

Annual Final Report

AFR

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CV-Helios Network Annual Final Report for 2012

In the year 2012, Solar Cycle no. 24

The Average CV was: 67,8 and the Average 6-rot. Smoothed CV was: 74,9

The Average CV-USAF was: 53,1

giving an Estimated STDEV of: 10,3

CV-Helios Network observed on 366 days

CV-Helios Network had a total of 6135 observations in 2012

CV-Helios Network have received 382 observation entries in the year 2012

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

This Annual Final Report contain results from 37 CV-observers

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

CV-Helios Network 01. April 2013



Kjell Inge Malde
Director

CV-Helios Network Annual Final Report for 2012

Collated results CV for the year 2012												
CV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	58,88	50,55	17,33	34,99	80,11	107,04	97,01	126,06	123,58	75,60	30,67	58,58
2	82,00	47,58	18,07	35,57	88,20	115,82	101,12	129,22	103,69	79,25	26,33	48,52
3	93,38	41,34	59,93	42,89	76,17	107,67	87,41	124,63	127,54	77,63	18,22	43,00
4	96,08	29,81	79,56	48,84	74,09	87,95	91,09	98,32	110,28	71,08	21,18	49,54
5	105,86	22,10	109,58	34,92	85,00	88,40	90,00	85,66	95,61	56,61	18,27	28,23
6	86,34	39,11	96,40	28,26	75,90	83,10	127,21	78,99	83,74	60,08	33,61	19,12
7	109,04	29,15	101,64	15,24	72,70	74,99	139,67	100,79	64,44	49,54	35,92	13,59
8	101,99	11,21	92,43	10,85	73,97	66,39	122,12	111,33	76,00	44,22	56,29	26,29
9	107,75	20,59	101,25	8,94	85,27	65,46	109,22	118,71	74,67	55,78	47,98	47,88
10	95,75	28,55	90,95	4,14	85,79	95,11	98,33	127,71	55,90	49,79	83,06	38,56
11	71,13	37,70	94,34	9,13	86,47	88,79	99,87	97,07	48,36	52,16	92,06	36,97
12	36,41	43,76	82,53	21,83	98,38	95,47	100,28	67,94	48,58	73,80	116,91	53,82
13	62,80	76,34	93,44	27,96	100,84	108,78	107,24	51,57	47,99	69,78	121,00	54,75
14	72,00	59,75	85,62	30,94	105,65	105,58	117,87	32,20	42,81	85,34	127,58	55,33
15	88,40	50,32	52,55	53,25	116,90	106,22	116,47	33,02	41,06	74,23	112,92	81,02
16	97,06	33,93	42,95	41,42	110,36	94,44	117,60	42,98	32,67	68,97	94,22	80,97
17	109,52	31,53	45,23	64,73	93,33	81,77	84,82	47,51	39,80	61,58	75,25	72,17
18	107,00	25,83	48,68	85,41	97,52	63,54	64,38	54,63	55,29	82,13	67,26	72,50
19	100,33	34,95	58,38	112,02	108,25	53,27	24,37	48,00	66,00	75,67	91,29	58,06
20	110,22	43,25	58,02	129,12	109,07	41,27	17,16	38,86	81,18	67,27	77,48	72,40
21	124,62	47,57	35,24	138,16	86,50	16,85	11,12	39,00	67,95	93,70	76,33	67,88
22	108,43	41,49	21,88	138,31	64,31	4,27	13,47	36,69	61,89	103,08	103,53	69,55
23	96,63	40,00	26,98	141,93	54,19	4,22	33,08	39,87	70,05	105,78	81,78	60,00
24	74,00	33,20	42,22	115,32	48,98	4,22	38,84	44,55	63,54	96,76	64,71	44,45
25	45,09	33,78	44,29	107,14	66,71	13,25	38,12	62,15	82,32	72,92	57,43	50,78
26	39,29	20,99	51,07	78,52	66,27	31,80	52,72	65,30	74,41	69,44	64,04	34,23
27	44,78	14,81	50,05	81,00	73,14	53,59	74,14	62,48	54,85	83,00	74,88	39,64
28	24,70	14,29	56,33	87,13	75,29	84,90	79,54	51,09	64,31	66,28	81,60	33,42
29	28,36	10,77	67,06	70,72	63,67	90,62	91,23	52,07	78,44	66,90	88,21	26,23
30	56,15		49,53	72,56	55,11	101,97	108,43	86,52	78,47	50,88	83,93	27,96
31	59,32		40,17		68,94		112,85	126,15		38,38		58,50
67,53	80,43	34,97	61,73	62,37	82,16	71,22	82,80	73,58	70,51	70,25	70,80	49,16

CV-Helios Network Annual Final Report for 2012

Collated results Observers for the year 2012													
Obsrvrs.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	8	19	12	27	27	16	21	19	17	13	13	13	13
2	12	17	15	23	20	17	22	20	16	16	15	14	14
3	13	14	26	17	18	12	20	19	20	16	19	9	9
4	14	20	16	17	18	13	21	21	21	19	14	12	12
5	11	18	12	13	18	15	22	23	17	14	11	11	11
6	14	18	20	16	15	13	20	20	16	12	12	13	13
7	11	16	14	19	22	16	24	19	13	17	9	11	11
8	15	16	23	20	20	17	23	21	25	15	7	13	13
9	10	16	20	16	22	18	20	19	26	16	12	13	13
10	8	16	21	14	18	17	20	15	18	14	8	9	9
11	12	20	20	17	16	12	19	20	18	16	15	14	14
12	14	17	16	19	19	17	19	22	15	13	11	13	13
13	15	8	9	19	17	16	17	21	15	16	9	10	10
14	15	14	19	21	19	17	20	22	17	16	9	9	9
15	20	15	22	16	16	18	23	20	21	14	12	13	13
16	14	14	20	15	19	21	20	21	18	15	9	10	10
17	14	12	23	20	20	23	24	24	20	12	12	9	9
18	9	12	24	19	24	18	20	24	18	12	14	7	7
19	9	15	21	22	22	17	20	23	15	15	7	8	8
20	9	14	17	22	22	14	18	21	16	15	9	10	10
21	13	18	18	22	22	17	19	21	19	19	6	8	8
22	14	16	24	21	24	21	22	20	20	16	11	11	11
23	12	12	25	24	21	20	22	21	21	14	9	10	10
24	11	15	27	19	21	25	21	22	16	9	14	11	11
25	11	25	25	19	23	19	18	19	17	12	14	12	12
26	14	21	24	15	25	18	19	19	11	9	12	15	15
27	13	14	22	17	24	18	20	21	15	10	10	11	11
28	10	7	25	23	25	22	21	21	17	17	10	12	12
29	14	13	19	22	20	23	19	19	20	10	11	16	16
30	13		17	24	21	21	19	18	21	12	7	20	20
31	18		20		19		17	15		14		16	16
16,75	12,58	15,59	19,87	19,27	20,55	17,70	20,32	20,32	17,97	14,13	11,03	11,71	

