

## Requests for Rc & Ic values for existing Tycho-2 sequences.

Use the following formulas to convert Tycho-2 data, using VizierR (which will show the Bt & Vt values) & the existing sequence coordinates for each comp:

$$\begin{aligned} B &= B_t + 0.018 - 0.2580 * (B_t - V_t) \\ V &= V_t + 0.008 - 0.0988 * (B_t - V_t) \\ R &= V_t - 0.014 - 0.5405 * (B_t - V_t) \\ I &= V_t - 0.039 - 0.9376 * (B_t - V_t) \end{aligned}$$

Rc uncertainty = .05; Ic uncertainty = .065

You will note a small difference between these V & B conversions (if you process them) vs those from Seqplot used in an existing Tycho-2 sequence. Please do not change or alter existing seqplot B & V values. Once you have completed the Rc & ic conversions for each existing comp you will have to make a manual entry into the VSD, by AUID, for each comp for each value (uploading a normal sequence txt file would create problems with V-I, etc because of differences between seqplot and converted values for V).

Ignore the Colorindex portion of the VSD and only input the Rc & Ic data into the Measurement portion, as shown below for a comp star (000-BNL-049) in the CH Lyn fov that I recently added Rc & ic data, click the New label to add each value:

Measurement								New
	Delete?	Mag.	Error	Band	Type	Source	Nights	Trans.
1	<input type="checkbox"/>	7.935	0.032	V	CCD	Tycho-2		Unknown
2	<input type="checkbox"/>	8.993	0.048	B	CCD	Tycho-2		Unknown
3	<input type="checkbox"/>	7.373	0.060	Rc	CCD	Tycho-2		Unknown
4	<input type="checkbox"/>	6.860	0.065	Ic	CCD	Tycho-2		Unknown