

Annual Final Report

AFR

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Year number 18

AFR for the year 1998

ISSN 2535-3799

1998

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In the year 1998, Solar Cycle no. 23

The Average CV was: 72,7 and the Average 6-rot. Smoothed CV was: 61,5

The Average CV-USAF was: 56,9

giving an Estimated STDEV of: 10,1

CV-Helios Network observed on 365 days

CV-Helios Network had a total of 5381 observations in 1998

CV-Helios Network have received 338 observation entries in the year 1998

CV-Helios Network's observers had an average of 15,5 observations per day

This Annual Final Report contain results from 38 CV-observers

A sincere thanks to all observers for their fine contributions in the passed year.

CV-Helios Network 01. April 1999



Kjell Inge Malde
Director

CV-Helios Network Annual Final Report for 1998

Collated results CV for the year 1998												
CV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	55,06	14,30	69,05	78,89	63,80	55,27	121,00	77,15	137,11	24,22	40,00	129,44
2	33,06	16,50	53,50	71,31	79,92	84,94	125,55	78,78	111,00	31,67	34,42	121,80
3	26,60	24,58	44,00	53,00	86,70	83,05	107,29	71,90	104,71	28,33	59,89	120,80
4	12,29	19,59	53,50	41,80	92,67	87,53	116,50	62,30	88,16	31,91	79,38	125,00
5	3,40	14,62	60,64	74,71	96,27	82,94	107,09	74,68	109,31	30,25	84,47	89,27
6	1,09	16,09	46,00	79,36	100,55	75,84	63,79	113,14	124,19	34,50	96,31	118,00
7	0,80	18,21	35,42	98,50	111,57	74,69	63,79	123,31	135,91	75,89	89,64	163,54
8	0,58	14,47	32,31	136,80	91,26	58,47	48,56	122,81	145,06	66,22	85,54	159,89
9	0,80	20,73	41,05	115,44	85,19	82,67	60,92	132,18	132,74	63,90	92,14	159,38
10	3,50	20,17	63,28	114,36	59,25	78,15	41,12	151,23	100,56	54,29	123,45	132,14
11	12,80	25,67	60,43	92,67	65,33	74,00	42,31	158,52	98,50	47,17	89,08	97,69
12	28,30	40,93	69,00	74,07	82,83	100,33	46,91	155,79	126,92	46,64	82,45	115,50
13	40,84	53,00	56,54	59,61	89,21	57,87	27,61	140,55	132,92	54,55	110,70	99,42
14	41,59	57,67	64,63	52,00	83,15	48,00	28,29	126,10	104,00	54,22	119,78	105,17
15	42,62	56,15	88,13	72,36	76,88	45,75	33,52	118,30	84,43	61,67	86,42	76,38
16	56,58	60,67	80,50	43,79	69,28	48,10	49,00	135,00	55,75	102,06	54,08	82,33
17	50,80	62,85	70,60	22,56	73,19	55,89	48,35	127,36	86,15	109,67	59,45	81,93
18	31,67	54,81	60,44	16,71	59,38	45,50	33,00	115,35	97,28	113,25	45,62	81,13
19	12,00	48,06	82,68	19,79	32,41	38,00	36,00	151,41	110,53	110,00	49,63	66,17
20	9,17	42,00	78,50	21,25	25,07	44,86	54,29	116,85	105,50	53,64	51,82	52,83
21	2,69	35,59	97,79	25,94	22,33	54,38	75,58	113,33	110,10	51,00	56,12	49,63
22	3,50	30,67	127,86	18,81	11,30	56,30	92,06	96,95	112,29	51,11	53,95	34,78
23	24,00	33,88	102,00	9,84	18,70	51,64	83,65	100,71	110,53	44,90	48,42	33,44
24	47,50	39,43	95,45	3,18	31,00	65,86	104,29	99,54	105,79	36,80	66,58	69,80
25	74,88	53,56	89,58	22,20	54,00	62,65	104,27	93,42	98,00	23,08	123,00	68,21
26	78,94	52,20	76,37	31,00	59,29	72,83	101,10	95,41	101,61	23,06	128,50	97,29
27	66,94	31,88	85,00	30,92	60,31	94,89	103,00	88,96	114,54	11,57	100,33	114,55
28	53,43	29,08	70,27	40,40	44,92	97,00	111,00	90,24	83,77	22,56	99,91	116,67
29	41,71		79,89	35,00	32,67	109,60	111,64	118,56	55,50	49,17	86,00	103,73
30	17,20		71,18	44,06	37,86	113,17	95,25	155,62	31,33	53,36	124,00	94,76
31	15,00		84,24		54,71		85,35	142,95		48,42		93,43
70,59	28,69	35,26	70,64	53,34	62,94	70,01	74,91	114,46	103,81	51,91	80,70	98,52

