

A429 NOTES ON PHOTOMETRY

KRISTI WEBB

1. CB68

CB68 has curve of growths which are close to the fitted curves.

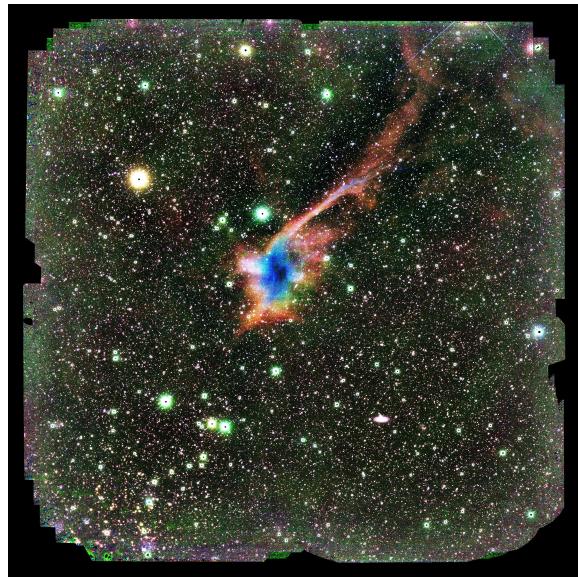


FIGURE 1. CB68 JHK

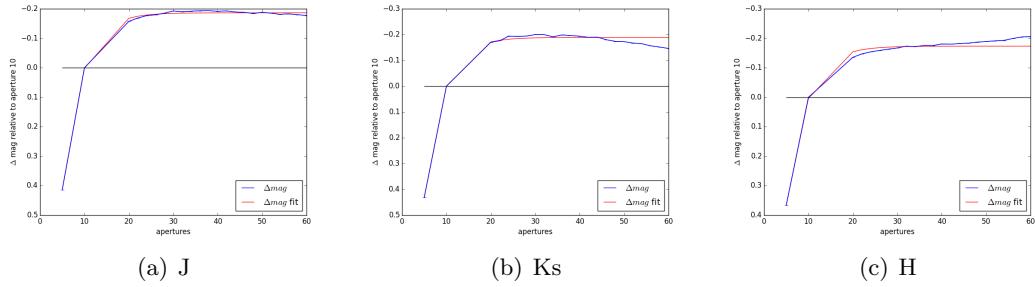


FIGURE 2. CB68 threshold 20

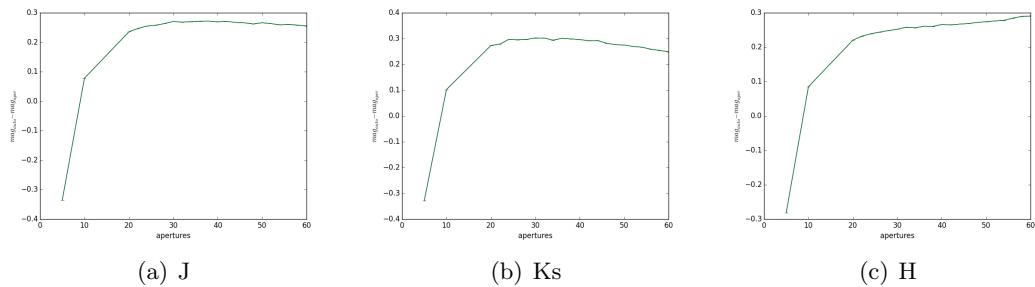


FIGURE 3. CB68 threshold 20 diff

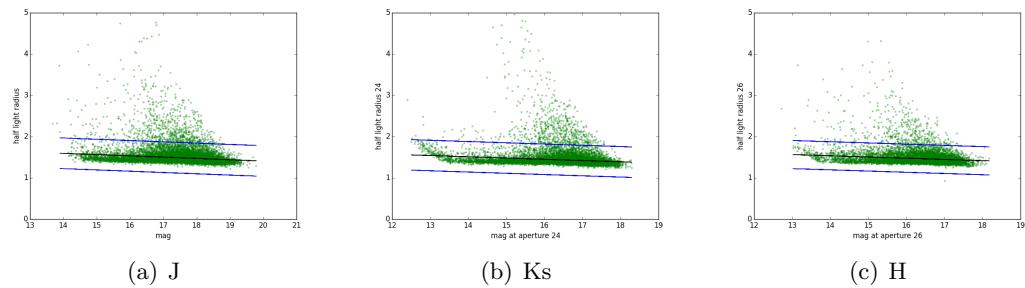


FIGURE 4. CB68 threshold 20 halflight

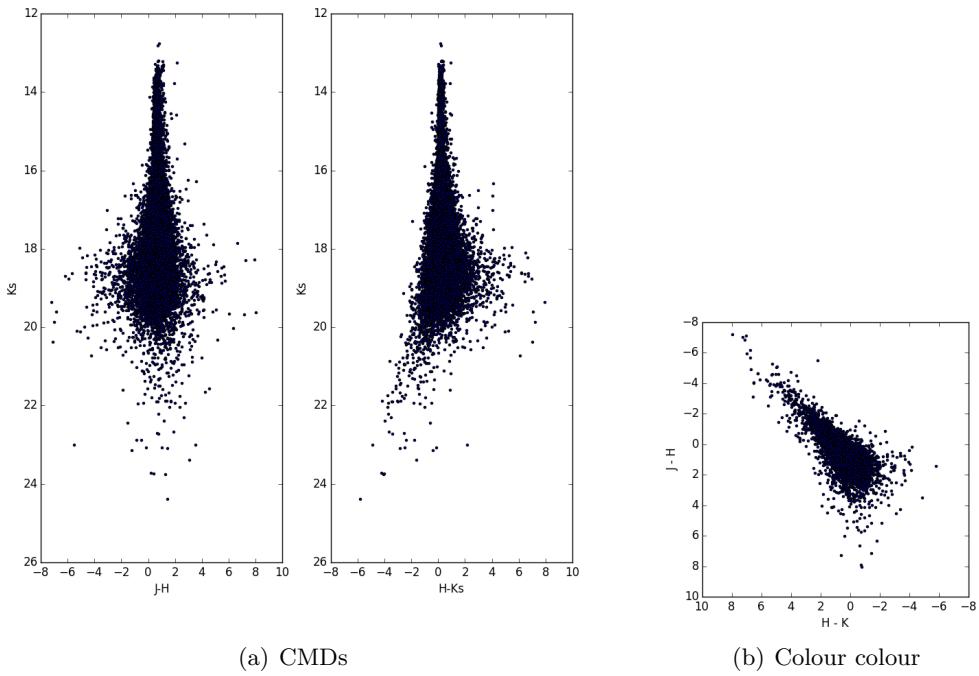


FIGURE 5. CB68 colours

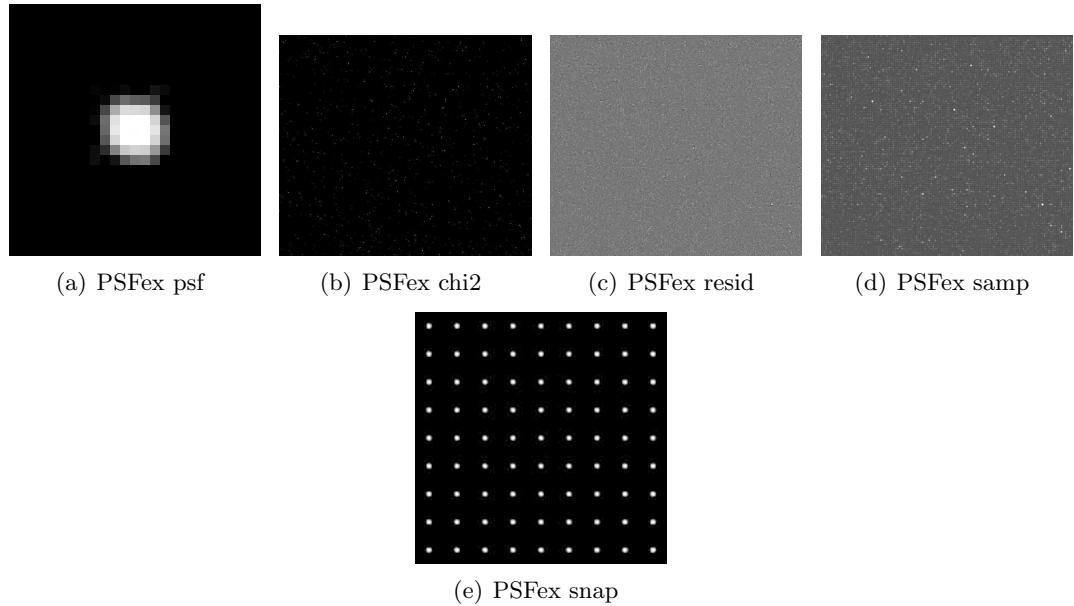


FIGURE 6. CB68 psfs

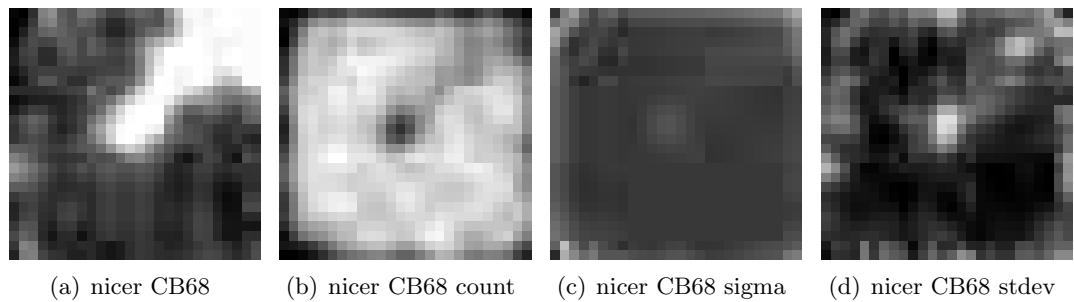


FIGURE 7. CB68 NICER maps

Cloud	Band	Aperture [pix]	zeropoint offset	var in avg.	σ	mean mag	var
CB68	J	30	-0.180268018464	2.18954349099	8362.93650512	15.3601689267	1.21279584699
	Ks	24	-0.129103512792	1.50309444298	6098.75452149	14.214040796	1.06273121833
	H	30	-0.202377027628	1.71815388109	9319.38290835	14.0175438309	1.21526399644
L429	J	24	-0.227070820053	1.77098562458	16701.134431	14.8993794015	0.825385234563
	Ks	24	-1.54257582313	1.95412515199	16482.0210614	14.8943402308	0.814672876059
	H	20	-1.23418863358	1.95407143257	15824.8390143	14.9323135187	0.78078927504
L1521E	J	30	-0.0511556038353	2.84593942226	7909.34026877	15.4484821421	1.61877838369
	Ks	28	-0.924219247486	2.67114528471	8192.5246769	15.4535484825	1.65986454375
	H	26	-0.665857709385	2.74565130989	9170.10780814	15.2474529443	1.78577325997
L1544	J	28	-0.131345306554	1.82703492638	9221.19564812	15.3352721091	1.72156912182
	Ks	28	-1.08119035262	2.0502835368	9907.0776577	15.1904351929	1.75030379504
	H	28	-0.910266383741	1.76445075488	10517.3639556	15.0904409351	1.75424447111
L1552	J						
	Ks						
	H						

TABLE 1. Calculated quantities for zeropoint offset removing objects with extended PSF

1.1. Limiting magnitude. Generating model PSFs from nice stars in the field, implanting 100 in the image, repeating photometry, checking number recovered.

