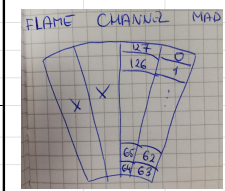


Date	Hour	Shifters/Logger	Info type	Additional comment	EUDAQ		SRS		Beam information		Lumi Table position		Stack position				FLAME settings	
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2		Comment
6.03	00:00		Info	3.6 GEV BEAM														
6.03	00:00	Jakub Moron	Run	Night run with FLAME only. Events in DAQ correlated by event number, not TLU number. Higher thresholds in DSP: Pulse = 6 [LSB]; FIR = 40 [0.125 LSB]	661	6770522	-	-	250	3.6	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:15	Jakub	Run	Dead channels for planes 1, 2, 3 ---->>> Thresholds in DSP lowered to: Pulse = 3 [LSB], FIR = 20 [0.125 LSB]	676	95294	-	-	460	3.6	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:17	Jakub	Run		677	103212	-	-	450	3.6	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03			Info	5 GEV BEAM														
6.03	11:23	Szymon	Run	Telescope data is corrupted because 5th plane is dead	678	101018	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:23	Szymon	Run	Telescope data is corrupted because 5th plane is dead	679	107178	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:23	Szymon	Run	Telescope data is corrupted because 5th plane is dead	680	116033	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:23	Szymon	Run	Telescope data is corrupted because 5th plane is dead	681	106194	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	11:23	Szymon	Run	Telescope data is corrupted because 5th plane is dead	682	100974	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	12:15	Szymon	Info	Eudaq relaunched with the telescope - to see the correlation between DUT and telescope									A					
6.03	12:15	Szymon	Run	Telescope data is corrupted because 5th plane is dead	683	101000	-	-	200	5	242.4	1677	A	1	2	3	With W before 1st sensor	
6.03	13:00	Szymon	SETUP	Shutter realigned with the external laser system.														
6.03	13:30	Szymon	SETUP	Lumi table moved down to change the position of active layers in the stack to configuration B. Now layers 4, 5, 6 are equipped with readout.							242.4	1677.3	B	4	5	6	With W before 1st sensor	
6.03	13:50	Szymon	SETUP	Lumi table moved back to the nominal position														
6.03			Info	Dead channels for planes 4, 5, 6 ---->>> Telescope realignment, 5th telescope plane is now alive. Second telescope sector placed at: X = 175.8, Y = 290.4									B					
6.03	14:50	Szymon	SETUP	First run in configuration B (see FLAME measurement plan)	696	101063	-	-	200	5	242.4	1677.3	B	4	5	6	With W before 1st sensor	
6.03	16:03	Roma	Run	buNB err, run stopped - FireDAQ spotted the TLU issue	697	-	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03	16:06	Roma	Run	-.-	698	100683	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03	16:15	Roma	Run	-.-	699	101150	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03	16:23	Lapkin, Bohdan	Run	ALPIDE was crushed	700	-	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03	16:27	Lapkin, Bohdan	Run		701	101884	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03	16:40	Lapkin, Bohdan	Run		705	100570	-	-	200	5	242.4	1677.3	B	4	5	6	-.-	
6.03			Info	4 GEV BEAM														
6.03	16:53	Lapkin, Bohdan	Run		706	102198	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03	16:58	Lapkin, Bohdan	Run	buNB err, run stopped - FireDAQ spotted the TLU issue	707	72180	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03	17:04	Lapkin, Bohdan	Run		709	101934	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03	17:08	Lapkin, Bohdan	Run		710	107378	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03	17:13	Lapkin, Bohdan	Run		711	103192	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03	17:19	Lapkin, Bohdan	Run		712	101881	-	-	200	4	242.4	1677.3	B	4	5	6	-.-	
6.03			Info	3 GEV BEAM														
6.03	17:25	Lapkin, Bohdan	Run		714	102376	-	-	200	3	242.4	1677.3	B	4	5	6	-.-	
6.03	17:29	Lapkin, Bohdan	Run		715	114573	-	-	200	3	242.4	1677.3	B	4	5	6	-.-	
6.03	17:33	Lapkin, Bohdan	Run		716	109795	-	-	200	3	242.4	1677.3	B	4	5	6	-.-	
6.03	17:36	Lapkin, Bohdan	Run		717	108312	-	-	200	3	242.4	1677.3	B	4	5	6	-.-	
6.03	17:46	Lapkin, Bohdan	Run		719	102121	-	-	200	3	242.4	1677.3	B	4	5	6	-.-	
6.03			Info	2 GEV BEAM														
6.03	17:52	Lapkin, Bohdan	Run		722	109804	-	-	200	2	242.4	1677.3	B	4	5	6	-.-	
6.03	17:56	Lapkin, Bohdan	Run		723	102432	-	-	200	2	242.4	1677.3	B	4	5	6	-.-	
6.03	18:00	Lapkin, Bohdan	Run		725	102765	-	-	200	2	242.4	1677.3	B	4	5	6	-.-	
6.03	18:04	Lapkin, Bohdan	Run		726	123162	-	-	200	2	242.4	1677.3	B	4	5	6	-.-	
6.03	18:07	Lapkin, Bohdan	Run		727	102214	-	-	200	2	242.4	1677.3	B	4	5	6	-.-	
6.03			Info	1 GEV BEAM														
6.03	18:14	Lapkin, Bohdan	Run	buNB err, run stopped - FireDAQ spotted the TLU issue	731	81664	-	-	200	1	242.4	1677.3	B	4	5	6	-.-	

Dead channels

B0, Plane1 B1, Plane2 B2, Plane3  
22, 71, 78, 100 8, 28, 42, 45, 85, 95, 118, 13, 47, 53, 63, 126



Dead channels

B0, Plane4 B1, Plane5 B2, Plane6  
22, 23, 71, 78 1, 2, 3, 4, 28, 85, 95, 118, 119, 124 53, 63, 73, 126

