

A quick comparison between datasets of
LIME Run 3

Analysis of the background, pedestal and ^{55}Fe runs from Run 3

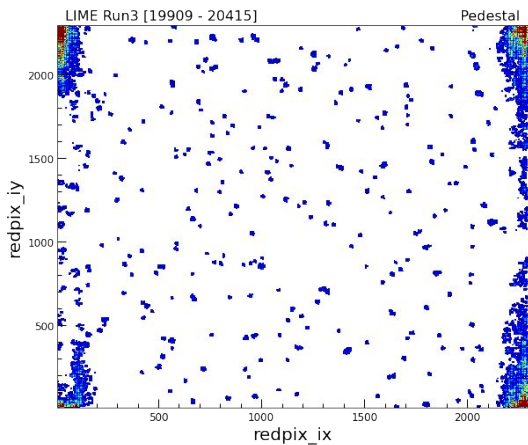
Start	Stop	Numbers			Description	Data runs	Data pics
2023-05-16 17:34:57	2023-05-16 18:11:26	19675	-	19691	Daily Calibration	-	-
Issue with the booster: sudden increase of humidity and too many hotspot to continue the data taking							
2023-05-20 11:16:18	2023-05-21 0:18:49	19704	-	19891	Stability	149	60005
2023-05-21 16:30:45	2023-05-22 16:17:07	19902	-	19908	Daily Calibration	-	-
2023-05-22 16:20:26	2023-05-23 12:31:49	19909	-	20067	Bkg	133	53455
2023-05-23 12:36:17	2023-05-23 13:26:35	20068	-	20074	Daily Calibration	-	-
2023-05-23 13:29:43	2023-05-24 14:59:51	20075	-	20277	Bkg	177	71138
2023-05-24 15:05:03	2023-05-24 15:46:29	20278	-	20284	Daily Calibration	-	-
2023-05-24 15:49:09	2023-05-25 9:06:39	20285	-	20415	Bkg	115	46184
Issue with the pump: it didn't restarted after technical intervention to fix the booster leakage							
2023-07-06 15:16:24	2023-07-07 18:52:12	20426	-	20816	Pedestal Study [GEMs OFF]	340	136940
2023-07-07 18:54:41	2023-07-12 10:10:41	20817	-	21041	Stability	112	45072
2023-07-12 14:47:29	2023-07-12 15:32:40	21049	-	21055	Daily Calibration	-	-
2023-07-12 15:37:53	2023-07-17 11:10:11	21056	-	22074	Bkg	862	346008
2023-07-17 11:14:10	2023-07-17 12:09:49	22075	-	22083	Daily Calibration	-	-
2023-07-17 12:29:04	2023-07-18 11:13:28	22084	-	22291	Bkg	184	74014
2023-07-18 11:16:48	2023-07-18 11:55:00	22292	-	22298	Daily Calibration	-	-
2023-07-18 12:00:51	2023-07-19 11:46:29	22299	-	22505	Bkg	182	73048
2023-07-19 11:48:55	2023-07-19 12:46:22	22506	-	22514	Daily Calibration	-	-
2023-07-19 12:51:52	2023-07-20 13:44:11	22515	-	22568	Stability	26	10493
Issue with the pump: it abruptly stopped working							
2023-07-25 12:15:46	2023-07-28 10:33:13	22570	-	22717	Stability	73	29432
2023-07-28 11:13:45	2023-07-28 11:51:10	22718	-	22724	Daily Calibration	-	-
2023-07-28 11:55:49	2023-07-31 12:11:05	22725	-	23350	Bkg	567	227938
2023-07-31 12:13:08	2023-07-31 12:50:11	23351	-	23357	Daily Calibration	-	-
2023-07-31 12:52:29	2023-08-01 14:42:19	23358	-	23579	Bkg	200	80382
2023-08-01 14:44:07	2023-08-01 15:27:10	23580	-	23586	Daily Calibration	-	-
2023-08-01 15:33:15	2023-08-02 11:54:39	23587	-	23760	Bkg	157	63111
2023-08-02 11:56:49	2023-08-02 12:41:09	23761	-	23767	Daily Calibration	-	-
2023-08-02 12:43:32	2023-08-02 14:50:34	23768	-	23800	Stability	29	11690