Cloud	band	function	mag	x [pix]	y [pix]	# implanted	# recovered
CB68	J	gaussian	21.0074	1808.3137	739.7461	100	85
CB68	J	lorentzian	21.0074	1808.3137	739.7461	100	74
CB68	J	gaussian	21.5337	4769.5825	1376.837	100	74
CB68	J	gaussian	22.0609	3902.3103	831.9636	100	38
CB68	J	gaussian	22.0963	2511.6357	781.707	100	74
CB68	J	gaussian	22.2896	1908.8398	969.7622	100	55
CB68	J	gaussian	22.6087	3220.4189	4390.7026	100	32
CB68	J	gaussian	22.6291	2265.6694	972.3683	100	69
CB68	J	gaussian	23.1608	3535.6663	886.0461	100	42

TABLE 2. Artificial stars.

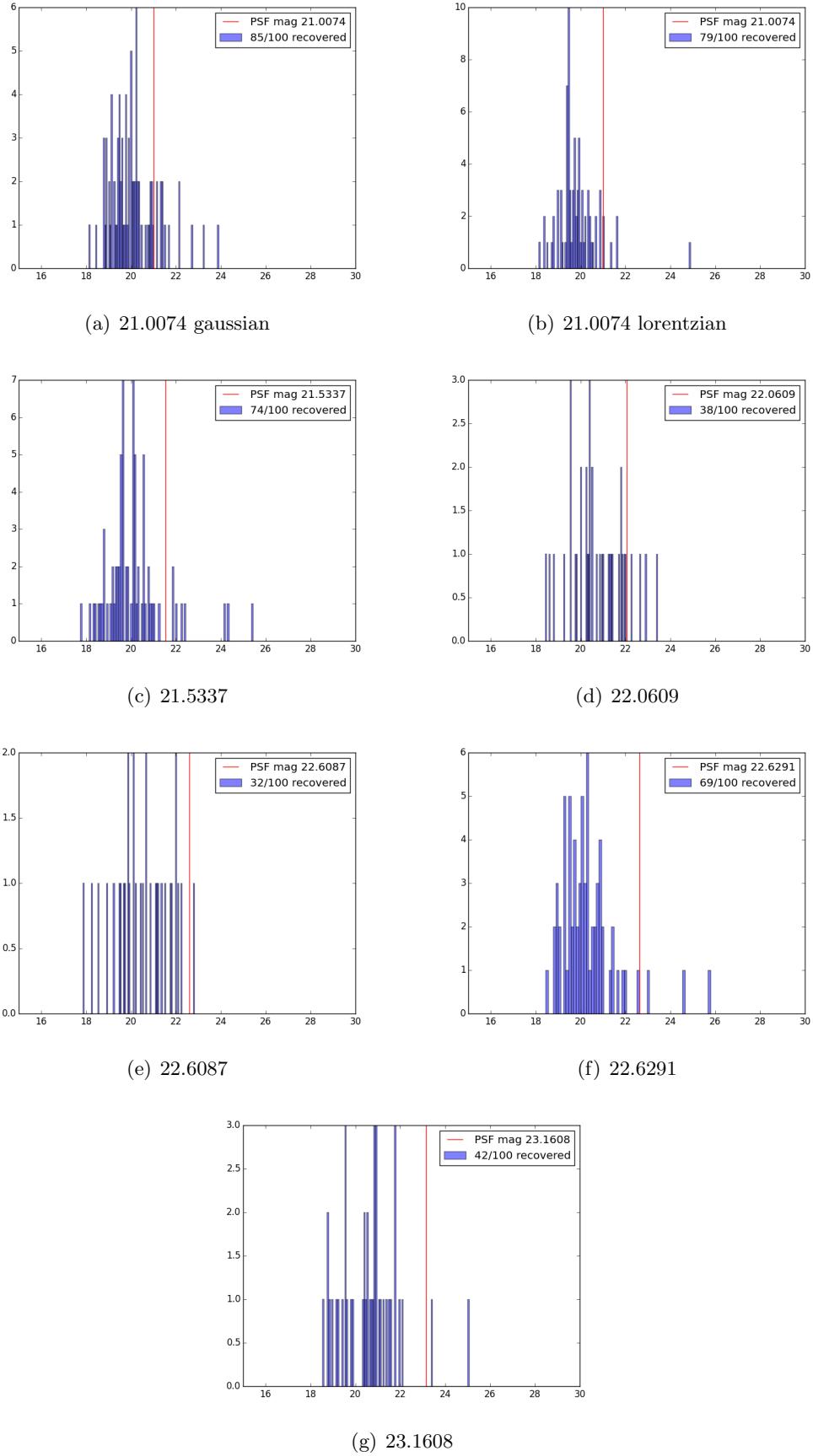


FIGURE 8. CB68 histograms of recovered artificial stas

2. L429

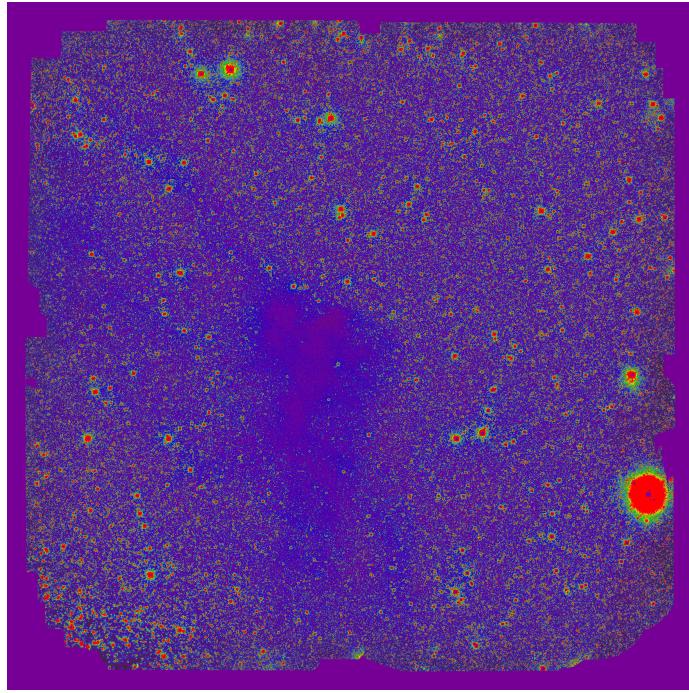


FIGURE 9. L429 J aips0

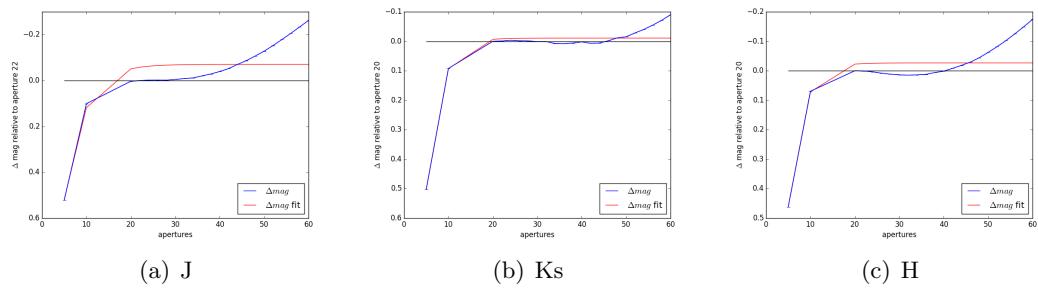


FIGURE 10. L429 threshold 20

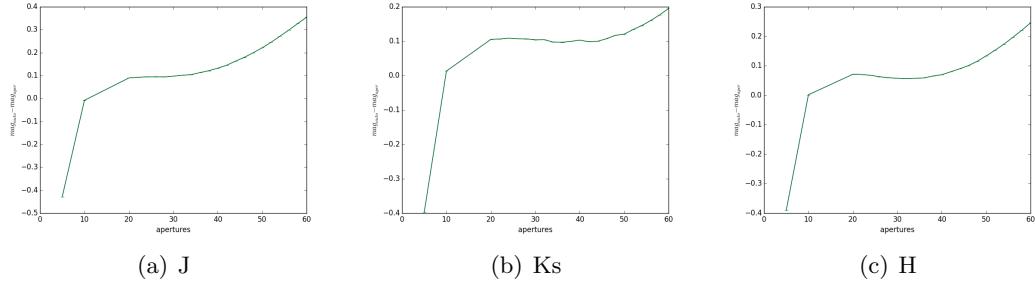


FIGURE 11. L429 threshold 20 diff