Date	Hour	Shifters/Logger	Info type	Additional comment	EUDAQ		SRS		Beam information		Lumi Table position		Stack position					FLAME settings	
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2	Comment		
6.03	18:18	Lapkin, Bohdan	Run		732	108480	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03	18:21	Lapkin, Bohdan	Run		733	100612	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03	18:24	Lapkin, Bohdan	Run	tluNB err, run stopped - FireDAQ spotted the TLU issue	734	42452	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03	18:29	Lapkin, Bohdan	Run		735	101723	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03	18:34	Lapkin, Bohdan	Run		736	101847	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03	18:37	Lapkin, Bohdan	Run		737	101378	-		200	1	242.4	1677.3	B	4	5	6	..	..	
6.03			Info	5 GEV BEAM															
6.03	18:42	Jakub	Run	Debug data type: raw	739	50396	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	18:52	Jakub	Run	Debug data type: pedestal subtr.	740	50713	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	19:00	Jakub	Run	Debug data type: CM subtr.	741	50532	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	19:08	Jakub	Run	Debug data type: FIR filter	742	51060	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	19:20	Lapkin, Bohdan	Run	low gain mode. Stopped. Forgol to take out the pedestal	744	25826	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	19:23	Lapkin, Bohdan	Run	Test run with a low gain mode in FLAME for Marek	745	101940	-		115	5	242.4	1677.3	B	4	5	6	..	..	
6.03	19:41	Lapkin, Bohdan	SETUP	Changing FLAME to the configuration C. LumiCal table position moved to: X = 242.4, Y = 2183.9 to reposition the FLAME boards. Now FLAME will be on planes 7, 8, 9							242.4	2183.9	B	4	5	6			
6.03	20:00	Lapkin, Bohdan	SETUP	LumiCal table moved back to the nominal position. Jakub reconfigures the FLAME for the new sensors and checks dead channels							242.4	1677.3	C	7	8	9	..	..	
			Info	Dead channels for planes 7, 8, 9 ---->									C					Dead channels	
				First run in configuration C (see FLAME measurement plan). <b>Some problem with plane 8.</b> It shows only the noise. Noise is lower than in the neighbor planes. We continue runs with this problem open										C					
6.03	20:30	Lapkin, Bohdan	Run	Run finished with segmentation violation of FireDAQ (see screenshot on the right). Data is saved properly.	746	86001	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	20:41	Lapkin, Bohdan	Run	tluNB err, run stopped - FireDAQ spotted the TLU issue	747	102708	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	20:56	Lapkin, Bohdan	Run	tluNB err, run stopped - FireDAQ spotted the TLU issue	749	53076	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:01	Lapkin, Bohdan	Run	RUN number accidentally written as 53076 instead of 751	750	104418	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:11	Lapkin, Bohdan	Run	We restored the number from the EUDAQ panel to 752. tluNB err, run stopped - FireDAQ spotted the TLU issue	53076 (751)	103631	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:26	Lapkin, Bohdan	Run		752	52801	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:31	Lapkin, Bohdan	Run		753	101303	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:40	Lapkin, Bohdan	Run		754	99532	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:48	Lapkin, Bohdan	Run		755	57491	-		200	5	242.4	1677.3	C	7	8	9	..	..	
6.03	21:55	Lapkin, Bohdan	SETUP	Changing FLAME to the configuration D. LumiCal table position moved to: X = 242.4, Y = 2272.8 to reposition the FLAME boards. Now FLAME will be on planes 10, 11, 12							242.4	2272.8	D	10	11	12	..	..	
6.03	22:17	Lapkin, Bohdan	SETUP	LumiCal table is moved back to the nominal position. Jakub reconfigures the FLAME for the new sensors and checks dead channels							242.4	1677.2	D	10	11	12	..	..	
6.03			Info	Dead channels for planes 10, 11, 12 ---->									D					Dead channels	
6.03	21:33	Lapkin, Bohdan	Run		757	100580	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	21:42	Lapkin, Bohdan	Run		758	100264	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	22:50	Lapkin, Bohdan	Run		759	100435	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	22:58	Lapkin, Bohdan	Run	tluNB err, run stopped - FireDAQ spotted the TLU issue	760	34025	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	23:02	Lapkin, Bohdan	Run		761	100908	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	23:11	Lapkin, Bohdan	Run		762	101698	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	23:20	Lapkin, Bohdan	Run		764	7437	-		200	5	242.4	1677.2	D	10	11	12	..	..	
6.03	23:23	Lapkin, Bohdan	SETUP	We remove 1st tungsten plate in the front. And connect FLAME boards to 1, 2, 3 sensors							242.4	2249.4	D	10	11	12	Without W before 1st sensor	..	
6.03	23:49	Lapkin, Bohdan	SETUP	LumiCal table is moved back to the nominal position. Jakub reconfigures the FLAME for the new sensors and checks dead channels. Looking how to make EUDAQ restart after certain number of events							242.4	1677.2	A-	1	2	3	Without W before 1st sensor	..	
7.03	00:02	Lapkin, Bohdan	Run		765	117000	-		200	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	..	
7.03	00:14	Lapkin, Bohdan	Run	Szymon is trying to make EUDAQ restart run option work with a scan scripts					200	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	..	

Date	Hour	Shifters/Logger	Info type	Additional comment	EUDDAQ		SRS		Beam information		Lumi Table position		Stack position				FLAME settings		
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2		Comment	
7.03	00:20	Lapkin, Bohdan	Run	We leave this setup to run autopilot for the night. EUDDAQ will start every new run every 10 min.	775-...	check in the morning	-	-	200	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	09:15	Jakub	End of run	End of night run	...-826	? (~120000)	-	-	200	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	823 passed to Sasha
7.03	09:15	Jakub	Run	Debug data: RAW	827	50168	-	-	120	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	09:21	Jakub	Run	Debug data: Pedestal subtraction	828	50756	-	-	120	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	09:29	Jakub	Run	Debug data: CM subtraction	829	-66770	-	-	120	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	-09:37	Jakub	Run	Debug data: FIR	830	50911	-	-	120	5	242.4	1677.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:00	Maryna, M.G.	SETUP	We prepare FLAME for the xy scan. We move the Lumical table to the X = 247.2, Y = 1630.2 for the xy scan. This is the bottom of the sensor (channels 63/64). We try to keep the beam spot in the edge between sectors 0 and 1							242.4	1605.6	A-	1	2	3	Without W before 1st sensor	-.	
7.03			SETUP								247.2	1630.2	A-						
7.03	10:12	Jakub	Run	XY scan, sensor bottom (channel 63)	833	50260	-	#REF!	200	5	247.2	1630.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:16	Jakub	Run	XY scan, sensor bottom (channel 63)	834	50467	-	#REF!	200	5	247.2	1630.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:26	Jakub	Run	XY scan, sensor bottom (channel 60)	837	50371	-	#REF!	200	5	247.2	1635.6	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:31	Jakub	Run	ALPIDE plane 1 did not start	838	-30000	-	-	200	5	247.2	1635.6	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:36	Jakub	Run	XY scan, sensor bottom (channel 60) - probably this run is 640 (because 639 is not even saved for Flame)	839	50216	-	-	200	5	247.2	1635.6	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:45	Jakub	Run	XY scan, sensor bottom (channel 57)	843	50437	-	#REF!	200	5	247.1	1641	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:50	Jakub	Run	XY scan, sensor bottom (channel 57)	844	50477	-	-	200	5	247.1	1641	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:54	Jakub	Run	XY scan, sensor bottom (channel 54)	847	61529	-	-	200	5	246.3	1646.5	A-	1	2	3	Without W before 1st sensor	-.	
7.03	10:58	Jakub	Run	XY scan, sensor bottom (channel 54)	848	49298	-	-	200	5	246.3	1646.5	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:04	Jakub	Run	XY scan, sensor bottom (channel 51)	849	49090	-	-	200	5	245.7	1651.8	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:09	Jakub	Run	XY scan, sensor bottom (channel 51)	850	50328	-	-	200	5	245.7	1651.8	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:15	Jakub	Run	XY scan, sensor bottom (channel 48)	852	48318	-	-	200	5	244.5	1657.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:20	Jakub	Run	XY scan, sensor bottom (channel 48)	853	54707	-	-	200	5	244.5	1657.2	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:25	Jakub	Run	XY scan, sensor bottom (channel 42)	854	50121	-	-	200	5	243	1668	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:29	Jakub	Run	XY scan, sensor bottom (channel 42)	855	50390	-	-	200	5	243	1668	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:37	Jakub	Run	XY scan, sensor bottom (channel 36)	860	51424	-	-	200	5	241.6	1678.7	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:45	Jakub	Run	XY scan, sensor bottom (channel 30)	861	50971	-	-	200	5	240.1	1689.7	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:50	Jakub	Run	XY scan, sensor bottom (channel 24)	862	50876	-	-	200	5	238.7	1700.3	A-	1	2	3	Without W before 1st sensor	-.	
7.03	11:55	Jakub	Run	XY scan, sensor bottom (channel 18)	864	50563	-	-	200	5	237.4	1711.3	A-	1	2	3	Without W before 1st sensor	-.	
7.03	12:00	Jakub	Run	XY scan, sensor bottom (channel 12)	865	51073	-	-	200	5	236	1722.1	A-	1	2	3	Without W before 1st sensor	-.	
7.03	12:05	Jakub	Run	XY scan, sensor bottom (channel 6)	866	50705	-	-	200	5	234.4	1732.8	A-	1	2	3	Without W before 1st sensor	-.	
7.03	12:10	Jakub	Run	XY scan, sensor bottom (channel 6)	867	50335	-	-	200	5	234.4	1732.8	A-	1	2	3	Without W before 1st sensor	-.	
7.03	12:15	Jakub	Run	XY scan, sensor bottom (channel 0)	868	50799	-	-	200	5	233	1743.7	A-	1	2	3	Without W before 1st sensor	-.	
7.03	12:40	Szymon	SETUP	First tungsten plate mounted back. Flame table moved to the default position, now Flame will be in configuration E (on positions 13, 14, 15)															
7.03			Info	Dead channels for planes 13, 14, 15 ---->>	x														Dead channels
7.03	13:05	Szymon	Run	Autopilot: 100kevents/Run.EUDDAQ will start every 10 min.	869-...	101701	-	-	200	5	242.3	1677.2	E	13	14	15	With W before 1st sensor	-.	B0, Plane13
7.03	13:55	Szymon	Run	Autopilot finished on run: 875	... -875	-120000	-	-	200	5	242.3	1677.2	E	13	14	15	With W before 1st sensor	-.	B1, Plane14 26, 45, 85, 95, 118, 119, 124
7.03	14:10	Jakub	SETUP	Single board (B0) mounted on sensor layer 8 which was not working properly in configuration C. Flame is now in configuration F. Flame table moved to the default position															
7.03	14:15	Jakub	Run		877	110787	-	-	200	5	242.3	1677.2	F	8	-	-	With W before 1st sensor	-.	
7.03	14:24	Jakub	Run		878	106855	-	-	200	5	242.3	1677.2	F	8	-	-	With W before 1st sensor	-.	
7.03	14:33	Jakub	Run		879	100689	-	-	200	5	242.3	1677.2	F	8	-	-	With W before 1st sensor	-.	
7.03	14:41	Jakub	Run		880	101695	-	-	200	5	242.3	1677.2	F	8	-	-	With W before 1st sensor	-.	
7.03	14:56	Jakub	Run	Sensor on plane 8 is working. Runs 746-755 failed probably because of the bad connection of the FLAME board	881	103997	-	-	200	5	242.3	1677.2	F	8	-	-	With W before 1st sensor	-.	

