May 20, 2015.

Dear CBAers,

   Another round of (northern) spring cleaning.

1. UX UMa continues to delight, with its 3.7 d wave, its superhump, and, for that matter, its eclipse. Of course the eclipse has been known for 80 years, but we're seeing the shape of the eclipse change with (apparently) the 3.7 d period. Or the "precession" period, if we can load the star with a theoretical term. We've been going for 83 days, and the periods – even those "not supposed to be" - are all sensibly constant. So while continuing coverage is valuable, it's probably subject to the law of diminishing returns – basically the theory that to add significantly to an x-day baseline, you have to observe for at least x more days. Unless you love UX UMa, it's probably best to switch targets now... although I'll greedily lap up whatever you send.

2. V1084 Her and V795 Her. Apparently these stars are not showing anything new this year. **Finis**. Same fate for V406 Vir, MT Com, V418 Ser; fascinating stars, but awfully faint for the CBA. Not a good investment until some bigger glass can supplement our coverage (we'll try V418 Ser and V406 Vir with the 2.4 m next week; the other two are gone for the season).

3. T Pyx. Thanks to Josch, Berto, and Gordon Myers, the end-of-season coverage is now complete. **Finis**, this time for real.

4. IM Nor, a precious short-period recurrent nova (in theory a contradiction in terms, because short-P_{orb} stars should take a million years to accrete the H needed for a nova outburst). Thanks to Gordon and Berto, the eclipse ephemeris – showing a spectacular period change – is now specified. **Finis**. Likewise for YY Sex: that one's a good target, but no longer, because we now have the long-term ephemeris PLUS coverage in both high and low states.

And now for the new May-June targets.

5. New DQ Hers. Basically discovered by the new generation of hard-X-ray-sensitive telescopes. Four that are very interesting to us are:
AX J1853.3-0128   18 53 30.60 -01 28 15.9   (All 2000.0)
IGR J19552+0044. 19 55 12.47 +00 45 36.6.
IGR J1650-33   16 49 55.64 -33 07 02.0
IGR J17195-4100   17 19 35.9   -41 00 54.0
The periods are around 9-20 minutes, but as for the precise values - that's our job. The stars are in the range mag range 15-17, with the history not well known (that's our job too). Some finding charts in the attached papers, including some CVs we may do in the future.

   Since none of these stars are well known, it's worth adopting one or two as your

favorite target for a few runs. If the data look good, take it longer. Try to be consecutive (rather than alternate). I suspect that most of these targets will be rewarding.

6. V728 Sco, an old nova now known to be a deep 3.3 hour eclipser. It seems to vary between 17 and 18. Not much is known about it, but anything we can learn about a 150-yearold nova would be great! Is it too faint now? (I'm surprised our famously intrepid southern observers haven't yet observed it.)

7. IGR 1654-19, V4743 Sgr, NY Lupi. All southern DQ Hers, all needing a few long night's timings to keep the cycle count alive.

8. Northern stars! Based on our success with UX UMa, I recommend DQ Her for very close coverage. But we don't necessarily need the usual very fast time resolution, since we're now interested in (roughly) orbital effects. V446 Her is also a very interesting candidate to show these effects. BTW DQ Her has a close red contaminant (4 arcsec away), so you should cleanly include both stars in your aperture.

   After midnight (in mid-May), the equatorial stars in (5) above are prime candidates. (Although quite long – close to all-night – runs are important in these matters.

  As some of you know, Enrique is in for shoulder surgery, and won't be doing any typing, observing, or anything requiring manual dexterity for a month or more. I'll try to pick up the pace for dwarf novae (which has become my weak point)... but some of you can take the lead too (and are).

   I hope to see a bunch of you in Indiana in two weeks (AAVSO meeting). I think CBA will have a good turnout, and a couple of papers given.

joe p