CV-Helios Network Annual Final Report for 2012

Collated results CV-USAF for the year 2012												
USAF-CV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	43,52	35,97	8,97	22,56	63,69	90,72	80,49	110,59	107,96	59,31	19,04	43,24
2	65,54	33,33	9,48	23,04	71,66	99,83	84,67	113,94	87,29	62,85	15,62	34,16
3	76,84	27,90	44,50	29,24	59,86	91,37	70,88	109,08	112,16	61,27	9,59	29,33
4	79,55	18,36	63,16	34,44	57,86	71,41	74,54	81,82	94,07	54,97	11,73	35,07
5	89,52	12,41	93,35	22,51	68,49	71,86	73,46	69,14	79,08	41,44	9,63	17,10
6	69,81	26,01	79,88	17,12	59,60	66,62	111,81	62,59	67,25	44,63	21,43	10,23
7	92,79	17,83	85,20	7,53	56,52	58,72	125,12	84,33	48,69	35,07	23,33	6,43
8	85,55	4,91	75,88	4,69	57,73	50,52	106,43	95,16	59,70	30,39	41,15	15,59
9	91,46	11,30	84,79	3,55	68,76	49,64	92,97	102,84	58,41	40,69	33,69	33,60
10	79,22	17,36	74,40	1,07	69,28	78,57	81,83	112,34	40,79	35,29	66,58	25,54
11	55,01	24,81	77,80	3,66	69,94	72,25	83,40	80,56	34,02	37,41	75,51	24,21
12	23,74	30,00	66,06	12,21	81,89	78,94	83,82	51,98	34,22	57,58	100,96	38,91
13	47,16	60,02	76,90	16,89	84,38	92,52	90,93	36,88	33,69	53,73	105,25	39,75
14	55,85	44,33	69,10	19,26	89,30	89,22	101,96	20,27	29,17	68,83	112,20	40,28
15	71,86	35,76	37,76	38,39	100,95	89,89	100,50	20,94	27,66	57,99	96,80	64,58
16	80,54	21,69	29,29	27,98	94,16	77,91	101,69	29,32	20,66	52,96	77,68	64,53
17	93,29	19,73	31,27	48,96	76,78	65,31	68,31	33,27	26,59	46,02	58,97	56,01
18	90,69	15,24	34,30	68,90	81,01	47,85	48,63	39,64	40,24	65,66	51,34	56,33
19	83,87	22,53	43,06	95,87	91,98	38,41	14,11	33,70	50,15	59,37	74,74	42,77
20	94,01	29,55	42,73	113,84	92,82	27,85	8,84	25,79	64,73	51,35	61,13	56,23
21	109,06	33,32	22,77	123,50	69,98	8,63	4,86	25,91	51,99	77,16	60,02	51,92
22	92,16	28,03	12,24	123,66	48,57	1,12	6,36	23,97	46,30	86,66	87,12	53,51
23	80,11	26,76	16,13	127,56	39,24	1,10	20,99	26,65	53,99	89,43	65,32	44,56
24	57,77	21,09	28,66	99,30	34,57	1,10	25,78	30,67	47,85	80,24	48,95	30,59
25	31,15	21,57	30,45	90,83	50,82	6,21	25,17	46,55	65,86	56,73	42,19	36,17
26	26,16	11,59	36,43	62,14	50,41	19,95	37,91	49,50	58,16	53,41	48,32	21,93
27	30,88	7,24	35,52	64,56	56,94	38,70	57,90	46,86	39,84	66,52	58,62	26,45
28	14,37	6,89	41,19	70,60	59,01	68,39	63,13	36,45	48,57	50,42	65,15	21,27
29	17,20	4,64	51,16	54,63	47,96	74,07	74,68	37,33	62,06	51,00	71,67	15,54
30	41,03		35,06	56,38	40,08	85,53	92,16	70,00	62,09	36,26	67,44	16,89
31	43,93		26,90		52,93		96,74	110,69		25,39		43,17
52,99	64,96	23,11	47,24	49,50	66,04	57,14	68,07	58,67	55,11	54,52	56,04	35,35

