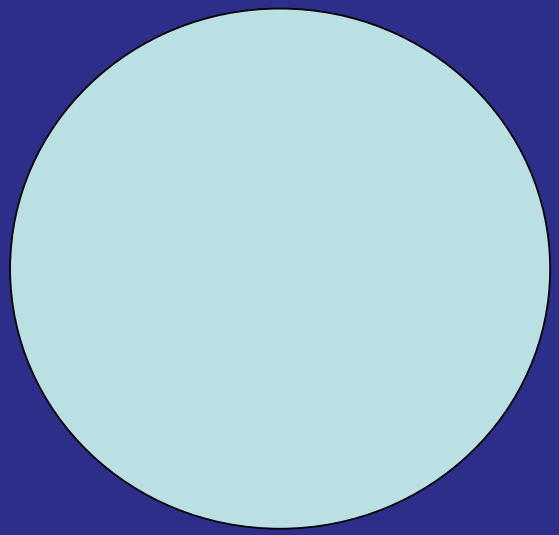


Test

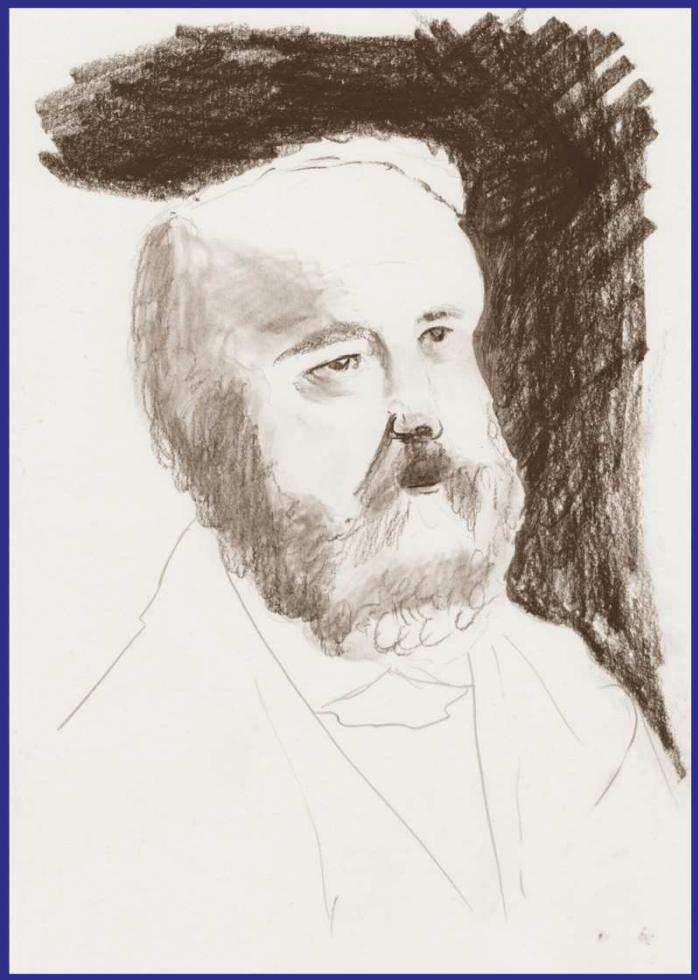
Tests

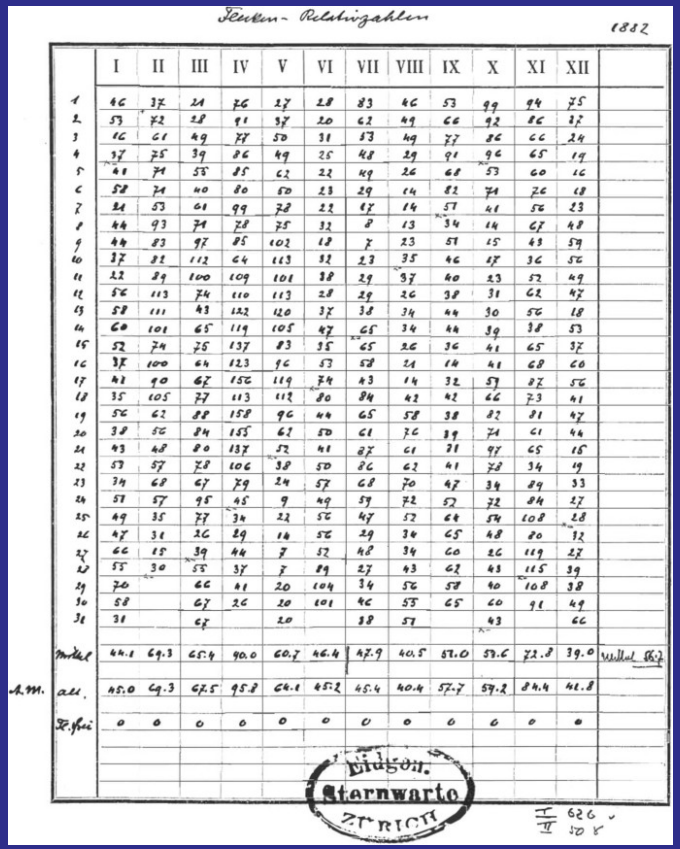
- Astronomie / Astrophysique
- Aquarelle
- Van / Voyage
- Scandinavie
- Observation

Du Soleil de minuit au siège du SILSO

RCE 2022

Johann Rudolf Wolf



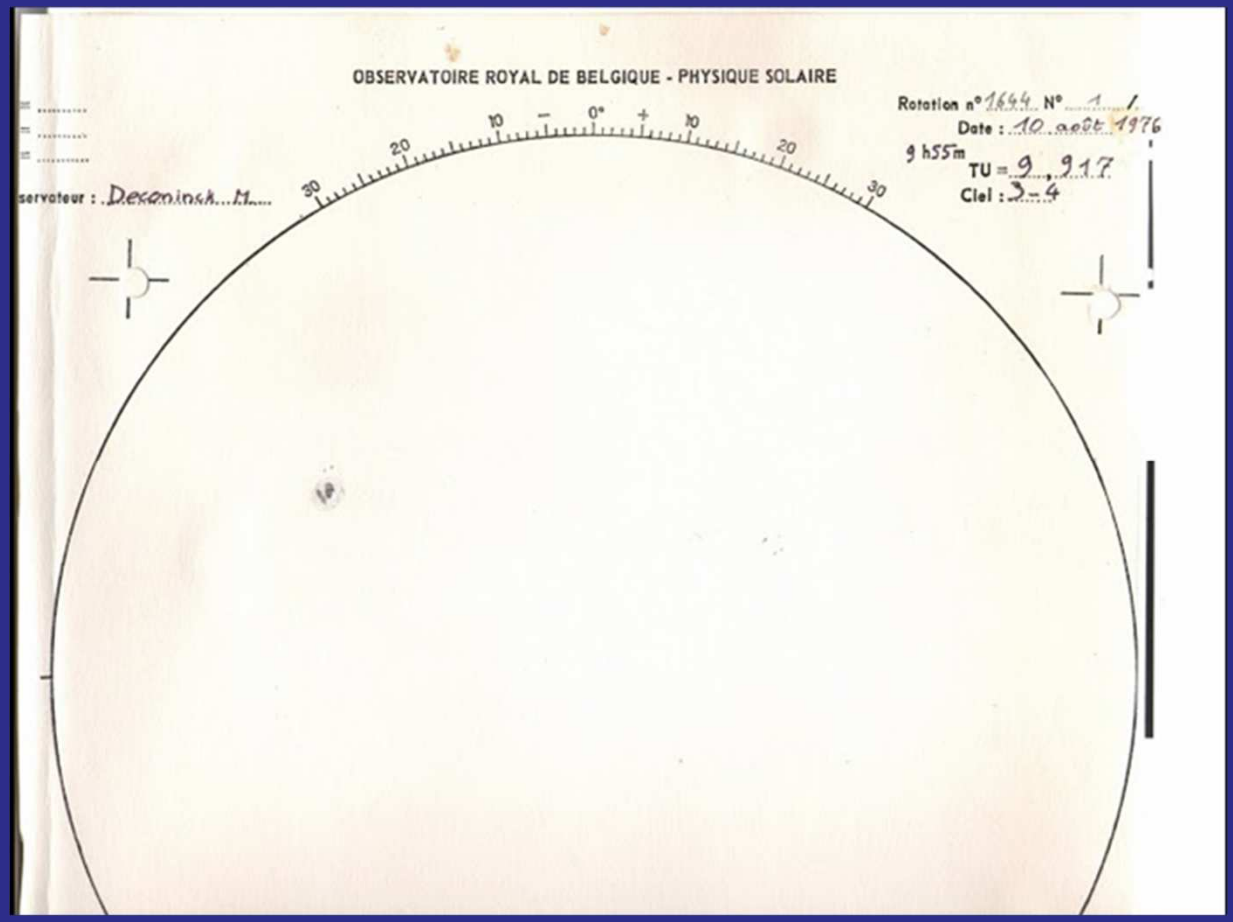


Flecken-Relativzahlen 1882

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
1	46	37	21	76	27	28	83	46	53	99	94	75	
2	53	72	28	91	37	20	62	49	66	92	86	27	
3	16	61	49	77	50	31	53	49	77	86	66	24	
4	37	75	39	86	49	25	48	29	91	96	65	19	
5	41	71	55	85	62	22	49	26	68	53	60	16	
6	58	71	40	80	50	23	29	14	82	71	76	18	
7	21	53	61	99	78	22	47	14	57	41	56	23	
8	44	93	71	78	75	32	8	13	34	14	67	48	
9	44	83	97	85	102	18	7	23	51	15	43	59	
10	37	82	112	64	113	32	23	35	46	27	36	56	
11	22	89	100	109	101	38	29	37	40	23	52	49	
12	56	113	74	110	113	28	29	26	38	31	62	47	
13	58	111	43	122	120	37	38	34	44	30	56	18	
14	60	101	65	119	105	47	65	34	44	39	38	53	
15	52	74	75	137	83	35	65	26	36	41	65	37	
16	37	100	64	123	96	53	58	21	14	41	68	60	
17	42	90	67	156	119	74	43	14	32	57	87	56	
18	35	105	77	113	112	80	84	42	42	66	73	41	
19	56	62	88	158	96	44	65	58	38	82	81	47	
20	38	56	84	155	67	50	61	76	39	71	61	44	
21	43	48	80	137	52	41	87	61	71	97	65	15	
22	57	57	78	106	38	50	86	62	41	78	34	19	
23	34	68	67	79	24	57	68	70	47	34	29	33	
24	57	57	95	45	9	49	59	72	52	72	84	27	
25	49	35	77	34	22	56	47	52	64	54	108	28	
26	47	31	26	29	14	56	29	34	65	48	80	32	
27	66	15	39	44	7	57	48	34	60	26	119	27	
28	55	30	55	37	7	89	27	43	62	43	115	39	
29	70		66	41	20	104	34	56	58	40	108	38	
30	58		67	26	20	101	46	55	65	60	91	49	
31	31		67		20		38	57		43		66	
Mittel	44.1	69.3	65.4	90.0	60.7	46.4	47.9	40.5	57.0	59.6	72.8	39.0	Mittel 56.7
a.m. all.	45.0	69.3	67.5	95.8	64.1	45.2	45.4	40.4	57.7	59.2	84.4	41.8	
Tagesei	0	0	0	0	0	0	0	0	0	0	0	0	

Lindgen. Sternwarte ZÜRICH

Pourquoi dessiner le soleil tous les jours ?



IRSOL

IRSOL

INFORMATIONS COVID-19
Pour votre sécurité,
Ce véhicule est actuellement fermé.
Il a été nettoyé et désinfecté avec soin.
N'hésitez pas à demander à nos équipes
de vous l'ouvrir et de vous le présenter.
STOP
COVID
9

