

Abstract Submitted  
for the NWS19 Meeting of  
The American Physical Society

**A variable temperature virtual star for visual observing.**  
MICHAEL BRAUNSTEIN, Central Washington University — Many visual observers, under appropriate conditions and albeit at low resolution, can qualitatively recognize the temperature sequence that is the basis of the MK stellar classification system. This is demonstrated by the well-known apparent color/temperature contrast of the binary star Albireo and a limited number of other bright, color-contrasting binary stars. We have developed a variable temperature virtual star, viewed through a telescope eyepiece, that permits an observer, in a manner similar to observing color-contrasting binary stars, to compare the color of a bright star to a virtual star whose apparent color can be varied corresponding to temperatures of the MK stellar classification system. The virtual star uses a pulse-width-modulated RGB LED, calibrated to vary in apparent color approximately along the Planck locus of the CIE color space, and coupled to an optical fiber which terminates at the focus of the telescope eyepiece. Preliminary results suggest that the virtual star is a qualitative, low resolution instrument which can be used to engage students in understanding the MK stellar classification system.

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Date submitted: 12 Apr 2019

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