CV-Helios Network Annual Final Report for 2012

Collated results STDEV for the year 2012												
std. Dev.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	10,86	10,31	5,92	8,79	11,61	11,53	11,68	10,94	11,04	11,52	8,22	10,84
2	11,64	10,07	6,07	8,86	11,69	11,31	11,63	10,80	11,60	11,60	7,57	10,15
3	11,70	9,50	10,92	9,65	11,53	11,52	11,69	11,00	10,88	11,56	6,10	9,66
4	11,68	8,10	11,60	10,18	11,48	11,69	11,70	11,67	11,46	11,39	6,68	10,23
5	11,56	6,85	11,48	8,78	11,67	11,70	11,70	11,68	11,69	10,73	6,11	7,87
6	11,68	9,26	11,68	7,87	11,53	11,65	10,89	11,59	11,66	10,92	8,61	6,28
7	11,49	8,00	11,63	5,45	11,44	11,50	10,28	11,64	11,14	10,23	8,90	5,06
8	11,62	4,45	11,70	4,35	11,48	11,22	11,10	11,44	11,53	9,78	10,71	7,57
9	11,52	6,57	11,63	3,81	11,68	11,18	11,49	11,22	11,50	10,67	10,11	10,10
10	11,69	7,92	11,70	2,17	11,68	11,69	11,67	10,87	10,68	10,25	11,65	9,20
11	11,39	9,11	11,69	3,87	11,68	11,70	11,65	11,68	10,14	10,43	11,70	9,02
12	8,96	9,74	11,65	6,80	11,67	11,69	11,65	11,28	10,16	11,47	11,28	10,55
13	11,06	11,54	11,70	7,83	11,64	11,50	11,53	10,39	10,11	11,35	11,14	10,61
14	11,42	10,91	11,68	8,26	11,56	11,56	11,24	8,43	9,65	11,68	10,88	10,65
15	11,70	10,29	10,46	10,51	11,28	11,55	11,29	8,54	9,47	11,48	11,39	11,62
16	11,68	8,66	9,66	9,51	11,46	11,69	11,25	9,66	8,49	11,32	11,69	11,62
17	11,48	8,34	9,87	11,15	11,70	11,64	11,67	10,07	9,34	11,00	11,51	11,43
18	11,54	7,49	10,17	11,68	11,67	11,10	11,14	10,60	10,64	11,64	11,26	11,44
19	11,64	8,78	10,83	11,42	11,51	10,51	7,25	10,11	11,21	11,52	11,70	10,81
20	11,46	9,69	10,81	10,81	11,49	9,49	5,88	9,24	11,63	11,26	11,56	11,43
21	11,00	10,07	8,82	10,37	11,68	5,81	4,43	9,25	11,28	11,70	11,54	11,28
22	11,51	9,51	6,81	10,36	11,13	2,22	5,03	8,99	11,02	11,61	11,60	11,34
23	11,68	9,36	7,68	10,16	10,57	2,20	8,55	9,35	11,36	11,56	11,64	10,92
24	11,48	8,56	9,59	11,33	10,19	2,20	9,24	9,81	11,10	11,68	11,15	9,80
25	9,86	8,64	9,79	11,53	11,23	4,98	9,16	11,03	11,64	11,45	10,77	10,33
26	9,28	6,65	10,35	11,58	11,22	8,38	10,47	11,18	11,49	11,34	11,12	8,69
27	9,83	5,35	10,27	11,62	11,45	10,53	11,48	11,05	10,61	11,65	11,50	9,32
28	7,31	5,23	10,71	11,69	11,51	11,67	11,60	10,35	11,13	11,22	11,63	8,59
29	7,89	4,33	11,25	11,38	11,10	11,70	11,70	10,42	11,58	11,24	11,69	7,56
30	10,70		10,23	11,44	10,63	11,62	11,51	11,69	11,58	10,34	11,66	7,83
31	10,88		9,38		11,32		11,40	10,94		9,18		10,84
10,28	10,94	8,39	10,25	9,11	11,40	9,96	10,42	10,54	10,89	11,12	10,44	9,76

CV-Helios Network Annual Final Report for 2012

Collated results CV 6 rot. averages for the year 2012												
CV-6 rot.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	88,92	92,87	84,76	76,20	68,18	67,36	63,36	69,89	73,02	77,76	72,83	71,52
2	89,21	92,73	84,38	75,47	68,18	67,51	63,31	70,41	73,52	77,41	72,60	71,71
3	89,65	92,61	84,29	74,91	68,10	67,48	63,08	70,88	74,14	77,04	72,38	71,95
4	90,20	92,52	84,17	74,61	68,04	67,28	62,98	71,23	74,55	76,60	72,21	72,22
5	90,80	92,31	84,14	74,15	67,98	67,30	62,93	71,51	74,86	76,25	71,92	72,37
6	91,06	92,25	84,02	73,75	67,88	67,24	63,26	71,79	75,06	75,96	71,72	72,41
7	91,33	92,17	83,99	73,42	67,76	67,08	63,84	72,20	75,15	75,78	71,49	72,29
8	91,35	92,02	83,97	73,01	67,71	66,84	64,34	72,75	75,27	75,56	71,38	72,13
9	91,34	91,94	84,07	72,58	67,74	66,54	64,73	73,38	75,32	75,37	71,28	71,90
10	91,21	91,82	84,12	72,17	67,77	66,49	65,18	74,07	75,36	75,24	71,45	71,59
11	90,83	91,61	84,16	71,82	67,64	66,44	65,62	74,60	75,41	75,11	71,59	71,19
12	90,21	91,34	84,15	71,54	67,52	66,56	65,89	74,91	75,49	75,08	71,65	70,93
13	89,79	91,22	84,14	71,16	67,44	66,86	66,18	75,11	75,56	74,96	71,68	70,64
14	89,48	91,02	84,03	70,63	67,41	67,01	66,59	74,94	75,56	75,02	71,81	70,45
15	89,37	90,82	83,79	70,28	67,32	67,09	67,01	74,66	75,52	75,02	71,96	70,39
16	89,41	90,60	83,35	69,97	67,05	67,08	67,48	74,25	75,50	74,92	71,99	70,33
17	89,54	90,40	83,11	69,73	66,76	66,93	67,81	73,95	75,57	74,84	71,95	70,00
18	89,76	90,15	82,91	69,45	66,65	66,79	68,07	73,67	75,82	74,89	71,90	69,59
19	89,96	89,93	82,78	69,33	66,69	66,45	67,98	73,40	76,15	74,90	72,05	69,20
20	90,29	89,72	82,75	69,28	66,69	66,08	67,91	73,02	76,59	74,79	72,12	68,97
21	90,89	89,49	82,41	69,27	66,67	65,53	67,91	72,70	76,98	74,84	72,01	68,78
22	91,49	89,26	81,91	69,21	66,61	64,97	67,86	72,35	77,31	74,94	72,10	68,60
23	92,05	88,96	81,38	69,18	66,56	64,56	67,89	72,09	77,60	74,99	72,02	68,35
24	92,50	88,48	80,82	69,08	66,56	64,36	67,90	71,79	77,82	74,96	71,75	67,97
25	92,77	87,92	80,17	69,05	66,67	64,06	67,86	71,65	78,13	74,76	71,45	67,56
26	92,91	87,19	79,52	68,76	66,78	63,82	67,72	71,72	78,26	74,47	71,20	67,06
27	92,97	86,39	79,00	68,49	66,95	63,60	67,81	71,84	78,34	74,31	71,08	66,59
28	92,85	85,83	78,57	68,41	67,08	63,53	67,98	71,88	78,34	74,14	71,08	66,27
29	92,74	85,24	78,10	68,27	67,16	63,41	68,33	71,90	78,30	73,96	71,23	66,04
30	92,82		77,55	68,18	67,16	63,38	68,80	72,07	78,09	73,61	71,41	66,06
31	92,93		76,89		67,20		69,33	72,49		73,17		66,31
74,92	90,99	90,30	82,37	71,05	67,29	65,99	66,35	72,68	76,09	75,18	71,78	69,72