- Runs 19909 - 20415

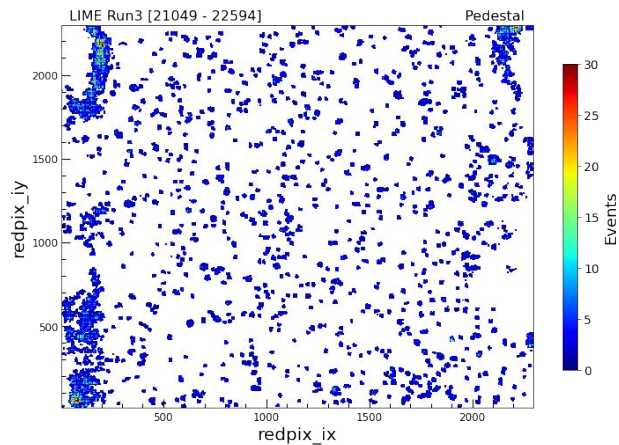
- Runs 21049 - 22514

- Runs 22718 - 23767

Clusters occupancy: Pedestal runs



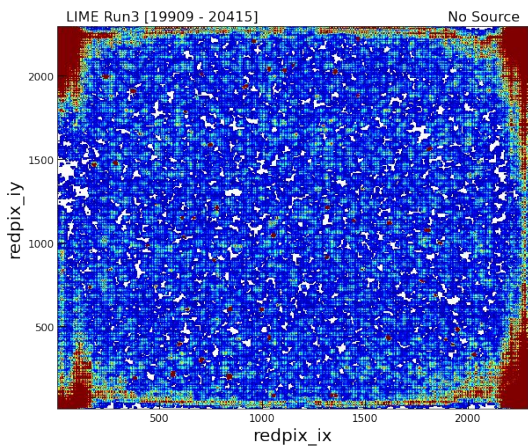
Runs 19909 - 20415



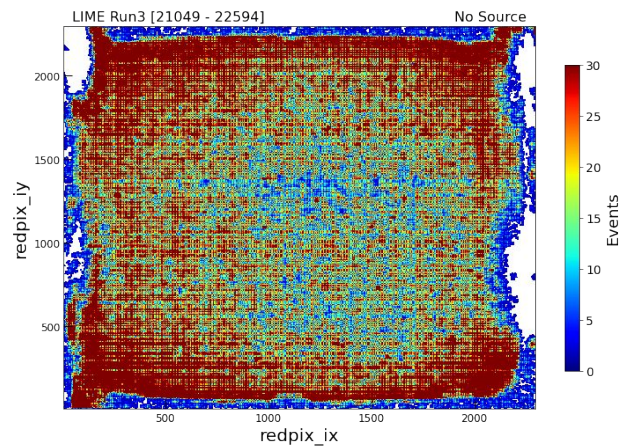
Runs 21049 - 22514

Runs 22718 - 23767

Clusters occupancy: Background runs



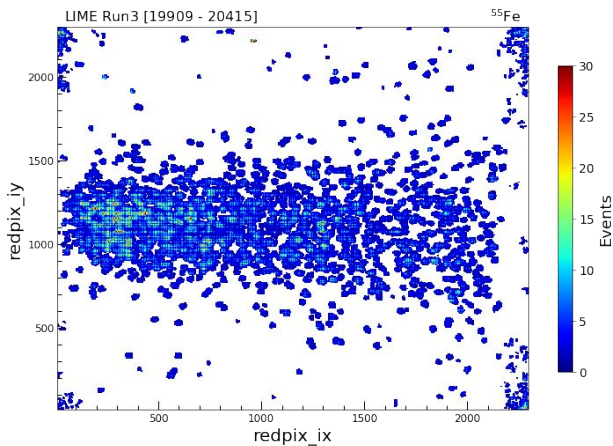
Runs 19909 - 20415



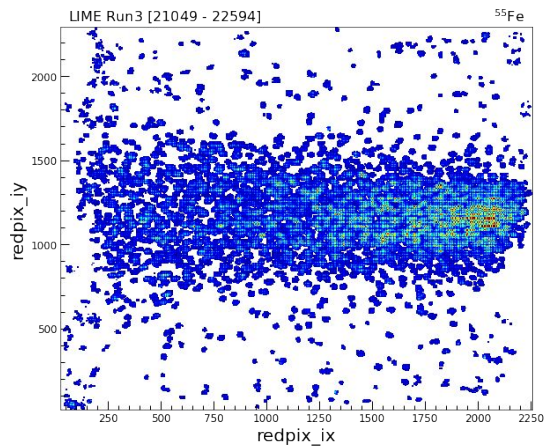
Runs 21049 - 22514

Runs 22718 - 23767

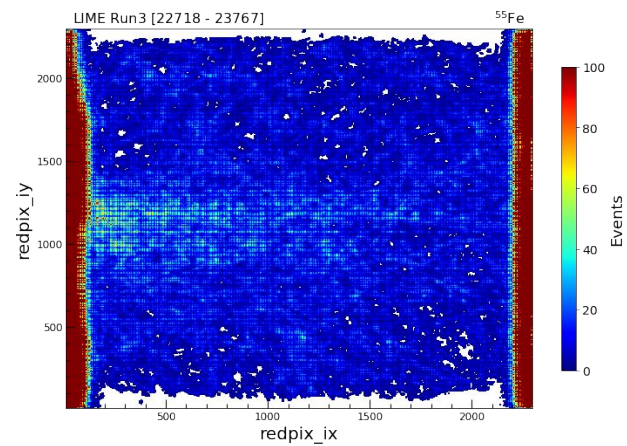