www.aquarellia.com
COAST
Telescope
10

Bed & Telescope
www.aquarellia.com

12

13

www.aquarellia.com
Bed & Telescope
CORST

www.aquarella.com
Bed & Telescope
15

FS-874-AX
16

17

18

19

20

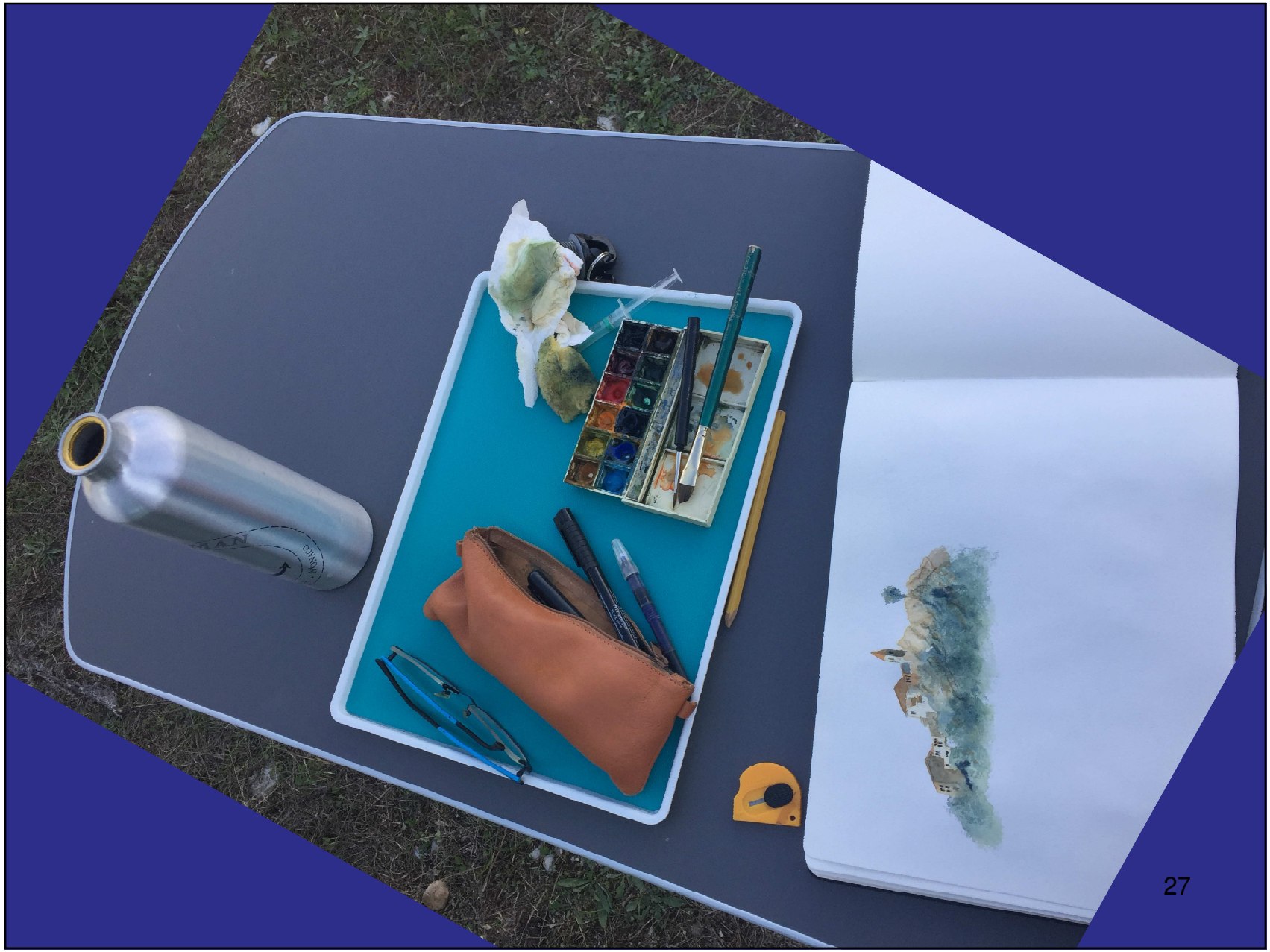
TAKAHASHI
Made in Japan

FC-100D
D=100mm F=740mm
No. 02A3008
TAKAHASHI
MADE IN JAPAN
TAKAHASHI

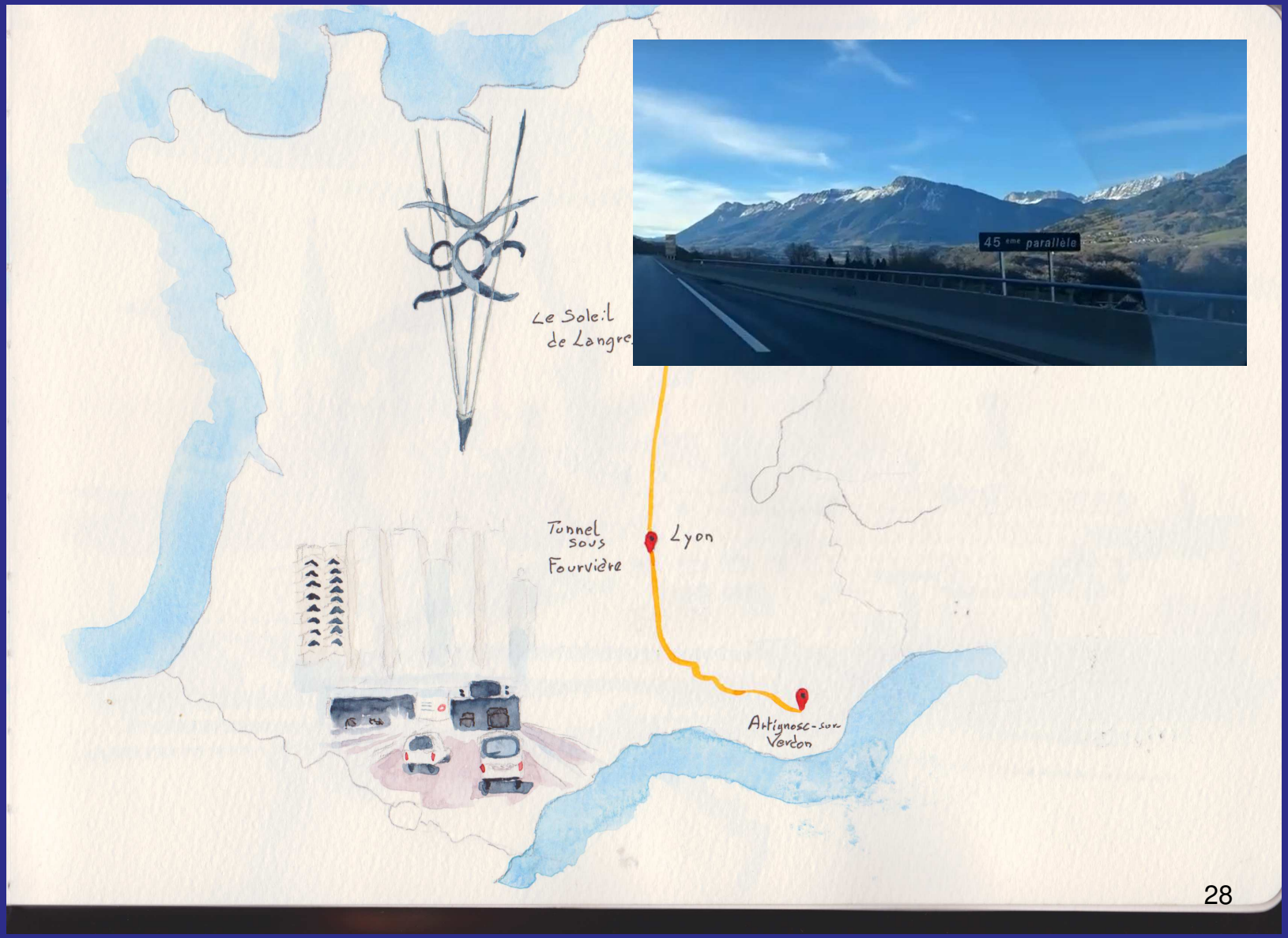
24

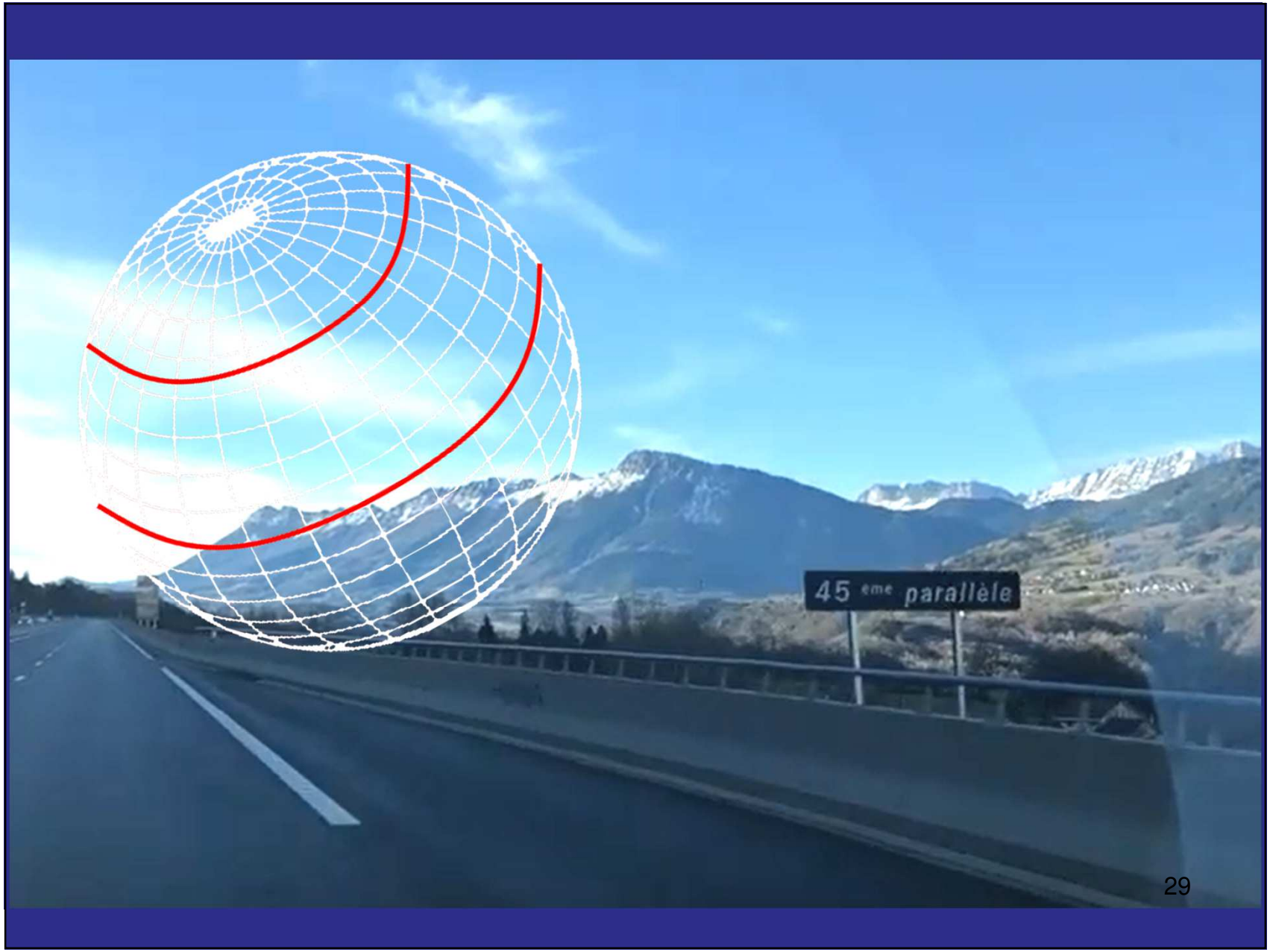
25

26



27

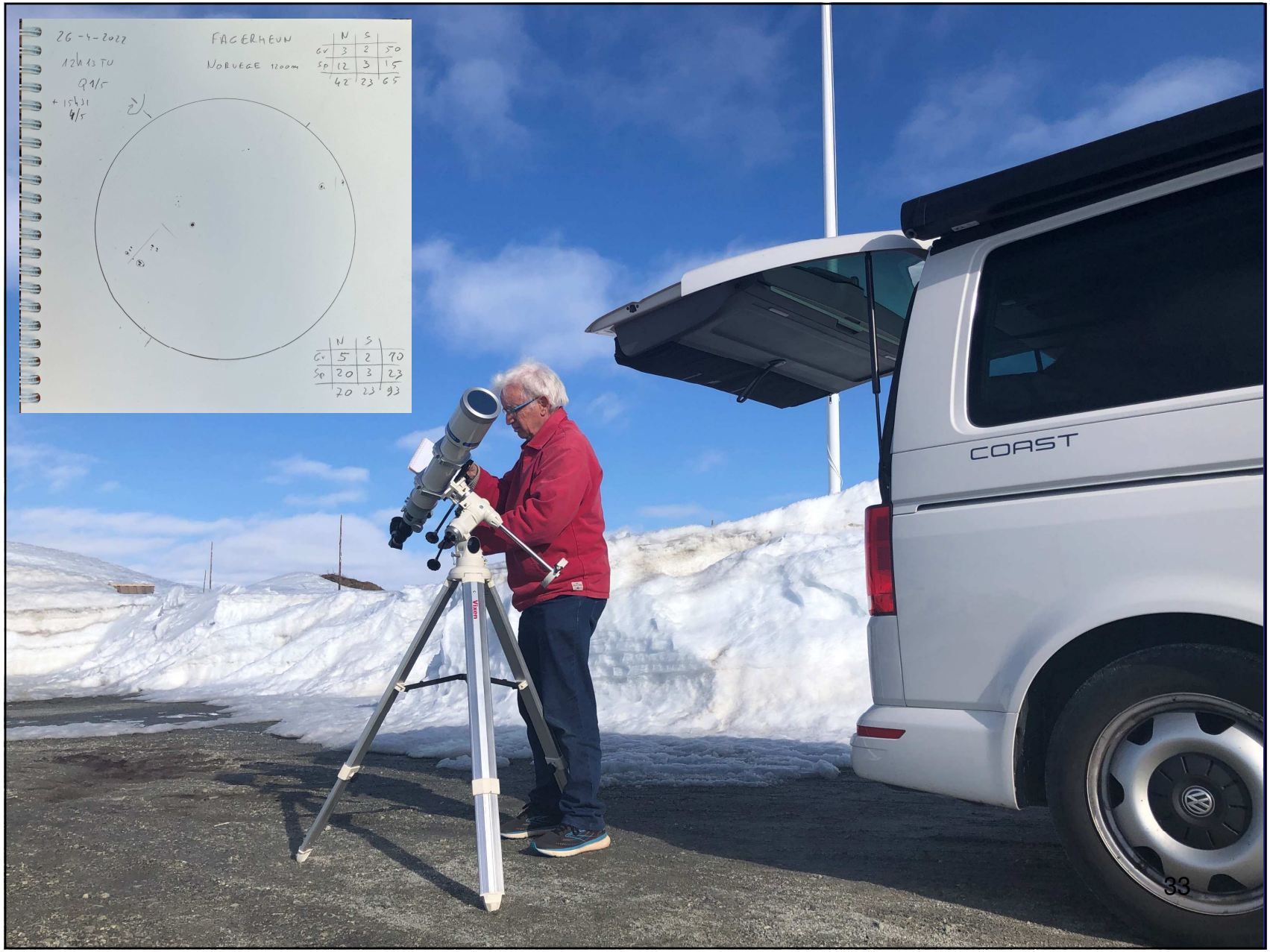

Le Soleil
de Langres
45 ème parallèle
Tunnel
sous
Fourvière
Lyon
Artignosc-sur-
Verdon
28

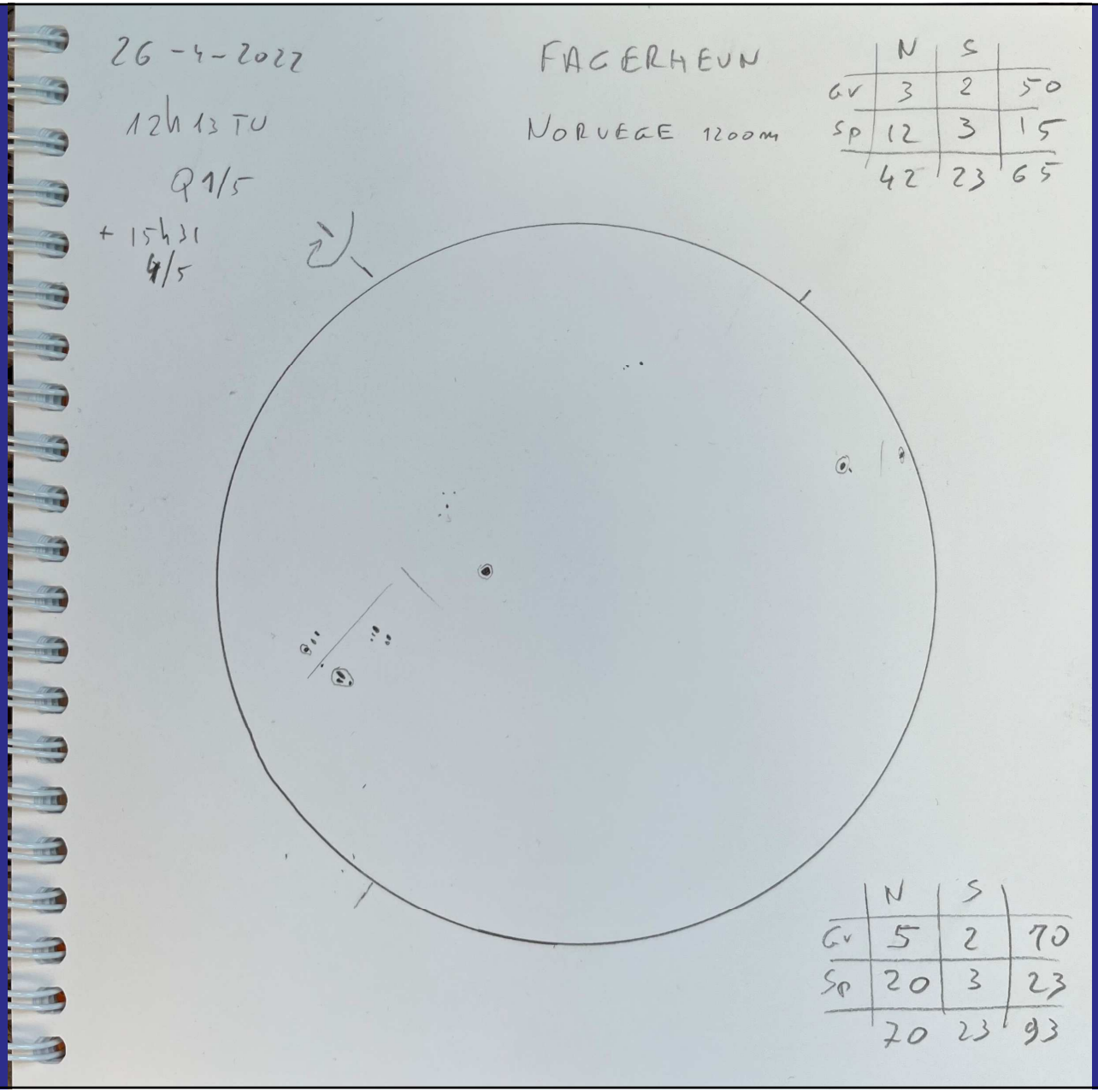

45 eme parallèle
29

Color Line Cruises
M/S COLOR MAGIC
Color Line
30

31

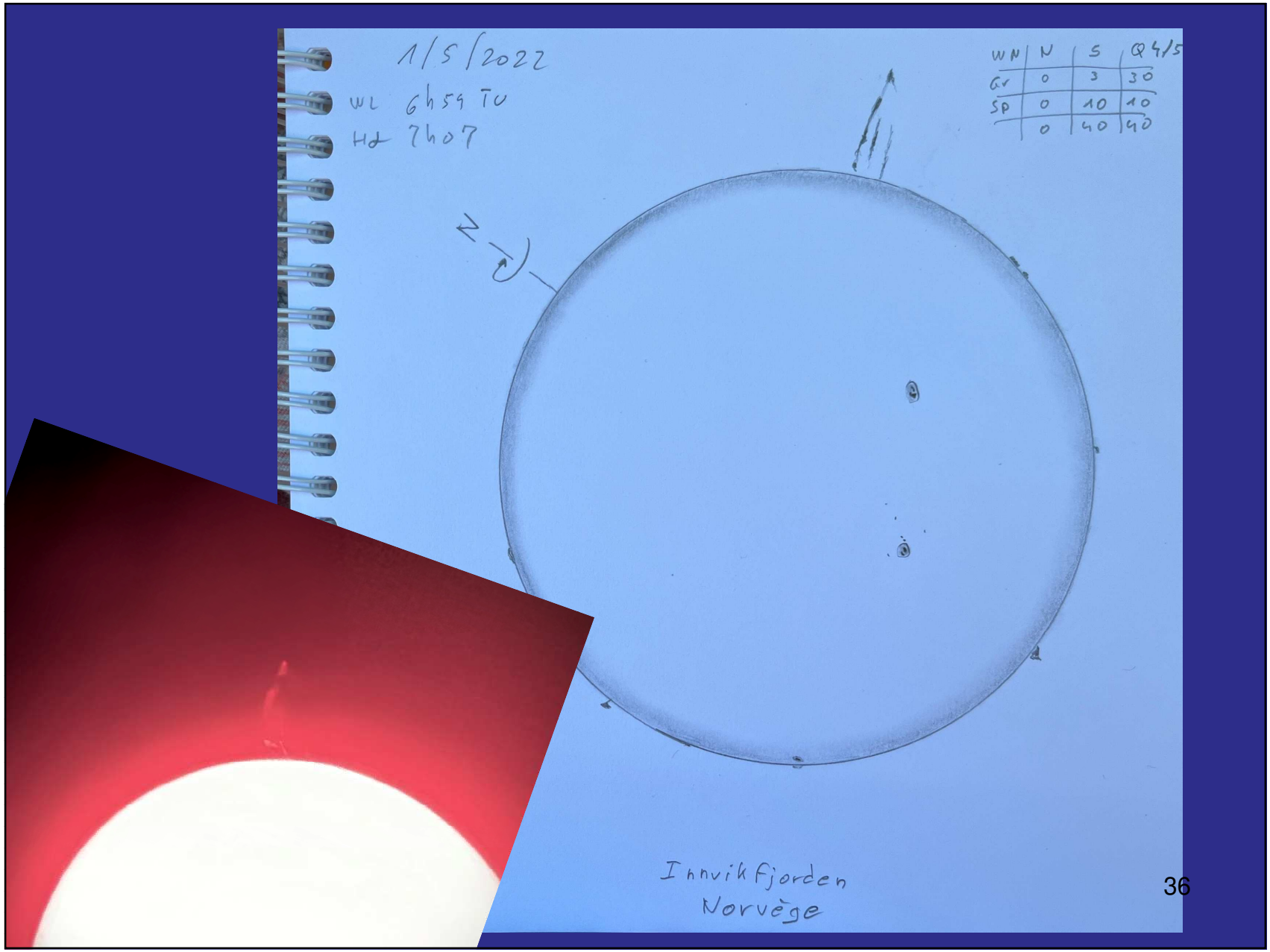
32


26-4-2022
12h13 TU
Q 1/5
+15h31
4/5
FAGERHEUN
NORVEGE 1200m
N S
Gr 3 2 50
Sp 12 3 15
42 23 65
N S
Gr 5 2 70
Sp 20 3 23
70 23 93
COAST
Vixen
33


26-4-2022
12h13 TU
Q 1/5
+ 15h31
4/5
FAGERHEUN
NORVEGE 1200m
N S
Gv 3 2 50
Sp 12 3 15
42 23 65
N S
Gv 5 2 70
Sp 20 3 23
70 23 93

34

Vixen
35


1/5/2022
WL 6h59 TU
Hd 7h07
WN N S Q 4/5
Gr 0 3 30
Sp 0 10 10
0 40 40
N
Innvikfjorden
Norvège
36

Month 04 Year 2022			Total			North			South			Center			
Day	Time	Quality	Groups*	Sunspots*	Wolf*	Groups	Sunspots	Wolf	Groups	Sunspots	Wolf	Groups	Sunspots	Wolf	
01	1333	2	6	44	104	3	15	45	3	29	59	0	0	0	Clear
02	1103	2	6	34	94	3	12	42	3	22	52	0	0	0	Clear
03	1545	2	5	41	91	2	2	22	3	39	69	0	0	0	Clear
04	1320	2	4	38	78	1	2	12	3	36	66	0	0	0	Clear
05	1120	4	5	22	72	3	3	33	2	19	39	0	0	0	Clear
06	1630	1	5	31	81	2	3	23	3	28	58	0	0	0	Clear
07	1455	2	3	6	36	0	0	0	3	6	36	0	0	0	Clear
08	1508	3	3	10	40	1	3	13	2	7	27	0	0	0	Clear
09															Clear
10	0750	3	2	3	23	1	2	12	1	1	11	0	0	0	Clear
11	1557	1	1	2	12	1	2	12	0	0	0	0	0	0	Clear
12	0820	2	1	3	13	1	3	13	0	0	0	0	0	0	Clear
13	0930	3	2	7	27	2	7	27	0	0	0	0	0	0	Clear
14	0828	4	3	11	41	2	8	28	1	3	13	0	0	0	Clear
15	0754	2	3	10	40	2	7	27	1	3	13	0	0	0	Clear
16	0740	4	5	9	59	4	6	46	1	3	13	0	0	0	Clear
17	1251	2	5	18	68	3	14	44	2	4	24	0	0	0	Clear
18	1603	2	4	17	57	3	15	45	1	2	12	0	0	0	Clear
19	1315	1	4	30	70	3	29	59	1	1	11	0	0	0	Clear
20	1253	4	4	28	68	3	27	57	1	1	11	0	0	0	Clear
21	1515	1	5	40	90	4	33	73	1	7	17	0	0	0	Clear
22	0557	2	5	30	80	4	28	68	1	2	12	0	0	0	Clear
23	1427	3	6	32	92	5	31	81	1	1	11	0	0	0	Clear
24	1406	2	5	33	83	4	32	72	1	1	11	0	0	0	Clear
25	1008	2	6	35	95	5	33	83	1	2	12	0	0	0	Clear
26	1531	4	7	23	93	5	20	70	2	3	23	0	0	0	Clear
27	0956	2	8	19	99	5	15	65	3	4	34	0	0	0	Clear
28															Clear
29	1023	1	5	9	59	2	3	23	3	6	36	0	0	0	Clear
30	0717	2	3	7	37	1	1	11	2	6	26	0	0	0	Clear
Day	Time(UT)	Quality	Groups*	Sunspots*	Wolf*	Groups	Sunspots	Wolf	Groups	Sunspots	Wolf	Groups	Sunspots	Wolf	