CV-Helios Network Annual Final Report for 2012

NOAA Regions year 2012							250 regions					
Reg.	Date	Lat.	Long.	Rot.	Class		Reg.	Date	Lat.	Long.	Rot.	Class
1	1391	03.01.12	13	10	2118	HSX	271					
2	1392	04.01.12	20	68	2118	BXO	272					
3	1393	06.01.12	18	54	2118	DAO	273					
4	1394	07.01.12	18	356	2119	AXX	274					
5	1395	09.01.12	22	312	2119	HSX	275					
6	1396	13.01.12	25	287	2119	BXO	276					
7	1397	14.01.12	-20	277	2119	DAO	277					
8	1398	14.01.12	13	314	2119	DAO	278					
9	1399	15.01.12	-24	224	2119	CAO	279					
10	1400	15.01.12	-14	297	2119	CRO	280					
11	1401	15.01.12	15	215	2119	HSX	281					
12	1402	15.01.12	26	212	2119	HSX	282					
13	1403	16.01.12	-19	250	2119	BXO	283					
14	1404	17.01.12	12	296	2119	DSO	284					
15	1405	17.01.12	13	202	2119	HSX	285					
16	1406	18.01.12	-23	309	2119	DRO	286					
17	1407	19.01.12	17	228	2119	BXO	287					
18	1408	22.01.12	06	132	2119	HAX	288					
19	1409	22.01.12	16	150	2119	AXX	289					
20	1410	27.01.12	16	69	2119	HSX	290					
21	1411	29.01.12	-26	100	2119	AXX	291					
22	1412	30.01.12	-15	137	2119	BXO	292					
23	1413	30.01.12	08	58	2119	BXO	293					
24	1414	05.02.12	-06	36	2119	BXO	294					
25	1415	09.02.12	10	24	2119	CSO	295					
26	1416	10.02.12	-16	287	2120	DAI	296					
27	1417	11.02.12	18	239	2120	BXO	297					
28	1418	13.02.12	-24	259	2120	BXO	298					
29	1419	13.02.12	28	203	2120	CSO	299					
30	1420	13.02.12	13	203	2120	HSX	300					
31	1421	19.02.12	17	133	2120	AXX	301					
32	1422	20.02.12	15	177	2120	DAI	302					
33	1423	24.02.12	18	57	2120	HSX	303					
34	1424	25.02.12	09	45	2120	HRX	304					
35	1425	27.02.12	18	75	2120	HRX	305					
36	1426	27.02.12	10	75	2120	DRO	306					
37	1427	02.03.12	15	35	2120	CRO	307					
38	1428	04.03.12	-17	316	2121	CRO	308					
39	1429	04.03.12	18	299	2121	DKC	309					
40	1430	05.03.12	19	315	2121	CRO	310					
41	1431	06.03.12	-27	18	2120	BXO	311					
42	1432	10.03.12	18	220	2121	HSX	312					
43	1433	12.03.12	12	200	2121	DSO	313					
44	1434	12.03.12	-22	205	2121	DSO	314					
45	1435	16.03.12	-25	221	2121	CRO	315					
46	1436	17.03.12	-12	135	2121	AXX	316					
47	1437	18.03.12	-34	169	2121	CSO	317					
48	1438	21.03.12	-15	75	2121	HSX	318					
49	1439	21.03.12	25	223	2121	CRO	319					
50	1440	22.03.12	-26	154	2121	DAI	320					
51	1441	23.03.12	-27	174	2121	AXX	321					
52	1442	23.03.12	13	67	2121	AXX	322					
53	1443	23.03.12	16	54	2121	AXX	323					
54	1444	24.03.12	19	65	2121	BXO	324					
55	1445	24.03.12	-24	29	2121	EAO	325					
56	1446	26.03.12	23	105	2121	BXO	326					
57	1447	28.03.12	-25	106	2121	CRO	327					
58	1448	29.03.12	-18	342	2122	AXX	328					
59	1449	30.03.12	-18	41	2121	DRO	329					
60	1450	01.04.12	15	321	2122	CRO	330					
61	1451	01.04.12	17	306	2122	CRO	331					
62	1452	03.04.12	19	285	2122	DSO	332					
63	1453	03.04.12	-17	330	2122	CSO	333					
64	1454	11.04.12	-13	157	2122	CRO	334					
65	1455	12.04.12	07	204	2122	CAO	335					
66	1456	13.04.12	-20	219	2122	BXO	336					
67	1457	14.04.12	22	145	2122	BXO	337					
68	1458	15.04.12	07	104	2122	BXO	338					
69	1459	15.04.12	-15	95	2122	HRX	339					
70	1460	17.04.12	15	107	2122	CRO	340					
71	1461	18.04.12	13	68	2122	HSX	341					
72	1462	18.04.12	-23	09	2122	CAO	342					
73	1463	19.04.12	-26	158	2122	DSO	343					
74	1464	20.04.12	23	107	2122	BXO	344					
75	1465	21.04.12	-17	54	2122	DAO	345					
76	1466	23.04.12	12	39	2122	CSO	346					
77	1467	25.04.12	14	330	2123	HSX	347					
78	1468	25.04.12	09	29	2122	DAO	348					
79	1469	25.04.12	-21	334	2123	CAO	349					
80	1470	29.04.12	-17	288	2123	CSO	350					
81	1471	29.04.12	-23	279	2123	HSX	351					
82	1472	30.04.12	-29	297	2123	BXO	352					
83	1473	02.05.12	-21	347	2123	CAO	353					
84	1474	03.05.12	14	230	2123	HSX	354					
85	1475	04.05.12	05	221	2123	HSX	355					
86	1476	06.05.12	09	188	2123	DKO	356					
87	1477	09.05.12	-22	144	2123	HSX	357					
88	1478	11.05.12	-24	135	2123	HSX	358					
89	1479	12.05.12	15	111	2123	HSX	359					
90	1480	12.05.12	-16	187	2123	AXX	360					