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Collated results Observers for the year 1998												
Obsrvrs.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	17	23	19	9	15	15	18	20	19	9	15	9
2	16	18	10	13	13	17	22	18	18	9	12	5
3	15	19	9	7	10	19	17	20	17	9	9	10
4	17	17	8	10	12	19	10	23	19	11	8	8
5	10	13	11	17	15	18	11	22	13	8	15	11
6	11	11	8	14	11	19	14	22	16	12	13	7
7	10	14	12	10	14	13	14	26	22	9	14	13
8	12	15	16	10	19	15	18	21	16	9	13	9
9	10	11	22	16	16	15	13	22	19	10	7	8
10	18	18	18	14	20	13	17	26	16	14	11	7
11	25	15	14	15	21	19	16	27	14	6	13	13
12	20	15	14	14	18	9	11	24	12	14	11	10
13	19	12	13	18	19	15	18	20	12	11	10	12
14	17	18	8	15	20	20	24	20	13	9	9	6
15	13	13	8	14	17	20	21	23	7	12	12	13
16	12	12	6	14	18	20	17	20	20	16	12	12
17	25	13	5	9	16	19	23	22	13	15	11	15
18	18	16	9	7	16	12	20	23	18	16	13	16
19	8	16	19	14	17	19	21	27	15	15	16	12
20	6	19	14	16	14	21	21	26	22	14	11	12
21	13	17	19	17	9	21	24	15	20	11	17	16
22	10	12	14	21	10	23	17	21	14	9	21	9
23	10	17	18	19	10	14	17	21	17	10	12	18
24	6	7	20	11	8	14	17	13	19	15	12	5
25	17	9	19	15	11	20	22	24	16	12	7	14
26	17	10	19	8	14	18	20	17	18	16	8	17
27	16	8	8	12	13	19	15	24	13	7	9	11
28	7	12	15	10	13	23	16	17	13	9	11	12
29	17		18	12	12	20	14	16	10	12	5	15
30	10		17	16	14	18	20	21	15	11	3	17
31	23		17		17		20	20		12		14
14,71	14,35	14,29	13,77	13,23	14,58	17,57	17,68	21,32	15,87	11,35	11,33	11,48

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Collated results CV-USAF for the year 1998												
USAF-CV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	40,03	6,90	53,04	62,50	48,09	40,22	105,25	60,81	122,37	14,00	26,76	114,18
2	20,98	8,39	38,62	55,19	63,51	68,43	110,04	62,39	94,82	19,85	22,09	106,09
3	15,83	14,27	30,20	38,17	70,17	66,57	90,99	55,75	88,33	17,18	44,45	105,04
4	5,59	10,57	38,62	28,30	76,12	70,99	100,54	46,69	71,62	20,04	62,97	109,47
5	0,75	7,11	45,15	58,45	79,74	66,47	90,78	58,42	93,07	18,71	67,97	72,73
6	0,02	8,11	31,94	62,96	84,08	59,54	48,08	97,03	108,61	22,16	79,79	102,10
7		9,59	22,91	82,00	95,41	58,43	48,08	107,68	121,08	59,59	73,10	151,19
8		7,01	20,37	122,04	74,72	43,14	34,19	107,16	130,95	50,36	69,02	147,16
9		11,40	27,65	99,43	68,68	66,19	45,41	117,10	117,69	48,18	75,60	146,59
10	0,80	10,99	47,60	98,30	43,86	61,79	27,72	137,66	84,10	39,33	107,84	117,05
11	5,92	15,11	44,95	76,12	49,53	57,77	28,74	145,65	82,00	32,97	72,53	81,19
12	17,16	27,56	52,99	57,84	66,36	83,87	32,74	142,65	111,50	32,51	65,99	99,49
13	27,48	38,17	41,38	44,20	72,67	42,59	16,62	126,07	117,88	39,56	94,50	82,93
14	28,12	42,41	48,86	37,27	66,67	33,70	17,15	110,63	87,61	39,27	103,97	88,80
15	29,00	41,03	71,59	56,19	60,55	31,72	21,36	102,42	67,93	46,10	69,89	60,07
16	41,42	45,17	64,07	30,01	53,25	33,79	34,59	120,11	40,66	85,63	39,14	65,87
17	36,19	47,20	54,51	12,75	56,99	40,79	34,01	111,97	69,63	93,44	44,05	65,47
18	19,85	39,81	44,97	8,54	43,98	31,51	20,93	99,33	80,77	97,15	31,61	64,68
19	5,41	33,76	66,21	10,71	20,45	25,07	23,40	137,86	94,33	93,78	35,14	50,31
20	3,68	28,47	62,12	11,78	14,65	30,95	39,33	100,90	89,14	38,75	37,10	38,02
21	0,48	23,06	81,28	15,32	12,58	39,41	59,29	97,24	93,88	36,37	40,99	35,14
22	0,80	19,04	112,49	10,01	4,97	41,16	75,51	80,44	96,15	36,47	39,03	22,39
23	13,83	21,65	85,56	4,08	9,93	36,95	67,16	84,25	94,33	30,98	34,07	21,29
24	33,26	26,28	78,92	0,67	19,31	50,02	87,91	83,06	89,44	24,07	50,70	53,75
25	58,62	38,67	73,03	12,48	39,07	47,02	87,89	76,87	81,50	13,14	107,36	52,24
26	62,55	37,45	60,05	19,31	43,90	56,65	84,65	78,88	85,17	13,13	113,18	80,78
27	51,04	20,01	68,49	19,24	44,84	78,36	86,58	72,42	98,49	5,14	83,87	98,50
28	38,55	17,78	54,19	27,10	31,00	80,48	94,82	73,69	67,28	12,75	83,43	100,71
29	28,22		63,47	22,57	20,66	93,37	95,48	102,69	40,43	34,74	69,48	87,33
30	8,88		55,06	30,25	24,95	97,06	78,72	142,47	19,58	38,49	108,41	78,23
31	7,37		67,74		39,71		68,84	128,67		34,07		76,89
56,85	21,49	23,46	55,10	40,46	48,40	54,47	59,90	99,00	88,01	38,32	65,13	83,09