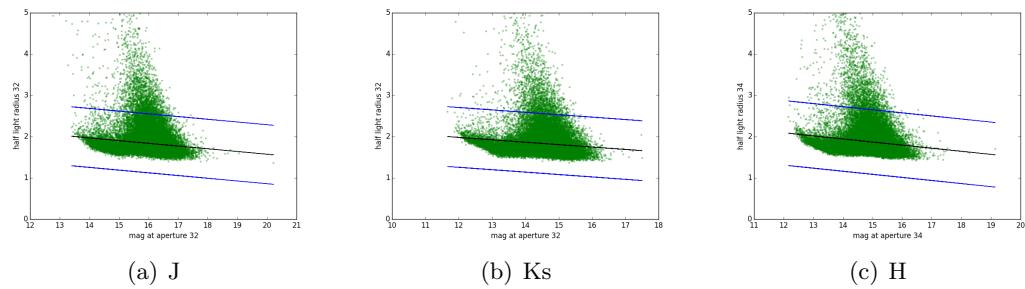


FIGURE 12. L429 threshold 20 halflight

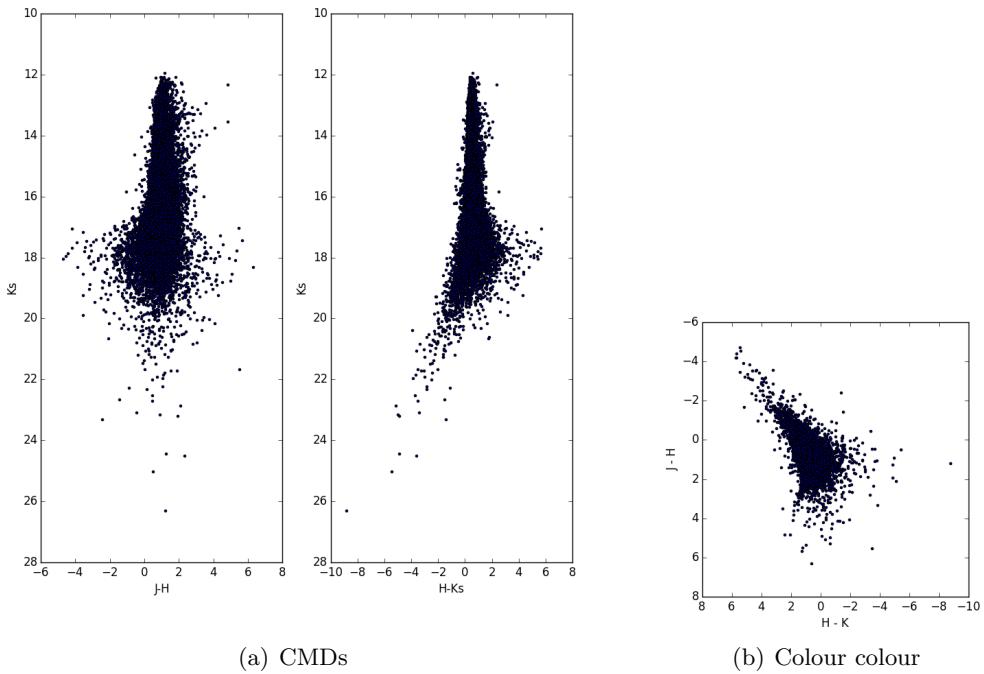


FIGURE 13. L429 colours

3. L1521E

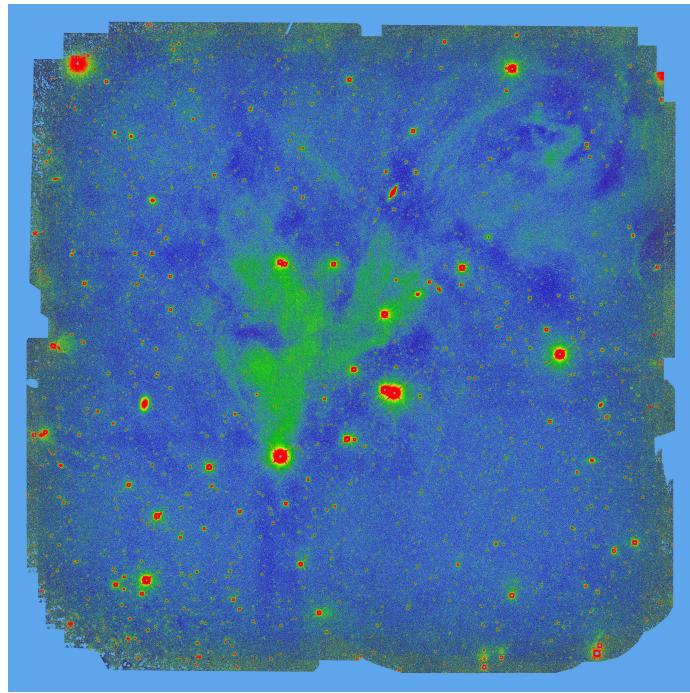


FIGURE 14. L1521E J aips0

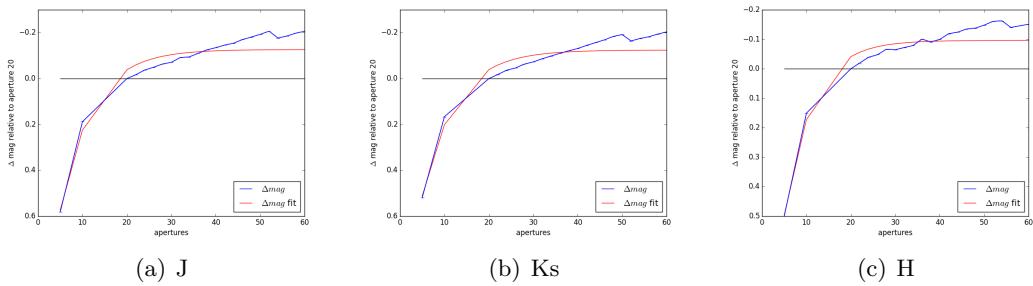


FIGURE 15. L1521E threshold 20

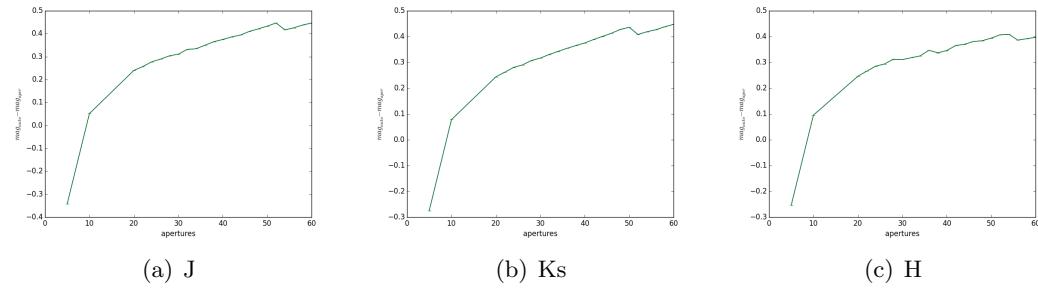


FIGURE 16. L1521E threshold 20 diff

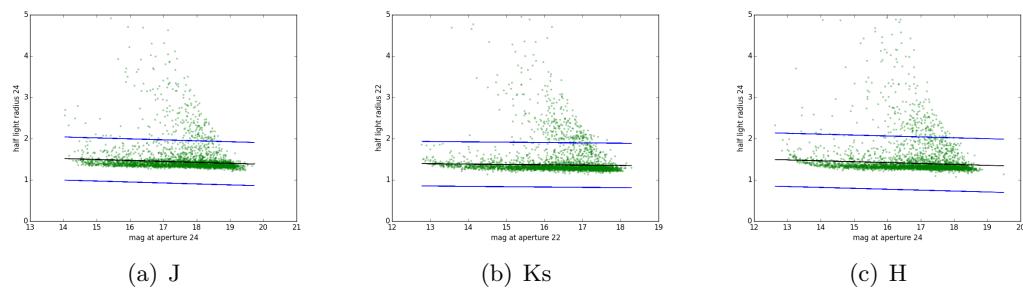


FIGURE 17. L1521E threshold 20 halflight

