

## "RSGs are just plain cool: An observing program and online tool"

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Characterized by high masses, cool temperatures, and enormous diameters, red supergiants (RSGs) represent a brief yet important extreme of stellar evolution. RSGs are variable stars, and show spectroscopic changes as well as photometric ones, but their periods are long and their behavior irregular, making it difficult for researchers to acquire spectroscopic observations which cover a long enough time span to study this variability in detail. Fortunately, this is an area in which anyone with a spectrograph can help.

To assist with the construction of an observing program, I used Python to combine several sources from the literature and create an interactive online catalog of RSGs. The primary function of this catalog is as a target selection tool for spectroscopic observations, but it includes many other features which will be of interest to anyone who enjoys learning about RSGs.

My hope is that the use of this new online tool will inspire fresh interest in RSGs, and result in an increase in observations, both spectroscopic and photometric. Through collaboration with our fellow observers, we have the potential to grow within AVSpec a library of RSG spectra which is dense in coverage and extensive in time, offering researchers an opportunity to unlock the secrets of RSGs through detailed spectroscopic analysis, and producing a historical record which will become of enormous scientific interest as these bright stars continue to evolve and explode as supernovae.