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Collated results STDEV for the year 1998												
std. Dev.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	10,63	5,23	11,32	11,59	11,11	10,64	11,14	11,55	10,42	7,23	9,36	10,79
2	8,54	5,73	10,52	11,40	11,61	11,67	10,96	11,59	11,44	8,36	8,72	11,11
3	7,62	7,29	9,76	10,49	11,69	11,65	11,53	11,42	11,58	7,88	10,91	11,14
4	4,74	6,38	10,52	9,55	11,70	11,69	11,29	11,04	11,69	8,39	11,60	10,98
5	1,87	5,31	10,95	11,50	11,68	11,65	11,53	11,50	11,49	8,16	11,67	11,70
6	0,76	5,64	9,94	11,60	11,64	11,52	11,11	11,39	11,02	8,73	11,68	11,24
7		6,10	8,84	11,66	11,43	11,50	11,11	11,05	10,48	11,53	11,70	8,73
8		5,27	8,45	10,44	11,70	10,84	10,16	11,07	9,98	11,21	11,68	9,00
9		6,60	9,47	11,32	11,67	11,65	10,97	10,67	10,64	11,11	11,70	9,04
10	1,91	6,49	11,08	11,35	10,88	11,57	9,48	9,59	11,64	10,58	11,04	10,67
11	4,87	7,47	10,94	11,70	11,18	11,48	9,60	9,10	11,66	10,04	11,70	11,67
12	7,88	9,46	11,32	11,48	11,65	11,64	10,02	9,29	10,90	10,00	11,64	11,32
13	9,45	10,49	10,72	10,90	11,70	10,80	7,77	10,24	10,63	10,59	11,45	11,66
14	9,52	10,79	11,15	10,42	11,65	10,11	7,88	10,94	11,59	10,57	11,18	11,57
15	9,63	10,70	11,69	11,43	11,55	9,92	8,60	11,23	11,67	11,01	11,68	11,54
16	10,72	10,96	11,62	9,74	11,33	10,12	10,19	10,53	10,67	11,62	10,56	11,64
17	10,33	11,06	11,38	6,94	11,46	10,68	10,14	10,89	11,68	11,48	10,89	11,64
18	8,36	10,61	10,94	5,78	10,89	9,90	8,54	11,32	11,68	11,38	9,91	11,63
19	4,66	10,11	11,65	6,42	8,46	9,14	8,91	9,58	11,46	11,47	10,24	11,21
20	3,88	9,57	11,58	6,70	7,37	9,84	10,58	11,28	11,56	10,53	10,41	10,48
21	1,56	8,86	11,67	7,51	6,90	10,58	11,52	11,38	11,47	10,35	10,69	10,24
22	1,91	8,22	10,86	6,22	4,48	10,71	11,70	11,68	11,41	10,35	10,55	8,76
23	7,19	8,65	11,62	4,07	6,20	10,39	11,66	11,64	11,46	9,84	10,14	8,59
24	10,07	9,30	11,69	1,78	8,27	11,20	11,59	11,65	11,56	9,00	11,23	11,35
25	11,50	10,53	11,70	6,87	10,56	11,06	11,59	11,70	11,67	7,03	11,06	11,29
26	11,59	10,43	11,54	8,27	10,88	11,45	11,63	11,69	11,63	7,03	10,84	11,68
27	11,24	8,39	11,67	8,26	10,94	11,69	11,61	11,70	11,35	4,55	11,64	11,35
28	10,52	7,99	11,37	9,40	9,84	11,68	11,44	11,70	11,66	6,94	11,65	11,28
29	9,54		11,61	8,79	8,49	11,48	11,43	11,22	10,66	10,20	11,68	11,60
30	5,89		11,39	9,76	9,13	11,39	11,69	9,30	8,31	10,51	11,02	11,69
31	5,40		11,67		10,60		11,68	10,10		10,14		11,70
10,13	7,21	8,34	10,99	9,11	10,28	10,99	10,61	10,94	11,17	9,61	11,01	10,91