CV-Helios Network Annual Final Report for 2012

91	1481	14.05.12	-10	88	2123	HSX	361					
92	1482	14.05.12	14	100	2123	DSO	362					
93	1483	14.05.12	-27	100	2123	BXO	363					
94	1484	14.05.12	10	75	2123	HSX	364					
95	1485	16.05.12	-19	59	2123	AXX	365					
96	1486	19.05.12	15	17	2123	DAO	366					
97	1487	21.05.12	19	63	2123	BXO	367					
98	1488	23.05.12	12	337	2124	BXO	368					
99	1489	24.05.12	-30	339	2124	AXX	369					
100	1490	25.05.12	-12	307	2124	CRO	370					
101	1491	26.05.12	23	21	2123	DSO	371					
102	1492	26.05.12	-13	286	2124	CSO	372					
103	1493	01.06.12	15	208	2124	DSO	373					
104	1494	01.06.12	-16	204	2124	HSX	374					
105	1495	01.06.12	-12	254	2124	CRO	375					
106	1496	02.06.12	16	201	2124	CSO	376					
107	1497	02.06.12	-22	226	2124	CSI	377					
108	1498	02.06.12	07	189	2124	CSO	378					
109	1499	04.06.12	16	183	2124	DSO	379					
110	1500	05.06.12	09	254	2124	DRO	380					
111	1501	05.06.12	07	205	2124	AXX	381					
112	1502	05.06.12	-17	179	2124	BXO	382					
113	1503	06.06.12	11	245	2124	BXO	383					
114	1504	10.06.12	-17	86	2124	CAO	384					
115	1505	10.06.12	-09	90	2124	AXX	385					
116	1506	11.06.12	11	74	2124	CAO	386					
117	1507	11.06.12	-26	111	2124	DAO	387					
118	1508	14.06.12	-28	107	2124	DAI	388					
119	1509	16.06.12	-15	103	2124	AXX	389					
120	1510	20.06.12	-16	19	2124	CRO	390					
121	1511	23.06.12	15	358	2125	CRO	391					
122	1512	26.06.12	-16	262	2125	DAO	392					
123	1513	27.06.12	16	216	2125	HAX	393					
124	1514	28.06.12	-16	220	2125	BXO	394					
125	1515	28.06.12	-16	205	2125	CSO	395					
126	1516	30.06.12	13	204	2125	DRO	396					
127	1517	02.07.12	19	195	2125	DAO	397					
128	1518	05.07.12	09	117	2125	AXX	398					
129	1519	05.07.12	-14	107	2125	HSX	399					
130	1520	08.07.12	-15	88	2125	FHC	400					
131	1521	10.07.12	-22	96	2125	DAO	401					
132	1522	13.07.12	13	98	2125	CRO	402					
133	1523	13.07.12	-27	46	2125	BXO	403					
134	1524	18.07.12	-17	317	2126	CSO	404					
135	1525	18.07.12	-22	320	2126	CSO	405					
136	1526	21.07.12	-17	268	2126	BXO	406					
137	1527	24.07.12	27	227	2126	AXX	407					
138	1528	24.07.12	17	224	2126	HSX	408					
139	1529	24.07.12	-12	220	2126	HSX	409					
140	1530	25.07.12	-19	210	2126	HSX	410					
141	1531	27.07.12	15	309	2126	CRO	411					
142	1532	27.07.12	-20	185	2126	CAO	412					
143	1533	28.07.12	-28	220	2126	CAO	413					
144	1534	29.07.12	17	170	2126	AXX	414					
145	1535	31.07.12	18	135	2126	DAI	415					
146	1536	31.07.12	-23	173	2126	DAO	416					
147	1537	01.08.12	12	110	2126	AXX	417					
148	1538	01.08.12	-23	118	2126	DRO	418					
149	1539	03.08.12	-22	99	2126	CRO	419					
150	1540	04.08.12	-27	86	2126	CRO	420					
151	1541	04.08.12	-15	82	2126	HRX	421					
152	1542	07.08.12	-13	31	2126	HAX	422					
153	1543	08.08.12	21	23	2126	CSO	423					
154	1544	10.08.12	-30	73	2126	DAI	424					
155	1545	12.08.12	-14	61	2126	BXO	425					
156	1546	17.08.12	16	265	2127	HSX	426					
157	1547	18.08.12	05	298	2127	CSO	427					
158	1548	19.08.12	20	232	2127	CAO	428					
159	1549	20.08.12	-16	323	2127	CSO	429					
160	1550	22.08.12	-11	349	2127	BXO	430					
161	1551	22.08.12	13	282	2127	BXO	431					
162	1552	22.08.12	-18	214	2127	HSX	432					
163	1553	24.08.12	-23	192	2127	HSX	433					
164	1554	25.08.12	16	215	2127	DAI	434					
165	1555	26.08.12	09	145	2127	DAO	435					
166	1556	28.08.12	-12	267	2127	AXX	436					
167	1557	28.08.12	17	150	2127	BXO	437					
168	1558	28.08.12	18	110	2127	BXO	438					
169	1559	29.08.12	18	112	2127	AXX	439					
170	1560	30.08.12	04	126	2127	DAO	440					
171	1561	31.08.12	-12	132	2127	CAO	441					
172	1562	31.08.12	-16	92	2127	AXX	442					
173	1563	31.08.12	-25	78	2127	AXX	443					
174	1564	01.09.12	-13	65	2127	DAO	444					
175	1565	04.09.12	11	74	2127	DAO	445					
176	1566	04.09.12	24	20	2127	HAX	446					
177	1567	08.09.12	17	347	2128	BXO	447					
178	1568	10.09.12	-11	44	2127	DSO	448					
179	1569	11.09.12	-11	298	2128	HAX	449					
180	1570	13.09.12	-13	10	2128	CSO	450					
181	1571	13.09.12	-12	279	2128	CSO	451					
182	1572	16.09.12	15	07	2128	AXX	452					
183	1573	17.09.12	17	222	2128	AXX	453					

