ASAS Candidates for Misidentified SRd Variable Stars JUSTIN
FAGNONI, KRISTINE LARSEN, Central Connecticut State University — The All
Sky Automated Survey (ASAS) is an observation project dedicated to the constant
collection of photometric data across the entire sky. By default, ASAS classifies
variable stars exhibiting any irregularity in their periodicity as miscellaneous. Un-
fortunately, there are many types of definitive variables that exhibit irregularities and
are thus misidentified. A sample of approximately 1500 stars deemed miscellaneous
by ASAS was initially obtained and candidates for a particular type of semi-regular
variable were sought. These are SRd variables, giant and supergiant stars that pul-
sate as a result of an inability to assume hydrostatic equilibrium. Specifically, these
variables belong to spectral classes F, G, K and have periods between 30 and 1100
days. Various parameters were used to clear the initial sample of definitive non-SRd
candidates, including magnitude range, proper motion and photometric J-K value.
VSTAR, an analysis software provided by the AAVSO, was then used to decompose
the light curves of the remaining stars into their respective periods. Light curve
and period phase plot behavior were used as a qualitative method for SRd candi-
date identification. From a subsample of 30 stars fitting the required parameters,
9 were found to exhibit light curve and phase plot characteristics that suggest SRd
candidacy; the 6 with the most definitive behavior will be presented. A potential
candidate for an eclipsing binary system was also discovered in the search for SRds.

Justin Fagnoni
Central Connecticut State University