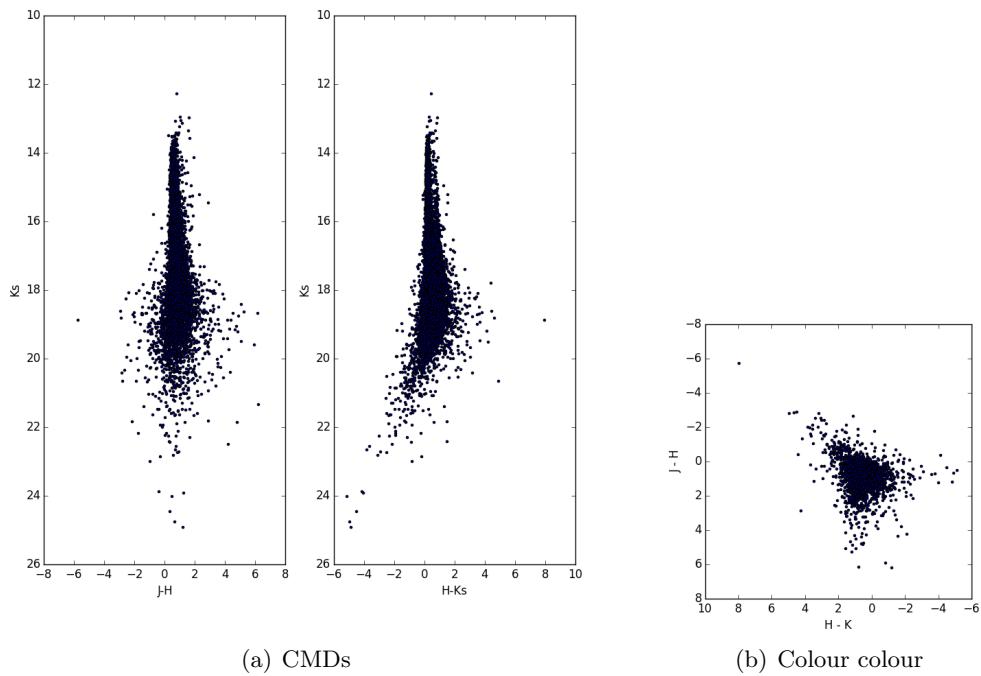


FIGURE 18. L1521E colours

4. L1544

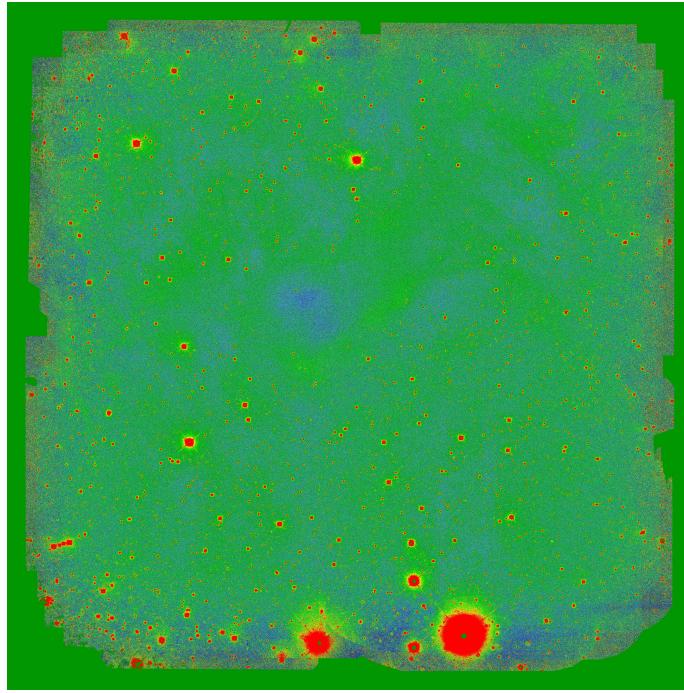


FIGURE 19. L1544 J aips0

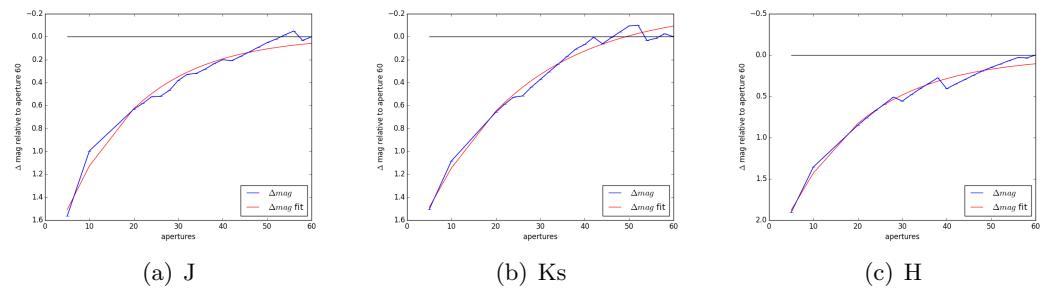


FIGURE 20. L1544 threshold 20

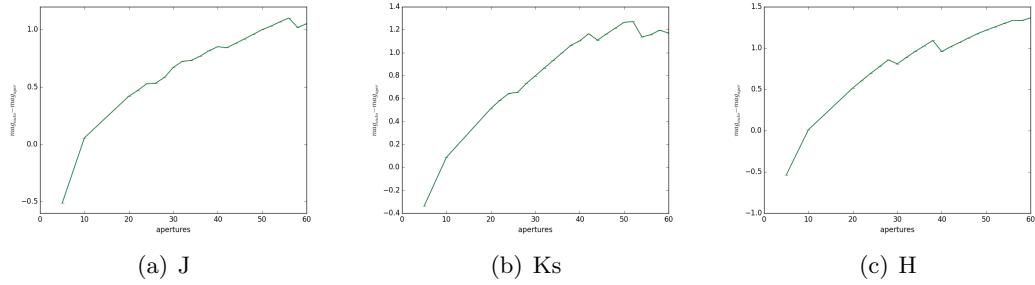


FIGURE 21. L1544 threshold 20 diff

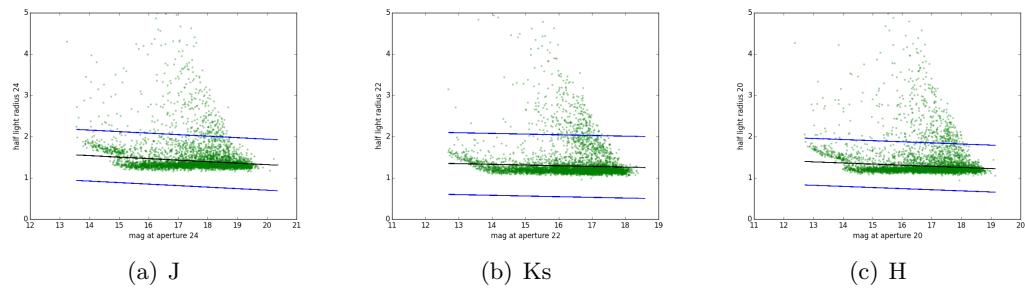


FIGURE 22. L1544 threshold 20 halfflight

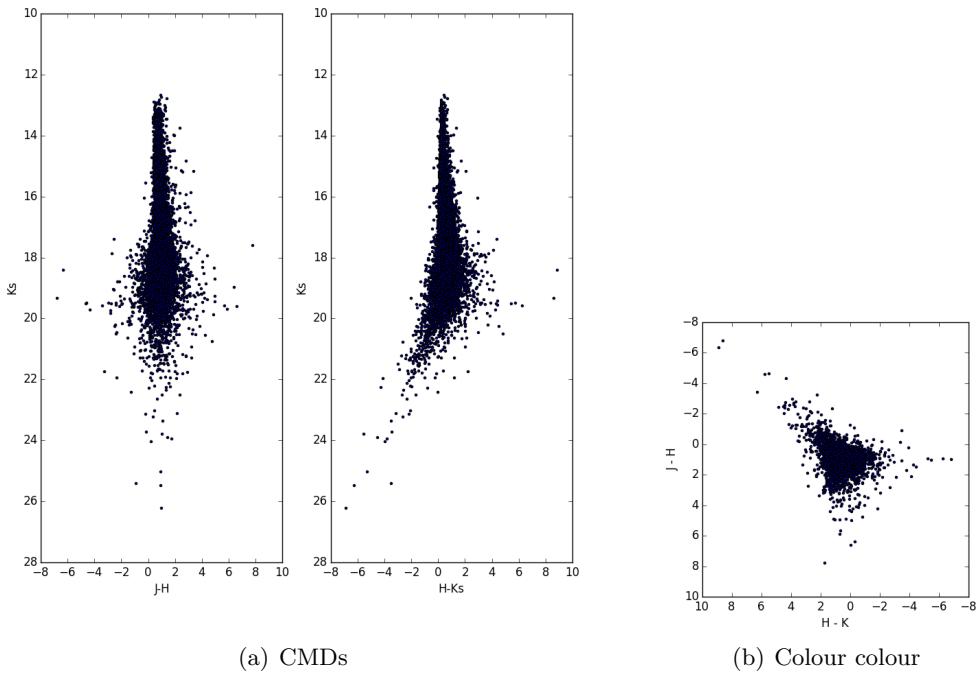