Date	Hour	Shifters/Logger	Info type	Additional comment	EUDAQ		SRS		Beam information		Lumi Table position		Stack position				FLAME settings		
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2		Comment	
7.03	15:23	Bohdan	SETUP	We disassemble the LumiCal box to connect SRS system to the layers: 4, 5, 6, 7, 8, 10, 12, 14. Connections (#Sensor - #Layer - #APV - #HDM) are shown in the picture on the right							242.3	2283.6	A	1	2	3	With W before 1st sensor	-.	
7.03	19:12	Bohdan	SETUP	SRS is connected but we observe high noise in APV							242.3	2283.6	A	1	2	3	With W before 1st sensor	-.	
7.03	20:42	Bohdan	SETUP	We move the LumiCal table corresponding to Jakob's positioning list (see 2nd sheet) to match around -44 pad. We going to record data and check how FLAME, SRS, TELESCOPE cooperate with each other. SRS is still noisy							238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
7.03	20:56	Bohdan, Jan	Run	Pedestal run for SRS	-	4	0			238.4	1708.1	A	1	2	3	With W before 1st sensor	-.		
7.03	21:01	Bohdan	Run	Jakub tries to set the VETO trigger delay to the value so SRS can work in parallel (~30 Hz). 3rd sensor noise increased more than 2 times compared to last results. MIP peak couldn't be distinguished	893	-	500	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.			
7.03	21:29	Bohdan	Run	First run to tackle synchronisation between FLAME and SRS. FLAME threshold is lowered to much. Putting it back for the next runs	908	27077	7	27372	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
7.03	21:51	Bohdan	Run	SRS still shows more events than FLAME. This is know problem from the previous test beam. Trying to solve it	909	3830	8	3871	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
7.03	23:58	Bohdan	Run		911	1902	10	1918	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
7.03	22:35	Bohdan	Info	We concluded this is SRS bug. SRS duplicates some events. We can track those duplicates by time delay less than 900 us (time_us1-time_us2). We tried to fix this, but couldn't. For now we should be careful and take out the duplicate in the raw files data before any analysis									A						
7.03	22:49	Bohdan	Info	Current plan: To do the energy scan. With 200k events per energy, 50k events per run and 2k events pedestal runs on switching the beam energy										A					
7.03	22:50	Sasha, Bohdan	Run	Energy scan	912	50061	11	50636	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
7.03	23:20	Sasha	Run	Energy scan	913	49834	12	50371	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	00:11	Bohdan, Mykyta	Run	Energy scan	914	49834	13	50371	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	00:48	Bohdan, Mykyta	Run	tluNB err, run stopped - FireDAQ spotted the TLU issue	916	-38000	15	-38000	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	01:12	Bohdan, Mykyta	Run	Energy scan	917	50048	16	50587	27	5	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	01:50	Bohdan, Mykyta	Run	Pedestal run for SRS	-	-	18	-2000	0		238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03		Bohdan, Mykyta	Info	4 GEV BEAM									A						
8.03	01:55	Bohdan, Mykyta	Run	Energy scan	918	50118	19	50606	27	4	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03		Bohdan, Mykyta	Info	Sometimes SRS produces ERROR "Event dropped" and WARNINGS "no fafa frame"									A						
8.03	02:30	Bohdan, Mykyta	Run	Energy scan	919	50061	20	50571	27	4	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	03:19	Bohdan, Mykyta	Info	SRS in run19 has 488 more events than TLU. Number of duplicate events (delay < 1000us) in SRS is 495. Thus TLU has 7 actual events MORE than SRS. Probably SRS missed the events. Number of ERRORS "Event dropped" doesn't match?									A						
8.03	03:02	Bohdan, Mykyta	Run	Energy scan	921	50827	22	51398	27	4	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	03:30	Bohdan, Mykyta	Run	Energy scan	922	50163	23	50679	27	4	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	05:00	Bohdan, Mykyta	Run	Pedestal run for SRS			24	2500	0		238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	04:06	Bohdan, Mykyta	Info	3 GEV BEAM									A						
8.03	04:12	Bohdan, Mykyta	Run	Fire producer was dead. Restarting FireDAQ	924		25		27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	04:25	Bohdan, Mykyta	Run	Accidentally closed SRS DAQ	929	45771			27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03		Bohdan, Mykyta	Info	Compacted log (only ERRORS & WARNINGS) of SRS runs up to 23 is stored in the txt file /home/tgc/SiliconTAU/srs_shift_log.txt. Hope that it will help to identify missing SRS events and to restore calibration										A					
8.03	04:47	Bohdan, Mykyta	Run	Energy scan	930	50127	29	50694	27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	05:12	Bohdan, Mykyta	Run	Energy scan	931	50156	30	50648	27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	05:42	Bohdan, Mykyta	Run	Energy scan	932	50298	31	50795	27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	06:07	Bohdan, Mykyta	Run	Energy scan	933	50336	32	50836	27	3	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03		Bohdan, Mykyta	Run	Pedestal run for SRS			35	2089	0		238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	06:43	Bohdan, Mykyta	Info	2 GEV BEAM									A						
8.03	06:43	Bohdan, Mykyta	Run	Energy scan	934	50989	36	51485	27	2	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	07:11	Bohdan, Mykyta	Run	Energy scan	937	51278	39	51828	27	2	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	07:33	Bohdan, Mykyta	Run	Energy scan	938	47841	40	48325	27	2	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	08:07	Roma, Lapkin	Run	Energy scan	940	50017	44	50521	27	2	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	08:12	Bohdan	Info	Status for next shifters: Finish energy scan. The next step is to increase statistics and to do the positional scan? Wait others for the discussion															
8.03		Roma, Lapkin	Info	1 GEV BEAM															
8.03		Roma, Lapkin	Info	We are taking additional 1GeV set of run, because the planned energy scans are finished and one should wait for smn who can control next type of measurements (rotation?)															
8.03	08:38	Roma, Lapkin	Run	Pedestal run for SRS	-	45	2322	0			238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	08:45	Roma, Lapkin	Run	Energy scan	941	50352	46	50915	50	1	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	09:05	Roma, Lapkin	Run	Energy scan	943	50936	47	41450	50	1	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	
8.03	09:24	Roma, Lapkin	Run	Energy scan	944	48161	48	48633	50	1	238.4	1708.1	A	1	2	3	With W before 1st sensor	-.	