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Collated results CV 6 rot. averages for the year 1998												
CV-6 rot.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	40,48	42,38	36,61	45,06	48,06	51,41	57,30	64,86	76,47	81,23	80,11	84,89
2	40,66	42,39	36,84	45,37	48,17	51,76	57,99	65,05	76,37	81,26	80,25	85,30
3	40,76	42,52	37,04	45,63	48,39	52,04	58,59	65,23	76,38	81,32	80,51	85,70
4	40,76	42,63	37,22	45,87	48,70	52,34	59,28	65,39	76,34	81,46	80,80	86,15
5	40,54	42,66	37,37	46,32	49,07	52,52	59,91	65,66	76,46	81,62	80,99	86,29
6	40,34	42,61	37,38	46,80	49,35	52,51	60,16	66,14	76,75	81,70	81,21	86,63
7	40,24	42,59	37,33	47,38	49,76	52,52	60,25	66,65	77,06	81,97	81,39	87,18
8	40,23	42,46	37,27	48,16	50,15	52,42	60,09	67,08	77,52	82,18	81,64	87,58
9	40,23	42,33	37,24	48,76	50,45	52,49	59,98	67,56	77,84	82,33	82,00	87,96
10	40,25	42,22	37,39	49,21	50,53	52,52	59,83	68,29	78,02	82,45	82,52	88,09
11	40,32	42,09	37,51	49,53	50,64	52,53	59,76	69,08	78,10	82,46	82,73	88,00
12	40,49	42,05	37,75	49,63	50,86	52,65	59,79	69,61	78,40	82,36	82,90	87,96
13	40,72	42,09	37,92	49,66	51,12	52,52	59,85	70,14	78,77	82,21	83,06	87,81
14	40,94	42,19	38,11	49,75	51,29	52,48	59,93	70,64	79,08	82,01	83,28	87,79
15	41,15	42,17	38,55	49,87	51,42	52,56	60,05	71,04	79,34	81,82	83,27	87,55
16	41,44	42,18	38,92	49,80	51,58	52,69	60,25	71,49	79,23	81,85	83,10	87,40
17	41,57	42,09	39,24	49,58	51,72	52,95	60,40	71,99	79,27	81,91	83,00	87,51
18	41,55	41,82	39,51	49,19	51,77	53,21	60,48	72,47	79,26	81,92	82,82	87,61
19	41,44	41,37	39,98	48,78	51,74	53,43	60,61	73,20	79,10	82,03	82,77	87,72
20	41,39	40,73	40,43	48,55	51,64	53,70	60,84	73,66	79,04	81,84	82,58	87,67
21	41,37	40,10	40,99	48,46	51,49	54,03	61,19	73,97	79,02	81,79	82,44	87,72
22	41,23	39,38	41,73	48,53	51,36	54,37	61,66	74,19	79,14	81,70	82,32	87,68
23	41,12	38,71	42,27	48,43	51,23	54,66	62,05	74,38	79,36	81,47	82,00	87,60
24	41,11	38,13	42,72	48,15	51,13	54,99	62,56	74,65	79,64	81,15	82,06	87,85
25	41,34	37,62	43,07	48,21	51,06	55,20	63,04	74,82	79,92	80,79	82,52	88,10
26	41,64	37,28	43,32	48,22	51,15	55,39	63,41	74,87	80,10	80,46	83,02	88,48
27	41,93	36,84	43,66	48,15	51,19	55,72	63,71	74,92	80,53	80,11	83,34	88,88
28	42,18	36,52	43,94	48,11	51,17	56,05	64,04	75,04	80,90	79,80	83,61	89,30
29	42,35		44,18	47,99	51,02	56,37	64,37	75,39	81,14	79,74	83,85	89,73
30	42,36		44,41	47,93	51,02	56,75	64,59	75,84	81,21	79,86	84,38	90,09
31	42,37		44,69		51,21		64,72	76,23		80,01		90,33
61,56	41,11	41,01	39,83	48,17	50,63	53,49	60,99	70,95	78,66	81,45	82,35	87,70

