

Test 14/01/21 sulla linearità della SXVR-H18 (CCD KAF8300) bin. 1x1

Rectangle [1579,1162] [1743,1307], pixels 24090 del flusso intercettato

File (FIT)	Esp. in sec	Timing (LT)	average (ADU/px)	std. deviation	Δ_{FL}	$ADU_c = ADU * \Delta_{FL}$	$ADU_i = m \text{ Esp.} + n$	$ADU_i - ADU_c$	$(ADU_i - ADU_c) / ADU_i$	$L = ((ADU_i - ADU_c) / ADU_i)^2$	note
E01c	0.1	21:53:03	119.14	26.02	1.00	119.14	167.73	48.59	0.28968	0.08392	Media di L tra L1L2
E02c	0.2	21:53:20	209.11	28.52	1.00	209.11	243.63	34.52	0.14168	0.02007	0.00033
E03c	0.3	21:53:51	278.63	30.89	1.00	278.63	319.52	40.89	0.12798	0.01638	Media quadratica di L tra L1L2
E04c	0.4	21:54:07	359.70	32.23	1.00	359.70	395.42	35.72	0.09034	0.00816	0.01804
E05c	0.5	21:54:22	444.61	34.65	1.00	444.61	471.32	26.71	0.05667	0.00321	
E06c	0.6	21:55:41	512.11	35.94	1.00	512.11	547.22	35.11	0.06416	0.00412	
E07c	0.7	21:55:58	574.26	35.98	1.00	574.26	623.12	48.86	0.07841	0.00615	
E08c (L1)	0.8	21:56:15	666.98	39.02	1.00	666.98	699.01	32.03	0.04583	0.00210	
E09c	0.9	21:56:35	742.51	40.75	1.01	749.99	774.91	24.92	0.03216	0.00103	
E10c	1	21:56:53	818.66	42.46	1.01	826.85	850.81	23.96	0.02816	0.00079	
E20c	2	21:58:06	1560.61	55.04	1.01	1576.21	1609.79	33.58	0.02086	0.00044	
E30c	3	22:00:01	2303.14	64.83	1.01	2326.17	2368.77	42.60	0.01798	0.00032	
E40c	4	22:00:29	3077.61	75.06	1.01	3108.39	3127.75	19.36	0.00619	0.00004	
E80c	8	22:02:14	6115.45	104.99	1.01	6176.60	6163.67	-12.93	-0.00210	0.00000	
E120c	12	22:02:44	9129.38	124.73	1.01	9220.67	9199.59	-21.08	-0.00229	0.00001	
E160c	16	22:03:49	12183.27	148.72	1.00	12183.27	12235.51	52.24	0.00427	0.00002	
E240c	24	22:07:43	18440.55	187.66	1.00	18440.55	18307.35	-133.20	-0.00728	0.00005	
E320c	32	22:08:46	24584.76	220.36	1.00	24584.76	24379.19	-205.57	-0.00843	0.00007	
E400c	40	22:40:26	30470.75	250.61	1.00	30470.75	30451.03	-19.72	-0.00065	0.00000	
E480c	48	22:11:50	36502.47	275.22	1.00	36502.47	36522.87	20.40	0.00056	0.00000	
E560c	56	22:31:08	42543.38	305.88	1.00	42543.38	42594.71	51.33	0.00121	0.00000	
E640c (L2)	64	22:12:59	48574.77	336.19	1.00	48574.77	48666.55	91.78	0.00189	0.00000	Inizio saturazione FWC
E660c	66	22:26:38	50057.13	337.66	1.00	50057.13	50184.51	127.38	0.00254	0.00001	c.s.
E680c	68	22:24:44	51600.99	346.66	1.00	51600.99	51702.47	101.48	0.00196	0.00000	c.s.
E700c	70	22:17:53	52992.80	350.24	1.00	52992.80	53220.43	227.63	0.00428	0.00002	c.s.
E720c	72	22:22:45	54243.99	340.96	1.00	54243.99	54738.39	494.40	0.00903	0.00008	c.s.
E740c (L3)	74	22:19:50	55732.19	310.87	1.00	55732.19	56256.35	524.16	0.00932	0.00009	c.s.
E800c	80	22:14:38	56917.83	421.59	1.00	56917.83	60810.23	3892.40	0.06401	0.00410	blooming generalizzato

Ogni esposizione del CCD è stata corretta dell'offset (masterbias).

Average (ADU/px) : definito come la somma degli ADU di ogni pixel del riquadro (rectangle) diviso per il numero degli stessi pixel.

Retta d'interpolazione (da E08c (L1) a E640c): $m = 758,98$ ed $n = 91,83$

ADUi: riferiti alla retta d'interpolazione

ADUc: calibrati in flusso (taratura)

Linearità (media quadratica degli scostamenti): 0.0180, segue da Pogson $\Delta m = 0.019$ magnitudini (errore massimo tra L1 ed L2)