37

37

38

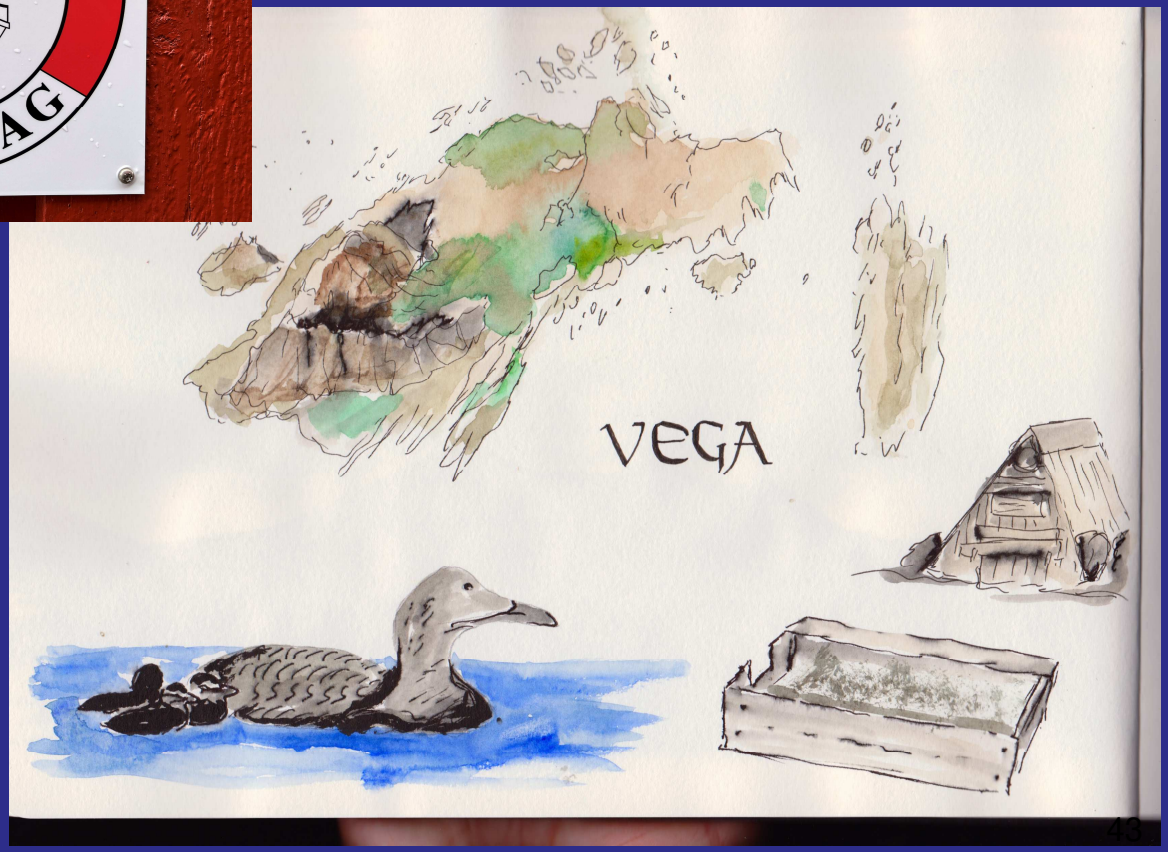
9

39

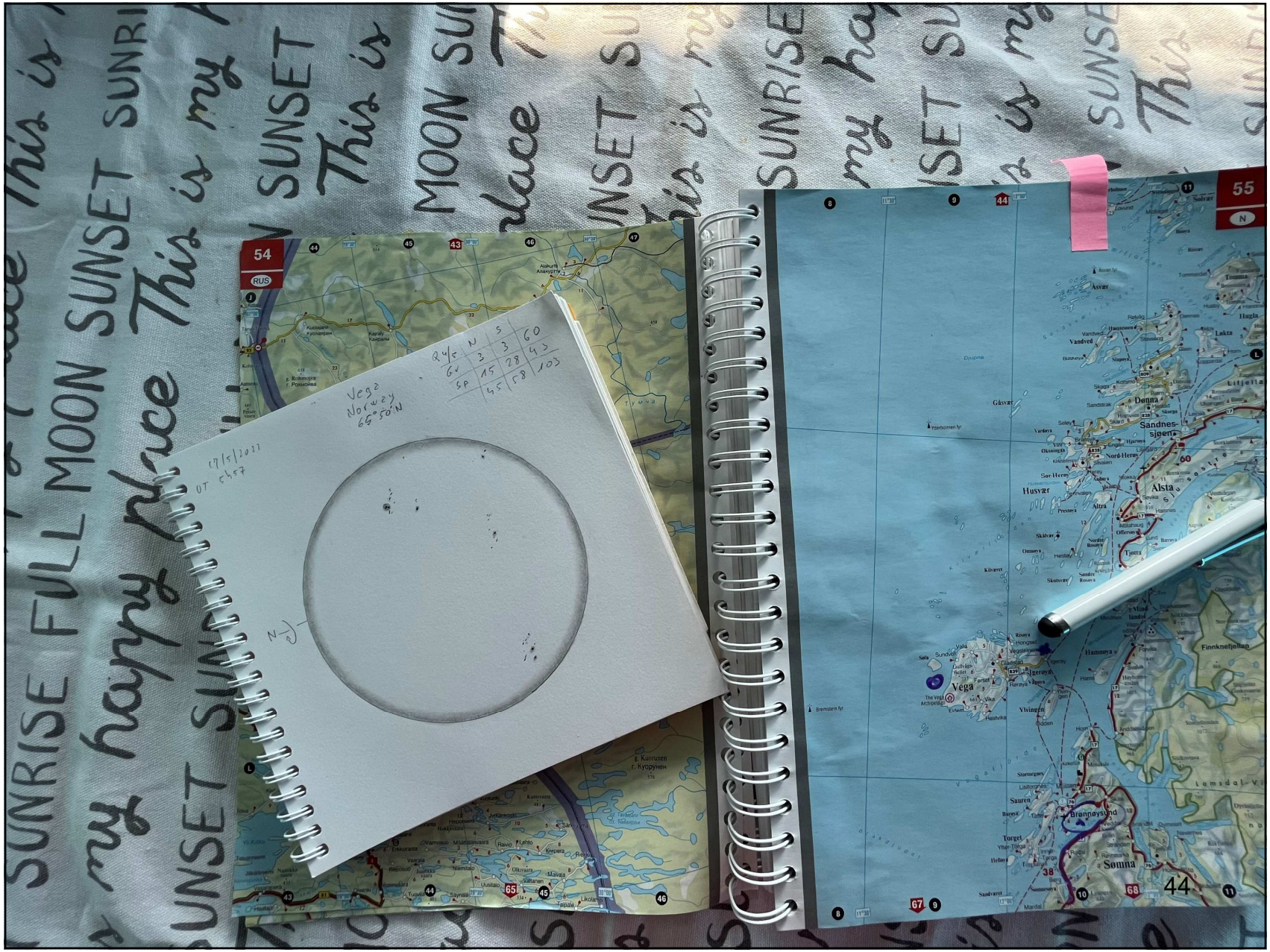
40

10/5/2022
10 17h50
Vikna (Ytter)
Norway
φ°/5 N S
Gr 0 2 20
Si 0 29 29
0 49 49
17
12
N
Kestenga
Кестенга
Kokkosalma
Коккосалма
Novaya Sofporog
Новая Софпорог
Novyi Sofporog
ozero Topozero
озеро Топозеро
o. Šiljo
о. Шилоп
Tungozero
Тунгозеро
g. Karnisvara
г. Карнисвара
Hapoa
Капра
g. Pitasiri
г. Питашири
Ytter-Vikna
Kalhøya
Borgan
Sandtrøret
Valøya
Bøøya
Bindeterøya
Hunnestad
Karstenøya
Bondøya
Brønnøyfjorden
Stokksøya
Grima fyr
Gjæslingen fyr
Frelsøyan
Kjelvelom
Vikna
Inner-Vikna
Rørvik
Torstad
Kvitgrø
Leipsing
Hagrøma
Vattøyan
Lundøyan
Arnøyan
Nærøya
Mæra
Ramstad
Abelvær
Storøya
Brakstad
Fosnes
Gulfjellet
Dun
Fæksdal
Seier-stad
Joa
Myrvika
Kvitgrø
Kolvereid
Sørå
Hemnesøya
Strandøyalen
Oksnøya
Lund
Harranget
Straumen
Storøya
Kvermvika
Gravvikfjellet
Salen
Salsvatnet
Blåvika
Røyklifjellet
Duna Almdalen
Grønning-fjella
Storenfjellet
Skrøvdalen
Skrøystad
Bjørtuna
Svartåsen
Kjelstad
Flatt
Hauksen
Høylandet
195
Avassmarka
Gartland
Storfjellet
Galgofjella
Fjellbrodalsfjellet
Seltran
Mevåssvika
Grøntvika
Almdalen
Myrvika
Gjæslingen fyr
Grima fyr
Brønnøyfjorden
Sandtrøret

11/5/2021
12h29 UTC
LEKA
NORWAY
65°N
Q% N S
GV 1 2 30
SP 1 20 21
11 40 51
Leka
Austra
Vikna
Inner-Vikna
Ytter-Vikna
Skjolden
Gaskeyaerie
Grønning-fjella
Joa
Otteroya
Namsos
Namdalen
Hortavær
Borgan
Lauvøya
Kvaløya
Sandværet
Melholeinen
Gjeitinga
Kvingra
Gjeitvatnet
Skjolsvatnet
Sørfjorden
Sørøya
Bjørnøya
Kvernøya
Skingen
Skorstad
Hammarlen
Kvamvik
Kjelvatnet
Ekornfjella
Ladjeleg
Ytterdalen
Sjøvatnet
Sørfjellet
Sørfjellet
Sørfjell



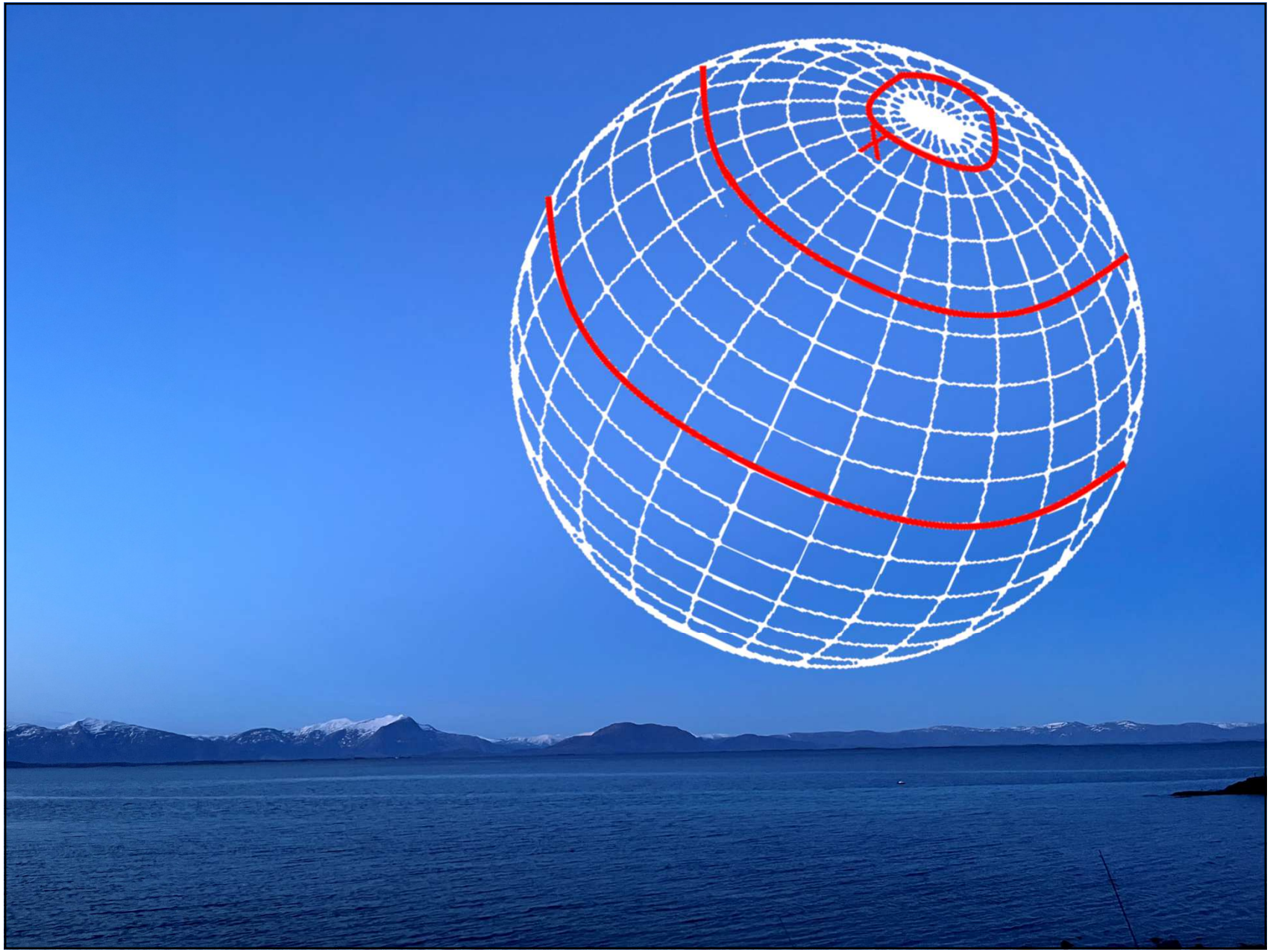
43


SUNRISE FULL MOON SUNSET
my happy place
This is
Vega
Norway
65°50'N
17/5/2022
UT 5:57
N
Vega
Husyær
Alsta
Donna
Sandnes-sjøen
Brønnøysund
Sømna
Finnknetjellan
54
55
44

