



Coordinated by Anthony van Bick

It was supposed to be such a straightforward task; to compile a catalogue of 2021 prominent stars to coincide with the 50th Anniversary of the South Downs Astronomical Society and then to plot the the colour index and absolute magnitude properties for each star on a Hertzsprung-Russell diagram.

It soon became apparent that there were simply too many “prominent” stars to fit into a catalogue of 2021 stars so two catalogues were produced; one for northern skies and one for southern skies.

Working initially with stars in the Northern Skies Catalogue it was then a matter of setting about the process of plotting the stars on an H-R diagram using data from Stellarium. What was intriguing was that, in many cases, a version of Stellarium from 2020 gave significantly different values of absolute magnitude for stars than a version of Stellarium from 2019. Although the colour index values held firm for the most part, there were considerable differences in the absolute magnitude values in general. Changing the absolute value of a star would automatically change its position on an H-R diagram.

[In fact in some cases the change in absolute magnitude values had such a profound effect on the calculated distance of the star from Earth that the star would have had to have travelled far more than 1 lightyear between 2019 and 2020! (Even taking into account the error margins.)]

As a result of the different values of absolute magnitude, the position of some stars on the H-R diagram would change from year to year. But there was another problem. The H-R diagram had a shear along the vertical axis where the colour index is zero. It is as if the quoted values for the colour index referred to different filters from the standard B-V filter quoted for all the featured stars in Stellarium. This needs investigating!

It is worth noting that, in general, the data holds firm across different versions of Stellarium for the main stars which form the asterisms within the constellations. This is particularly the case for stars in the southern skies.

There will be turbulence on the H-R diagram as over time, with coherent data, the positions of the stars on the H-R diagram conform to produce a more anticipated form of the diagram.

This is the starstorm!

If you are interested in getting involved with this project please contact Anthony van Bick at: nightparklane@gmail.com

For other astronomy projects please see: [La Finca](http://www.nightparklane.com) at www.nightparklane.com