

CLUSTER DEFINITION Support Table

Cluster Definition 1

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]			Pixel calculation			
				Min	Max		Pixel	Wavelength		
1	5	841	837	213,29	313,92		842	314 nm		
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max		Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	1	0	0	5
1	5	196	192	213,29	239,88	straylight	2	1	5	192
2	197	551	355	240,00	281,90	virtual channel 1a	3	2	197	355
3	552	841	290	282,01	313,92	virtual channel 1b	4	3	552	290
4	842	1018	177	314,03	333,80	unused pixel	5	4	842	177
5	1019	1023	5			Blinded Pixel	6	5	1019	5

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Cluster Definition 1

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]			Note: lower limit of PMD 1 should be 307 nm, but this is outside of channel limits			
				Min	Max		Pixel	Wavelength		
2	76	947	872	403,96	309,43					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max		Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	7	0	1024	5
1	5	75	71	411,63	404,07	unused pixel	8	1	1029	71
2	76	853	778	403,96	320,14	virtual channel 2b	9	2	1100	778
3	854	947	94	320,02	309,43	virtual channel 2a	10	3	1878	94
4	948	1018	71	309,31	301,18	unused pixel	11	4	1972	71
5	1019	1023	5			Blinded Pixel	12	5	2043	5

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Cluster Definition 1

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]			Note: lower limit of PMD 1 should be 307 nm, but this is outside of channel limits			
				Min	Max		Pixel	Wavelength		
3	33	929	897	391,88	605,48					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max		Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	9	10			Blinded Pixel	13	0	2048	10
1	10	32	23	386,09	391,63	unused pixel	14	1	2058	23
2	33	929	897	391,88	605,48	Channel 3 (main part)	15	2	2081	897
3	930	1018	89	605,72	627,17	unused pixel	16	3	2978	89
4	1019	1023	5			Blinded Pixel	17	4	3067	5

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Cluster Definition 1

Channel ID	Start Pixel	Channel		Channel Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
		End Pixel	Length	Min	Max					
4	10	918	909	597,60	789,85					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max					
0	0	4	5			Blinded Pixel	18	0	3072	5
1	5	9	5	596,48	597,38	unused pixel	19	1	3077	5
2	10	918	909	597,60	789,85	Channel 4 (main part)	20	2	3082	909
3	919	1018	100	790,06	811,25	unused pixel	21	3	3991	100
4	1019	1023	5			Blinded Pixel	22	4	4091	5

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Cluster Definition 1

Channel ID	Start Pixel	Channel		Channel Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
		End Pixel	Length	Min	Max					
5	10	1000	776	776,24	1056,25					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max					
0	0	4	5			Blinded Pixel	23	0	4096	5
1	5	9	5	774,73	775,94	unused pixel	24	1	4101	5
2	10	1000	991	776,24	1056,25	Channel 5 (main part)	25	2	4106	991
3	1001	1018	18	1056,53	1061,40	unused pixel	26	3	5097	18
4	1019	1023	5			Blinded Pixel	27	4	5115	5

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Cluster Definition 1

Channel ID	Start Pixel	Channel		Channel Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
		End Pixel	Length	Min	Max					
6	24	996	973	990,84	1750,09					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max					
0	0	9	10			Blinded Pixel	28	0	5120	10
1	10	23	14	979,55	990,03	unused pixel	29	1	5130	14
2	24	996	973	990,84	1750,09	Channel 6/6+ (main part)	30	2	5144	973
3	997	1013	17	1750,92	1764,24	unused pixel	31	3	6117	17
4	1014	1023	10			Blinded Pixel	32	4	6134	10

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Cluster Definition 1

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description				
				Min	Max					
7	48	987	940	1939,99	2040,19					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max		Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	9	10			Blinded Pixel	33	0	6144	10
1	10	47	38	1935,55	1939,88	unused pixel	34	1	6154	38
2	48	987	940	1939,99	2040,19	Channel 7 (main part)	35	2	6192	940
3	988	1013	26	2040,29	2042,70	unused pixel	36	3	7132	26
4	1014	1023	10			Blinded Pixel	37	4	7158	10

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Cluster Definition 1

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description				
				Min	Max					
8	10	1013	1004	2260,61	2384,49					
Cluster				Cluster Wavelength [nm]		Description				
Cluster ID	Start Pixel	End Pixel	Length	Min	Max		Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	9	10			Blinded Pixel	38	0	7168	10
1	10	1013	1004	2260,61	2384,49	Channel 8	39	1	7178	1004
2	1014	1023	10			Blinded Pixel	40	2	8182	10

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
1	5	841	837	213,29	313,92		842	314 nm		
Cluster			Cluster Wavelength [nm]		Description		Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	1	0	0	5
1	5	196	192	213,29	239,88	straylight	2	1	5	192
2	197	551	355	240,00	281,90	virtual channel 1a	3	2	197	355
3	552	747	196	282,01	303,54	virtual channel 1b	4	3	552	196
4	748	841	94	303,65	313,92	overlap region, PMD 1	5	4	748	94
5	842	1018	177	314,03	333,80	unused pixel				
5	1019	1023	5			Blinded Pixel	6	5	1019	5