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NOAA Regions year 1998							292 regions						
Reg.	Date	Lat.	Long.	Rot.	Class		Reg.	Date	Lat.	Long.	Rot.	Class	
1	8131	11.01.98	-26	132	1931	BXO	271	8404	07.12.98	-22	113	1943	DSO
2	8132	12.01.98	-18	135	1931	BXO	272	8405	07.12.98	-16	51	1943	CSO
3	8133	12.01.98	04	114	1931	AXX	273	8406	08.12.98	-27	31	1943	CSO
4	8134	12.01.98	15	65	1931	AXX	274	8407	09.12.98	-17	82	1943	DSO
5	8135	14.01.98	-17	42	1931	AXX	275	8408	11.12.98	-18	35	1943	BXO
6	8136	17.01.98	15	96	1931	CRO	276	8409	11.12.98	-29	19	1943	DSO
7	8137	17.01.98	-16	62	1931	BXO	277	8410	12.12.98	23	332	1944	HSX
8	8138	17.01.98	-44	121	1931	BXO	278	8411	12.12.98	-28	345	1944	AXX
9	8139	18.01.98	14	22	1931	AXX	279	8412	14.12.98	-15	48	1943	AXX
10	8140	20.01.98	-14	93	1931	AXX	280	8413	16.12.98	18	342	1944	BXO
11	8141	20.01.98	26	344	1932	AXX	281	8414	17.12.98	21	293	1944	BXO
12	8142	23.01.98	-21	346	1932	BXO	282	8415	18.12.98	19	257	1944	BXO
13	8143	23.01.98	-35	281	1932	AXX	283	8416	21.12.98	19	221	1944	DSO
14	8144	24.01.98	12	275	1932	AXX	284	8417	21.12.98	22	353	1944	BXO
15	8145	25.01.98	28	267	1932	BXO	285	8418	21.12.98	-23	246	1944	BXO
16	8146	25.01.98	15	264	1932	AXX	286	8419	24.12.98	28	225	1944	BXO
17	8147	26.01.98	-23	311	1932	AXX	287	8420	24.12.98	18	186	1944	AXX
18	8148	03.02.98	-29	199	1932	BXO	288	8421	24.12.98	29	170	1944	HAX
19	8150	04.02.98	26	224	1932	BXO	289	8422	25.12.98	-23	162	1944	CAO
20	8151	04.02.98	-24	120	1932	CSO	290	8423	28.12.98	23	225	1944	BXO
21	8152	06.02.98	-19	214	1932	BXO	291	8424	29.12.98	-21	174	1944	BXO
22	8153	09.02.98	-40	92	1932	BXO	292	8425	31.12.98	-26	107	1944	BXO
23	8154	10.02.98	-24	87	1932	AXX	293						
24	8155	11.02.98	-14	98	1932	BXO	294						
25	8156	11.02.98	-24	32	1932	BXO	295						
26	8157	12.02.98	27	24	1932	BXO	296						
27	8158	12.02.98	-19	13	1932	BXO	297						
28	8159	15.02.98	33	09	1932	BXO	298						
29	8160	16.02.98	23	01	1933	BXO	299						
30	8161	17.02.98	25	330	1933	BXO	300						
31	8162	22.02.98	-32	272	1933	BXO	301						
32	8163	23.02.98	-22	333	1933	BXO	302						
33	8164	24.02.98	17	278	1933	BXO	303						
34	8165	24.02.98	29	239	1933	BXO	304						
35	8166	25.02.98	22	304	1933	AXX	305						
36	8167	25.02.98	-27	262	1933	BXO	306						
37	8168	26.02.98	17	313	1933	AXX	307						
38	8169	28.02.98	-19	283	1933	BXO	308						
39	8170	28.02.98	00	237	1933	AXX	309						
40	8171	28.02.98	-24	234	1933	BXO	310						
41	8172	02.03.98	22	207	1933	BXO	311						
42	8173	02.03.98	-17	142	1933	AXX	312						
43	8174	07.03.98	-17	97	1933	BXO	313						
44	8175	08.03.98	44	79	1933	AXX	314						
45	8176	08.03.98	-43	69	1933	AXX	315						
46	8177	09.03.98	-33	141	1933	BXO	316						
47	8178	11.03.98	-15	22	1933	HSX	317						
48	8179	11.03.98	-22	34	1933	BXO	318						
49	8180	13.03.98	-29	26	1933	BXO	319						
50	8181	13.03.98	-20	20	1933	BXO	320						
51	8182	19.03.98	-22	47	1933	BXO	321						
52	8183	19.03.98	22	291	1934	CRO	322						
53	8184	21.03.98	-18	276	1934	CSO	323						
54	8185	21.03.98	-24	258	1934	AXX	324						
55	8186	23.03.98	09	320	1934	BXO	325						
56	8187	24.03.98	-23	358	1934	BXO	326						
57	8188	26.03.98	29	200	1934	AXX	327						
58	8189	28.03.98	-26	247	1934	BXO	328						
59	8190	30.03.98	-20	137	1934	DSO	329						
60	8191	01.04.98	-20	125	1934	CSO	330						
61	8192	02.04.98	-33	206	1934	BXO	331						
62	8193	05.04.98	-22	82	1934	CSO	332						
63	8194	06.04.98	-18	40	1934	CSO	333						
64	8195	06.04.98	-26	36	1934	AXX	334						
65	8196	08.04.98	18	146	1934	BXO	335						
66	8197	08.04.98	32	37	1934	BXO	336						
67	8198	08.04.98	-28	11	1934	HSX	337						
68	8199	08.04.98	-26	87	1934	DAO	338						
69	8200	10.04.98	-21	52	1934	CRO	339						
70	8201	10.04.98	19	356	1935	AXX	340						
71	8202	10.04.98	-21	02	1934	BXO	341						
72	8203	15.04.98	30	05	1934	AXX	342						
73	8204	17.04.98	-15	314	1935	BXO	343						
74	8205	18.04.98	21	313	1935	BXO	344						
75	8206	20.04.98	23	245	1935	BXO	345						
76	8207	22.04.98	00	269	1935	AXX	346						
77	8208	23.04.98	18	190	1935	AXX	347						
78	8209	24.04.98	-22	240	1935	AXX	348						
79	8210	26.04.98	-16	140	1935	DSO	349						
80	8211	26.04.98	-22	219	1935	AXX	350						
81	8212	29.04.98	-30	233	1935	CRO	351						
82	8213	29.04.98	-25	114	1935	BXO	352						
83	8214	30.04.98	28	97	1935	AXX	353						
84	8215	01.05.98	31	186	1935	BXO	354						
85	8216	01.05.98	-21	91	1935	AXX	355						
86	8217	03.05.98	-17	41	1935	HSX	356						
87	8218	07.05.98	-23	348	1936	AXX	357						
88	8219	09.05.98	28	355	1936	BXO	358						
89	8220	11.05.98	-31	287	1936	HSX	359						
90	8221	12.05.98	-09	42	1935	BXO	360						