Clusters occupancy: ^{55}Fe runs



Runs 19909 - 20415



Runs 21049 - 22514

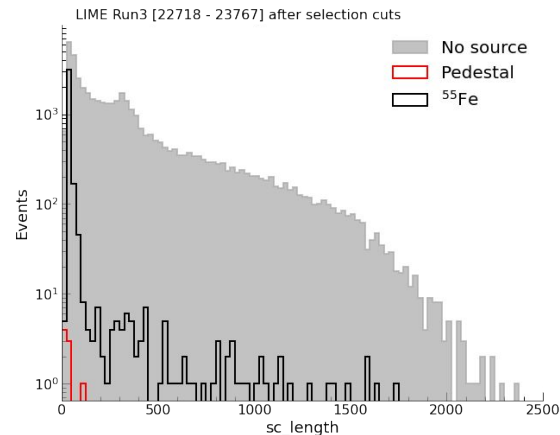
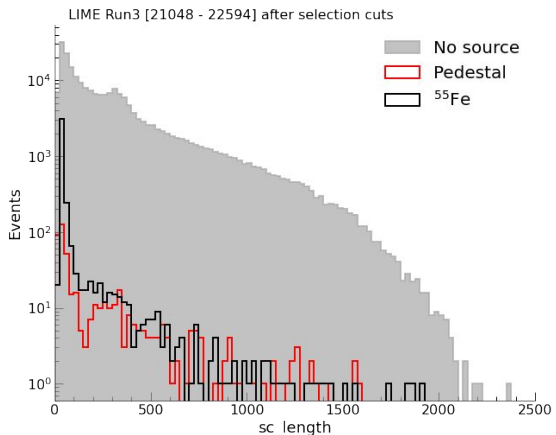
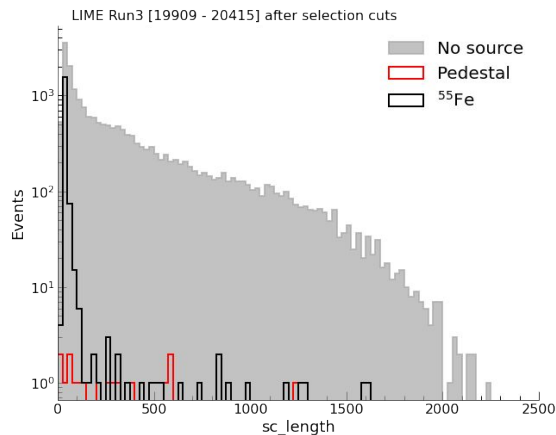
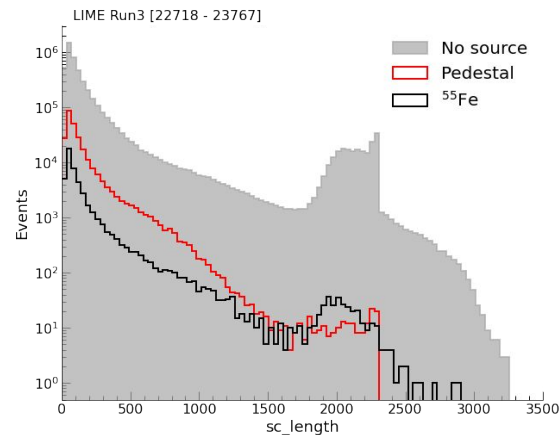
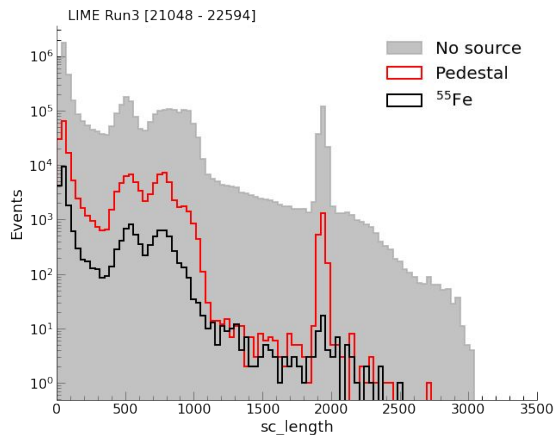
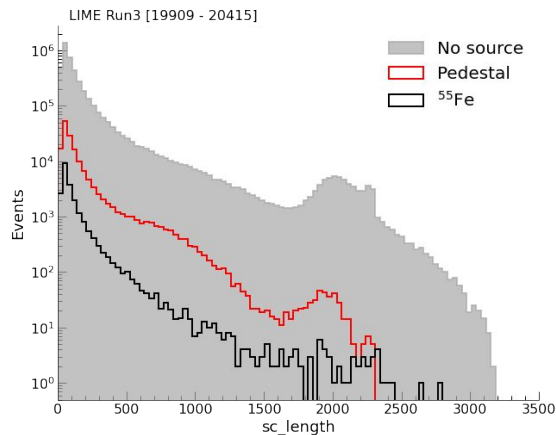


Runs 22718 - 23767

Selection cuts

- $sc_xmin > 250 \ \& \ sc_xmax < 2050$
- $sc_ymin > 300 \ \& \ sc_ymax < 2000$
- $sc_rms > 6$
- $sc_tgausssigma*0.152 > 0.5$