Connecting the SRS to the Sensors (Plane) APV HRM1

58	4	4	1
10	5	5	2
57	6	6	3
57e	7	7m	4
53	8	8	5
64	10	9	6
T2	12	10	7
61	14	11	8

Date	Hour	Shifters/Logger	Info type	Additional comment	EUDAQ		SRS		Beam information		Lumi Table position		Stack position				FLAME settings	
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2		Comment
8.03		Roma, Lapkin Roma, Lapkin Roma, Lapkin				#REF!		#REF!	#REF!									
8.03	23:08	Bohdan	Info	In the morning we tried to fix the high noise in the 3, 4 planes, which results in 14 hours fight. Now noise is higher in the whole system. That makes measurements impossible. Jakub tried to set up additional power supply to make powering of SRS and FLAME separate which decreased the noise x2 but its still too high														
8.03	23:08	Bohdan	SETUP	FLAME boards moved to planes: 10, 12, 14, SRS row takes 1-8 planes									10	12	14			
8.03	23:08	Bohdan	Info	The noise fights and the new configuration are better documented in the paper logbook														
8.03	23:33	Bohdan	SETUP	We unmount FLAME boards to make tilt LumiCal measurements with SRS only, cause we cannot operate 2 systems in the same time without noise														
8.03	23:38	Bohdan	Info	Tomorrow morning we try to restore previously working configuration and not to do all at once but track the noise change after small steps (grounding change, etc.) to understand what cause noise and how to reduce it														
9.03	01:00	Bohdan	SETUP	We lifted LumiCal front side up by 16mm to create 2 degrees angle. Now we will do a positional scan with reference to run843-868 with a 8mm correction for a tilt														
9.03		Ruth, John	Info	Y scan of the tilted LumiCal at 2 degrees. 4 positions for the scan are chosen to fit in time see on the sheet4. Channels are numbered by Jakub scheme. See picture on top-right.														
9.03		Ruth, John	Info	5 GEV BEAM									A					
9.03	01:05	Ruth, John	Run	Random position left channel 51	948	50382	70	50914	27	5	238.5	1679.9	-	-	-	With W before 1st sensor	.-.	
9.03	01:51	Ruth, John	Run	channel 51	950	50093	74	50624	27	5	244.2	1659.8	-	-	-	With W before 1st sensor	.-.	
9.03	02:26	Ruth, John	Run	channel 51	951	50103	75	50649	27	5	244.2	1659.8	-	-	-	With W before 1st sensor	.-.	
9.03	03:00	Ruth, John	Run	channel 51	952	50151	76	50684	27	5	244.2	1659.8	-	-	-	With W before 1st sensor	.-.	
9.03	03:35	Ruth, John	Run	channel 51	953	50182	77	50720	27	5	244.2	1659.8	-	-	-	With W before 1st sensor	.-.	
9.03	04:10	Ruth, John	Run	channel 42	954	50061	78	50592	27	5	241.9	1676	-	-	-	With W before 1st sensor	.-.	
9.03	04:44	Ruth, John	Run	channel 42 (accidentally changed run number, so it repeats, data files are ok, have unique time stamp)	200309040945 954	50061	78	50656	27	5	241.9	1676	-	-	-	With W before 1st sensor	.-.	
9.03	05:20	Ruth, John	Run	channel 42	955	50097	80	50648	27	5	241.9	1676	-	-	-	With W before 1st sensor	.-.	
9.03	06:01	Ruth, John	Run	channel 18	956	50107	81	50654	27	5	236.4	1719.2	-	-	-	With W before 1st sensor	.-.	
9.03	06:34	Ruth, John	Run	channel 18	957	50093	82	50634	27	5	236.4	1719.2	-	-	-	With W before 1st sensor	.-.	
9.03	07:07	Ruth, John	Run	channel 18	958	50170	83	50727	27	5	236.4	1719.2	-	-	-	With W before 1st sensor	.-.	
9.03	07:47	Ruth, John	Run	channel 18	961	36144	86	36547	27	5	236.4	1719.2	-	-	-	With W before 1st sensor	.-.	
9.03	08:11	Sasha, maryna	Run	Pedestal Run	87	775	0	5	236.4	1719.2	-	-	-	-	-	With W before 1st sensor	.-.	
9.03	08:30	Sasha, maryna	Run	Pedestal Run	88	2336	0	5	240.6	1708.2	-	-	-	-	-	With W before 1st sensor	.-.	
9.03	08:47	Sasha, maryna	Run	channel 24	963	59861	90	60510	27	5	240.6	1708.2	-	-	-	With W before 1st sensor	.-.	
9.03	09:33	Sasha, maryna	Run	channel 24	964	61778	91	62434	27	5	240.6	1708.2	-	-	-	With W before 1st sensor	.-.	
9.03	10:20	Sasha, maryna	Run	channel 24	965	51720	92	52254	27	5	240.6	1708.2	-	-	-	With W before 1st sensor	.-.	
9.03	10:50	Sasha, maryna	Run	channel 24	966	50595	93	51093	27	5	240.6	1708.2	-	-	-	With W before 1st sensor	.-.	
9.03	11:51	Sasha, maryna	Run	Y scan of the tilted LumiCal at 4 degrees. 2 positions for the scan are chosen.														
9.03	11:57	Sasha, maryna	Run	Pedestal Run	94	3194	0	5	240.6	1716.6	-	-	-	-	-	With W before 1st sensor	.-.	
9.03	12:13	Sasha, maryna	Run	channel 24	968	51589	96	59117	27	5	238.3	1716.4	-	-	-	With W before 1st sensor	.-.	
9.03	12:51	Sasha, maryna	Run	channel 24	969	53312	97	53882	27	5	238.3	1716.4	-	-	-	With W before 1st sensor	.-.	
9.03	12:36	Sasha, maryna	Run	channel 24	970	50258	98	50811	27	5	238.3	1716.4	-	-	-	With W before 1st sensor	.-.	
9.03	14:19	Sasha, maryna	Run	channel 42	972	50559	99	51135	27	5	242.1	1684.5	-	-	-	With W before 1st sensor	.-.	
9.03	14:55	Sasha, maryna	Run	channel 42	974	50048	101	50569	27	5	242.1	1684.5	-	-	-	With W before 1st sensor	.-.	
9.03	15:28	Sasha, maryna	Run	channel 42	975	51349	102	51876	27	5	242.1	1684.5	-	-	-	With W before 1st sensor	.-.	
9.03	15:51	Sasha, maryna	Run	Y scan of the tilted LumiCal at 6 degrees. 2 positions for the scan are chosen.														
9.03	16:17	Sasha, maryna	Run	Pedestal Run	103	2352	0	5	242.1	1724.4	-	-	-	-	-	With W before 1st sensor	.-.	
9.03	16:29	Louis, maryna	Run	channel 24	981	52108	106	52692	27	5	236.6	1724.4	-	-	-	With W before 1st sensor	.-.	
9.03	17:34	Louis, maryna	Run	Channel 24, large (2.2 GB for SRS, pedestal noise wrongly set to 10)	982	-35000	107	about 35k	27	5	236.6	1724.4						
9.03	18:00	Louis, maryna	Run	Channel 24	983	50179	108	50720	Energy scan	5	236.6	1724.4						
9.03	18:34	Louis, maryna	Run	Channel 24 (Run terminated because fireDAQ error)	984	23549	109	23446	27	5	236.6	1724.4						
9.03	18:56	Louis, maryna	Run	Channel 24	985	27735	110	28056	27	5	239.7	1692						
9.03	19:30	Louis, maryna	Run	Channel 42	992	50394	115	50901	27	5	239.7	1692						
9.03	20:00	Louis, maryna	Run	Channel 42	993	51227	116	51766	27	5	239.7	1692						
9.03	20:30	Louis, maryna	Run	Channel 42	994	50388	118	50962	27	5	239.7	1692						