CV-Helios Network Annual Final Report for 2012

184	1574	17.09.12	-25	302	2128	BXO	454							
185	1575	19.09.12	07	185	2128	DAO	455							
186	1576	21.09.12	-21	180	2128	DSO	456							
187	1577	23.09.12	08	162	2128	CAO	457							
188	1578	25.09.12	21	169	2128	CRO	458							
189	1579	25.09.12	-09	109	2128	HAX	459							
190	1580	26.09.12	17	99	2128	CRO	460							
191	1581	26.09.12	22	163	2128	CAO	461							
192	1582	27.09.12	-12	85	2128	HSX	462							
193	1583	30.09.12	13	188	2128	DSO	463							
194	1584	01.10.12	-23	71	2128	CAO	464							
195	1585	03.10.12	-16	09	2129	DSO	465							
196	1586	08.10.12	-12	301	2129	HSX	466							
197	1587	10.10.12	-09	59	2128	AXX	467							
198	1588	10.10.12	08	42	2128	BXO	468							
199	1589	10.10.12	13	265	2129	CAO	469							
200	1590	12.10.12	-29	256	2129	CSO	470							
201	1591	13.10.12	07	228	2129	DSO	471							
202	1592	15.10.12	23	255	2129	DRO	472							
203	1593	16.10.12	17	183	2129	HSX	473							
204	1594	16.10.12	-26	199	2129	DRO	474							
205	1595	18.10.12	-14	276	2129	AXX	475							
206	1596	19.10.12	11	149	2129	EAO	476							
207	1597	19.10.12	-21	252	2129	DRO	477							
208	1598	21.10.12	-09	114	2129	HSX	478							
209	1599	24.10.12	-09	83	2129	HSX	479							
210	1600	27.10.12	09	131	2129	DSO	480							
211	1601	30.10.12	-10	66	2129	AXX	481							
212	1602	30.10.12	-17	12	2129	HRX	482							
213	1603	02.11.12	08	55	2129	BXO	483							
214	1604	04.11.12	08	322	2130	BXO	484							
215	1605	05.11.12	17	333	2130	BXO	485							
216	1606	05.11.12	-16	310	2130	CRO	486							
217	1607	06.11.12	12	35	2129	BXO	487							
218	1608	06.11.12	-20	283	2130	HRX	488							
219	1609	07.11.12	-14	260	2130	HRX	489							
220	1610	08.11.12	-22	267	2130	BXO	490							
221	1611	09.11.12	12	239	2130	DSO	491							
222	1612	09.11.12	06	234	2130	HSX	492							
223	1613	12.11.12	-21	207	2130	HSX	493							
224	1614	12.11.12	15	193	2130	DSO	494							
225	1615	12.11.12	09	205	2130	BXO	495							
226	1616	15.11.12	21	164	2130	DRO	496							
227	1617	17.11.12	-18	217	2130	BXO	497							
228	1618	19.11.12	08	136	2130	EAI	498							
229	1619	19.11.12	10	171	2130	DAI	499							
230	1620	21.11.12	-08	87	2130	CSO	500							
231	1621	25.11.12	15	18	2130	HAX	501							
232	1622	27.11.12	-24	52	2130	BXO	502							
233	1623	28.11.12	11	341	2131	DSO	503							
234	1624	29.11.12	20	33	2130	BXO	504							
235	1625	30.11.12	15	338	2131	DSO	505							
236	1626	05.12.12	11	298	2131	HAX	506							
237	1627	06.12.12	-16	318	2131	AXX	507							
238	1628	06.12.12	10	243	2131	AXX	508							
239	1629	09.12.12	12	238	2131	CRO	509							
240	1630	10.12.12	18	254	2131	DAO	510							
241	1631	13.12.12	20	219	2131	DAO	511							
242	1632	13.12.12	16	231	2131	CRO	512							
243	1633	16.12.12	-07	109	2131	EHI	513							
244	1634	16.12.12	-13	109	2131	HSX	514							
245	1635	19.12.12	10	66	2131	DSO	515							
246	1636	26.12.12	13	347	2132	BXO	516							
247	1637	27.12.12	06	344	2132	AXX	517							
248	1638	28.12.12	12	311	2132	HSX	518							
249	1639	28.12.12	-16	311	2132	DAO	519							
250	1640	31.12.12	28	320	2132	DSO	520							
251							521							
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ZÜRICH/McINTOSH-CLASSIFICATIONS DISTRIBUTION for the year 2012

A	B	C	D	E	F	H
AXX	BXO	CRO	DRO	ERO	FRO	HRX
12,4 %	17,2 %	9,6 %	4,0 %			2,8 %
	BXI	CRI	DRI	ERI	FRI	HAX
						3,2 %
	CAO	DAO	EAO	FAO	HSX	
	6,0 %	7,6 %	0,8 %			14,8 %
	CAI	DAI	EAI	FAI	HKX	
		3,2 %	0,4 %			
	CSO	DSO	ESO	FSO	HHX	
	7,6 %	8,4 %				
	CSI	DSI	ESI	FSI		
	0,4 %					
	CKO	DAC	EAC	FAC		
	CKI	DSC	ESC	FSC		
	CHO	DKO	EKO	FKO		
		0,4 %				
	CHI	DKI	EKI	FKI		
		DHO	EHO	FHO		
		DHI	EHI	FHI		
			0,4 %			
		DKC	EKC	FKC		
		0,4 %				
		DHC	EHC	FHC		
				0,4 %		