Length spectrum



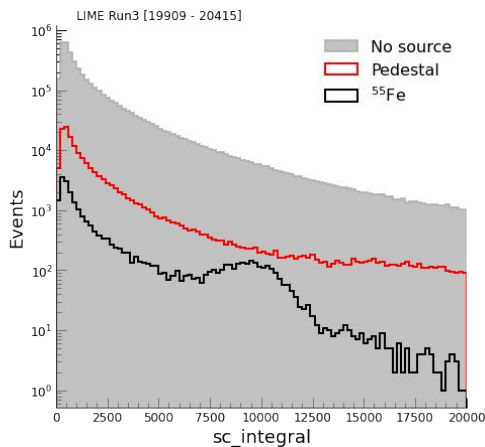
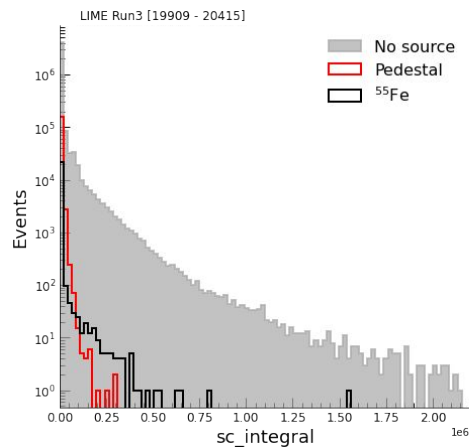
Runs 19909 - 20415

Runs 21049 - 22514

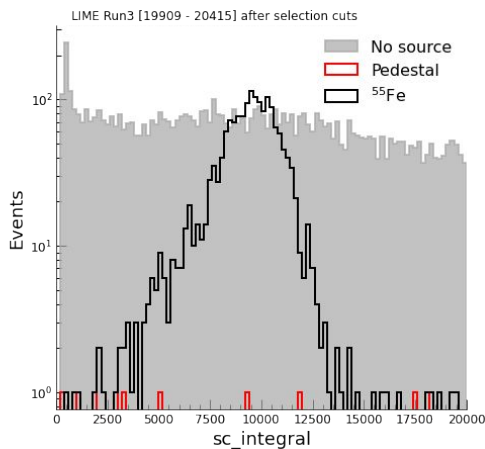
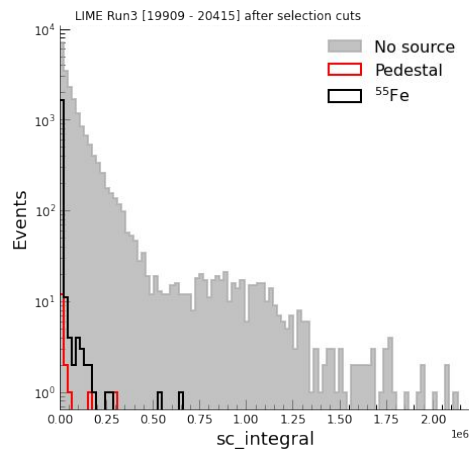
Runs 22718 - 23767

Energy spectrum: runs 19909 - 20415

Before the cuts

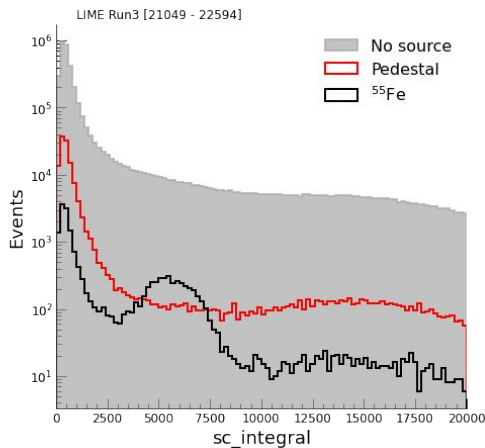
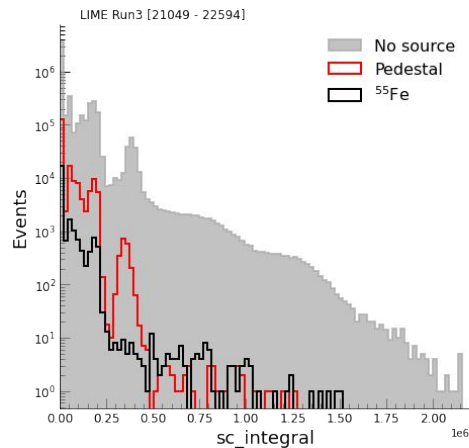