Date	Hour	Shifters/Logger	Info type	Additional comment	EUDAQ		SRS		Beam information		Lumi Table position		Stack position				FLAME settings	
					Run number	Events	Run number	Events	Rate	Energy	X_pos, [mm]	Y_pos, [mm]	Conf	B0	B1	B2		Comment
11.03	04:13	Mikhail, Roma	Run	Energy scan - FireDAQ crashed; stopped after ~28k events, but Flame root tree is ok (maybe ~2k last events should be rejected from the analysis because of wrong extended TLU)	1053	27849	206	28151	16	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	04:44	Mikhail, Roma	Run	Energy scan	1054	50049	207	50588	16	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	05:37	Mikhail, Roma	Run	Energy scan - FireDAQ crashed; the same situation as for run 1053	1055	20977	208	21185	16	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	06:03	Mikhail, Roma	Run	Energy scan - FireDAQ crashed;	1056	12294	209	12429	15	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	06:17	Mikhail, Roma	Run	Energy scan	1057	50109	210	50641	16	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	07:10	Mikhail, Roma	Run	Energy scan - FireDAQ crashed: In fireDAQ software: come back for isTurnOver = 100	1058	12795	211	12435	17	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	07:17	Mikhail, Roma	Run	Energy scan	1060	50534	213	51040	17	6	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	08:20	John, Jakub	Run	1 GEV BEAM (if finished before 8:00)	1061		214	-2080			234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	08:30	John, Jakub	Run	Pedestal Run	1067	50283	217	50786	41	1	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	08:50	John, Jakub	Run	Energy scan	1068	50795	218	51312	41	1	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	09:13	John, Jakub	Run	Energy scan	1069	50679	219	51233	41	1	234.6	1712	A	1	2	3	With W before 1st sensor	grounding Conf 31
11.03	09:13	Szymon	Run	LUXE Bremsstrahlung set-up Magnet current scan with telescope close to magnet	1075	7999380				5			A	1	2	3	With W before 1st sensor	grounding Conf 31
12.03	00:12	Bohdan, Lapkin	SETUP	Whole day we were setting the setup for the LUXE measurements. LumiCal placed on the further table with 3-6th ALPIDE planes. We put 2 targets and Jakub slightly reduced the noise by the afternoon of 11.03. The picture of detailed experimental setup is not ready yet, but should be made and put in public access. 3rd scintillator didn't seem to work, and removed for now							LumiCal is moved from table 8/11 P1 to 1/X P4							grounding Conf 37 (152-153) lines in "FLAME and SRS grounding scheme" excel file
12.03	00:28	Sasha	Run	Pedestal Run	1125	150613	228	-2000			-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	02:05	Bohdan, Lapkin	Run	LUXE experiment. MAGNET ON (200 A)	1126	150500	230	-150000	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	03:44	Bohdan, Lapkin	Run	LUXE experiment. MAGNET ON (200 A)	1127	150342	231	152023	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	05:24	Bohdan, Lapkin	Run	LUXE experiment. MAGNET ON (200 A)	1128	150938	232	151889	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	07:02	Bohdan, Lapkin	Run	LUXE experiment. MAGNET ON (200 A)	1128	150938	233	152926	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	07:09	Bohdan, Lapkin	Run	Pedestal Run	1129	159719	234	-2000			-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	08:55	Ruth, Maryna	Run	LUXE experiment. MAGNET ON (200 A)	1129	159719	235	161426	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	09:10	Ruth, Maryna	SETUP	Sasha removed the lead target, following runs will be taken without it. Target configuration: 1st Tungsten target after first two telescope planes, no lead target in between second telescope arm	1130	23951	236	24203	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	09:25	Ruth, Maryna	Run	Pedestal Run, MAGNET OFF			237	check later			-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	08:55	Ruth, Maryna	Run	Pedestal Run, MAGNET OFF			238	2115			-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	08:50	Ruth, Maryna	Run	LUXE experiment. MAGNET OFF. Take data for telescope alignment	1131	100567	239	101425	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	10:45	Ruth, Maryna	Run	Sasha removed the tungsten target. Target configuration: No target at all	1132	91443	240	92366	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	11:50	Ruth, Maryna	SETUP	LUXE experiment. MAGNET OFF. Take data for telescope alignment	1132	91443	240	92366	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	11:55	Ruth, Maryna	Run	Target configuration: Tungsten 90micron before magnet, lead 1.1mm between telescope planes	1133	118301	241	119541	26	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
12.03	22:18	Sasha, Jakub	Run	LUXE experiment. MAGNET ON, 200 A, increased to 300A after ~25000 events - leaving it for the whole night Overnight run seems to go smoothly, finishing it, and starting new run at the same configuration	1285	1132375 (last flame TLU the same)	247	1143396	38(32)	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 37
13.03	08:10	Szymon, John	Info	Quite high noise levels: F1(5.8), F2(19.5), F3(26.8), SRS1(127), SRS2(84), SRS3(55), SRS4(122), SRS5(55), SRS6(82), SRS7(63), SRS8(85)														
13.03	08:15	Szymon, John	Run	LUXE experiment. MAGNET ON 300A	1286	261895	250	263799	34	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	10:30	Szymon, John, Sash	Info	Playing around with trigger														
13.03	13:30	Szymon, John, Sash	Run	Magnet at 300A	30	153621	253	155203	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	~15:00	Szymon, John, Sash	Info	Modifying trigger and scintillator position. Two extra counters were installed for VETO. Their position, was tuned to veto 5GeV electrons after the magnet with 300A current. For TLU settings see page "scintillator counters".														
13.03	17:00	Sasha	Run	W and Pb targets, 300A magnet current.	1507	112298	255	112761	32	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	18:06	Sasha	Run	W and Pb targets, 300A magnet current.	1508	57088	256	57668	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	18:39	Sasha	Run	W and Pb targets, 300A magnet current.	1509	70081	257	70823	32	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	19:20	Louis, Sasha	Run	W and Pb targets, 300A magnet current.	1510	80450	258	81276	28	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	20:52	Louis, Sasha	Run	W and Pb targets, 300A magnet current. FLAME CRASHED around 60k events!	1511	66988	259	67675	31	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	21:29	Mykyta, Bohdan	Run	W and Pb targets, 300A magnet current.	1512	117031	260	118235	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 38
13.03	22:39	Louis, Sasha	Run	W and Pb targets, 300A magnet current.	1513	73683	261	74485	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 39
13.03	23:20	Louis, Sasha	Run	W and Pb targets, 300A magnet current. SRS did not run.	1514	20000		0	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 39
13.03	23:34	Louis, Sasha	Run	W and Pb targets, 300A magnet current.	1515	34054	262	34401	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 39
13.03	1/1899 00:00	Louis, Sasha	Run	W and Pb targets, 300A magnet current. Overnight run	1518	824539	265	833035	33	5	-232.4	-577.9	A	1	2	3	With W before 1st sensor	grounding Conf 40