FIGURE 23. L1544 colours

5. L1552

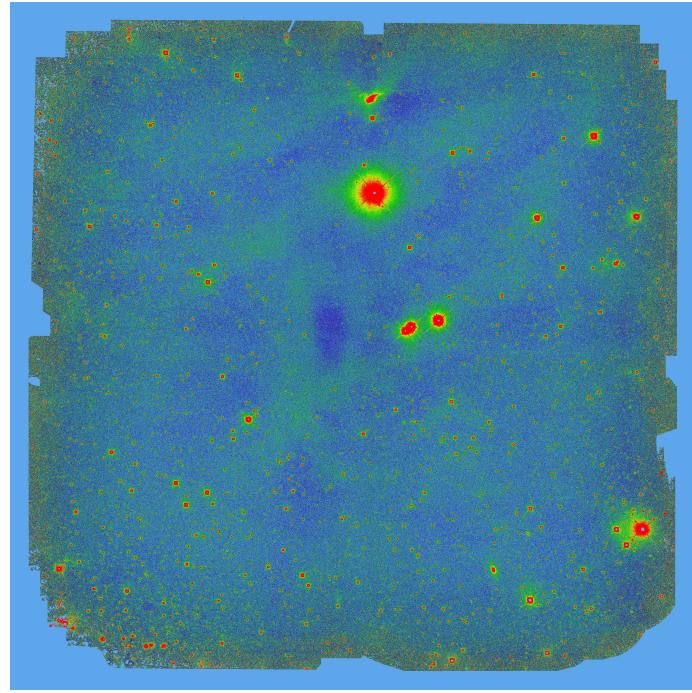


FIGURE 24. L1552 J aips0

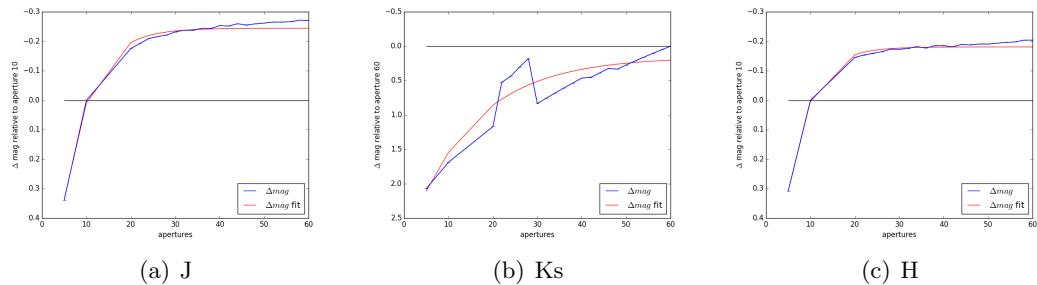


FIGURE 25. L1552 threshold 20

5.1. CMDs. Regions not considered in the calculation of the zeropoint offset due to reddening effects.

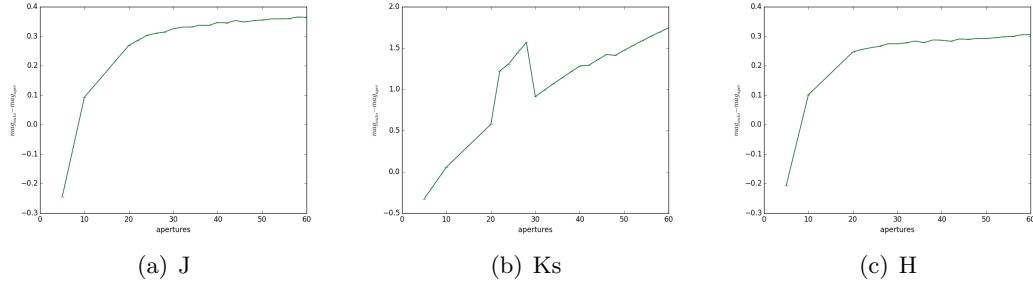


FIGURE 26. L1552 threshold 20 diff

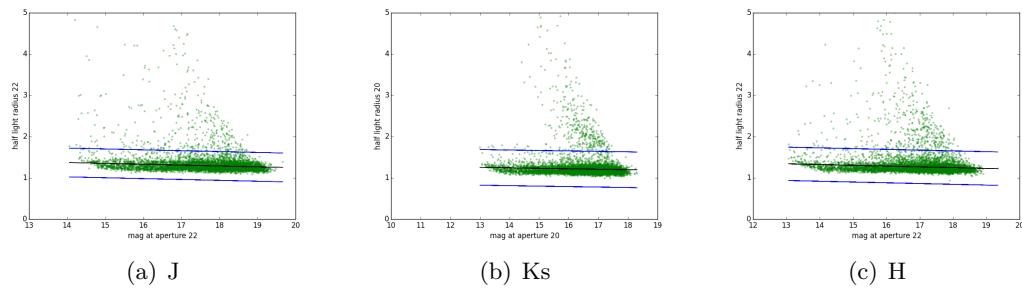


FIGURE 27. L1552 threshold 20 halflight