After the cuts

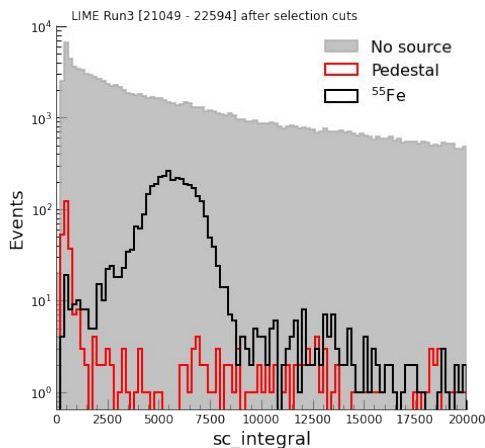
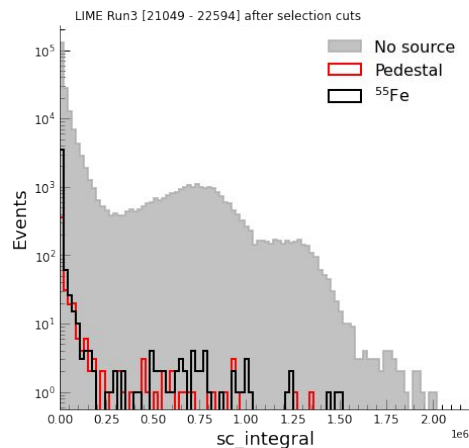


Energy spectrum: runs 21049 - 22594

Before the cuts

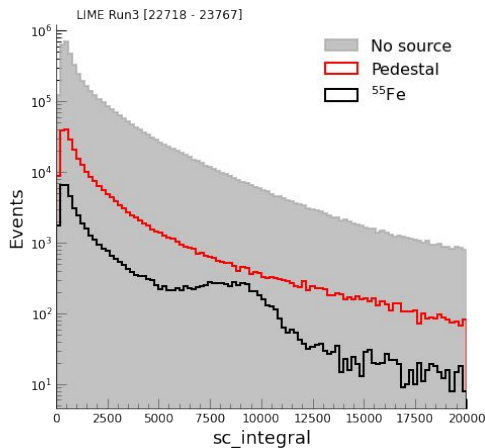
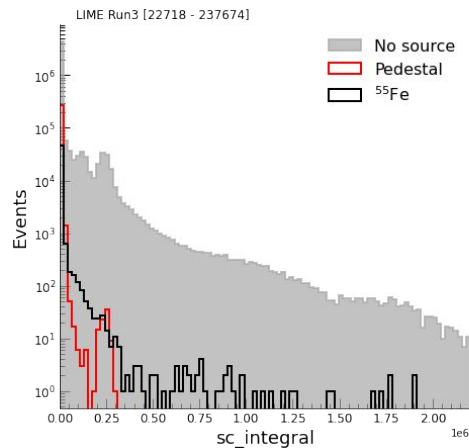


After the cuts

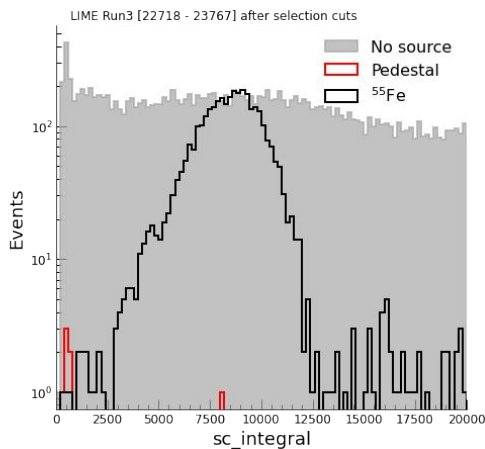
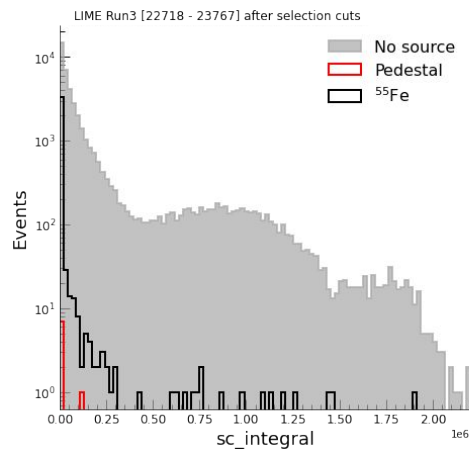


