

# Astronomy Seminar

Wednesday, January 29, 4:30 pm  
Science & Engineering Building Auditorium

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## Modern CCD Photometry and the Classification of Variable Stars

Mankind has known of the existence of variable stars for more than 3000 years. In the early days of astronomy we estimated the magnitudes of variables by visual methods and recorded the data over time. Unfortunately, this method was only accurate to within 0.1~0.2 magnitudes and sometimes not accurate enough to reveal some critical details in the variability. The physical processes responsible for the variability became of prime interest to astronomers since the common belief was that the heavens were perfect. This fueled the quest for greater accuracy in light detection and has given us the contemporary CCD's (Charge-Coupled Devices), which yield accuracy in the milli-magnitude range and allow finer details to emerge. Many modern surveys have employed CCD's in their observing campaigns and accumulated a wealth of variable star discoveries. However, due to under sampling many of these variables have been misclassified. We have begun a long term student project at Emory Observatory to deal with the misclassification of selected variables while teaching accurate photometric techniques at the undergraduate level.

*Please join us for light refreshments  
at 4:15pm outside SEB 203.*