots are separated)

In the Fit Settings Window

Set the Period to your estimated period of the transit.

Set the R\*, (the Teff, M\* and p\* are not actually used for anything except to estimate R\* if you do not know it) Qatar-1b: 0.803

If you have prior information about the planet’s orbital eccentricity, then uncheck the “Cir” (referring to circular orbit) box next to the period and enter in the eccentricity and, if you have it, the omega value.

Uncheck the Auto Update Priors box.

Go to <http://astroutils.astronomy.ohio-state.edu/exofast/limbdark.shtml> and enter in the temperature value, the log(g) value and the [Fe/H] value for your star as well as selecting the filter you used (if you use the w filter, select V). Press submit and it should output two values. The left value is for Quad LD u1 and the right value is for Quad LD u2. If you do not have enough information about your star for this, select both Quad LD u1 and Quad LD u2 as 0.3, which is the default value.

In AstroImageJ, set the Prior Center for Quad LD u1 and Quad LD u2 to the values determined above and set them to Lock

Set Baseline Flux (Raw) to lock and uncheck use. Change the value of Prior Centre until the out-of-transit lightcurve data roughly lines up with 1.00 on the y axis then unlock

Set Tc to Lock and uncheck use. Change the value of prior centre until it is roughly the value of the center of the transit. Unlock. (Sometimes if the data isn’t clear, you are going to have to set this manually and lock it)

Adjust Prior Centers for Rp/R\*, a/R\*, Tc and Inclination until a suitable model is autofit (you are trying to minimise the residual RMS value).

If you completely muff it up and need to return to the start, go to the Multi-plot Main window, in the Preferences menu and select “Reset Preferences to Default Values” and restart astroImageJ

Once you have a good fit, in the “Fit Settings” window, go to file menu and select “save fit results as text file”, this will save the results of your curve to a text file. The most important part here is the “Planet Radius (Rjup)” which provides the radius of the planet in terms of the radius of Jupiter.