Sensor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Configuration A	B0	B1	B2													
Configuration B				B0	B1	B2										
Configuration C							B0	B1	B2							
Configuration D										B0	B1	B2				
Configuration E													B0	B1	B2	
Configuration F							B0									

(A-) - without first tungsten plate

Measurements plan for FLAME ASICs commissioning: 06.03.2020	
1	5 GeV, configuration A, (500 k events)
2	Energy scan, configuration B (500 k events each)
2a	5 GeV
2b	4 GeV
2c	3 GeV
2d	2 GeV
2e	1 GeV
3	Debug data, 5 GeV, configuration B (50 k events each)
3a	Raw data
3b	Pedestal subtraction data
3c	Common mode subtraction data
3d	FIR filter data
4	5 GeV, configuration B, low FE gain, (100 k events)
5	5 GeV, configuration C, (500 k events)
6	5 GeV, configuration D, (500 k events)
7	5 GeV, configuration E, (500 k events)
8	5 GeV, configuration A without tungsten frame in front, (500 k events)
9	Debug data, 5 GeV, configuration A without tungsten frame in front (50 k events each)
9a	Raw data
9b	Pedestal subtraction data
9c	Common mode subtraction data
9d	FIR filter data
10	XY scan, 5 GeV, configuration A without tungsten frame in front (500 k events each)
10a	Scan up / down (larger / smaller pads), 5(?) different positions
10b	Scan left / right (do we need it?)

Note: On 8.03 fixed the issue with missing last ~1000 events in FireDaq

TURNING ON THE MAGNET:

ALPIDE:	50	51	52	53	54	sigma( sigma)	X	Y	dfelta_X	Beam energy						
NO magnet	483	530	417	461	494		175.7	290.4		5						
100A	476	0.21	530	0	174	7.29	193	8.04	206	8.64	146	4.38	185.1	290.4	9.4	5
100A	479	-0.09	531	-0.03	784	-18.3	795	-18.06	802	-17.88	166	4.98	196.2	290.4	11.1	5
200A - 5GeV	477	0.06	521	0.3	534	7.5	538	7.71	536	7.98	146	4.38	196.2	290.4	0	5
200A - 5GeV	477	0	531	-0.3	753	-6.57	754	-6.48	756	-6.6	161	4.83	203.3	290.4	7.1	5
200A - 4GeV	470	0.21	520	0.33	635	3.54	631	3.69	620	4.08	161	4.83	203.3	290.4	0	4
200A - 3GeV	464	0.18	513	0.21	442	5.79	424	6.21	402	6.54	156	4.68	203.3	290.4	0	3
200A - 5GeV	483	-0.57	527	-0.42	751	-9.27	752	-9.84	749	-10.41	170	5.1	203.3	290.4	27.6	5
							255	7.65								

Sensor pitch [mm]	1.8				
Sectors angle [deg] / [rad]	7.5 0.1308996939				
XY Jakub scan: 07.03.2020					
Beam center (channel)	Y position [mm]	Delta Y [mm]	X position [mm]	Delta X [mm]	Done
63	1630.2			247.2	
60	1635.6	5.4		246.5	0.7
57	1641	5.4		247.1	0.7
54	1646.4	5.4		246.4	0.7
51	1651.8	5.4		245.7	0.7
48	1657.2	5.4		244.5	0.7
42	1668	10.8		243.1	1.4
36	1678.8	10.8		241.7	1.4
30	1689.6	10.8		240.2	1.4
24	1700.4	10.8		238.8	1.4
18	1711.2	10.8		237.4	1.4
12	1722	10.8		236.0	1.4
6	1732.8	10.8		234.5	1.4
0	1743.6	10.8		233.1	1.4

\*x calculated here doesn't perfectly match with a center

Starting scan: 10.03.2020						Done
R	Pad number	Channel	Y Position [mm]	Delta Y	X Position	
160	19.5	20	1709.2		233.8	
170	14	14	1719.2	-10	232.483	
175	11.2	11	1724.2	-5	231.825	
180	8.4	8	1729.2	-5	231.167	
185	5.6	6	1734.2	-5	230.509	
190	2.9	3	1739.2	-5	229.850	

\*x calculated here doesn't perfectly match with a center, so we adjusted with monitor. X in the RUN is in the MainLogBook table

Tilting calorimeter scan: 09.03.202							Done:
x_pos	y_pos	x_tilted	y_pos_tilt_2_deg	y_tilt_4_deg	y_tilt_6_deg	channel	
245.7	1651.8	244.1	1659.8	1667.8	1675.8	51	
243	1668	241.9	1676	1684	1692	42	
238.7	1700.3	xxx*	1708.3	1716.3	1724.3	24	
237.4	1711.3	236.4	1719.3	1727.3	1735.3	18	

\*x calculated here doesn't perfectly match with a center, so we adjusted with monitor. X in the RUN is in the MainLogBook table

Starting LUXE measurement: 12.03.2020 00:12	
SETUP	Placement:
1st target: W 90mkm/100mkm, measured/documented	After 1st telescope arm, before the magnet
2nd target: Pb 3.5 mm (bad from the trash can)	Between telescope planes of 2nd arm
Lumical on the further "1/X P4" table	X = -232.4 mm, Y = -577.9 mm
1st scintillator (isn't moved)	Before 1st telescope arm
2nd scintillator (isn't moved)	After 1st telescope arm
(It didn't worked. REMOVED) 3rd scintillator on the "DESY MEA ALPIDE" table	X = 165.7 mm, Y = 267.8 mm
1, 2 ALPIDE planes	untouched
3, 4, 5, 6 ALPIDE planes	Moved to the 1/X P4 table to create 2nd arm in front of the LumiCal



## TAKING DATA with FLAME+TELESCOPE

### Standard operating mode:

For the standard operating mode, the FireDAQ (DAQ for Flame) and EUDAQ are running.