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184	8315	24.08.98	25	02	1939	AXX	454					
185	8316	25.08.98	28	328	1940	HSX	455					
186	8317	27.08.98	36	77	1939	AXX	456					
187	8318	27.08.98	-21	17	1939	BXO	457					
188	8319	27.08.98	21	10	1939	BXO	458					
189	8320	28.08.98	16	66	1939	BXO	459					
190	8321	28.08.98	33	293	1940	HRX	460					
191	8322	29.08.98	21	351	1940	BXO	461					
192	8323	29.08.98	-21	271	1940	HSX	462					
193	8324	31.08.98	22	339	1940	AXX	463					
194	8325	03.09.98	-28	241	1940	AXX	464					
195	8326	04.09.98	19	201	1940	DSO	465					
196	8327	04.09.98	30	196	1940	HSX	466					
197	8328	05.09.98	-18	189	1940	AXX	467					
198	8329	06.09.98	15	196	1940	DSO	468					
199	8330	07.09.98	-20	167	1940	CRO	469					
200	8331	07.09.98	25	161	1940	HSX	470					
201	8332	09.09.98	-27	196	1940	BXO	471					
202	8333	10.09.98	12	222	1940	BXO	472					
203	8334	12.09.98	-25	204	1940	BXO	473					
204	8335	13.09.98	-22	88	1940	CRO	474					
205	8336	17.09.98	-30	51	1940	CSO	475					
206	8337	17.09.98	-39	61	1940	BXO	476					
207	8338	17.09.98	31	22	1940	HSX	477					
208	8339	18.09.98	-17	48	1940	BXO	478					
209	8340	18.09.98	20	14	1940	HHX	479					
210	8341	20.09.98	19	121	1940	BXO	480					
211	8342	20.09.98	17	25	1940	AXX	481					
212	8343	20.09.98	42	358	1941	AXX	482					
213	8344	23.09.98	-20	02	1941	BXO	483					
214	8345	25.09.98	22	03	1941	BXO	484					
215	8346	25.09.98	-30	316	1941	CSO	485					
216	8347	29.09.98	-12	326	1941	BXO	486					
217	8348	29.09.98	17	228	1941	AXX	487					
218	8349	29.09.98	-26	240	1941	AXX	488					
219	8350	02.10.98	20	187	1941	HSX	489					
220	8351	06.10.98	-18	277	1941	AXX	490					
221	8352	07.10.98	-12	168	1941	AXX	491					
222	8353	07.10.98	20	130	1941	BXO	492					
223	8354	08.10.98	-18	185	1941	DAO	493					
224	8355	08.10.98	-21	121	1941	DAO	494					
225	8356	09.10.98	21	176	1941	CRO	495					
226	8357	11.10.98	-34	100	1941	AXX	496					
227	8358	14.10.98	15	104	1941	CAO	497					
228	8359	14.10.98	23	153	1941	BXO	498					
229	8360	15.10.98	-19	105	1941	DSO	499					
230	8361	16.10.98	14	90	1941	CRO	500					
231	8362	16.10.98	20	07	1941	HSX	501					
232	8363	16.10.98	26	33	1941	BXO	502					
233	8364	18.10.98	18	29	1941	BXO	503					
234	8365	19.10.98	-28	30	1941	BXO	504					
235	8366	19.10.98	-16	05	1941	AXX	505					
236	8367	22.10.98	16	00	1941	CRO	506					
237	8369	26.10.98	17	249	1942	DSO	507					
238	8370	26.10.98	-31	15	1941	BXO	508					
239	8371	29.10.98	-21	232	1942	BXO	509					
240	8372	30.10.98	21	238	1942	BXO	510					
241	8373	30.10.98	-24	198	1942	AXX	511					
242	8374	30.10.98	-18	188	1942	HAX	512					
243	8375	30.10.98	18	184	1942	CSO	513					
244	8377	03.11.98	22	127	1942	AXX	514					
245	8378	04.11.98	17	113	1942	HSX	515					
246	8379	05.11.98	-18	204	1942	CSO	516					
247	8380	05.11.98	-20	111	1942	AXX	517					
248	8381	06.11.98	22	147	1942	BXO	518					
249	8382	08.11.98	18	168	1942	BXO	519					
250	8383	09.11.98	-14	47	1942	BXO	520					
251	8384	10.11.98	-27	33	1942	HHX	521					
252	8385	12.11.98	19	114	1942	BXO	522					
253	8386	14.11.98	-20	00	1942	AXX	523					
254	8387	15.11.98	22	358	1942	BXO	524					
255	8388	15.11.98	23	354	1943	BXO	525					
256	8389	17.11.98	-20	72	1942	BXO	526					
257	8390	18.11.98	18	53	1942	BXO	527					
258	8391	19.11.98	-17	291	1943	BXO	528					
259	8392	22.11.98	-22	239	1943	HSX	529					
260	8393	24.11.98	-18	215	1943	DSO	530					
261	8394	25.11.98	-16	323	1943	CSO	531					
262	8395	25.11.98	17	196	1943	HSX	532					
263	8396	27.11.98	28	292	1943	CRO	533					
264	8397	30.11.98	15	137	1943	DSO	534					
265	8398	01.12.98	18	199	1943	CAO	535					
266	8399	01.12.98	30	171	1943	BXO	536					
267	8400	01.12.98	-18	186	1943	BXO	537					
268	8401	01.12.98	12	167	1943	BXO	538					
269	8402	02.12.98	17	117	1943	EAO	539					
270	8403	04.12.98	20	104	1943	HSX	540					

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ZÜRICH/McINTOSH-CLASSIFICATIONS DISTRIBUTION for the year 1998

A	B	C	D	E	F	H
AXX	BXO	CRO	DRO	ERO	FRO	HRX
25,7 %	42,1 %	4,8 %	0,3 %			0,7 %
	BXI	CRI	DRI	ERI	FRI	HAX
						1,7 %
		CAO	DAO	EAO	FAO	HSX
		1,0 %	1,4 %	0,3 %		9,9 %
		CAI	DAI	EAI	FAI	HKX
						0,3 %
		CSO	DSO	ESO	FSO	HHX
		5,8 %	4,5 %			1,0 %
		CSI	DSI	ESI	FSI	
		CKO	DAC	EAC	FAC	
		CKI	DSC	ESC	FSC	
		CHO	DKO	EKO	FKO	
		CHI	DKI	EKI	FKI	
			DHO	EHO	FHO	
			0,3 %			
			DHI	EHI	FHI	
			DKC	EKC	FKC	
			DHC	EHC	FHC	