Energy spectrum: runs 22718 - 23767

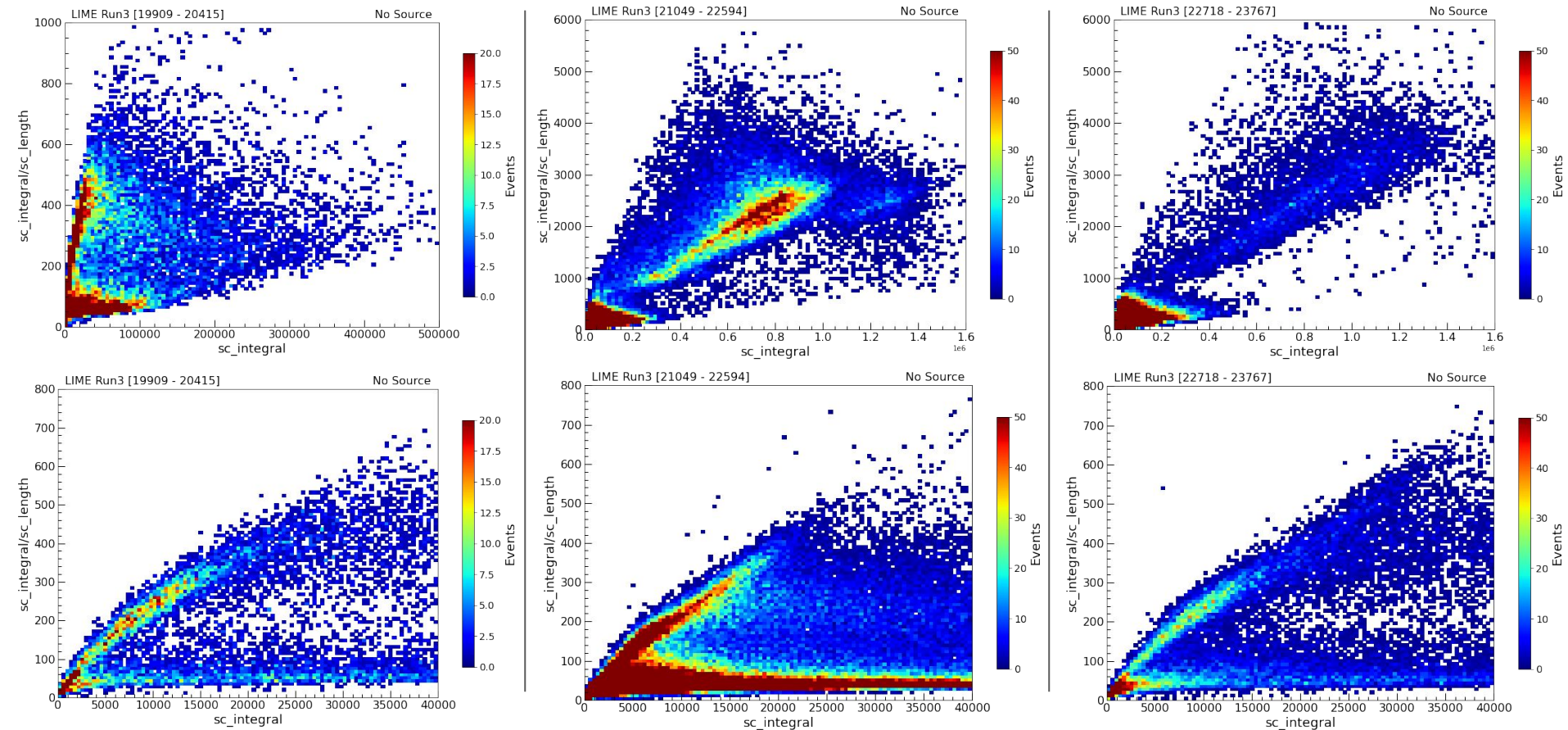
Before the cuts



After the cuts



Background: $sc_integral/sc_length$ vs $sc_integral$ (after the cuts)

