Comet Siding Spring (C/2013 A1) with SOAR Telescope (@ Cerro Pachon)

Nalin Samarasinha & Beatrice Mueller
with assistance from Sean Points

SOAR = 4.1m telescope

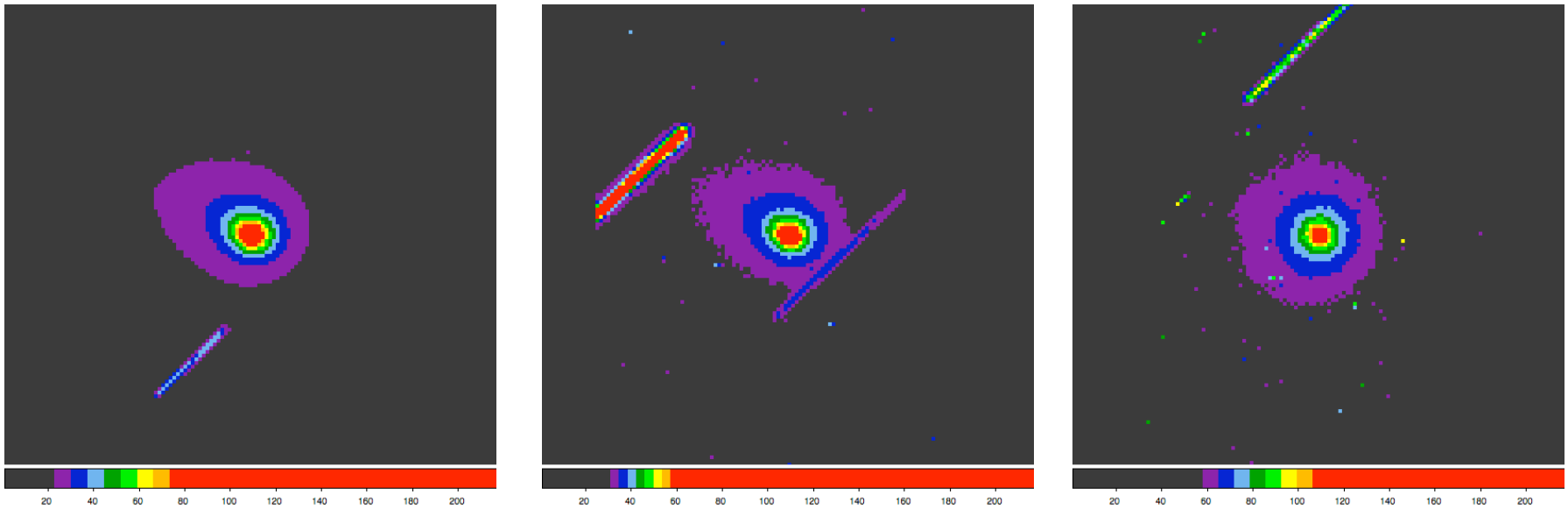
2x2 binning at telescope plus 5x5 binning prior to image enhancement

→ **effective pixel size = 0.77 arcsec**

→ **effective pixel size = 500 km**

Unenhanced Images (Sep 10, 2014)

R filter **HB BC filter** **HB CN filter**



North up and east to the left; nucleus is at the center

CN exposure time = 15 minutes

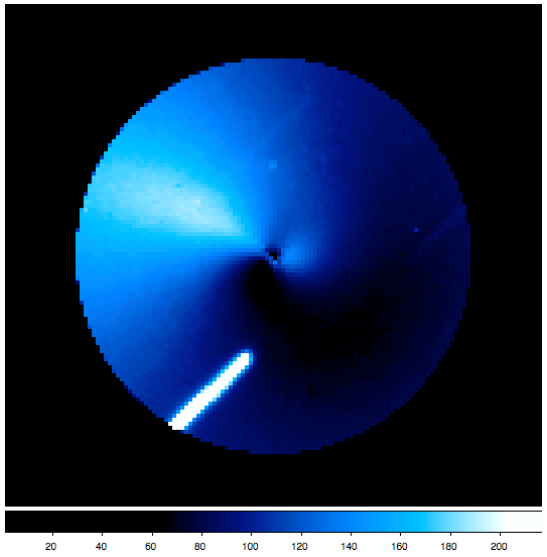
Position angle of the sun = 236°

CN brightness distribution is more circular than R or BC;