- To start the run push "START" button on EUDAQ.
  - > In overall about 0.5M events should be taken for one configuration. The routine is to take 5 times about 100k events runs.
- Verify if FireDAQ is connected (fire\_producer). If not -> run FireDAQ (see point 2 below)
- Verify if all telescope planes are taking events. If not -> run setup from scratch.
- To stop the run push "STOP" button on EUDAQ.
- Fill the log spreadsheet (in Event Number put the aida\_tlu trigger number)

### Running setup from scratch:

- 1 - Run the EUDAQ software by typing `/run_alpide_FCAL_onPort44000.sh` in `/home/teleuser/FCAL` on left PC.
  - > It will open the EUDAQ and connect the telescope planes (alpide\_x) and aida\_tlu.
- 2 - Run fireDAQ software on firedaq-PC
  - > go to: `/home/firedaq/fireDAQ_software/firedaq`
  - > type `./fireDAQ`
  - > FireDAQ GUI should appear (look at the printscreen below).
  - > `fire_producer` should appear in EUDAQ.
  - > From this point you do not have to do anything on fireDAQ except monitoring in terminal if it does not crash.
- 3 - Run fireDAQ software on firedaq-PC
- 4 - Load initialization file: `/home/teleuser/FCAL/conf/alpide_FCAL.ini` and `/home/teleuser/FCAL/conf/alpide_FCAL_FLAME_beam.conf` configuration file (by pressing LOAD button in EUDAQ)
- 5 - Make initialization by pressing INIT button on EUDAQ.
  - > Wait for all producers change the status to INIT.
- 6 - Make configuration by pressing CONFIG button on EUDAQ.
  - > Wait for all producers change the status to CONFIG.
- 7 - After this, data taking is controlled by "START" and "STOP" button -> see Standard operating mode

### Running fireDAQ:

When EUDAQ is running propoerly and fireDAQ has crashed:

- Run `./fireDAQ` on firedaq-PC
- In EUDAQ, all processors are probably "STOPPED" and fireDAQ is "UNINIT". Press the right button on `fire_producer` and press "Initialise".
- Then press "CONFIG" (also right-click on `fire_producer` or main "CONFIG" button works)

### DAQ TLU\_number problem:

It might happen that fireDAQ will have a problem with saving a proper TLU number. On the terminal, where the fireDAQ is running, a set of warnings about the TLU issue will be displayed.

- Stop the run in EUDAQ.
- Start with standard "START" command.

## TAKING DATA with FLAME+TELESCOPE+SRS

Path for scripts: `~/SiliconTAU/Scripts/CScript/script/TB2020`

Path for GUI: `~/SiliconTAU/Software/mndaq`

Color corresponds where to run the command

### Taking pedestal data:

The EUDAQ and FireDAQ should be run as described above.

Remember to switch off the beam when taking pedestal data.

- `source stop_fec0.sh`
- `./PllpedestalRunFEC0.sh`
- `source start_fec0.sh`
- `./mndaq` -> GUI should shown up
- In the left top corner of the GUI in `-run type-` section select "Pedestal"
- Mark "Write File" and "Monitor" flags.
- Fill up the comment (e.g *Pedestal for rotation scans*)
- Press "START" button
  - > The **run number** is displayed on the left side in dark red.

FIRE\_DAQ GUI:

The screenshot shows the FIRE\_DAQ GUI with several panels:

- Run control:** File name: TB\_FIRE\_717. Buttons for Start (green), Stop (red), Offline analysis, Configure, and Load Config File.
- Configuration:** Trigger source: TLU, Trigger delay: 2045. Parameters for Busy stretch (10000), Picking time (314), Time norm (113), and Amp norm (569). Includes checkboxes for Enable DSP, Enable CMS, Enable DAQ, and Include SRS. Buttons for Reset ev\_ctr, Synchronize, YIELD, Calculate ped, and Rst ev\_ctr.
- Main canvas:** 3D detector view. Monitor every: 1, Refresh: 1, Current TLU: 80847. A 3D plot titled "Integrated hit map" showing detector hits in a 3D volume.
- Plane configuration:** A table with columns for #Plane, na, Pulse period, RAM dept, FIR th, Pulse th, and ASICs 0-7.

#Plane	na	Pulse period	RAM dept	FIR th	Pulse th	ASIC_0	ASIC_1	ASIC_2	ASIC_3	ASIC_4	ASIC_5	ASIC_6	ASIC_7
0	<input checked="" type="checkbox"/>	20000000	10	20	3	C00000	0	4080	0	0	0	0	0
1	<input checked="" type="checkbox"/>	20000000	10	20	3	1000005E	0	80200000	10C00000	0	0	0	0
2	<input checked="" type="checkbox"/>	20000000	10	20	3	0	0	200	40000000	0	0	0	0
3	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
4	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
5	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
6	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
7	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
8	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0
9	<input checked="" type="checkbox"/>	20000000	10	16	2	0	0	0	0	0	0	0	0

- the 3D integrated detector hit map should look similarly to this on the printscreen when data are taken correctly
- the plots that are shown in online-monitoring can be changed. Also additional plots are available when selecting "Additional canvas" (bottom part of the GUI).

EUDAQ GUI:

The screenshot shows the EUDAQ GUI with the following information:

- State:** Current State: Running
- Control:** Init file: `/home/teleuser/FCAL/conf/alpide_FCAL.ini`, Config file: `/home/teleuser/FCAL/conf/alpide_FCAL_FLAME_beam.conf`, Next RunN: [empty]
- Buttons: Load, Init, Load, Config, Start, Stop, Reset, Terminate
- Progress: 0%

- Monitor the number of events collected in left bottom corner (in "footer" of the GUI)
  - Press "STOP" button when sufficient number of data collected.
- Taking physics data:**
- Before that pedestal should be collected. SRS is operated on tgc@localhost (grey laptop).
- `source stop_fec0.sh`
  - `/PIIphysicsRunFEC0.sh`
  - `/rmndaq`
  - `source start_fec0.sh`
  - In the left top corner of the GUI in -run type- section select "Physics"
  - Switch to the "Option" tab
  - > Fill up the pedestal run name (e.g run100.root) and press "LOAD". Verify if loaded properly at bottom right of the GUI (in "footer"). "2048 channels are loaded" message should appear
  - > In section -Raw common mode correction- Mark "On" and set "Signal in Pedestal Sigma x" on value 3
  - Back in main tab, mark "Write File" and "Monitor" flags and add comment (e.g *Run for 1 GeV*)
  - press button "START" on SRS GUI
  - **Only Afterwards** press EUDAQ "Start" to start the run (-> see Taking data with Flame and Telescope - [Standard operating mode](#))
  - Stop EUDAQ when sufficient events are collected
  - Write down the SRS event number
  - Press "STOP" on SRS system.