SUNSPOT CLASS

1st letter

	292	
A	75	25,7 %
B	123	42,1 %
C	34	11,6 %
D	19	6,5 %
E	1	0,3 %
F	0	0,0 %
H	40	13,7 %

MAIN SUNSPOT TYPE

2nd letter

	292	
X	198	67,8 %
R	17	5,8 %
A	13	4,5 %
S	59	20,2 %
K	1	0,3 %
H	4	1,4 %

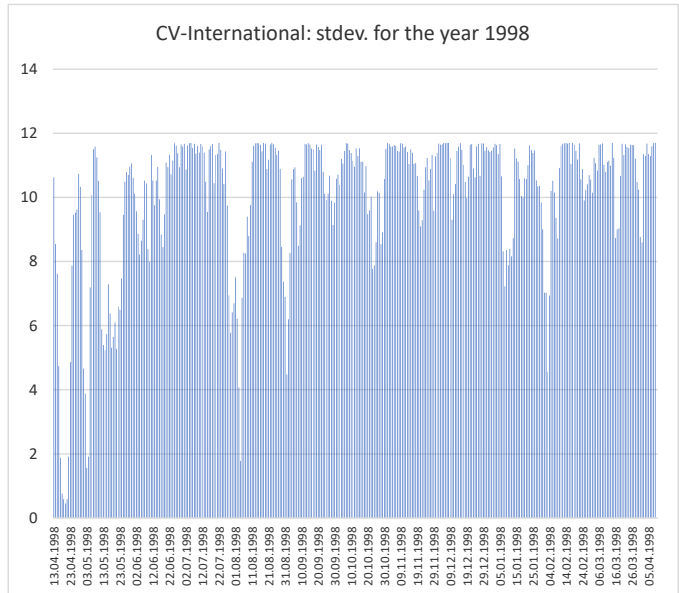
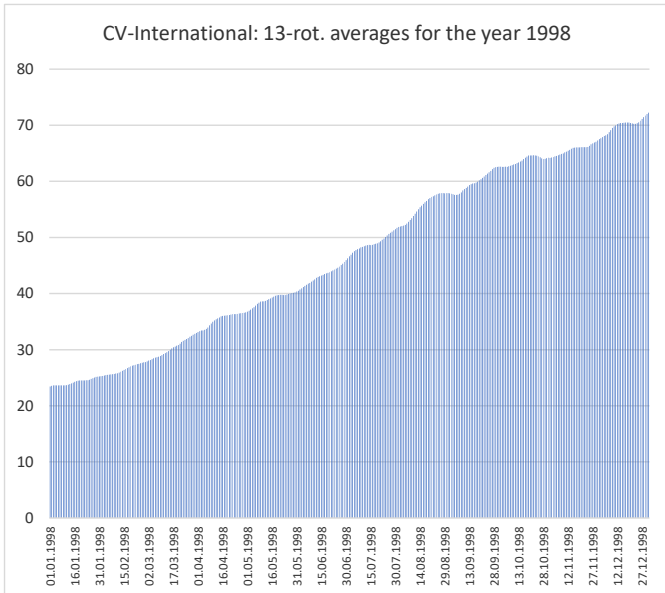
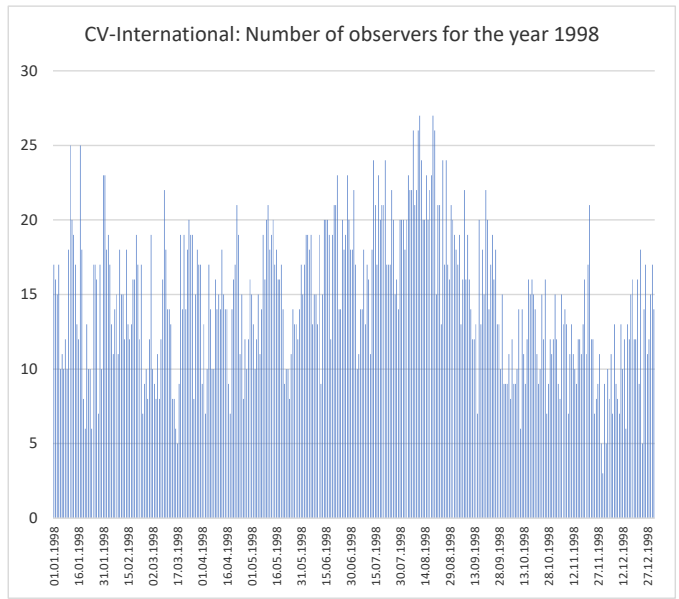
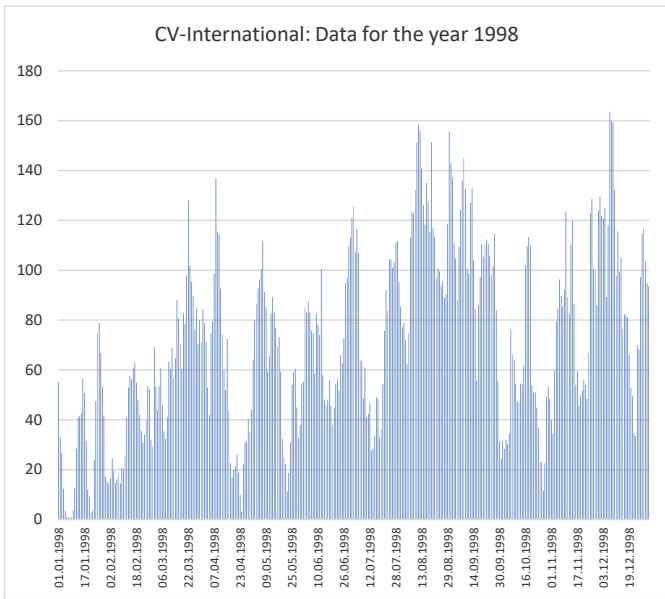
SUNSPOT DISTRIBUTION