SUNSPOT CLASS

1st letter

	250	
A	31	12,4 %
B	43	17,2 %
C	59	23,6 %
D	60	24,0 %
E	4	1,6 %
F	1	0,4 %
H	52	20,8 %

MAIN SUNSPOT TYPE

2nd letter

	250	
X	74	29,6 %
R	41	16,4 %
A	53	21,2 %
S	78	31,2 %
K	2	0,8 %
H	2	0,8 %

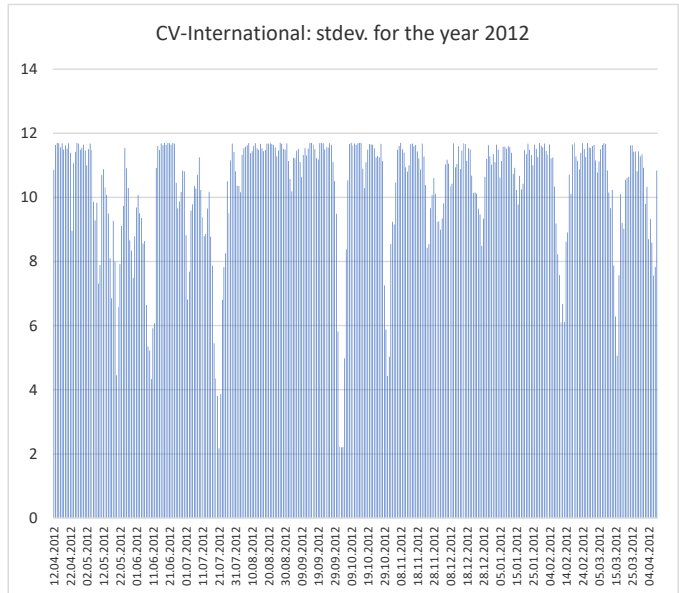
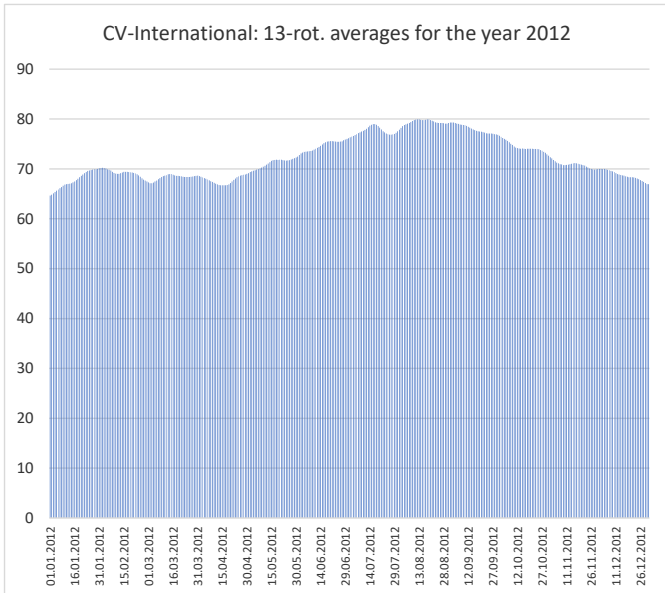
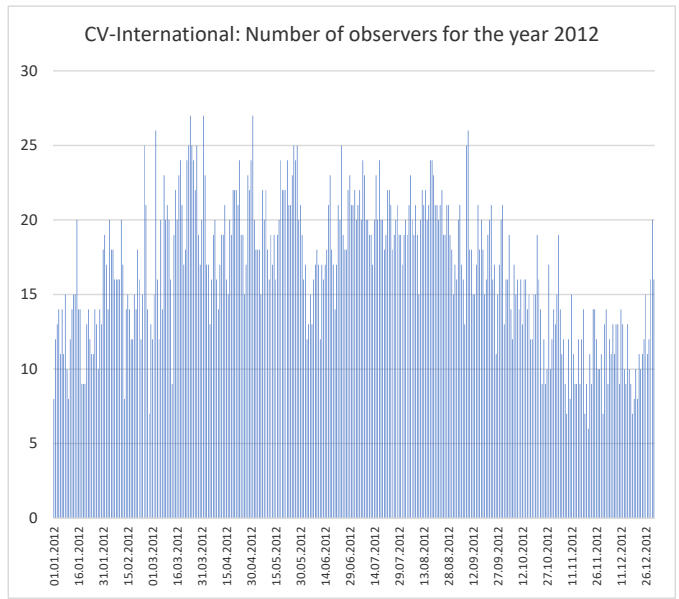
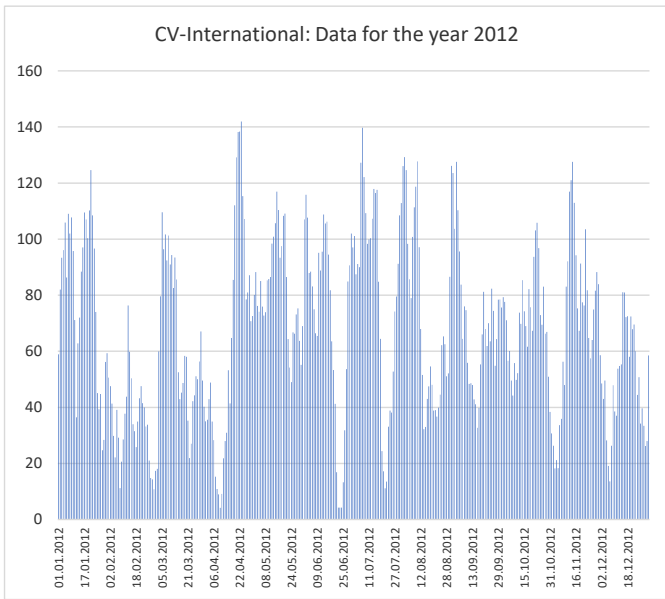
SUNSPOT DISTRIBUTION