COAST
www.aquarellia.com
Bed & Telescope

46

0 10 20 30 40 50 60 70 80 90
47

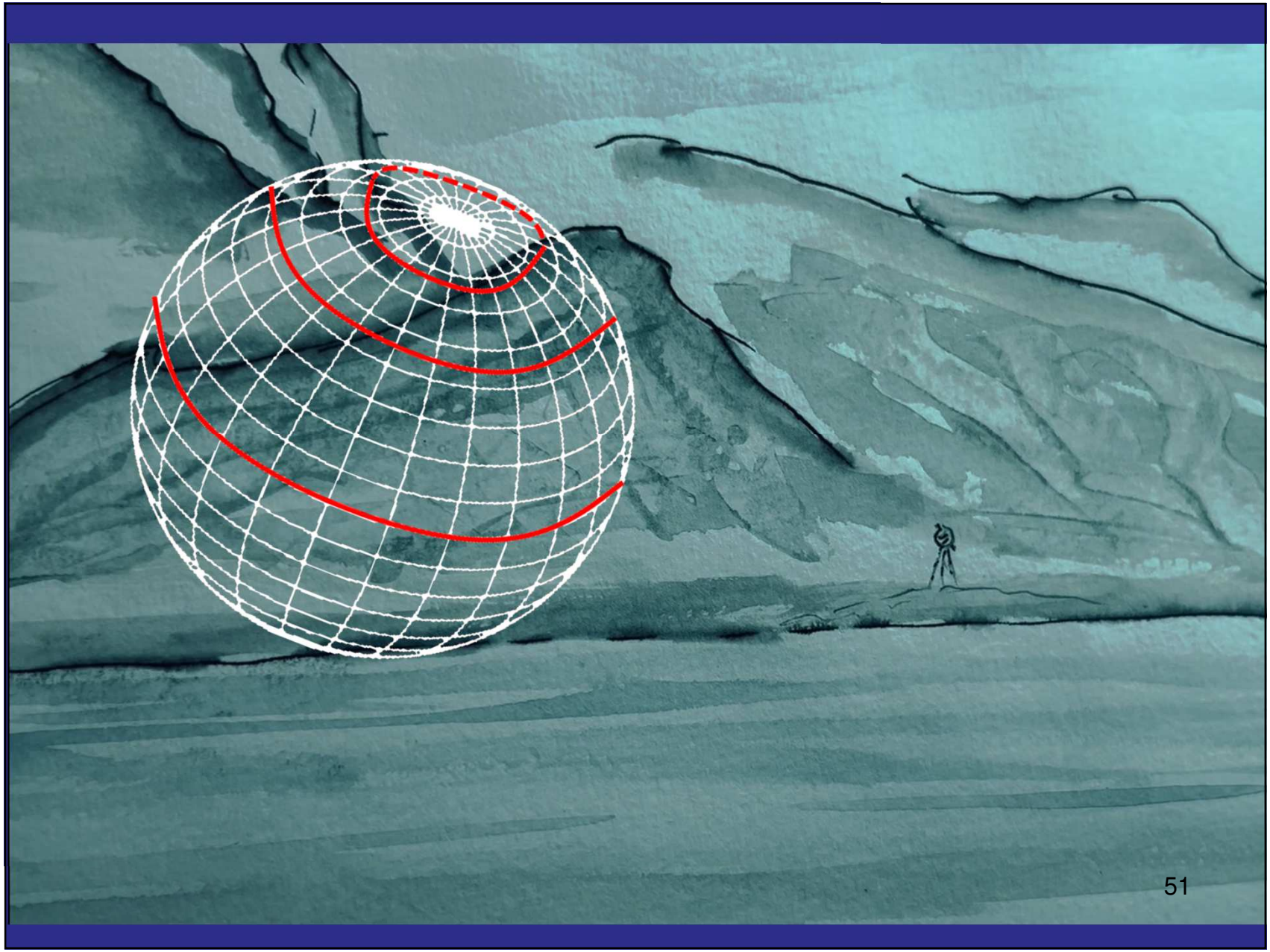


48

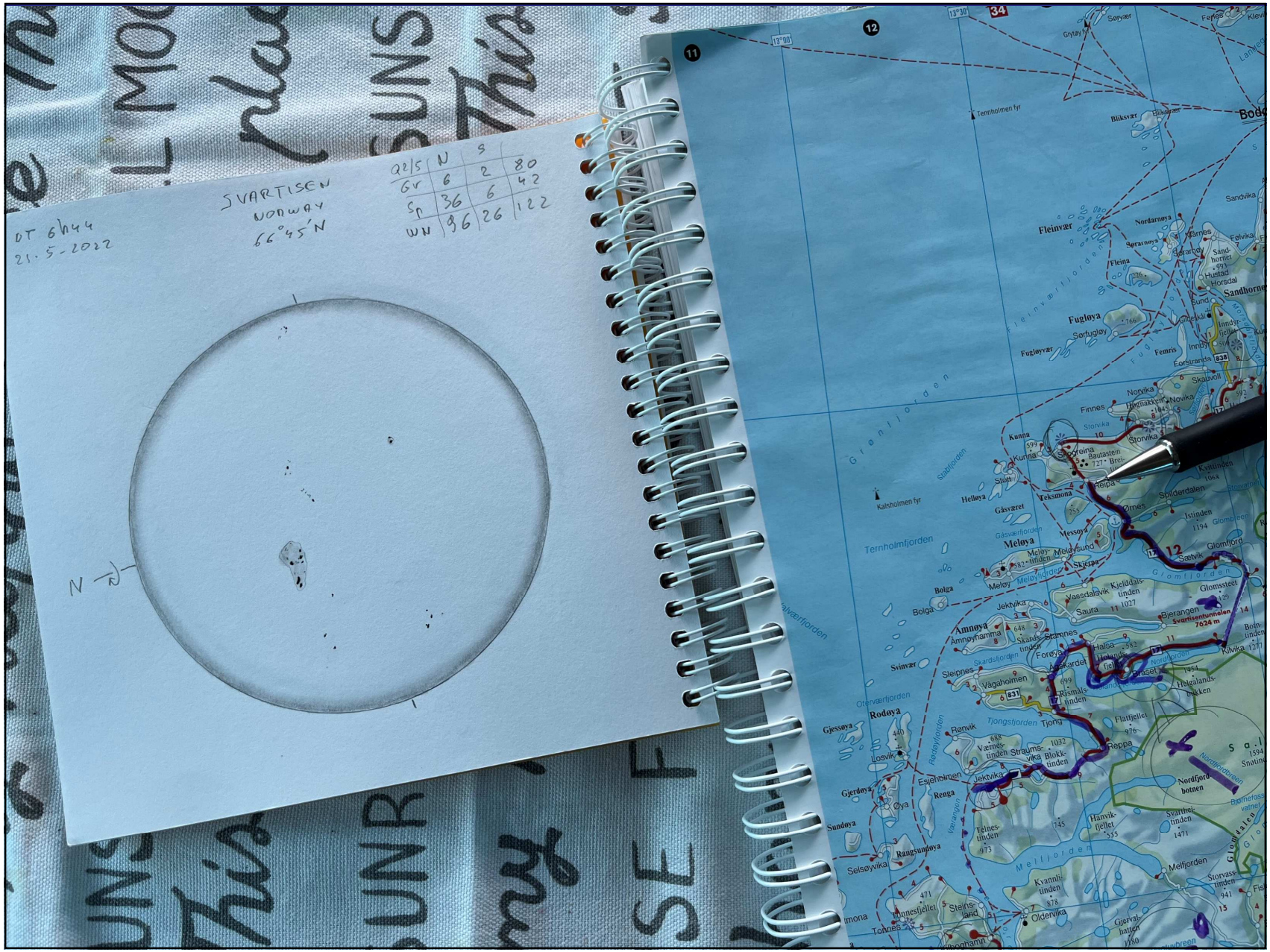
49

49

Souvenir du passage du cercle polaire

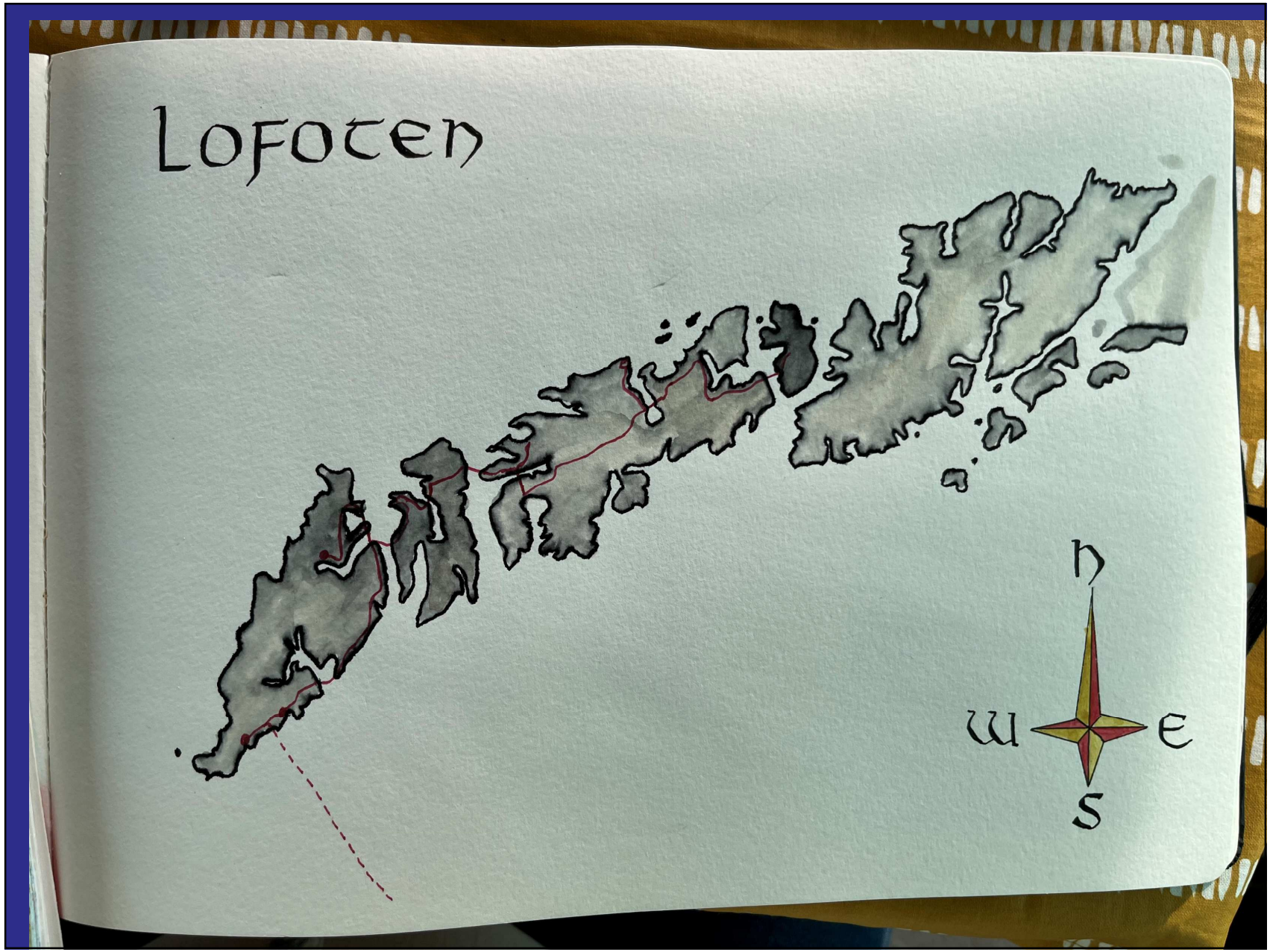


51


SVARTISEN
NORWAY
66°45'N
21.5.2022
N
Ternholmfjorden
Meløya
Rødøya
Fugløya
Fleinvær
Svartisentunnelen
7024 m

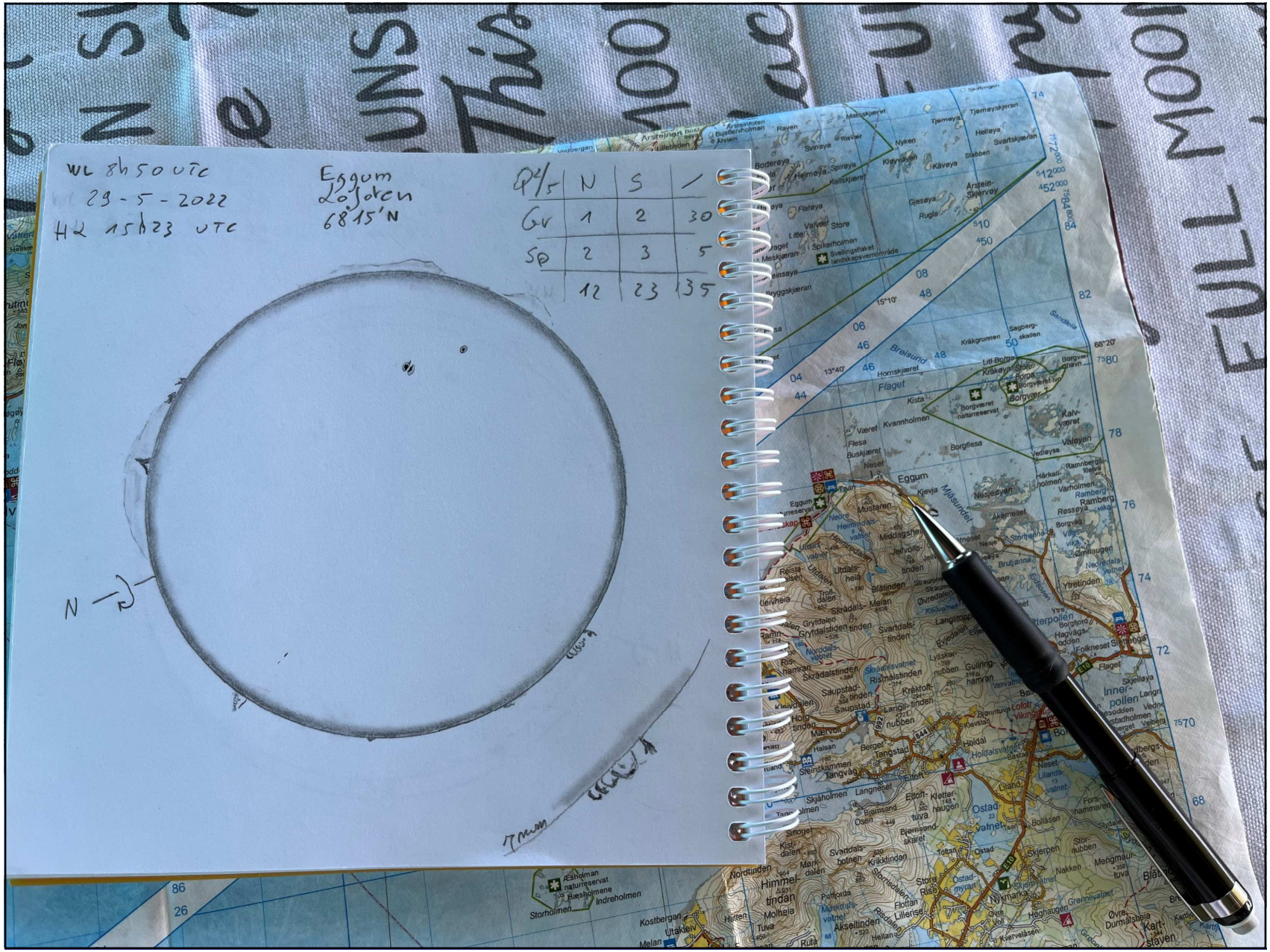
53

54



55

26-5-2022
WL 11h39 UT
Hα 11h52 UT
SELFJORD
LOFOTEN
Norway
68°07'N
N
Q²/5 | N | S | ✓
GV | 2 | 3 | 50
SP | 10 | 7 | 17
WN | 30 | 37 | 67
Moskenes
Selfjorden
Selfjordhytta
Stormarkoplen
Ryptinden
Ulvstinden
Narvtinden
Markan
Breiflogtinden
Torsfjordtinden
Moltinden
Ryten
Fuglhuken
Sørvågen
Ramberg
Skjelvsteinen
Dyrbåen


WL 8h50 UTC
29-5-2022
HL 15h23 UTC
Eggum
Lofoten
68°15'N
Gr/5 N S /
Gr 1 2 30
Sp 2 3 5
12 23 135
N
7mm

57

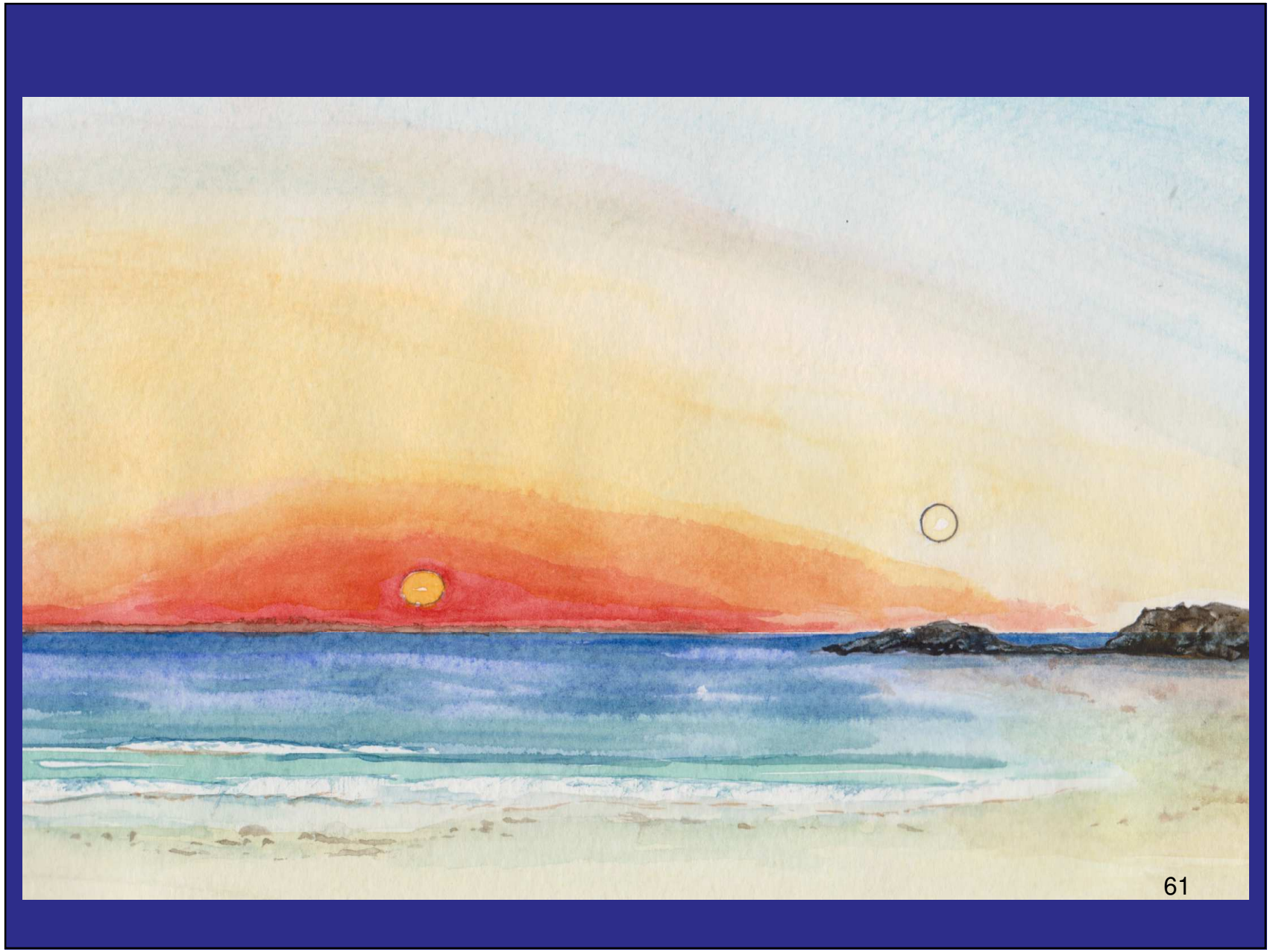
58

58

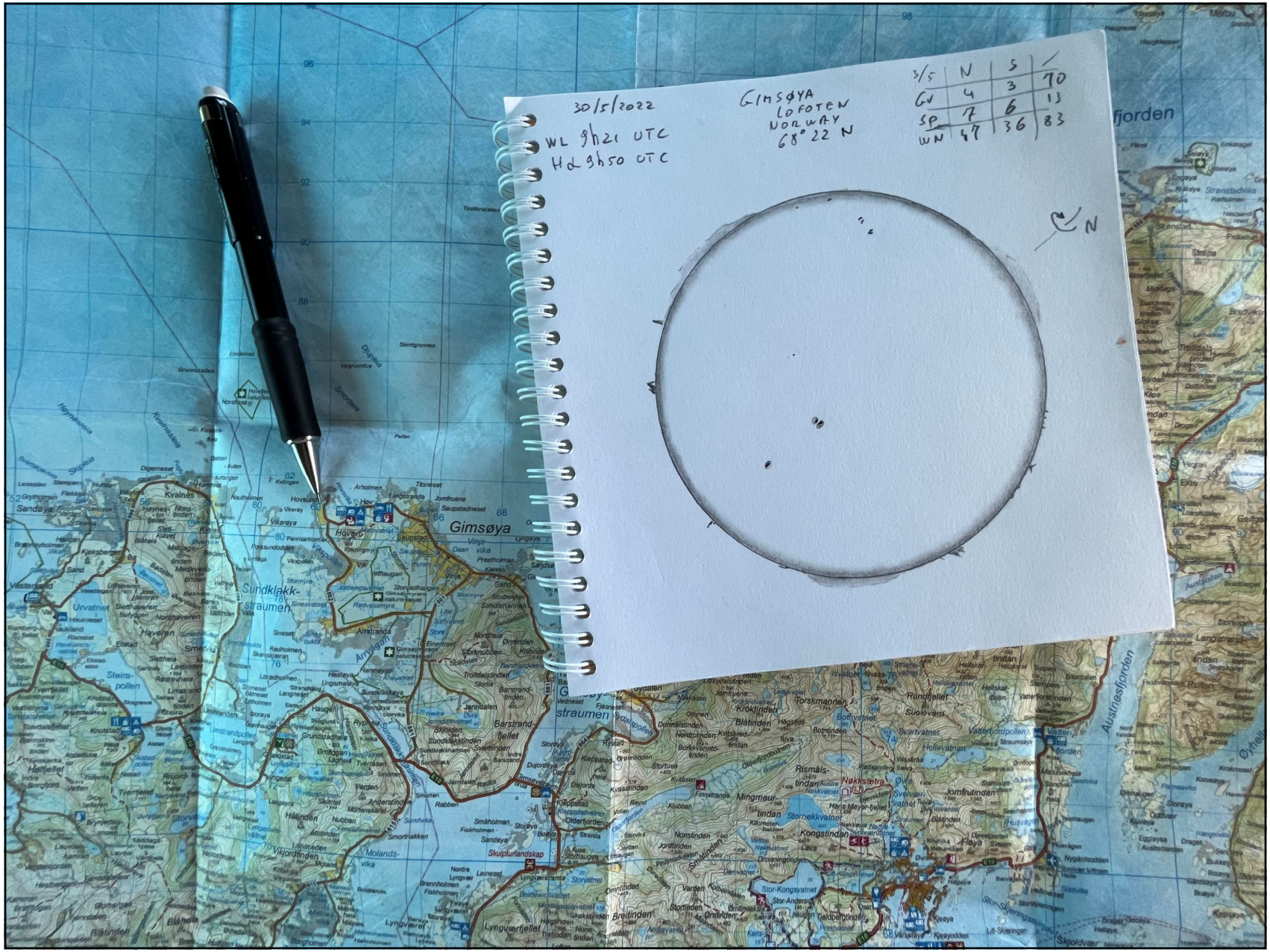
59

59

60

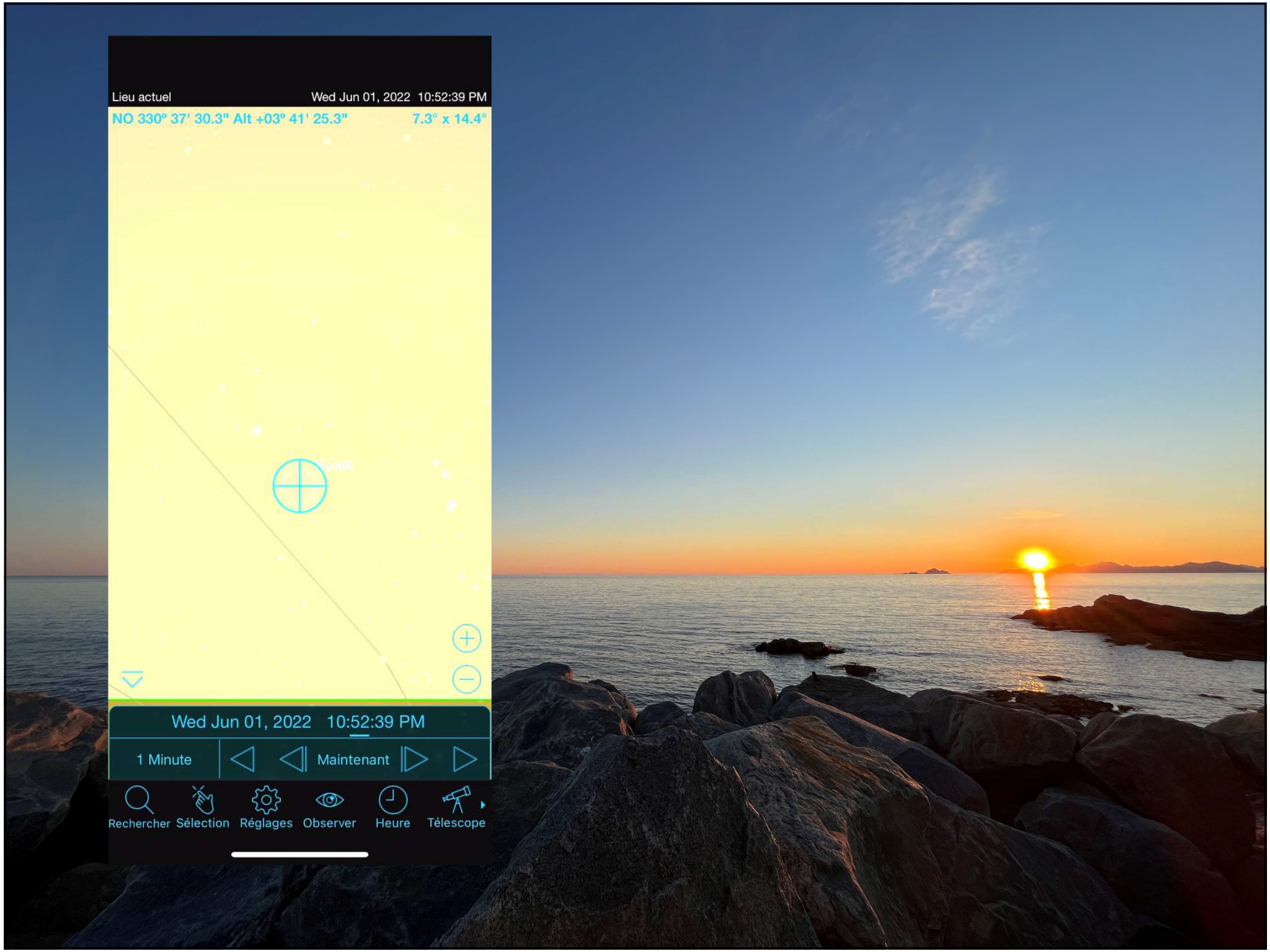


61


30/5/2022
WL 9h21 UTC
Hα 9h50 UTC
GIMSØYA
LOFOTEN
NORWAY
68°22 N
3/5 N S
GN 4 3 70
SP 7 6 13
WN 47 36 83
N
Gimsøya
Sundklakk-straumen
Austnesfjorden