3rd letter

	292	
X	115	39,4 %
O	177	60,6 %
I	0	0,0 %
C	0	0,0 %

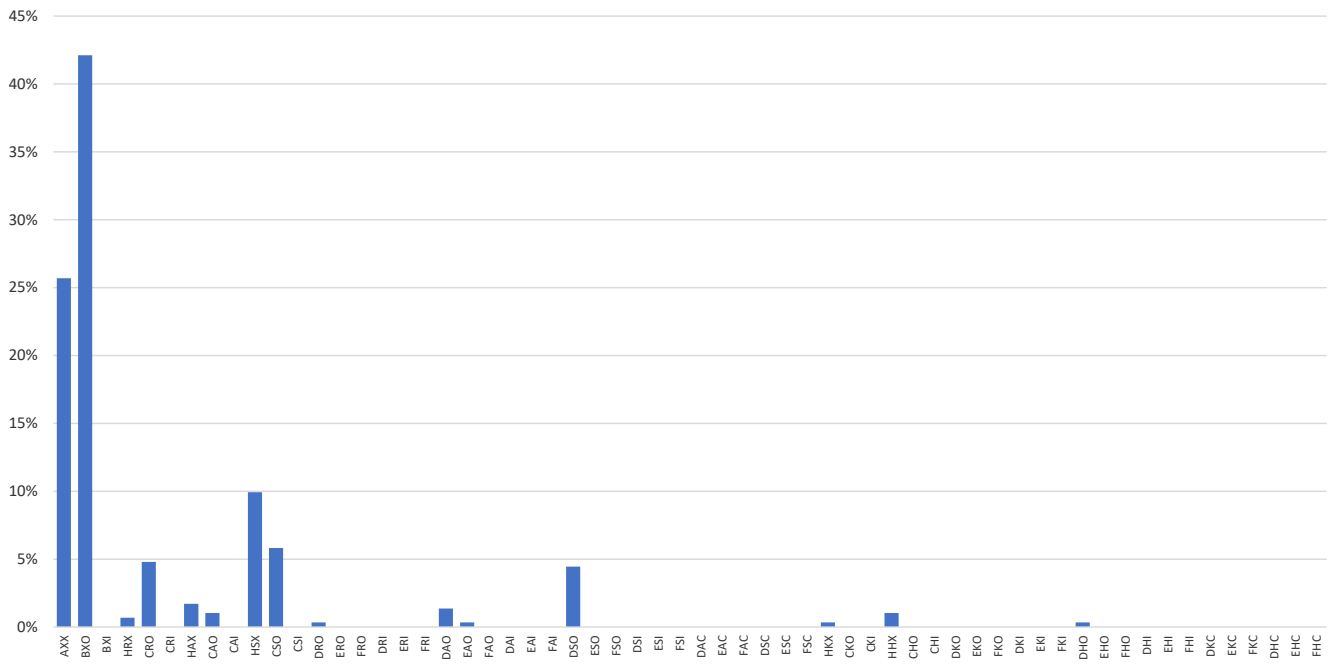
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Graphics for the year 1998

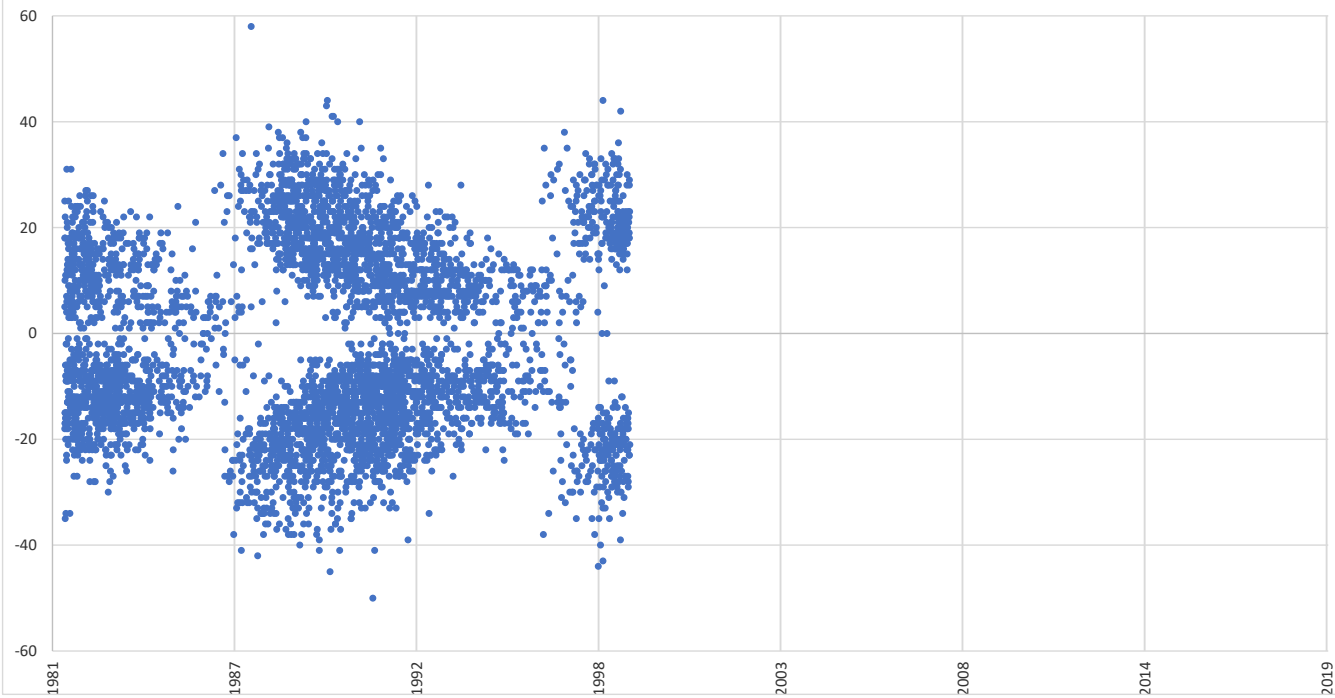


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Zürich/McIntosh-classifications denoted by NOAA/USAF for the year 1998



RGO/NOAA-USAF Sunspot Regions 1981-1998



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Magnetic Sunspot Classifications Zürich/McIntosh system
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