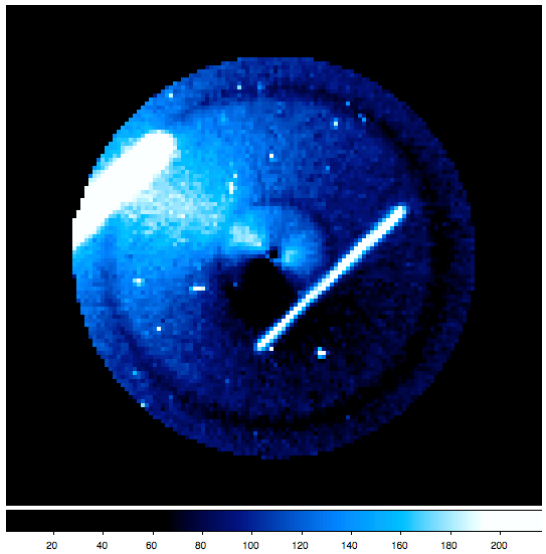
So, CN filter is indeed sampling CN

Enhanced Images (Sep 10, 2014)

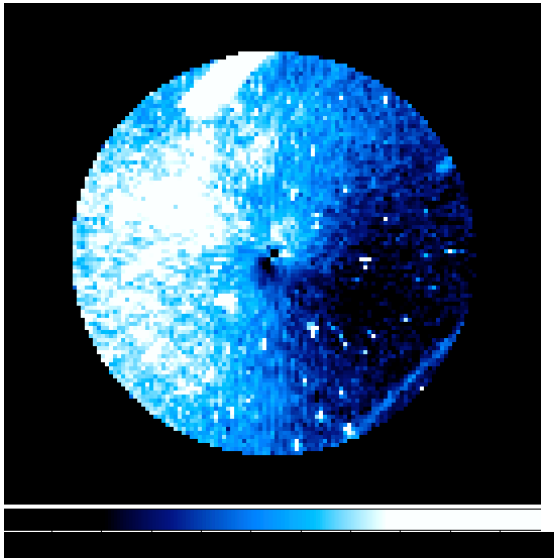
R filter



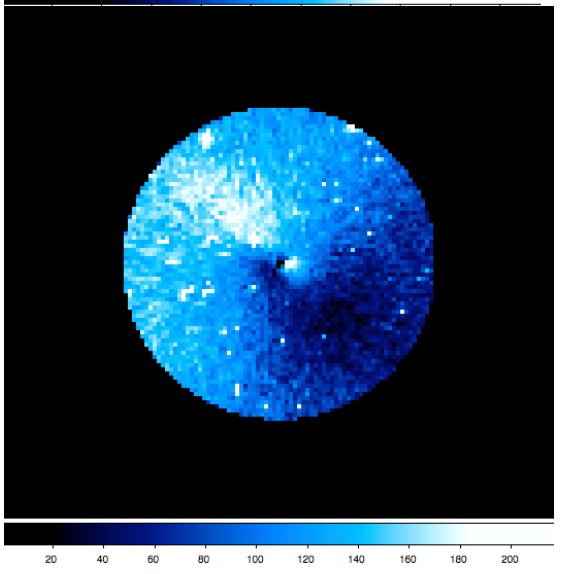
HB BC filter



HB CN filter



CN image from Sep 07



(Preliminary) CONCLUSIONS

- Clearly CN is present in the CN filter
- However, a careful continuum subtraction is needed to rule out continuum contamination (caveat: the S/N in the CN filter is very low)
- Weather permitting, we expect to image CN again during our early-October run (warning: do not expect strong CN signature unlike for Machholz (C/2004 Q2) or 103P/Hartley 2)