62

63

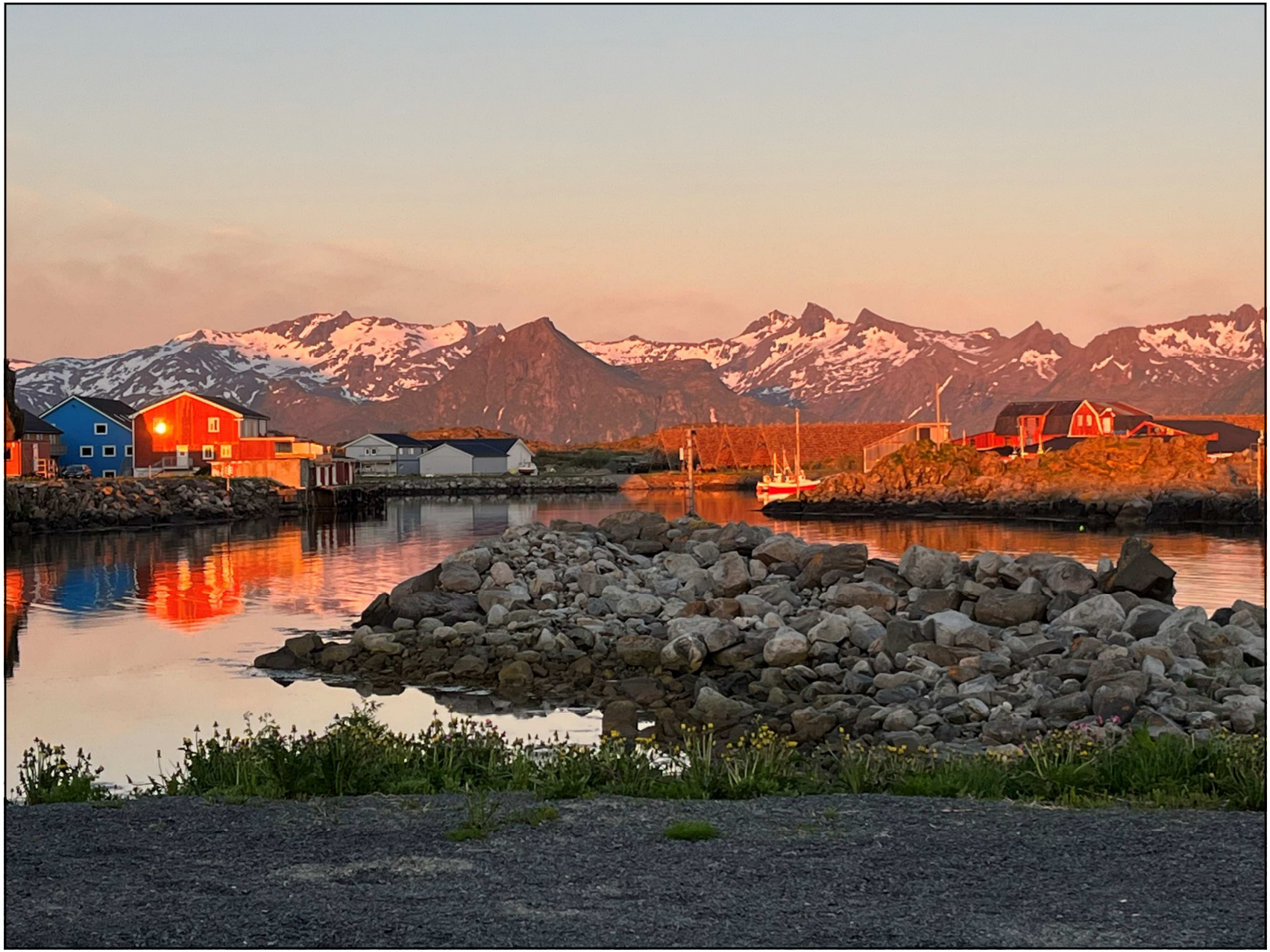

Lieu actuel
Wed Jun 01, 2022 10:52:39 PM
NO 330° 37' 30.3" Alt +03° 41' 25.3"
7.3° x 14.4°
Wed Jun 01, 2022 10:52:39 PM
1 Minute
Maintenant
Rechercher
Sélection
Réglages
Observer
Heure
Télescope