3rd letter

	250	
X	83	33,2 %
O	154	61,6 %
I	11	4,4 %
C	2	0,8 %

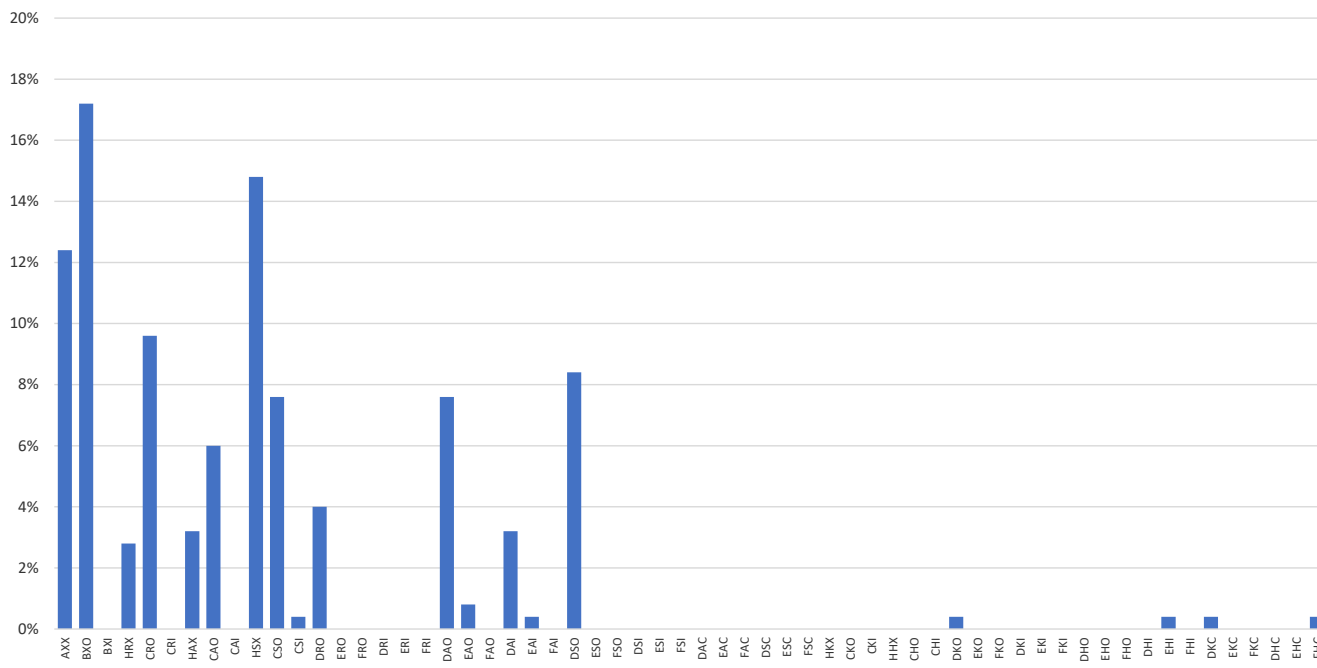
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Graphics for the year 2012

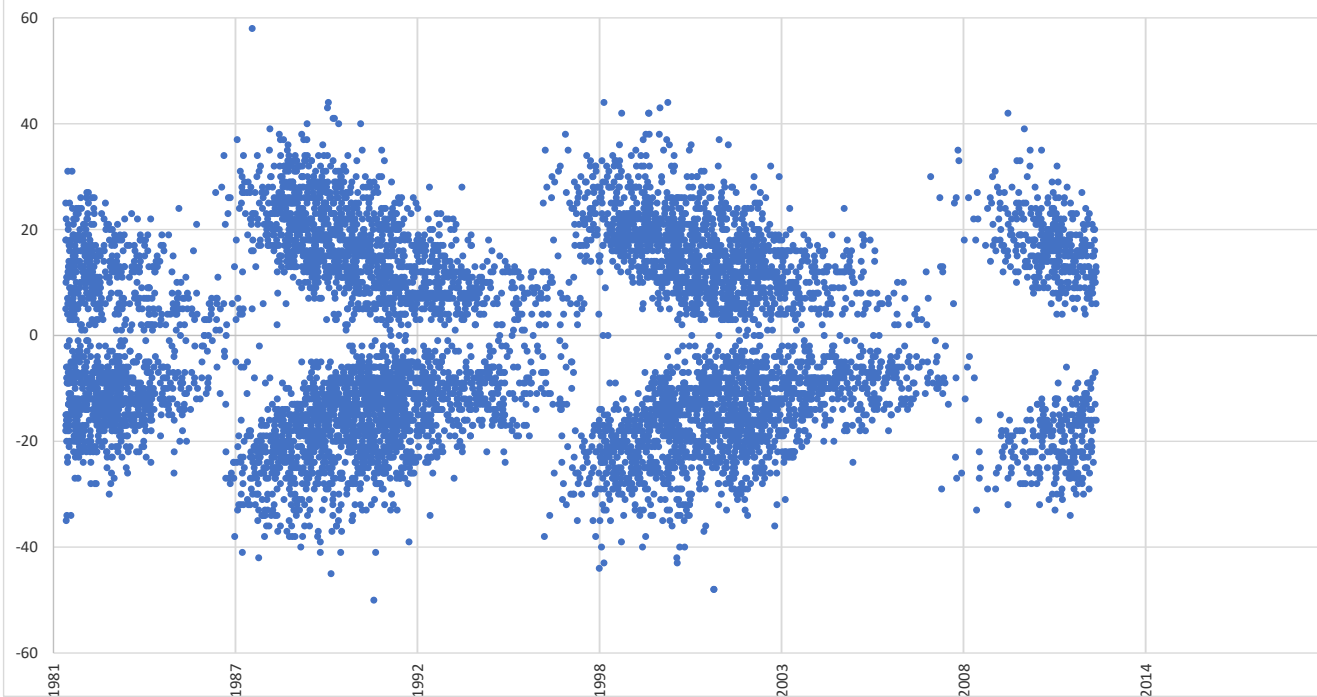


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Zürich/McIntosh-classifications denoted by NOAA/USAF for the year 2012



RGO/NOAA-USAF Sunspot Regions 1981-2012



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containing 131806 CV-observations!

This AFR issued 1st April 2013

CV-Helios Network

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Magnetic Sunspot Classifications Zürich/McIntosh system
CV - Classification Values (Malde/1981) - numeric system
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