

Initial Test of Nat's Code on Miras and RR Lyrae - JPL - March 21

I ran Nat's censored code on all our Miras and RR Lyrae both with censored observations and without censored observations.

0.1 Miras

- of the 1720 Miras, 247 had different period estimates (by more than 1%) after including the censored observations
- from visual inspection almost all these 247 had the correct period after using the censored data
- for the 247, using censored data nearly always doubled the period estimate (see plots below)

For RR Lyrae:

- i like RR lyraes

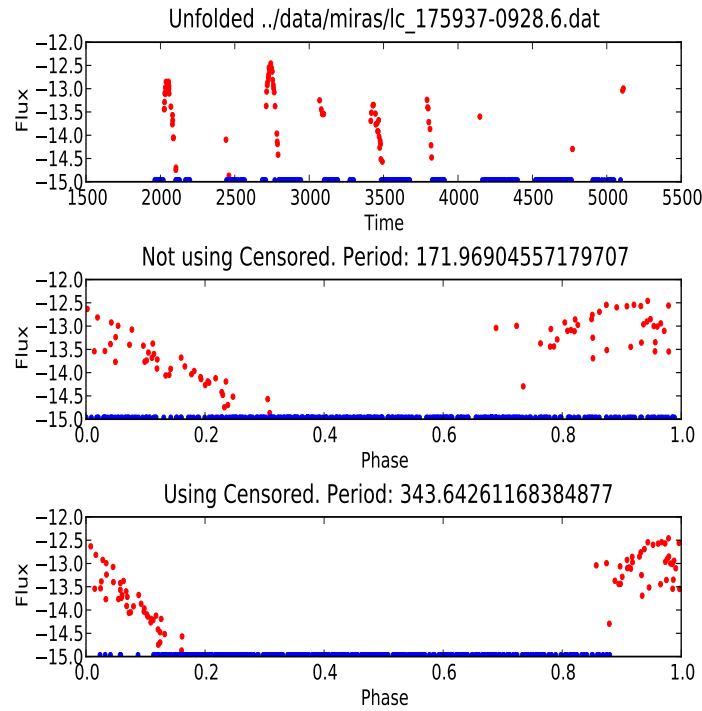


Figure 1: Mira where without using censored data the period is half of the estimate using censored. **period w/o censored = half period with censored** is the most common scenario among the Miras.

0.2 RR Lyrae

- density of miras periods w / wo censored obs, density of rr lyrae periods w / w/o censored - trouble getting unnormalized amplitude out of code - may be issue with selection of miras, other interesting patterns may arise if we run code on non-miras

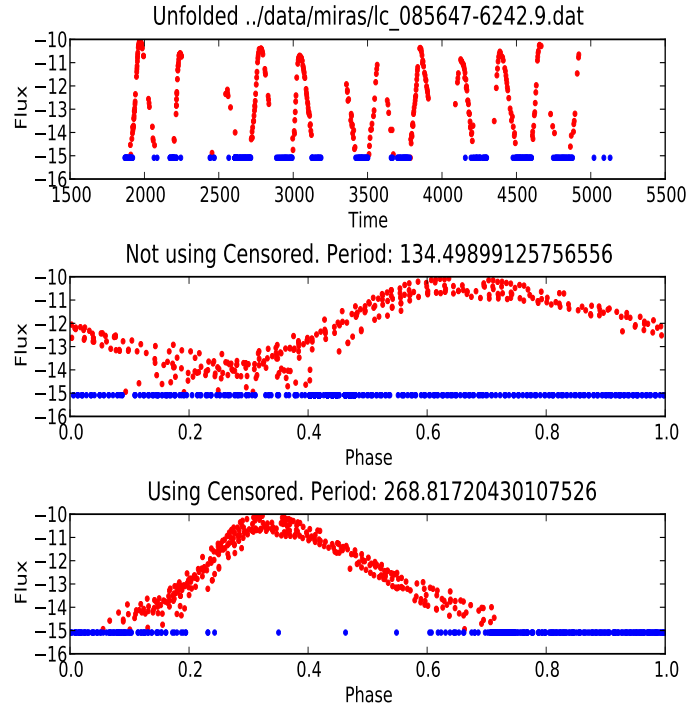


Figure 2: Another Mira.

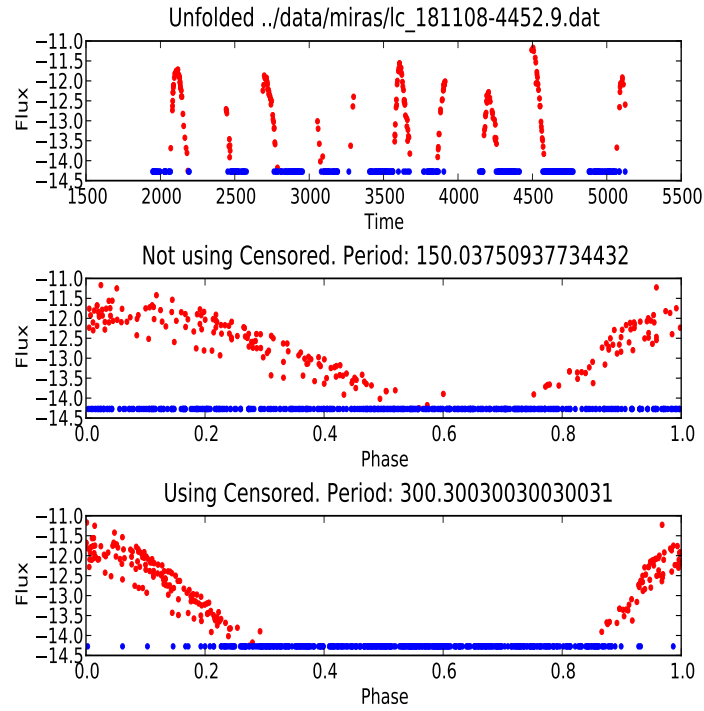


Figure 3: And a third Mira.