64

65

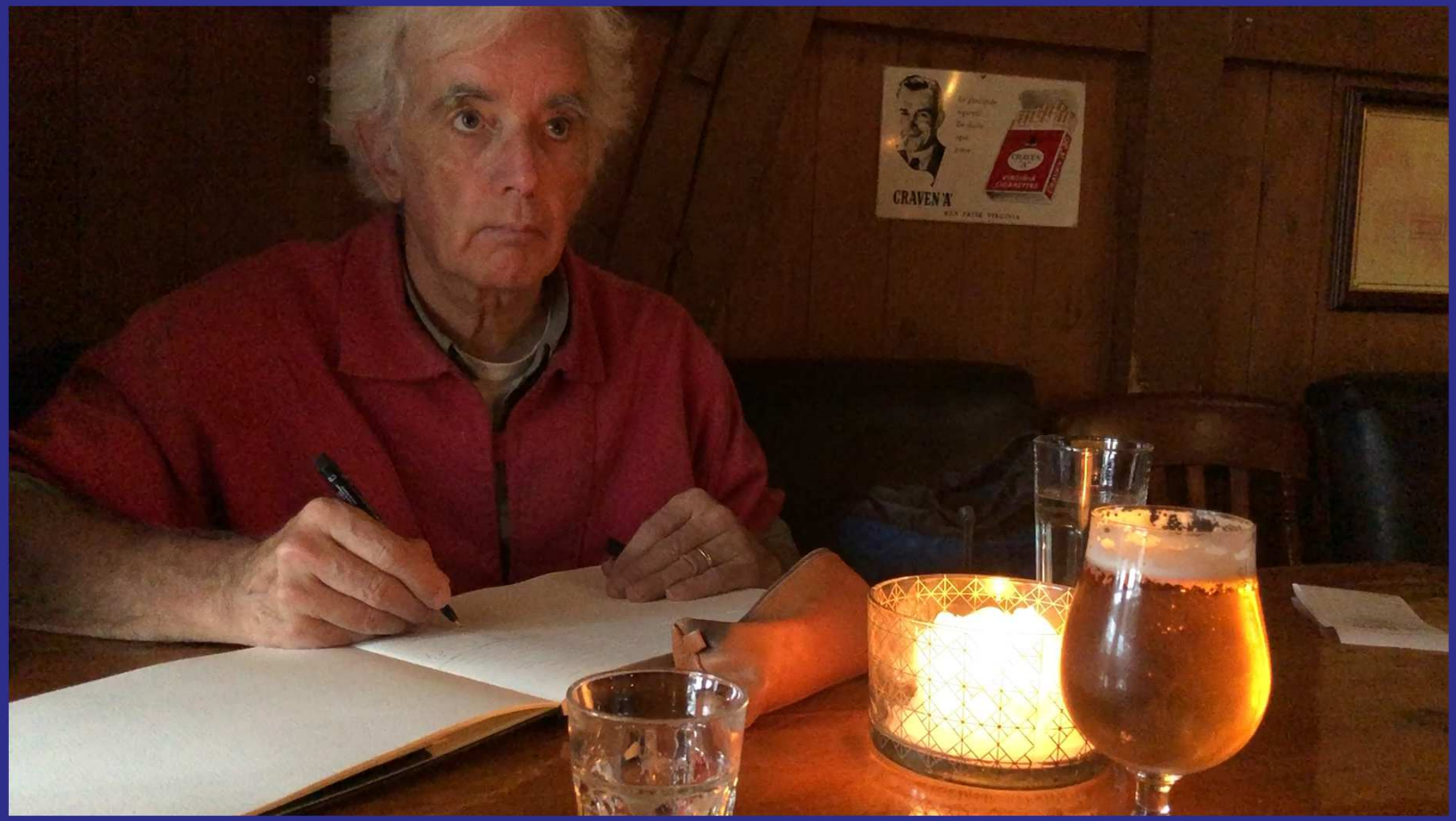
66

67



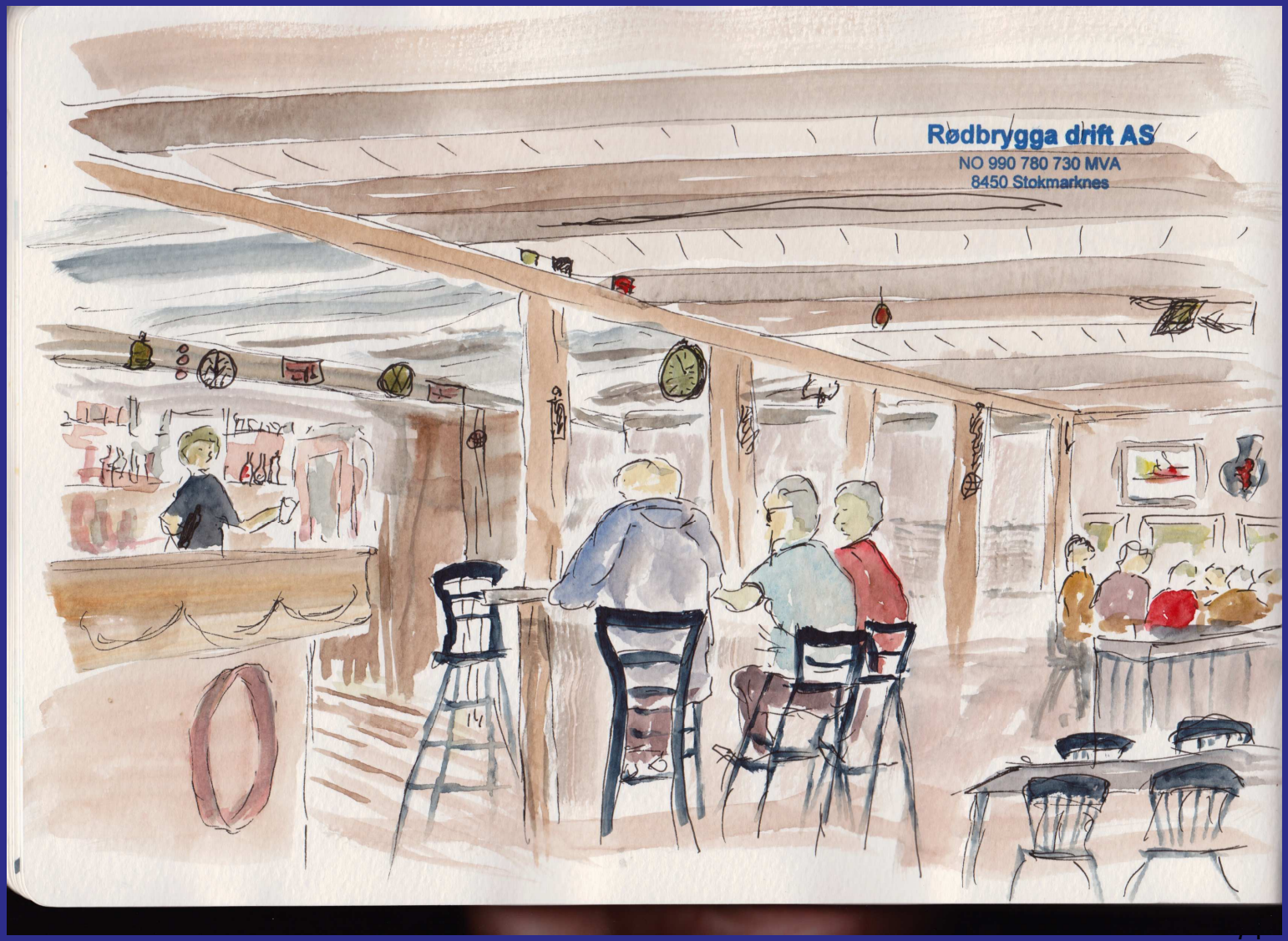
68

69



70

70

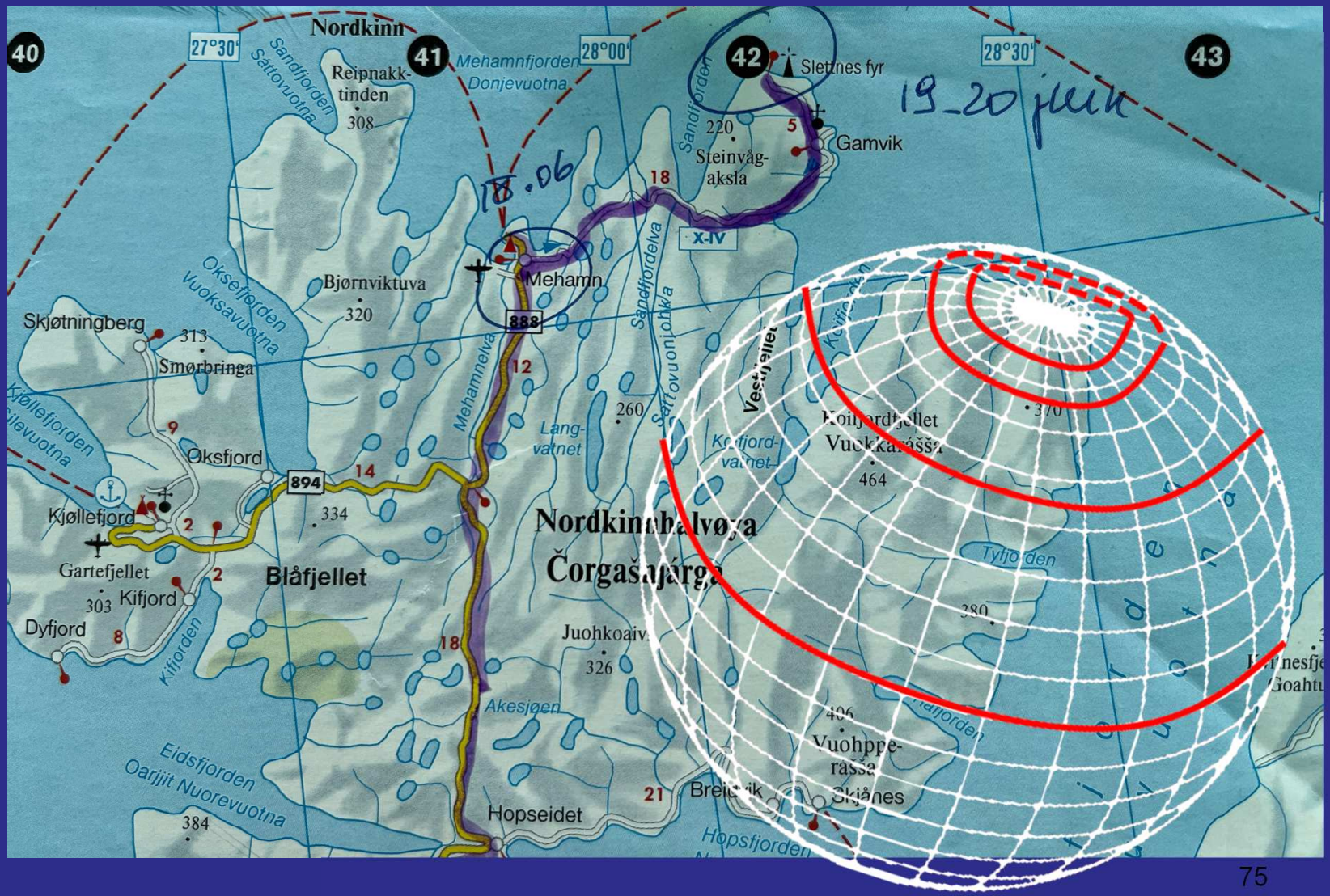


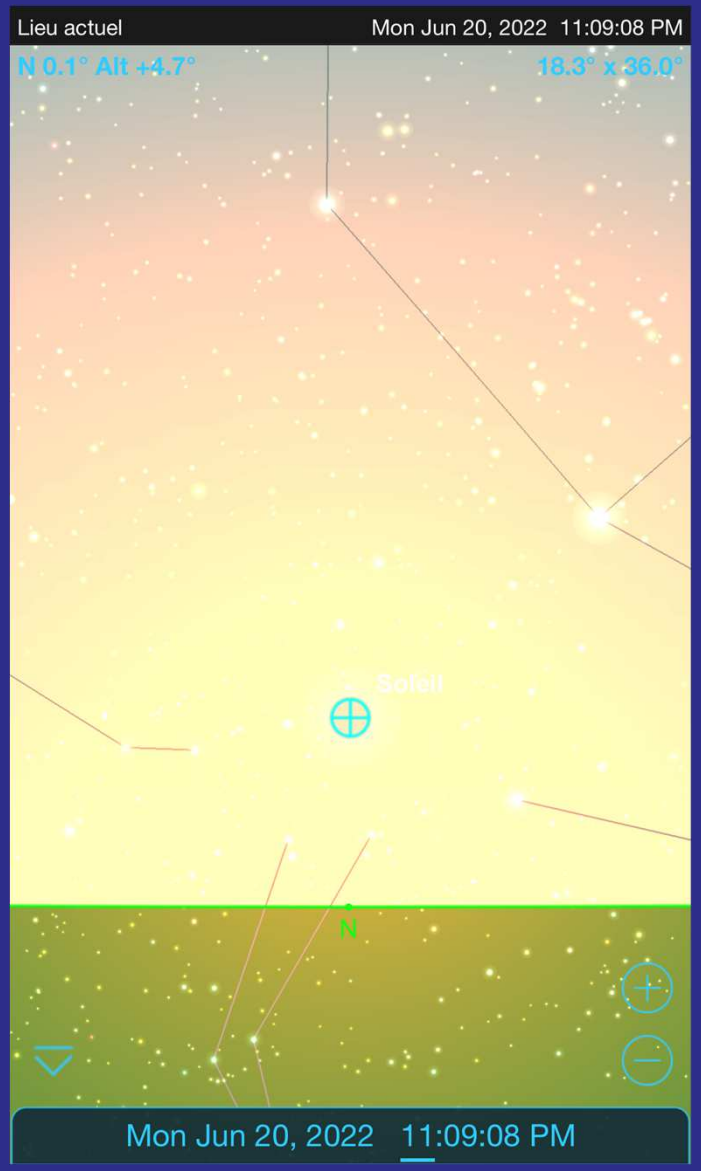
71

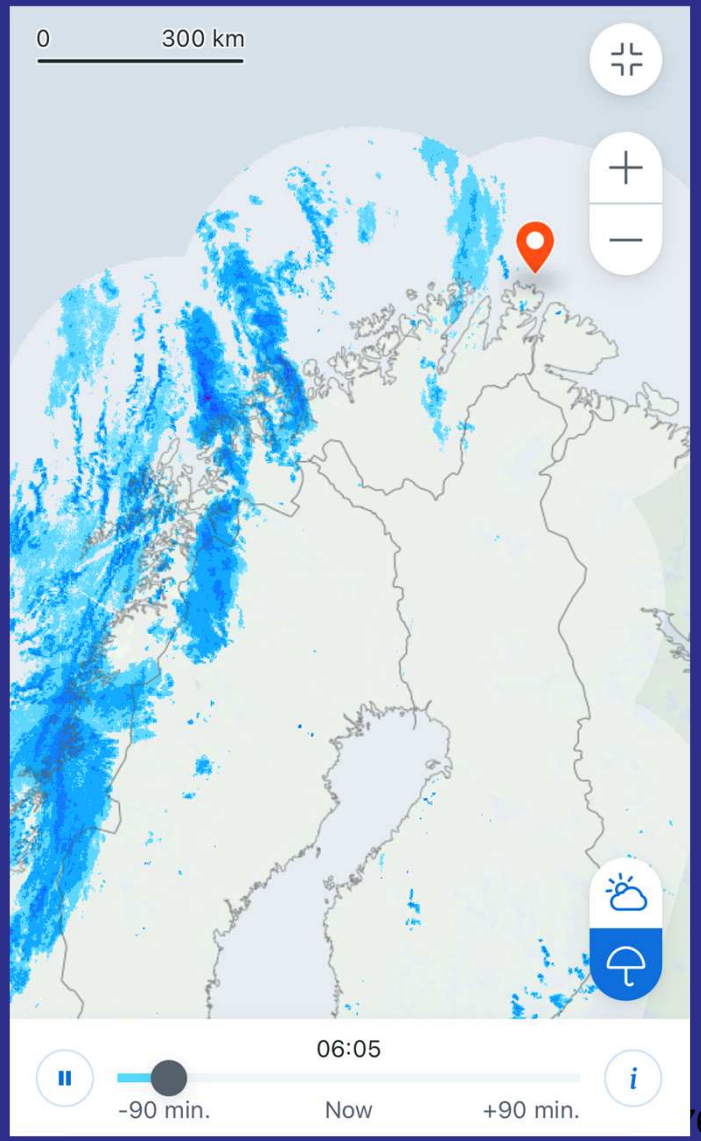
72

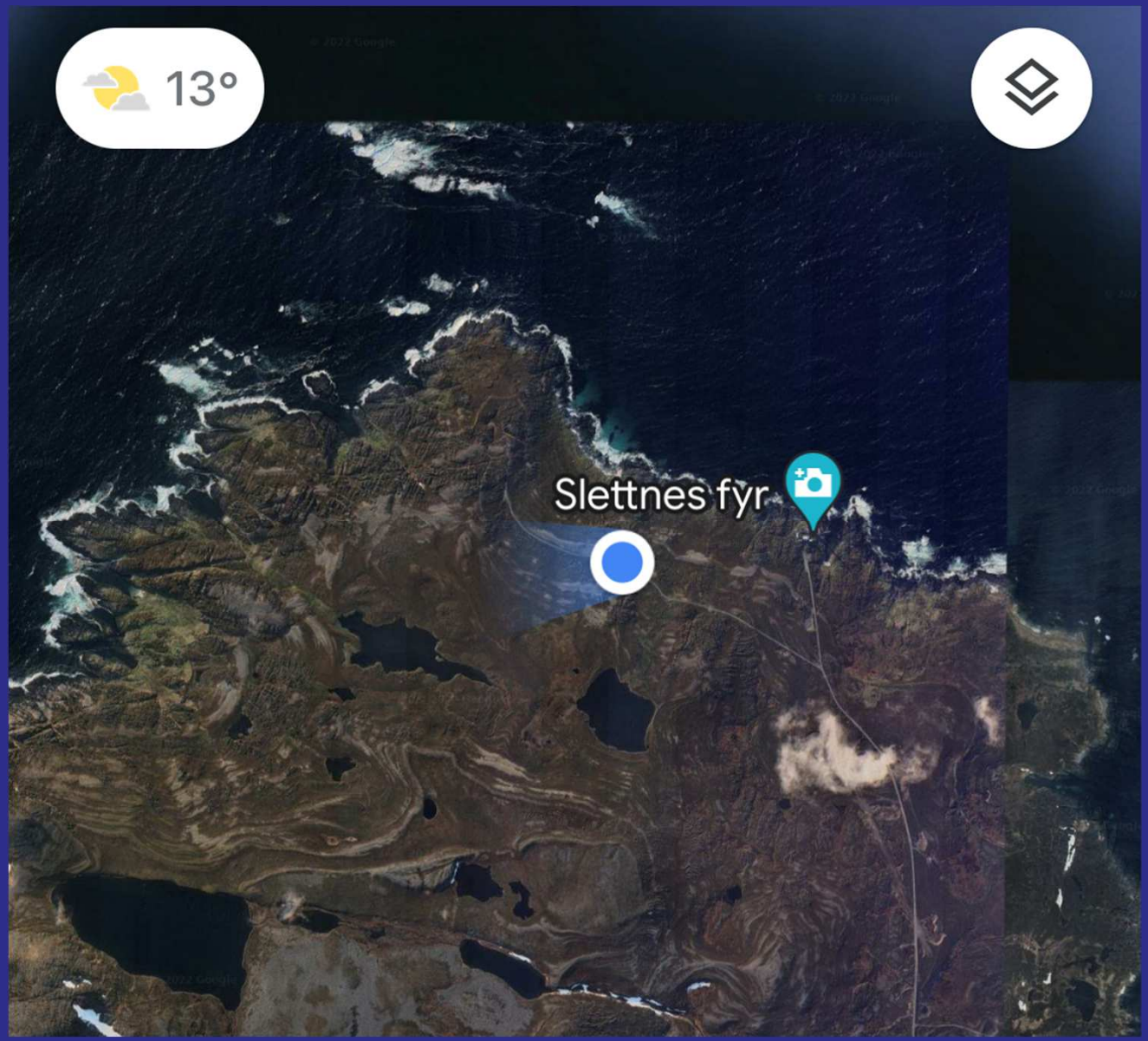
73

74


40
41
42
43
27°30'
28°00'
28°30'
Nordkinn
Sandfjorden
Sattovuotna
Reipnakk-
tinden
308
Mehamnfjorden
Donjevuotna
Slettnes fyr
19_20 juli
Gamvik
220
Steinvåg-
aksla
18.06
X-IV
Mehamn
888
Bjørnviktuva
320
Oksefjorden
Vuoksavuotna
Skjøtningberg
313
Smørbringa
Mehamnelva
Sandfjordelva
Sattovuonjohka
Lang-
vatnet
260
Kjøllefjorden
Oksfjord
894
334
Kjøllefjord
Gartefjellet
303
Kifjord
Dyfjord
Blåfjellet
Nordkinnhalvøya
Čorgašnjárga
Kifjorden
Akesjøen
Juohkoaiv
326
Eidsfjorden
Oarjjit Nuorevuotna
384
Hopseidet
Hopsfjorden
Breidvik
Vestfjellet
Koifjordfjellet
Vuokkarassa
464
Koifjord-
vatnet
Tyfjorden
Vuohppe-
rassa
Skjånes


Lieu actuel
Mon Jun 20, 2022 11:09:08 PM
N 0.1° Alt +4.7°
18.3° x 36.0°
Soleil
N
Mon Jun 20, 2022 11:09:08 PM

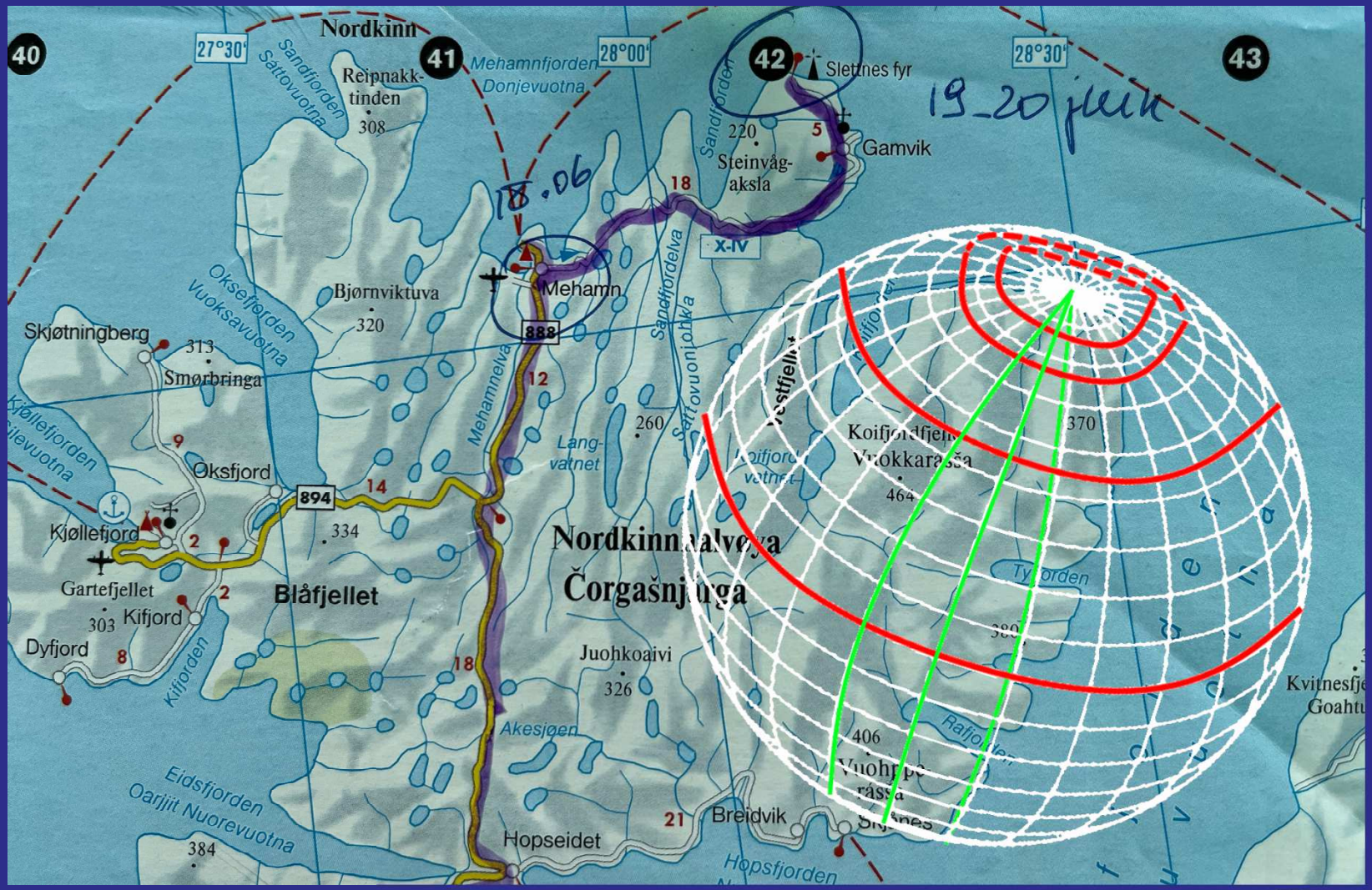

0
300 km
06:05
-90 min.
Now
+90 min.

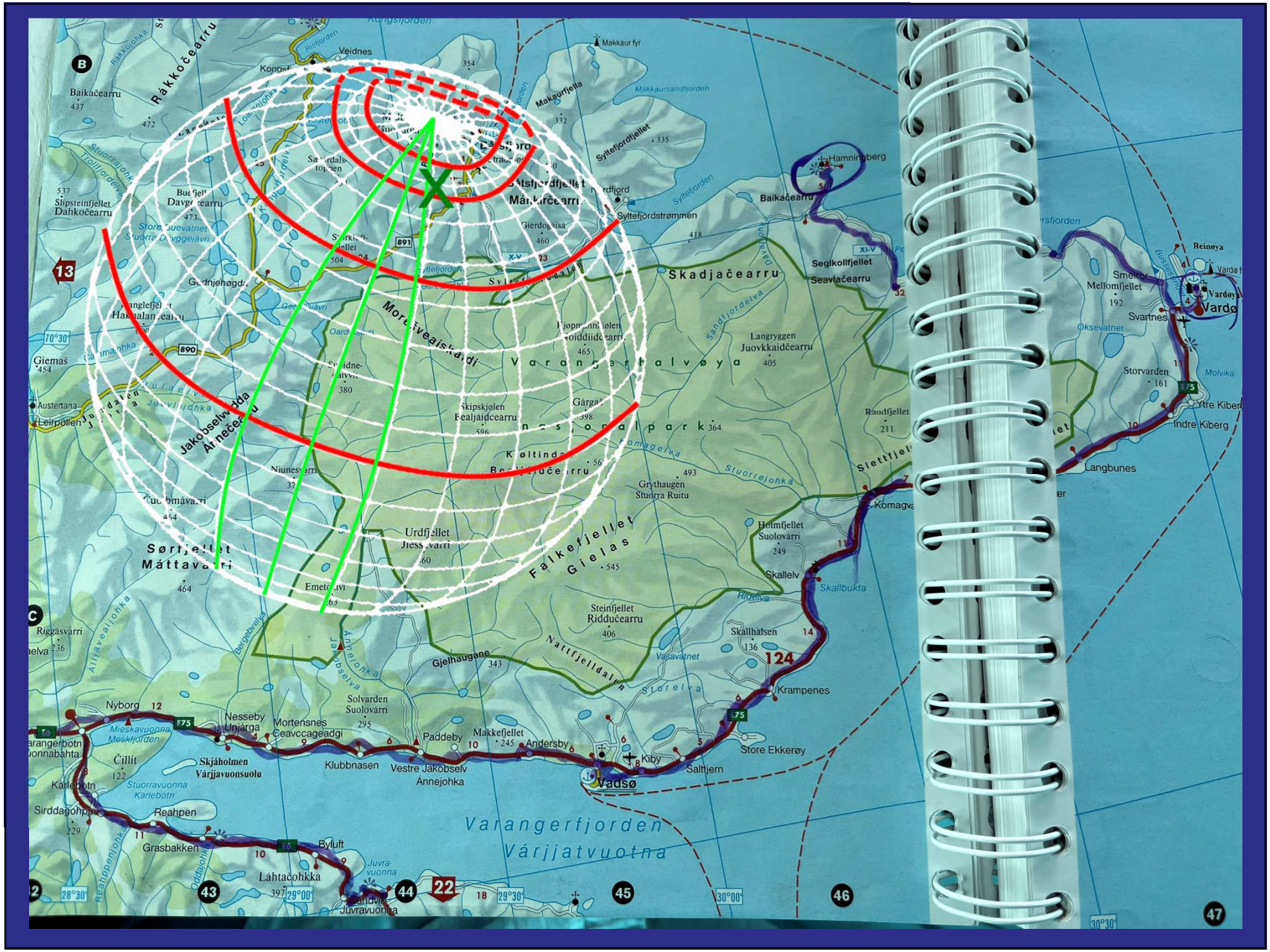


77

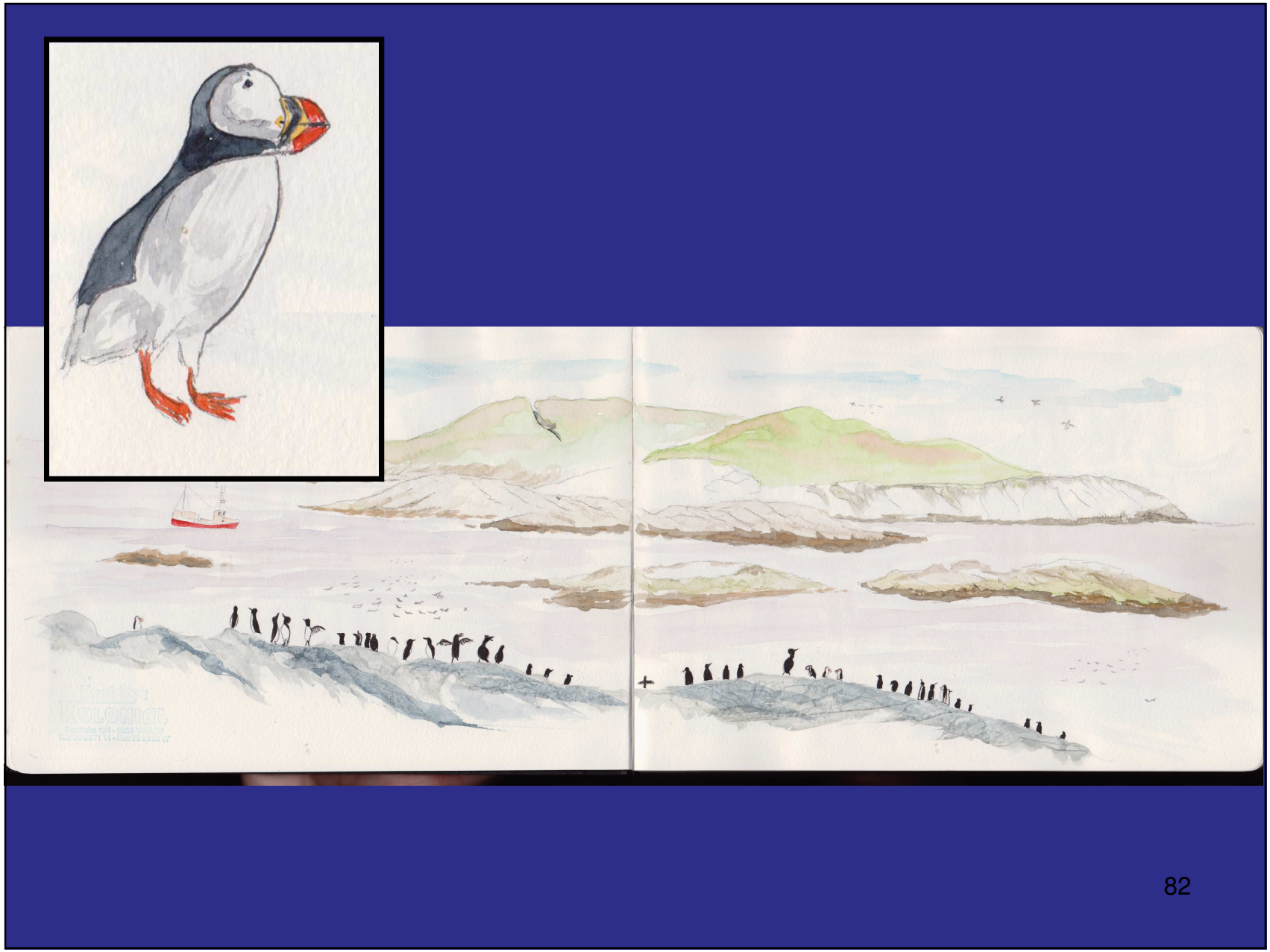
78

78


40
41
42
43
27°30'
28°00'
28°30'
Nordkinn
Sandfjorden
Sattovuotna
Reipnakk-
tinden
308
Mehamnfjorden
Donjevuotna
Slettnes fyr
Gamvik
220
Steinvåg-
aksla
18.06
19_20 juni
18
5
X-IV
Mehamn
888
Bjørnviktuva
320
Oksefjorden
Vuoksavuotna
Skjøtningberg
313
Smørbringa
Mehamnelva
12
Sandfjordelva
Sattovuonjohka
Lang-
vatnet
260
Koifjordfjellet
Koifjord-
vatnet
Vuokkarassa
464
370
Kjøllefjorden
Kilevuotna
9
Oksfjord
894
14
334
Kjøllefjord
2
Gartefjellet
303
Kifjord
Blåfjellet
Nordkinnvalvøya
Čorgašnjunga
Tyfjorden
Dyfjord
8
Kifjorden
18
Juohkoaivi
326
Akesjøen
Rafjorden
406
Vuohppe-
rassa
Kvitnesfje
Goahtu
Eidsfjorden
Oarjjit Nuorevuotna
384
Hopseidet
21
Breidvik
Hopsfjorden