Cloud	Center [pix] (x,y)	Size [pix] (x,y)
CB68	2610.6899,2868.1778	1382.2207,1227.3661
L429	2496.3232,2158.1909	1869.7259,2345.7605
L1521E	2532.6025,2753.7333	1880.5105,1777.3177
L1544	2345.069,2855.932	1788.7782,1570.9142
L1552	2710.337,2593.2019	1639.7134,177.3117

TABLE 3. Regions removed from calculation of zeropoint offset.

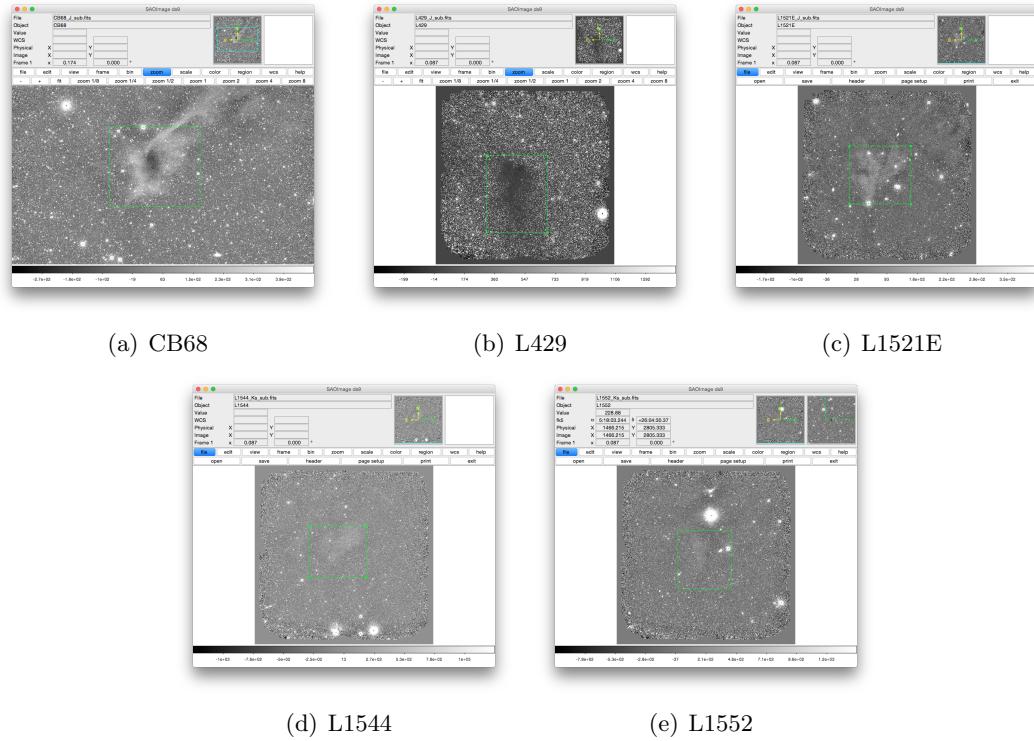


FIGURE 28. Regions removed from calculation of zeropoint