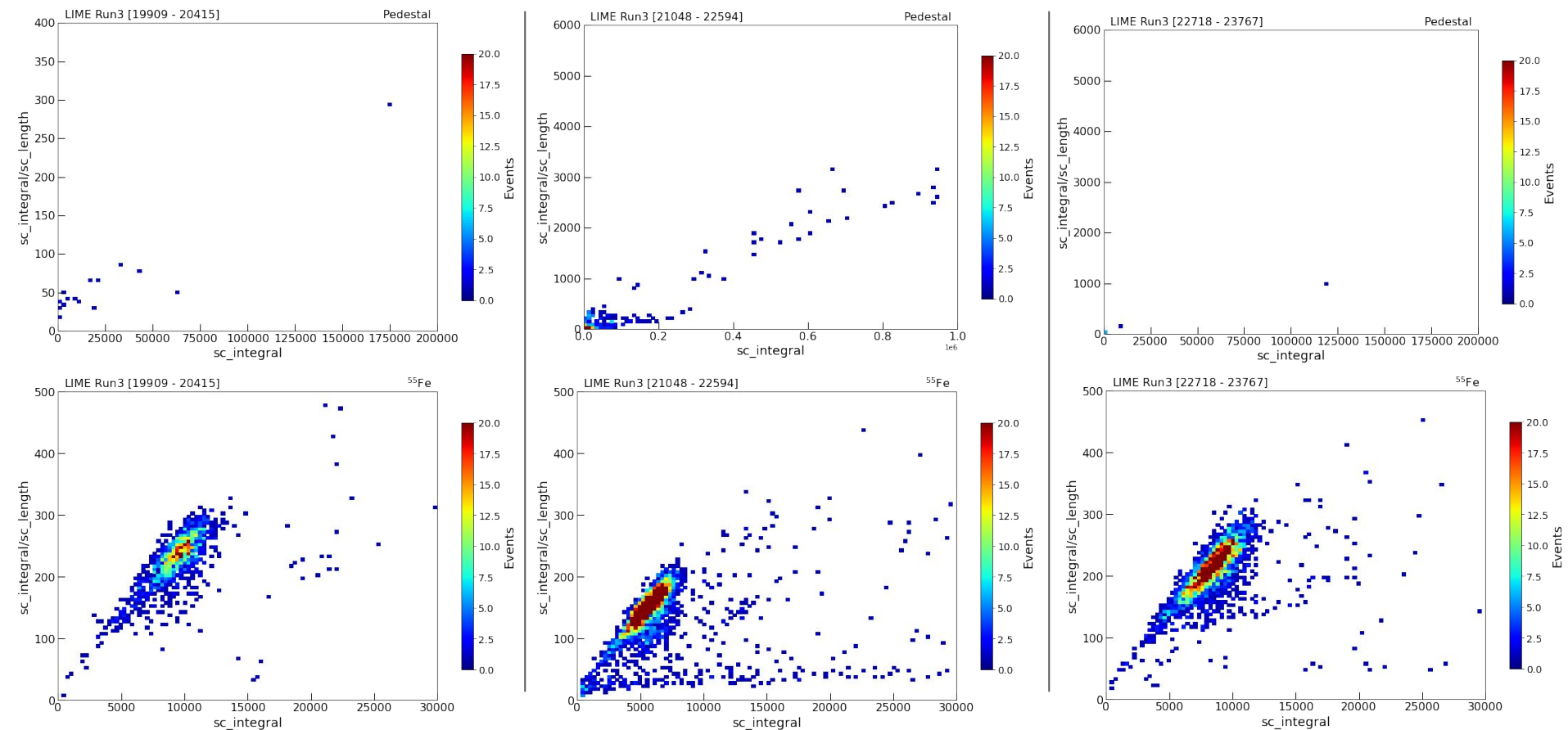


Runs 19909 - 20415

Runs 21049 - 22514

Runs 22718 - 23767

Pedestal and ^{55}Fe : sc_integral/sc_length vs sc_integral (after the cuts)