Veidnes
Makkaur fyr
Baikačearru
Rákkočearru
Makkaursandfjorden
Syltefjordfjellet
Syltefjordstrømmen
Syltefjorden
Hamninberg
Skadjačearru
Segikollfjellet
Seavlačearru
Langryggen
Juovkkaidčearru
Varangerhalvøya
Giemas
Austertana
Leirpollen
Jakobselvdda
Álnečearru
Skipskjølen
Ealjaidčearru
Gárga
Grythaugen
Stuorra Ruitu
Urdfjellet
Jiessavárri
Falkefjellet
Gielas
Sørfjellet
Máttavárri
Steinfjellet
Riddučearru
Gjelhaugane
Nattfjelldalen
Vasavatnet
Skallhalsen
Skallelv
Skallbukta
Holmfjellet
Suolovárri
Krampenes
Store Ekkerøy
Salttjern
Kiby
Vadsø
Andersby
Makkefjellet
Paddeby
Vestre Jakobselv
Ánnejohka
Klubbnasen
Solvarden
Suolovárri
Mortensnes
Ceavccageadgi
Nesseby
Unjárga
Nyborg
Mieskavuonna
Meskfjorden
Čillit
Skjåholmen
Várjjavuonsuolu
Karlebotn
Stuorravuonna
Karlebotn
Sirddagohpir
Reahpen
Grasbakken
Byluft
Láhtačohkka
Juvravuonna
Varangerfjorden
Várjjatvuotna
Reinøya
Vardøyan
Vardø
Smelror
Mellomfjellet
Svartnes
Oksevatnet
Molvika
Storvarden
Ytre Kiberg
Indre Kiberg
Langbunes
Raudfjellet
Komagvær
Slettfjelv
Stuorrejohka
Sandfjordelva
Rigdelva
Bergebelva
Alttjavealjohka
Jakobselva
Ánnejohka
Storelva
Rákkojohka
Stuorrajohka
Troillfjordelva
Gamajohka
Juvvajohka
Oksejohka
Molvikelva
Buksesjohka
Oddajohka
Reahppenjohka
Juvravuonna
Makkaurfjella
Makkaursandfjorden
Kongsfjorden
Risfjorden
Syltefjorden
Sandfjordelva
Rigdelva
Vasavatnet
Storelva
Stuorrejohka
Komagelva
Oksevatnet
Molvika
Buksesjohka
Oddajohka
Reahppenjohka
Juvravuonna
Juvravuonna
Juvravuonna

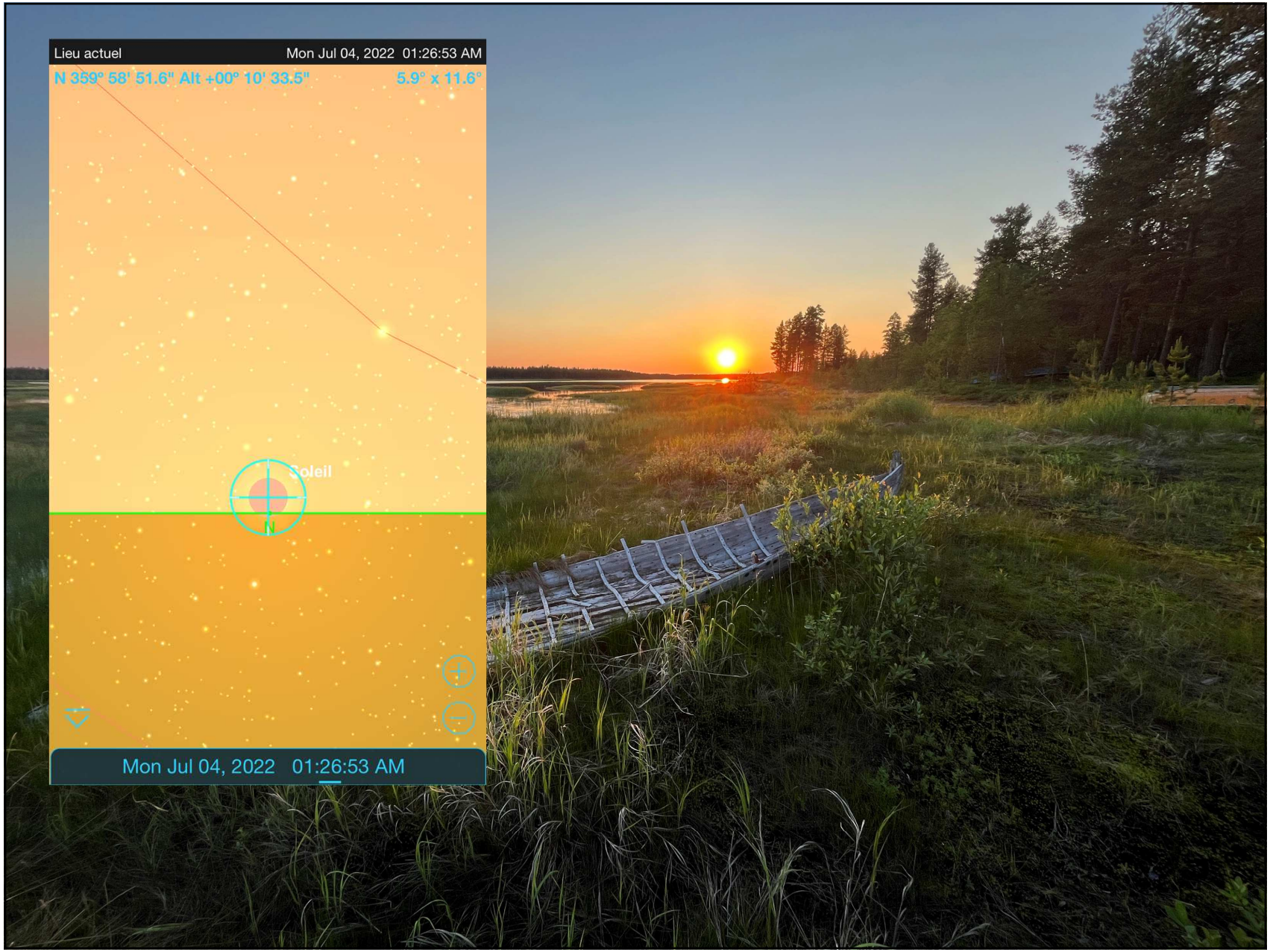
N 70° 23' 19"
E 31° 9' 24"
SKUA
Nature Group
HORNØYA



82

85

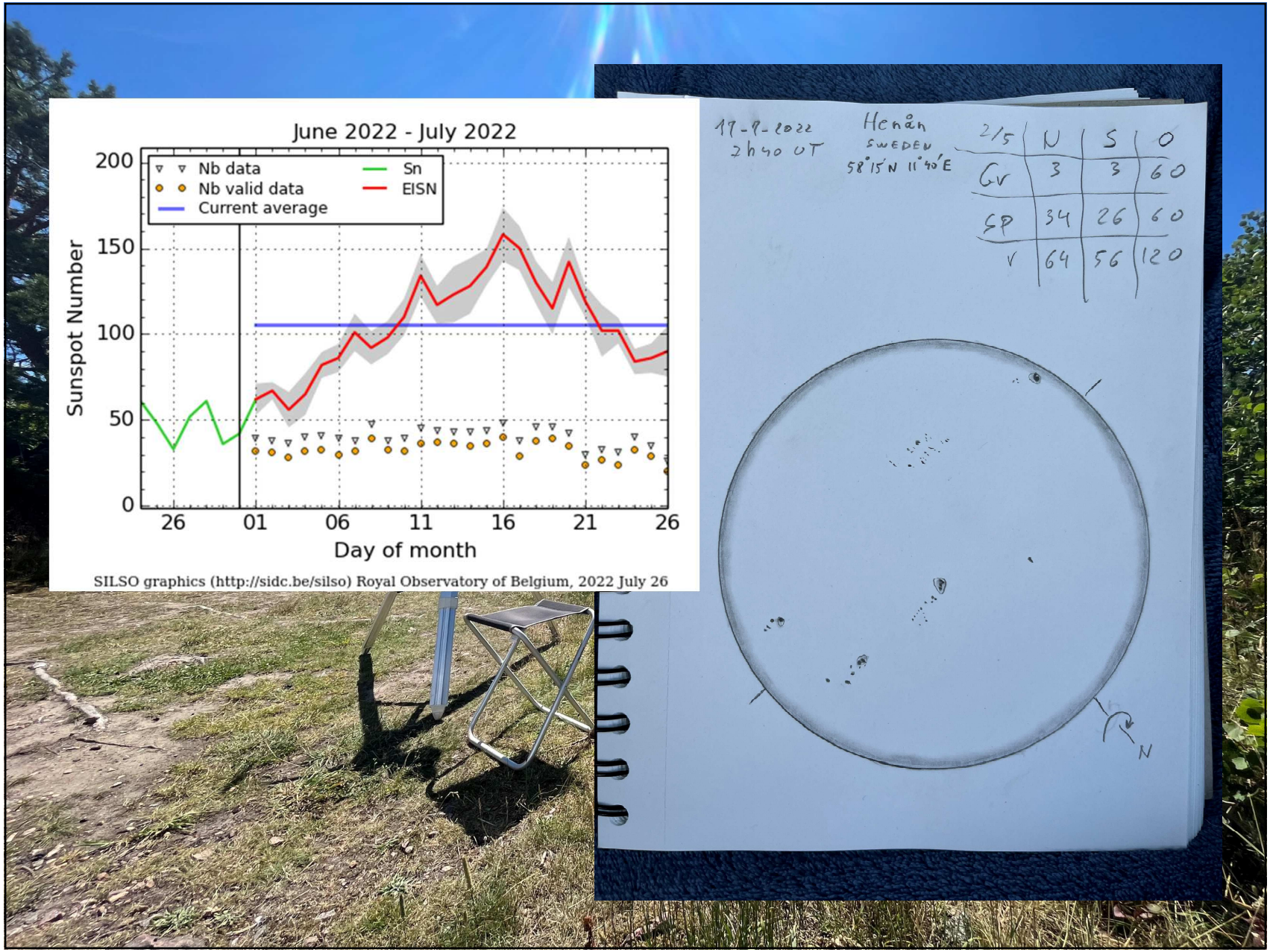
86


Lieu actuel
Mon Jul 04, 2022 01:26:53 AM
N 359° 58' 51.6" Alt +00° 10' 33.5"
5.9° x 11.6°
Soleil
N
Mon Jul 04, 2022 01:26:53 AM

87

88

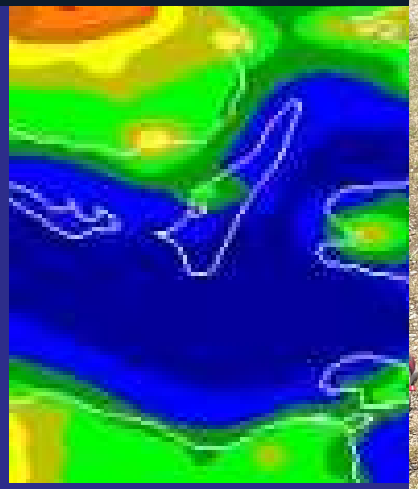
88


June 2022 - July 2022
Nb data
Nb valid data
Current average
Sn
EISN
Sunspot Number
Day of month
SILSO graphics (http://sidc.be/silso) Royal Observatory of Belgium, 2022 July 26
17-9-2022
2h40 UT
Henån
SWEDEN
58°15'N 11°40'E
2/5 N S O
Gr 3 3 60
SP 34 26 60
V 64 56 120
N

ida INT DA AS

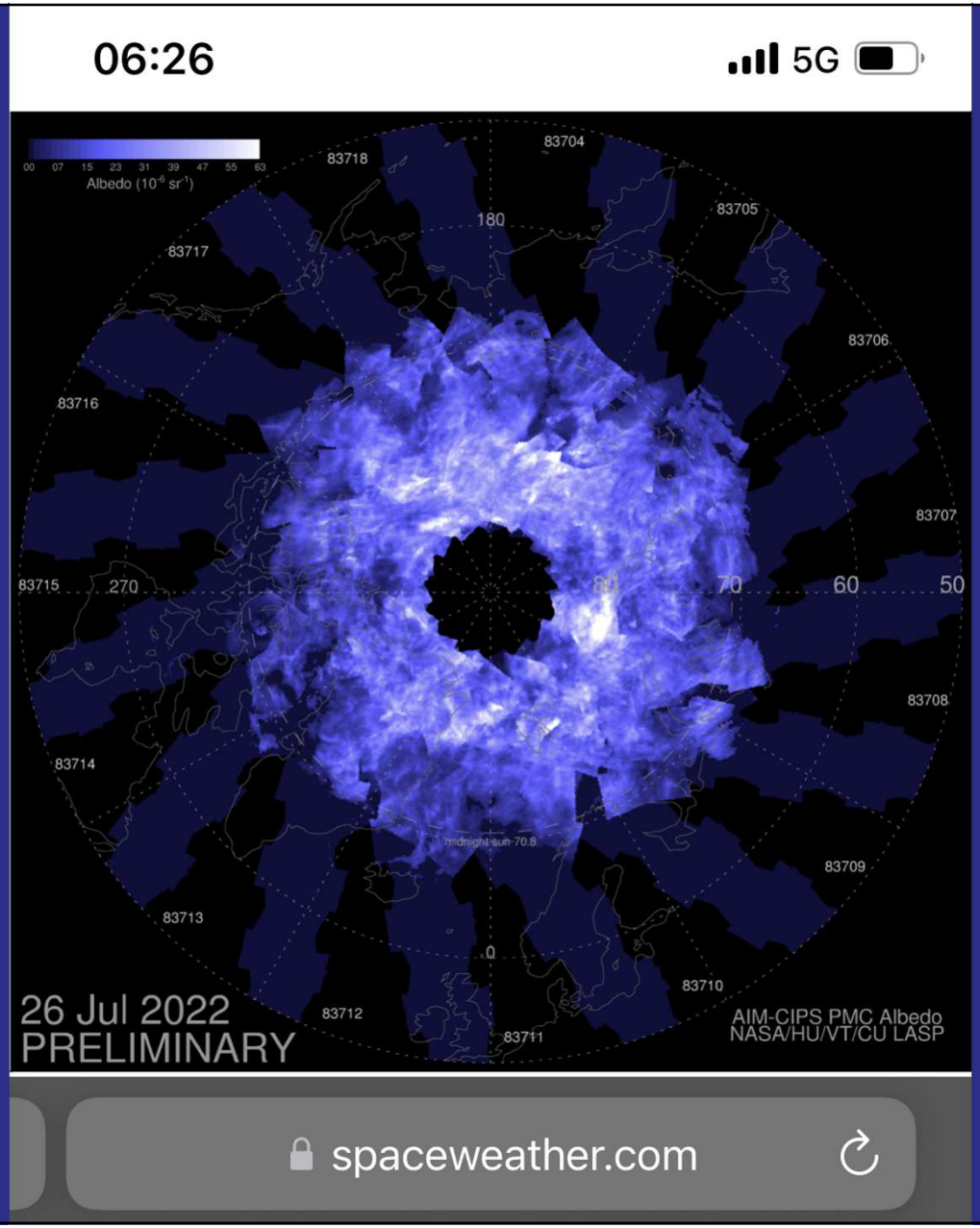
MØN AND NY
INTERNATIONAL DARK S

www.darksk



91

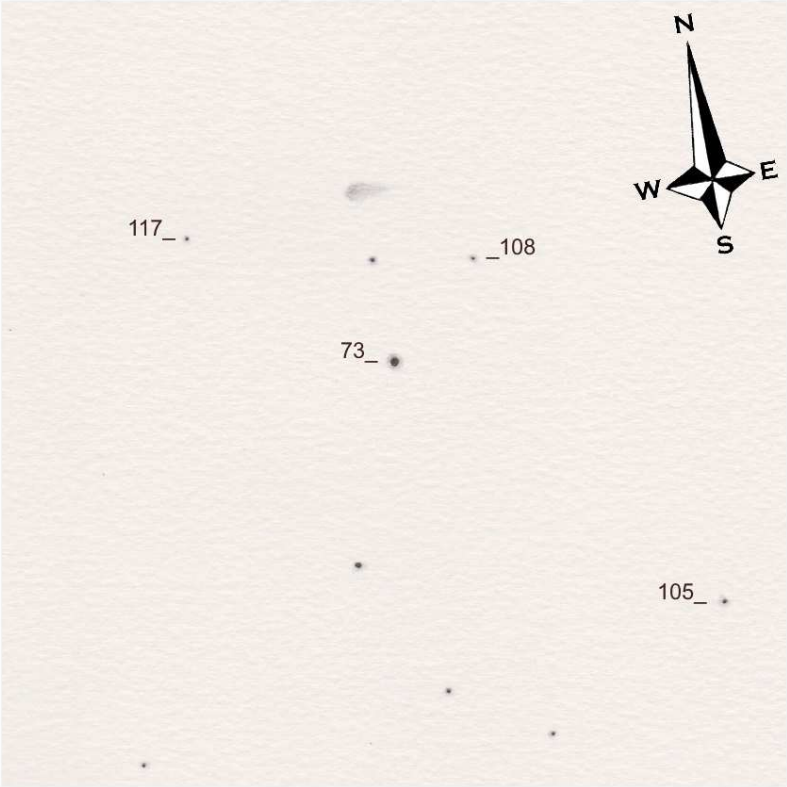
92


06:26
5G
00 07 15 23 31 39 47 55 63
Albedo (10^{-6} sr^{-1})
83718
83704
83705
180
83717
83706
83716
83707
83715
270
80
70
60
50
83708
83714
midnight sun 70.8
83709
83713
0
83710
26 Jul 2022
PRELIMINARY
83712
83711
AIM-CIPS PMC Albedo
NASA/HU/VT/CU LASP
spaceweather.com

94

95

95



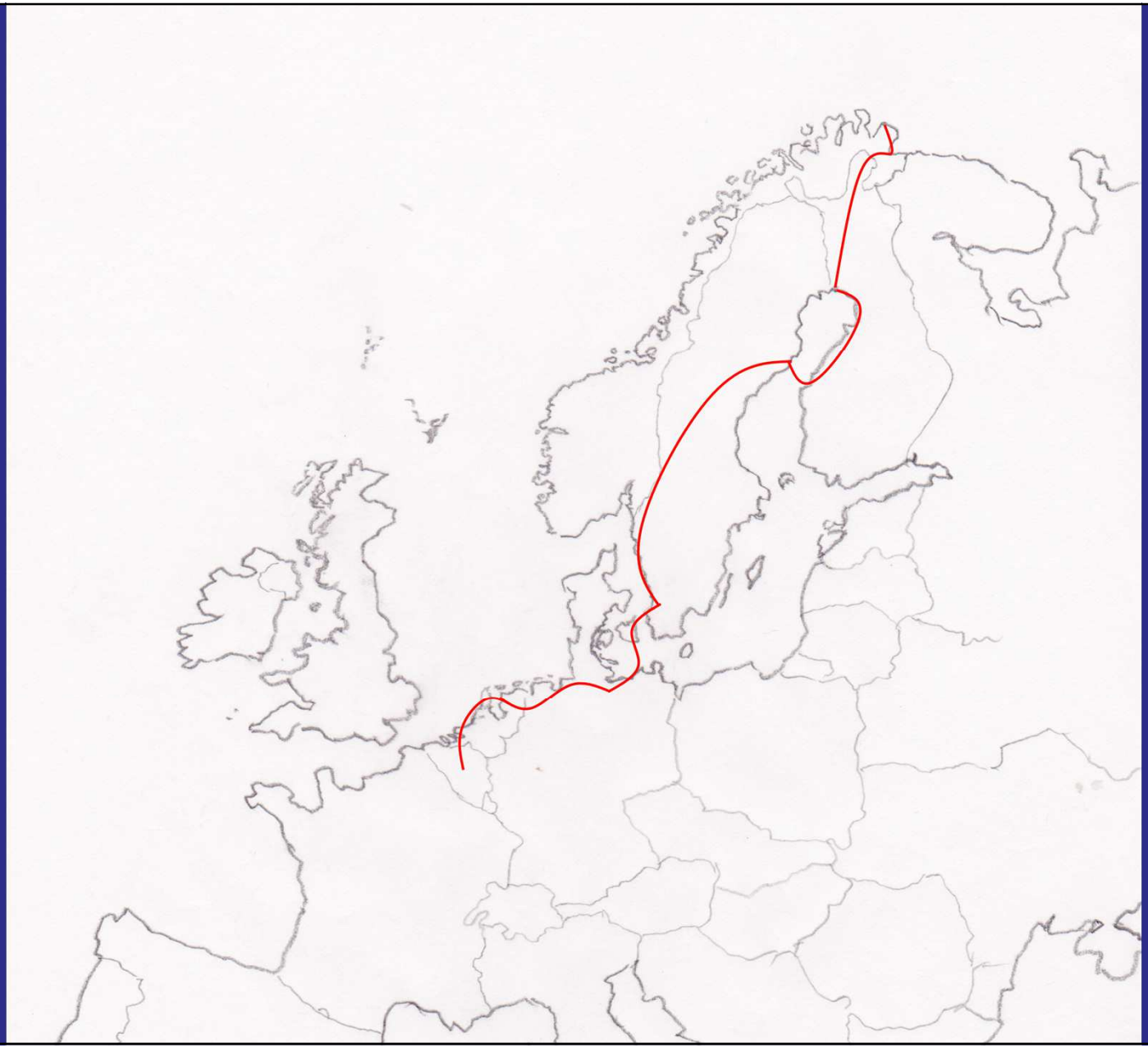
C/2017 K2 (PanSTARRS)