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
2	76	947	872	403,96	309,43		278	382 nm		
Cluster			Cluster Wavelength [nm]		Description		Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	7	0	1024	5
1	5	75	71	411,63	404,07	unused pixel				
1	76	189	114	403,96	391,87	overlap region 2b	8	1	1100	114
2	190	853	664	391,76	320,14	UV DOAS, PMD 1	9	2	1214	664
3	854	947	94	320,02	309,43	overlap region 2a, UV DOA	10	3	1878	94
4	948	1018	71	309,31	301,18	unused pixel				
4	1019	1023	5			Blinded Pixel	11	4	2043	5

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
3	33	929	897	391,88	605,48		612	530 nm		
Cluster			Cluster Wavelength [nm]		Description		Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	9	10			Blinded Pixel	12	0	2048	10
1	10	32	23	386,09	391,63	unused pixel				
1	33	82	50	391,88	404,10	overlap region	13	1	2081	50
2	83	162	80	404,34	423,73		14	2	2131	80
3	163	598	436	423,97	526,96	VIS DOAS, PMD 2	15	3	2211	436
4	599	673	75	527,20	544,56		16	4	2647	75
5	674	760	87	544,80	565,08	AE	17	5	2722	87
6	761	895	135	565,31	597,28		18	6	2809	135
7	896	929	34	597,52	605,48	overlap region	19	7	2944	34
8	930	1018	89	605,72	627,17	unused pixel				
8	1019	1023	5			Blinded Pixel	20	8	3067	5

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
4	10	918	909	597,60	789,85		116	620 nm		
Cluster				Cluster Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	21	0	3072	5
	5	9	5	596,48	597,38	unused pixel				
1	10	45	36	597,60	605,43	overlap region	22	1	3082	36
2	46	77	32	605,65	612,53		23	2	3118	32
3	78	612	535	612,75	725,99	PMD 3, AE	24	3	3150	535
4	613	746	134	726,19	753,77		25	4	3685	134
5	747	852	106	753,98	775,92	O2(A)	26	5	3819	106
6	853	918	66	776,13	789,85	overlap region	27	6	3925	66
	919	1018	100	790,06	811,25	unused pixel				
7	1019	1023	5			Blinded Pixel	28	7	4091	5

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
5	10	1000	991	776,24	1056,25		483	910 nm		
Cluster				Cluster Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	4	5			Blinded Pixel	29	0	4096	5
	5	9	5	774,73	775,94	unused pixel				
1	10	55	46	776,24	789,74	overlap region	30	1	4106	46
2	56	83	28	790,04	798,06		31	2	4152	28
3	84	608	525	798,35	946,62	PMD 4/7, AE	32	3	4180	525
4	609	766	158	946,90	990,40		33	4	4705	158
5	767	1000	234	990,68	1056,25	overlap region, (AE)	34	5	4863	234
	1001	1018	18	1056,53	1061,40	unused pixel				
6	1019	1023	5			Blinded Pixel	35	6	5115	5

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
6	24	996	973	990,84	1750,09		637	1470 nm		
Cluster				Cluster Wavelength [nm]		Description	Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max	Description	Cluster Index	Cluster Identifier	Start Pixel	Length
0	0	9	10			Blinded Pixel	36	0	5120	10
	10	23	14	979,55	990,03	unused pixel				
1	24	106	83	990,84	1056,23	overlap region	37	1	5144	83
2	107	334	228	1057,02	1233,24		38	2	5227	228
3	335	360	26	1234,01	1253,14	AE	39	3	5455	26
4	361	538	178	1253,90	1388,96		40	4	5481	178
5	539	566	28	1389,72	1410,36	Water Vapour	41	5	5659	28
6	567	745	179	1411,12	1548,51		42	6	5687	179
7	746	899	154	1549,30	1670,70	Water/Ice cloud & PMD 5	43	7	5866	154
8	900	930	31	1671,51	1695,84		44	8	6020	31
9	931	944	14	1696,65	1707,26	add. Water/Ice cloud	45	9	6051	14
10	945	996	52	1708,08	1750,09		46	10	6065	52
	997	1013	17	1750,92	1764,24	unused pixel				
11	1014	1023	10			Blinded Pixel	47	11	6134	10

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
7	48	987	940	1939,99	2040,19		48	1940 nm		
Cluster			Cluster Wavelength [nm]		Description		Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max					
0	0	9	10			Blinded Pixel	48	0	6144	10
	10	47	38	1935,55	1939,88	unused pixel				
1	48	292	245	1939,99	1967,79		49	1	6192	245
2	293	440	148	1967,90	1984,05	CO2	50	2	6437	148
3	441	882	442	1984,15	2029,89		51	3	6585	442
4	883	987	105	2029,99	2040,19	CO2, H2O	52	4	7027	105
	988	1013	26	2040,29	2042,70	unused pixel				
5	1014	1023	10			Blinded Pixel	53	5	7158	10

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Cluster Definition 3

Channel ID	Start Pixel	Channel End Pixel	Length	Channel Wavelength [nm]		Description	Pixel calculation			
				Min	Max		Pixel	Wavelength	Pixel	Wavelength
8	10	1013	1004	2260,61	2384,49		46	2265 nm		
Cluster			Cluster Wavelength [nm]		Description		Cluster Index	Cluster Identifier	Start Pixel	Length
Cluster ID	Start Pixel	End Pixel	Length	Min	Max					
0	0	9	10			Blinded Pixel	54	0	7168	10
1	10	1013	1004	2260,61	2384,49	PMD 6, Ch. 8, unused pixel	55	1	7178	1004
2	1014	1023	10			Blinded Pixel	56	2	8182	10

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