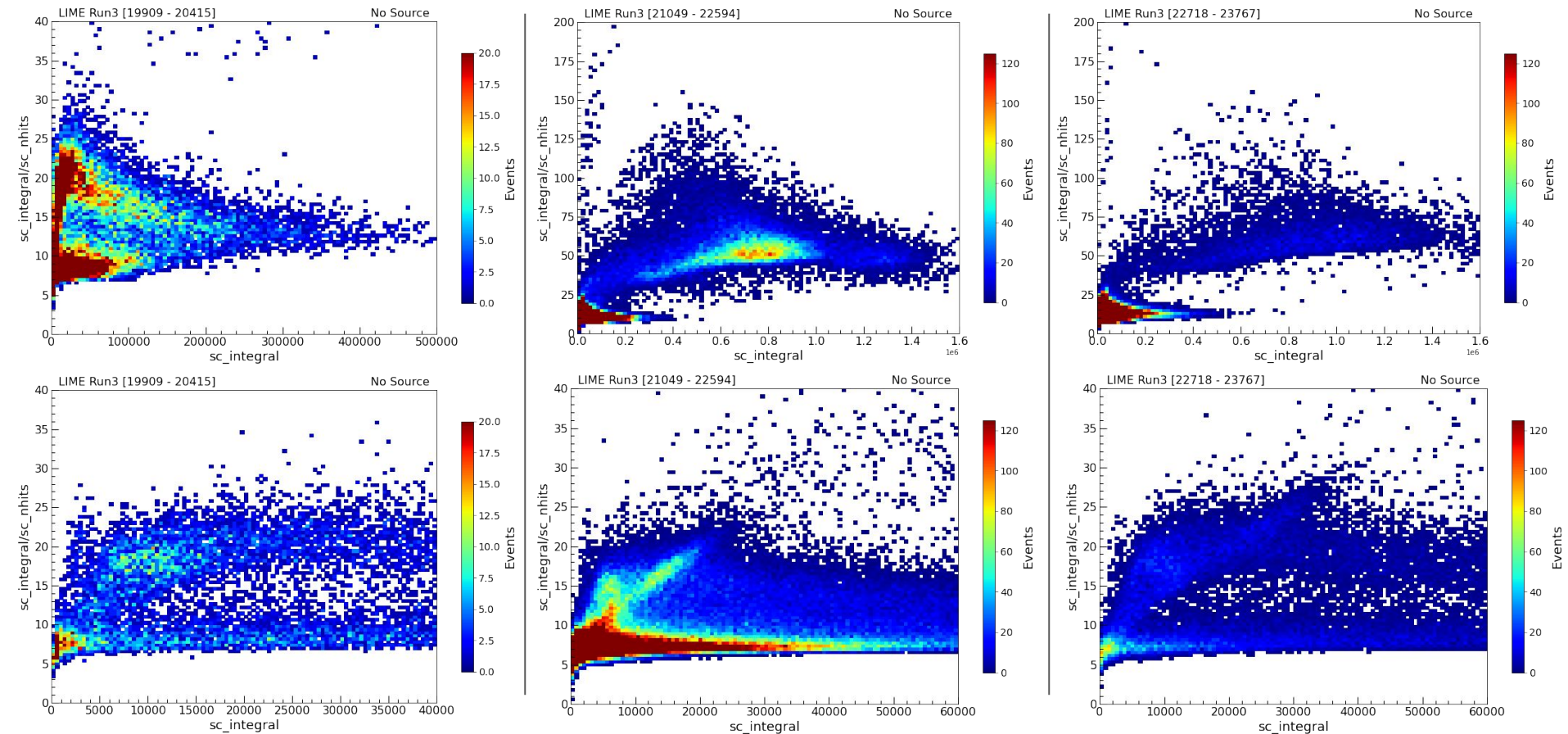


Runs 19909 - 20415

Runs 21049 - 22514

Runs 22718 - 23767

Background: $sc_integral/sc_nhits$ vs $sc_integral$ (after the cuts)

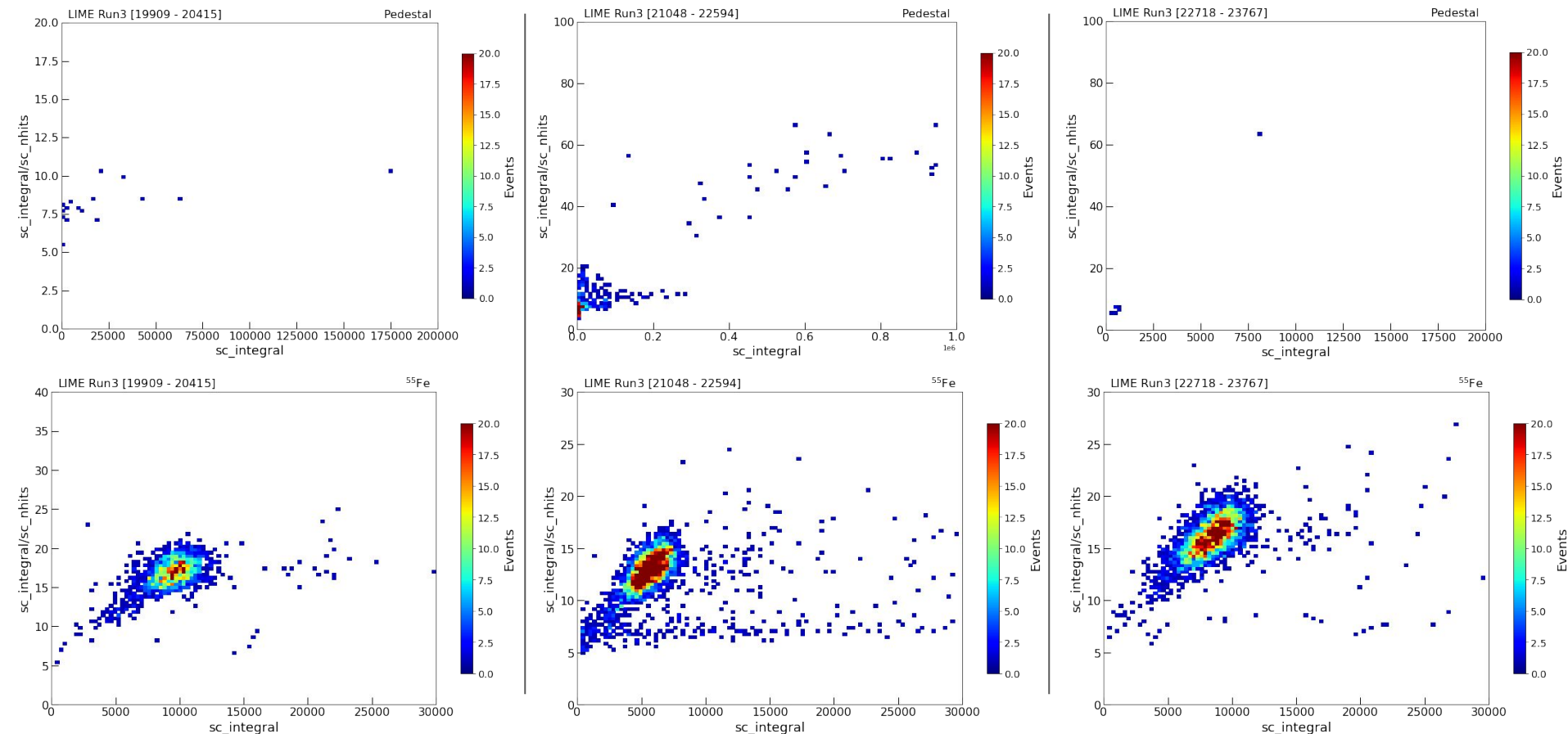


Runs 19909 - 20415

Runs 21049 - 22514

Runs 22718 - 23767

Pedestal and ^{55}Fe : sc_integral/sc_nhits vs sc_integral (after the cuts)



Runs 19909 - 20415

Runs 21049 - 22514

Runs 22718 - 23767