2022/07/28 - 22h05 UTC

Takahashi 100mm Refractor f7.4 Island of Nyord (Møn) Denmark (IDA)

Magn.: +9.7 - Tail: 5' - Coma: 2' - DC: 3

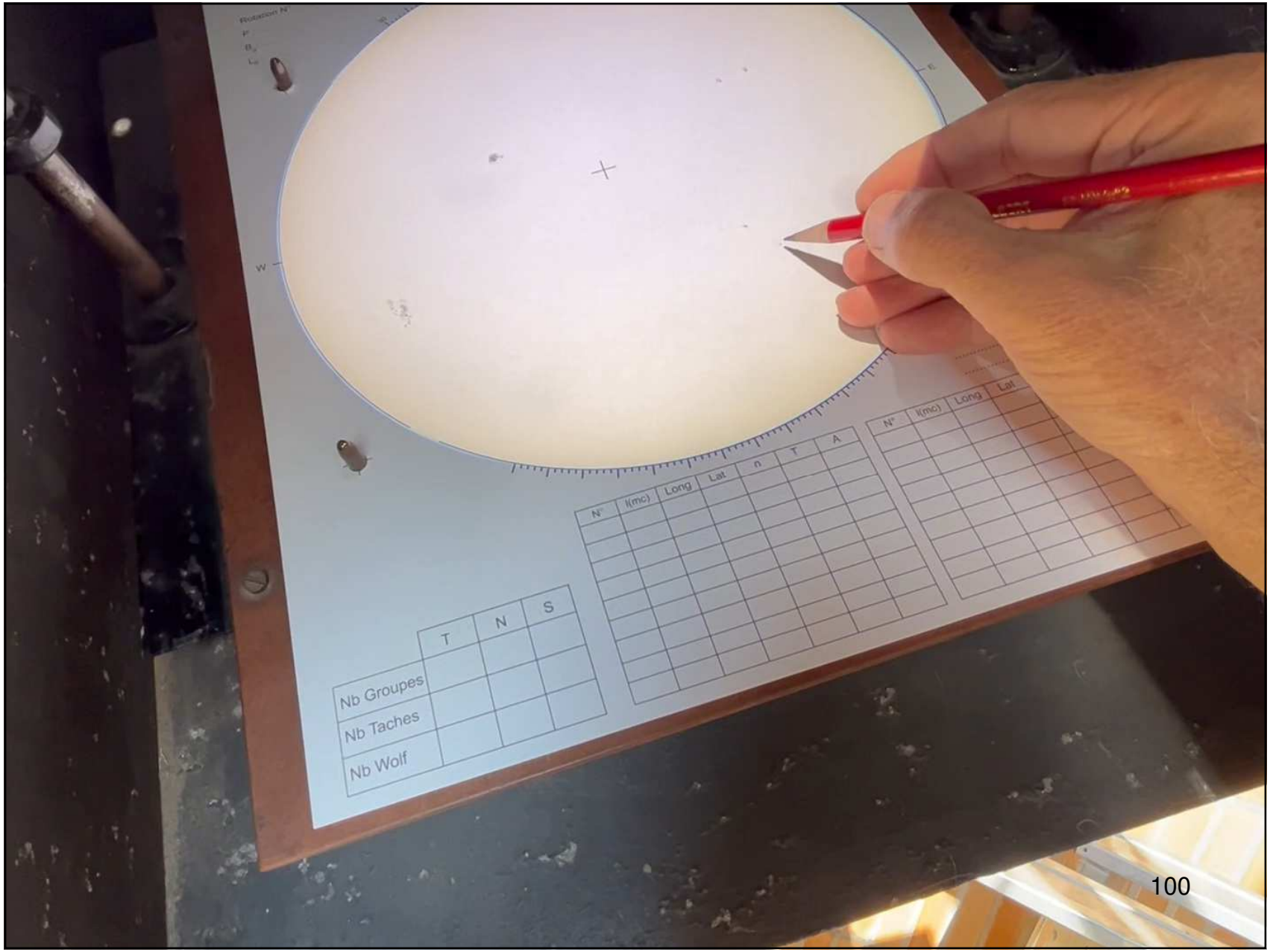
Aquarellia mobile Observatory



97

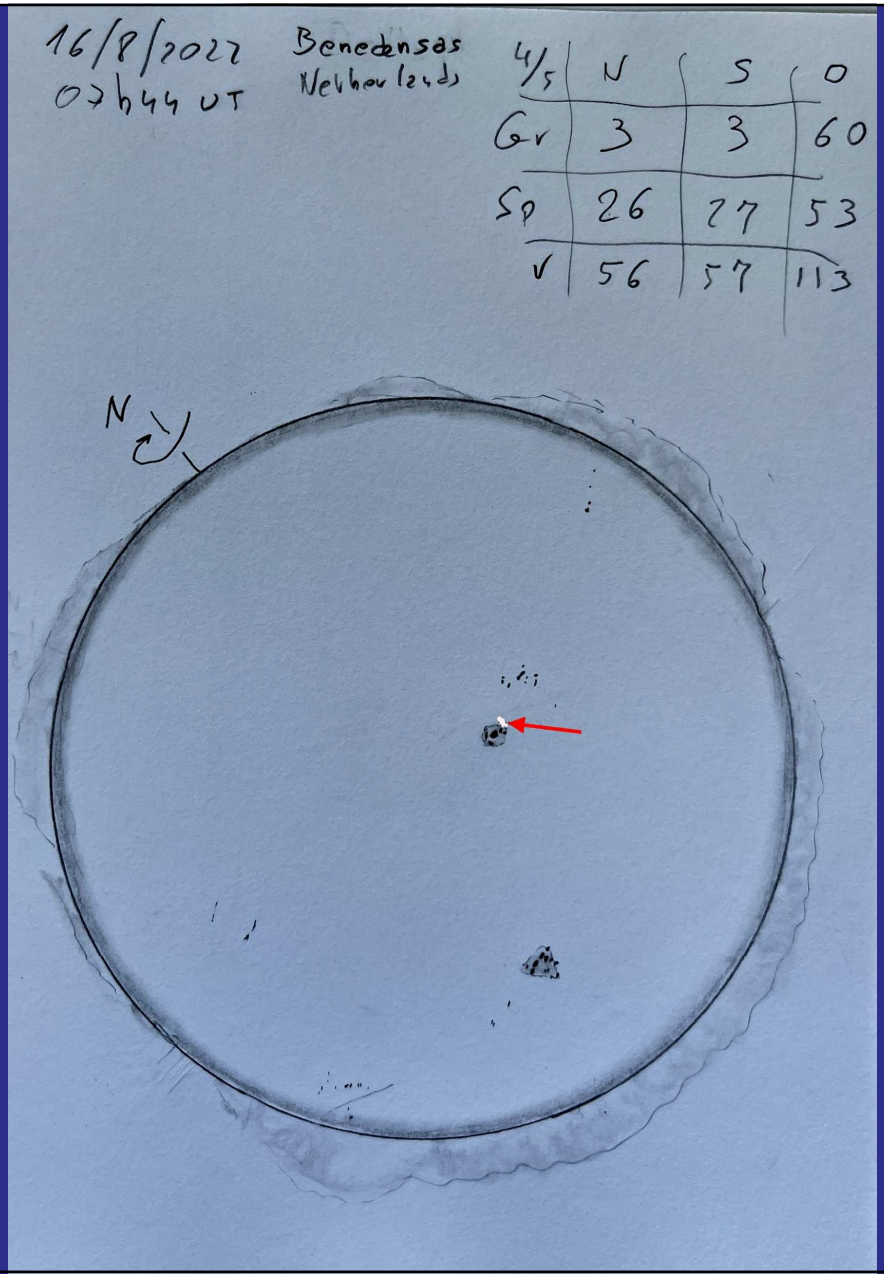
98

99


W
N°
l(mc)
Long
Lat
n
T
A
N°
l(mc)
Long
Lat
T
N
S
Nb Groupes
Nb Taches
Nb Wolf
100

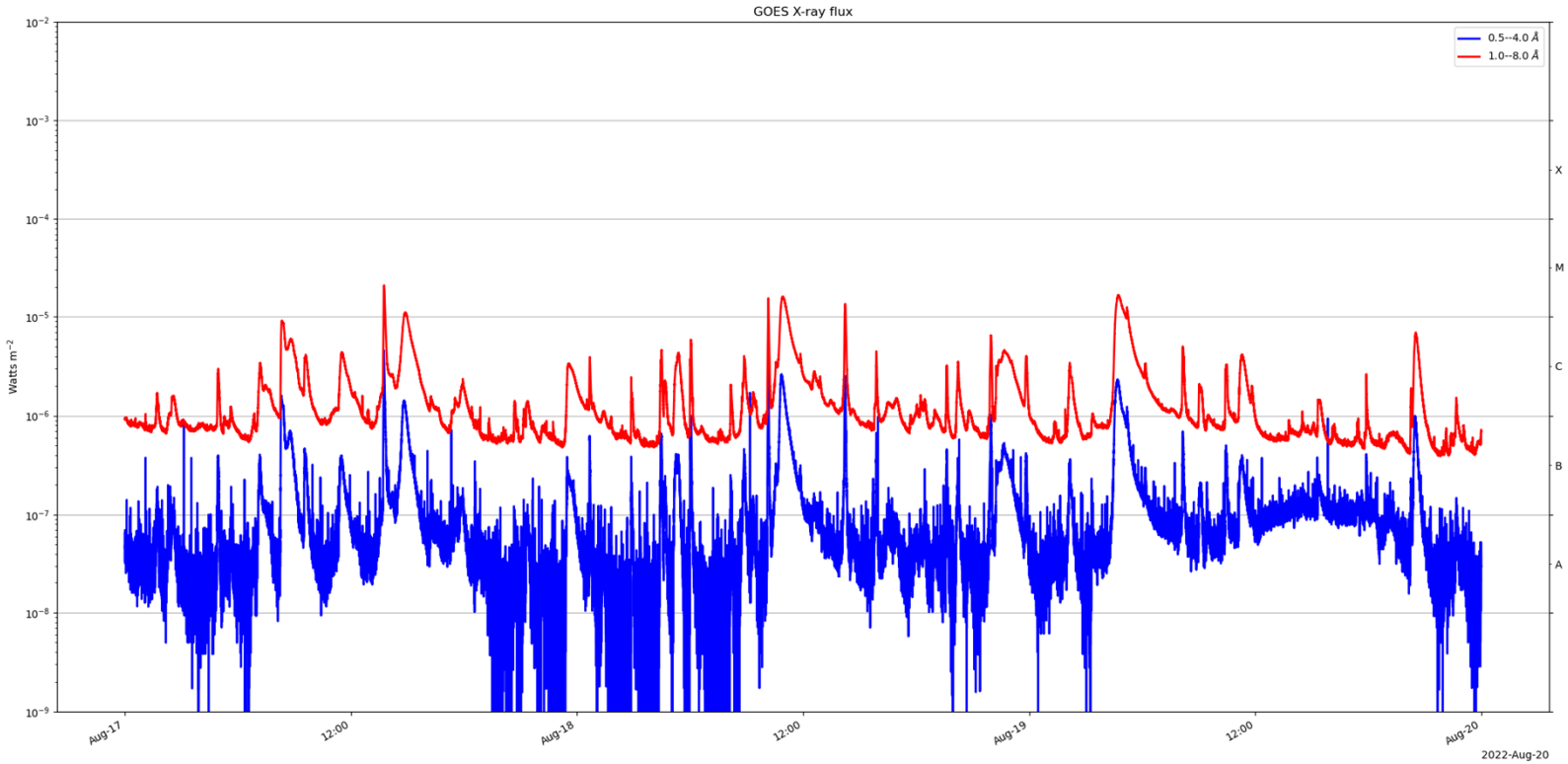
101

101


16/8/2022
07h44 UT
Benedensas
Netherlands
4/5 N S O
Gr 3 3 60
Sp 26 27 53
V 56 57 113
N

102

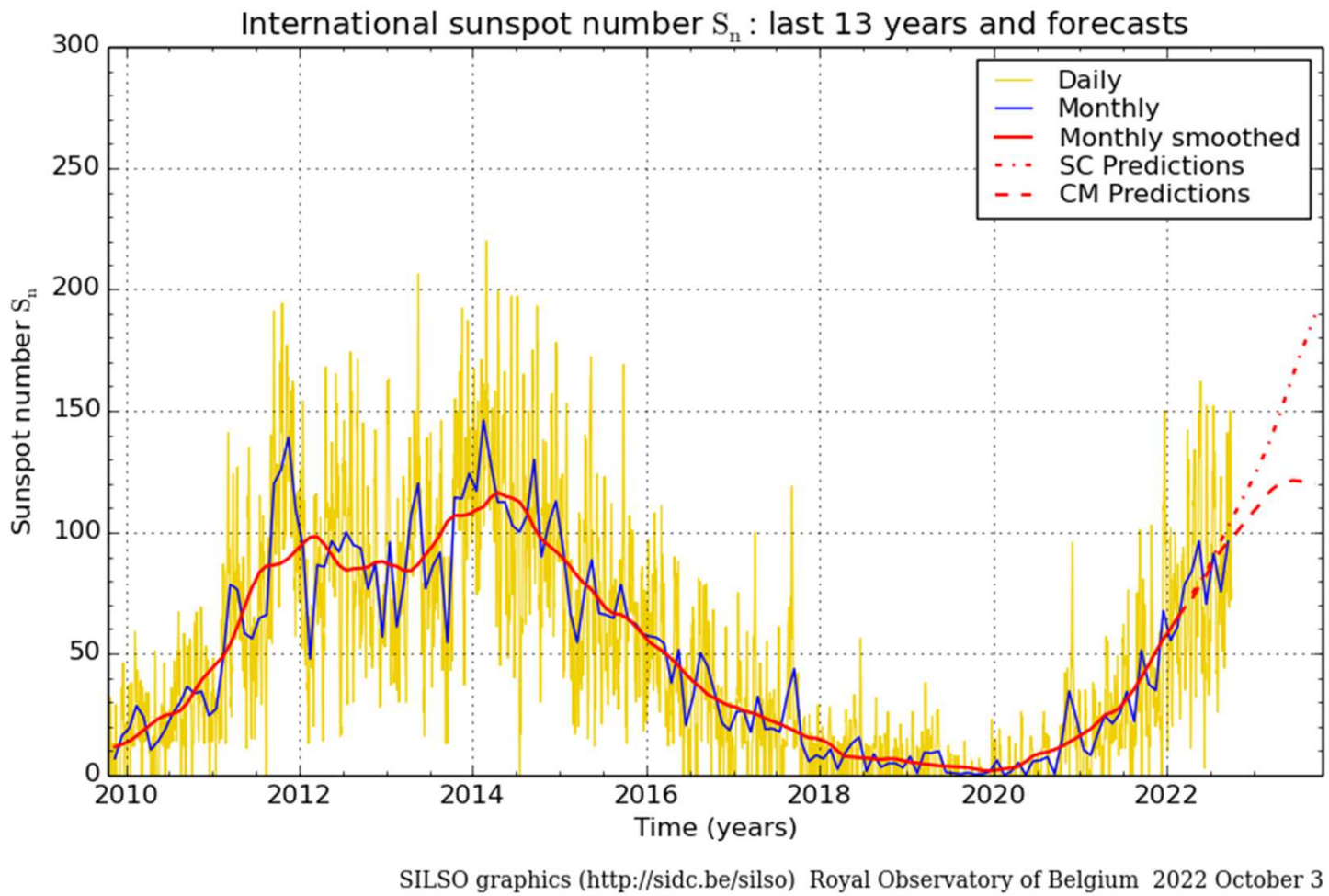
102


GOES X-ray flux
0.5--4.0 Å
1.0--8.0 Å
Watts m⁻²
10⁻²
10⁻³
10⁻⁴
10⁻⁵
10⁻⁶
10⁻⁷
10⁻⁸
10⁻⁹
X
M
C
B
A
Aug-17
12:00
Aug-18
12:00
Aug-19
12:00
Aug-20
2022-Aug-20

103

103

104


International sunspot number S_n : last 13 years and forecasts
Daily
Monthly
Monthly smoothed
SC Predictions
CM Predictions
Sunspot number S_n
Time (years)
300
250
200
150
100
50
0
2010
2012
2014
2016
2018
2020
2022
SILSO graphics (http://sidc.be/silso) Royal Observatory of Belgium 2022 October 3

105

105

https://www.sidc.be/silso/

https://www.aavso.org/

http://astrosurf.com/gfoes/

106

https://www.sidc.be/silso/

G.F.O.E.S. Septembre 2022

Commission "Nombre de Wolf" - calculé par François GOUYAUD mail : frangou2000@yahoo.fr

JOUR	GFOES GTS MOYENNES JOURNALIERES NORD	SUD	TOTAL	GFOES NOMBRE DE WOLF sans coef K Nord	Sud	TOTAL	GFOES NB WOLF COEF K	SILSO * 0.6	NBRE OBS.	NOMS DES OBSERVATEURS
1	0.3	2.3	2.7	4	40	44	33	37	6	BADIN Jean Louis 86500
2	0.0	2.5	2.5	0	43	43	31	38	4	BIDAUT Jean Pierre 24190
3	1.0	2.3	3.3	11	39	50	37	41	3	CAMBON Laurent 31390
4	1.0	2.6	3.6	11	41	52	41	43	5	DECONINCK Michel 83630
5	1.0	3.6	4.6	13	49	63	45	50	5	DELORME Francis 45110
6	2.4	2.2	4.6	29	27	56	43	45	5	FABRIGAT Eric 13
7	3.5	2.0	5.5	45	24	69	47	58	2	GOUYAUD François 38550
8	3.7	1.7	5.3	51	21	72	52	58	3	JOLLIVET Christian 45770
9	4.0	3.0	7.0	55	38	93	72	61	3	MATHELIN Jean Christophe 94130
10	3.7	2.7	6.3	45	38	83	63	70	3	MENGUS Arnaud 87000
11	4.0	2.2	6.2	60	28	88	67	77	6	PHILIPPE André 68310
12	3.4	2.6	6.0	60	38	99	69	85	5	
13	3.0	4.0	7.0	60	59	119	67	70	1	
14	1.3	2.3	3.7	21	29	50	40	55	3	
15	1.5	4.0	5.5	22	55	77	60	61	4	
16	1.0	5.0	6.0	13	74	87	62	55	2	
17	0.3	3.3	3.5	3	62	65	44	51	4	
18	0.1	3.3	3.4	1	58	60	46	44	7	
19	0.1	2.9	3.0	1	47	49	35	43	8	
20	0.0	3.0	3.0	0	54	54	39	41	7	
21	0.0	3.7	3.7	0	62	62	45	50	7	
22	1.0	4.0	5.0	15	68	83	62	64	7	
23	2.0	4.5	6.5	29	83	112	71	79	2	
24	2.0	4.0	6.0	35	92	128	85	90	2	
25	2.0	3.6	5.6	29	66	95	78	80	5	
26	2.3	3.0	5.3	36	73	108	78	80	4	
27	2.5	2.5	5.0	33	52	86	54	65	2	
28	2.0	2.0	4.0	28	38	66	37	52	1	
29	2.0	2.0	4.0	24	32	56	38	43	2	
30	2.7	1.9	4.6	34	23	57	46	46	7	
	Moyennes Mensuelles :			26	48	74.1	52.9	57.7		
							Total :		125	

org/

n/gfoes/

107

https://astro.aquarellia.com

Q / R ?