Dec. 13, 2013.

Dear CBAers,

Lots of CBA targets up there... let's get them up to date.

We're DONE with V339 Del = Nova Del 2013. I haven't finished the analysis yet, but so far it doesn't look like we have good detections of periodic signals. No more Delphinus in December.

BY Cam. Good response on this star, and the phase is now NAILED for 2013. Let's just get a few follow-ups in March - otherwise, we're finished for the year. So no need for further observation now.

BZ Cam. Not to imply that we're observing stars in alphabetical order, but...

Shiver me timbers! Of all the bright CVs, there's no other that has produced such frustration in period-finding. I'm pretty sure that in 1996 we (mainly John Thorstensen and I) managed to learn P_orb, finally (3.69 hours). There are obvious waves at nearby periods, and we decided to torment readers with a fistful of P_phot estimates... but in truth, they (the estimates, not the readers) were so unstable as to be not really credible. I was sufficiently disappointed that I demoted the star to low-priority in subsequent years. End of story, for 18 years. But Enrique, with several telescopes and a run of clear weather, started our 2013-4 season, with Bob Koff, Joe U, and Tut also chipping in. The longitude spread breaks aliases, and BZ Cam's negative superhumps now are quite clear! Simultaneous positive superhumps appear likely, and a disk precession period at very low frequency is possible. If you like epsilon (the fractional excess of P_phot over P_orb), the values appear to be +0.095 and -0.043.

If I were a gambling man (and I am - a regular at the horse races), I'd bet considerable dough that this is correct. It's not quite *proven*, though. We need a longer baseline in days (say another month of coverage), and also in hours, in order to precisely calibrate the European with the North American data. It's a perfect project for Arto!... with his endless Norwegian nights. But since those Norwegian nights are mostly cloudy, and since he has a Chilean telescope now too, I hope this target will become popular with all northern CBAers. I promise to give quick updates once the calibration between telescopes (for which we need strict time-overlap) is determined. Until that time, redundancy is quite desirable.

Two other things will improve the calibration: using the same comparison star, and including the airmass in your data submissions.

Enrique's comparison is the AAVSO 129 star (V=12.850); that would be a good choice. If you can't conveniently provide airmass, that's still OK (I can calculate from the time and location). The reason that airmass matters here is that at *very low* frequencies, wiggles due to differential extinction are a nuisance - especially since BZ Cam is a quite blue star. Finally, you could use a V filter, which would make your data much more suitable for archival purposes. I usually don't recommend it, because of the light loss. But BZ Cam is pretty bright, and in this case we're more calibration-minded than usual... so V and Clear have sort of equal (though different) merit.

AH Men. Josch has been observing this one regularly. But so far, we have no long runs and no data from other longitudes. This star has an *intricate* period structure, with likely positive and negative superhumps, simultaneously. Thus the structure is hard to unravel... and I now recommend *abandoning* this one for the rest of the season. A better target in that area - likely simpler, with a greater chance of rewarding us, is AQ Men. That should be the all-night target, for australites wanting an all-night target.

V1159 Ori. Gracious, I forgot to emphasize V1159 in my last letter! The Swift X-ray telescope will be watching V1159 Ori for months, starting about now. We need to provide as much simultaneous coverage as we can. As many of you know, the star has very frequent superoutbursts and "normal" outbursts. It takes a lot of attention, and probably multiple longitudes, to keep track of the guy. And it's busy flashing periodic waves all the while, so it's really an ideal target for us. It's an equatorial target, so nobody can get long runs... but we can take advantage of AU/NZ, and hopefully Josch's every-night Chile coverage, to synthesize very long light curves. A good comparison star might be AAVSO 120 (V=12.01). Despite the more troublesome extinction at equatorial latitudes, I still recommend unfiltered, because we're highly interested in the star's hijinks at minimum (15.3) as well as maximum (12) light.

T Pyx. Very definitely back on the menu.

SHORTER OBSERVATIONS. *Most* of the intermediate polars (DQ Her stars) are still good targets, with the exception of BG CMi (32-year ephemeris nailed down). Particularly good targets are PQ Gem, HT Cam, V1033 Cas, V515 And, WX Pyx, and especially V667 Pup (Swif0732-13). These stars have had little recent coverage, and we may be losing track of their phase.

joe p

p.s. One year from today will be 12/13/14, the last such date in the century. Kepler would appreciate the note. I hope we're all still healthy, happy, and observing variable stars on that day. And, for

that matter, enjoy the Geminids and merry Xmas!