"Segmentation fault" in the terminal of SRS GUI is a expected behaviour. Anyway, if other crash appears or just to verify if the tree is saved correctly, one may verify the number of events in the root tree that is stored:  
`/home/tgc/SiliconTAU/Data/FEC0/TB20/Ntuples/`

Log:

ScanFile:  Log

---

Run Number: 733	one:DataCollector: 22269 Events	22269 Events
alpine_0:Producer: 22179 Events	alpine_1:Producer: 22267 Events	
alpine_2:Producer: 22267 Events	fire_producer:Producer: 20950 Events	
alpine_3:Producer: 22267 Events	alpine_4:Producer: 22267 Events	
aida_tlu:Producer: 22274 Events	StdEventMonitor:Monitor: 2226 Events	

---

type	name	state	connection	message	information
DataCollector	one	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22269 <MonitorEventN> 2226.000000 <_SERVER> tcp://44429
Producer	alpine_0	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22179
Producer	alpine_1	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22267
Producer	alpine_2	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22267
Producer	alpine_3	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22267
Producer	alpine_4	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22267
Producer	aida_tlu	RUNNING	tcp://127.0.0.1...	Started	<EventN> 22274 <Freq. (avg.) [kHz]> 0.665512 <IDTrig> 22276 <Particles> 26328 <Run duration [s]> 33.471956 <Scaler> 32439:375516...
Monitor	StdEventMon...	RUNNING	tcp://127.0.0.1...	Started	<EventN> 2226 <_SERVER> tcp://38637
Producer	fire_producer	RUNNING	tcp://192.168.1...	Started	<EventN> 20950

Storage of the data files: <b>ALL DATA IS BACKUPED ON SASHA'S HDD</b>	
This section explains where to find raw data files from the TELESCOPE, FLAME, SRS. And people who can operate software to extract the physical information from raw data files	
Telescope:	
Computer:	fhrcdata
Path:	/home/teleuser/FCAL/data/
File format:	.raw
Who can reconstruct:	Sasha
FLAME:	
Computer:	firedaq
Path:	/home/firedaq/fireDAQ_software/Data/
File format:	.root
Who can reconstruct:	Jakub
SRS	
Computer:	tgc@localhost (grey laptop)
Path:	/home/tgc/SiliconTAU/Data/FEC0/TB20/Ntuples/
File format:	.root
Who can reconstruct:	Sasha

**Installing 5-th Alpide (notes from Y!):**

Things to check in software:

- In file: run\_alpide\_FCAL\_onPort44000.sh uncomment lines with:  
#xterm -T "ALPIDE 5" -e "/home/teleuser/FCAL/soft/INSTALL/bin/euCliProducer -n JadeProducer -t alpide\_5" &  
#sleep 1

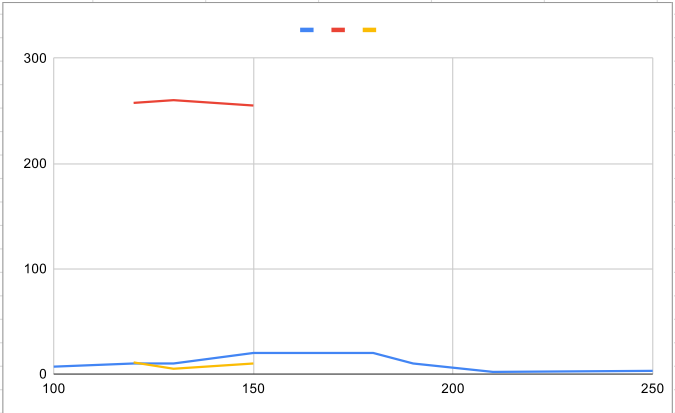
- Check that 5-th plane setup are in alpide\_FCAL.ini:  
[Producer.alpide\_5]  
IP\_ADDR="131.169.133.175"  
WRITER\_NAME="EudaqWriter\_v3"

- Check that 5-th plane setup are in alpide\_FCAL\_FLAME\_beam.conf:  
[Producer.alpide\_5]  
EUDAQ\_ID=55  
EUDAQ\_DC=one

- (OPTIONAL) not to remove events in case hit is absent in one of telescope  
one can change the section [DataCollector.one] in alpide\_FCAL\_FLAME\_beam.conf:  
MINIMUM\_SUB\_EVENT = 6 <- smaller number

- If telescope is not working ping it by 131.169.133.175 from internal comp. to wake him up!

Run Number	PMT0			PMT1			PMT2			PMT3			Config																								
	Voltage	Threshold	Rate	Voltage	Threshold	Rate	Voltage	Threshold	Rate	Voltage	Threshold	Rate																									
	0.89			0.82									200	100	120	130	150	160	170	180	190	200	210	250													
Trigger logic	T0		T1		T2		T3		Rate																												
	del	str	del	str	del	str	del	str	del	str																											
T0													970																								
T1													2600																								
T0+T1													870																								
T0+!T1													270																								
!T0+T1													2000																								
T2						0	2		0	2		2	1370																								
T3						0	2		0	2		2	1090																								
T2+T3						0	2		0	2		2	1000																								
T2+!T3						3	2		0	8		8	390																								
!T2+T3						0	8		3	2		2	260																								
T1				0	2		0	2		2			2550																								
T2				0	2		0	2		2			1370																								
T1+T2				1	2		0	2		2			340																								
T1+!T2				2	2		0	5		760			760																								
!T1+T2				2	3		0	6		760			760																								
T1+!T2				2	2		0	2		820			820																								
!T1+T2				3	2		0	8		2400			2400																								
T1+!T2				2	2		0	8		2500			2500																								
!T1+T2				5	2		0	12		2100			2100																								
!T1+!T2				5	2		0	15		2100			2100																								
!T1+T2				0	15		3	2		80			80																								
T1+T3				5	2			0	15				15																								
T1+!T2+T3				5	2		0	15	0	15			2000																								
T0+T1+!T2+T3	5	2	5	2	0	15	0	15		600																											
T0+T1+T2+T3 [1	2	2	2	2	0	2	0	2		10			10																								
										Yposition (1	Yposition (1	257.6	260.2	255.1	20	20	20	20	10	6	2	3															
T0+T1+T2+T3	2	2	2	2	0	2	0	2		10			10																								
										X:		88.1	86.1	90.1	92.3	95																					
T0+T2	2	2			0	2				165		165	107	185	200	154																					
												200	190	10	200																						
										Y:		257.9	255.4	251.7	260																						
T0+T2	2	5			0	5				520																											
	2	2			0	2				189			X																								
										411	250 A		92.3																								
										98	300 A		92.3																								
										240	300 A		95.1																								
										417	300 A		98.3																								
										540	300 A		101																								
										500	300 A		101.2																								
										400	300 A		104.3																								
													Y																								
										540	300 A		260																								
										520	300 A		263																								
										500	300 A		257																								
										496	300 A		260.2																								





[1] Probably the settings were actually different than those in the table, particularly the delay time for the counter 0.