04/05/2011

Mission: 'White Sands'



Weather: Clear

Comments: Mission to White Sands and White River, AR. However, sometime after the targets at White Sands the laser died.

Sample rate: 5 kHz

Energy levels throughout channels: variable: some beams were filtered to simulate ICESat-2 'weak' beams (see **colored** channels below). FOV: 'Cluster FOV' (see image below)

maximum off-nadir "+" angles are to the left side angle is +/- 1.05 km as the plane flies forwards 0 0 0 0 0 angle, in milliradians -2.0 -1.8 -0.1+0.1 +1.8 +2.0+2.2 -2.1 -1.9 -1.0 -0.2 0 +0.2 +1.0 +1.9 +2.1

Footprint geometry for initial flights

Angle to Channel map:

Fiber	1	2	3	4	5	6	7	8								
Connector	6	5	2	1	0	-1	-5	-6								
Channel	47	48	49	50	46	45	44	43								
Power (Matt, mW)	32	33.6	25	17.2	25.2	25	20	23.8								
Filter	0.49	0.15	0.49	0.15	0.49	0.15	0.49	0.15								
Raw Energy (Matt, uJ)	6.4	6.72	5	3.44	5.1	5	4	4.76								
Filtered Energy (uJ)	3.14	1.01	2.45	0.52	2.50	0.75	1.96	0.71								
Path Lengths (Matt, mm)	0	16	32	48	65	81	97	113								
Angle (mrad)	2	1.9	0.2	0.1	0	-0.1	-1.9	-2								
Approx offset on ground (m): 65k'	40	38	4	2	0	-2	-38	-40								
Fiber	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8
Channel	2	3	1	4	16	5	15	6	14	7	13	8	12	9	11	10
Power (Matt, mW)	34.4	38	32.2	35.8	18.8	24.7	27.6	26.7	24.5	31.2	30.2	28.8	27.5	27.6	31.2	31.4
Filter	0.69	0.69	0.49	0.69	0.69	0.69	0.69	0.49	0.69	0.69	0.69	0.69	0.69	0.49	0.69	0.69
Raw Energy (Matt, uJ)	6.88	7.6	6.44	7.16	3.76	4.94	5.52	5.34	4.9	6.24	6.04	5.76	5.5	5.52	6.24	6.28
Filtered Energy (uJ)	4.75	5.24	3.16	4.94	2.59	3.41	3.81	2.62	3.38	4.31	4.17	3.97	3.80	2.70	4.31	4.33
Path Lengths (Matt, mm)	27	43	59	75	92	108	124	140	156	172	188	204	221	237	253	269
Angle (mrad)	-2.1	-2	-1.9	-1.8	-1	-0.2	-0.1	0	0.1	0.2	1	1.8	1.9	2	2.1	2.2
Approx offset on ground (m): 65k'	-42	-40	-38	-36	-20	-4	-2	0	2	4	20	36	38	40	42	44

Points of interest:

Time (UTC)	TOF File	Description
16:21:57	1	Laser status healthy
16:34:27	66	start Grand Canyon leg
16:37:26	82	end Grand Canyon leg
16:46:04	133	start Flagstaff run
16:47:52	142	end Flagstaff run
17:12:41	315	start McCarty's run
17:16:9	332	end McCarty's run
17:33:14	470	start Carrizoz run
17:34:13	477	end Carrizoz run
17:36:18	502	start of first ICESat SW run
17:39:25	551	end of first ICESat SW run
17:44:02	607	start of first ICESat NW run
17:47:24	666	end of first ICESat NW run
17:52:32	720	start of second ICESat SW run
17:55:39	770	end of second ICESat SW run
17:59:45	819	start of second ICESat NW run
18:03:03	877	end of second ICESat NW run
18:07:38	924	start of third ICESat SW run
18:10:44	974	end of third ICESat SW run
18:14:37	1022	start of third ICESat NW run
18:17:54	1080	end of third ICESat NW run
18:22:22	1121	start of White Sands NP SE run
18:24:37	1164	end of White Sands NP SE run
18:28:25	1206	start of White Sands NP SW run
18:30:37	1248	end of White Sands NP SW run
18:37:50	1347	Laser dies (sometime after this)