

BOUVET Island DXpedition (early 2018)

A most difficult and dangerous visit to
the number #2 DXCC Most-wanted

Rochester DX & Contest Club

Glenn Johnson WØGJ

30 April 2017





NORVEGIA
EKSPEDITIONEN
1. JULI 1927

Claimed by Norway only 90 years ago!



A foreboding place...for sure

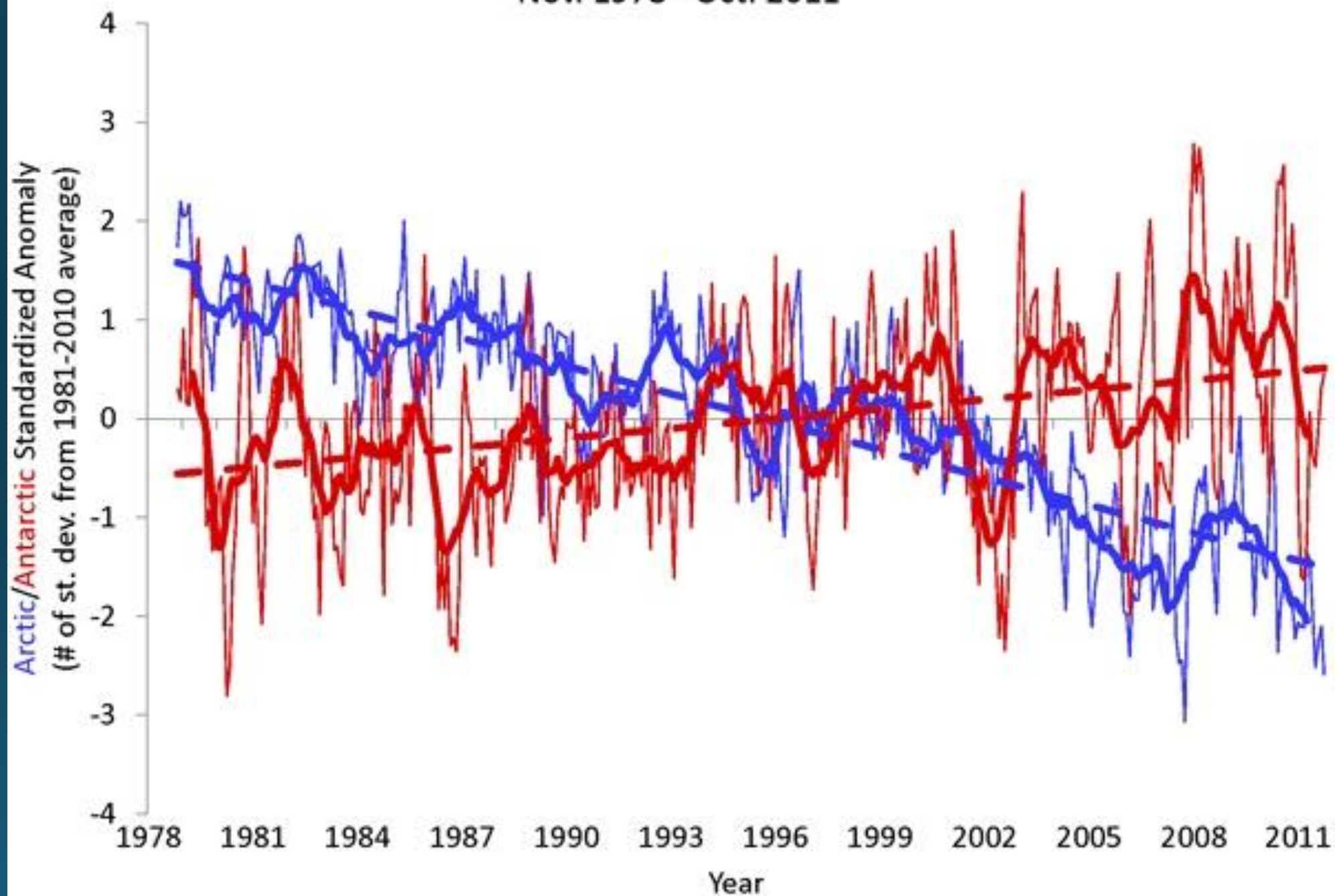


93% covered by glacier

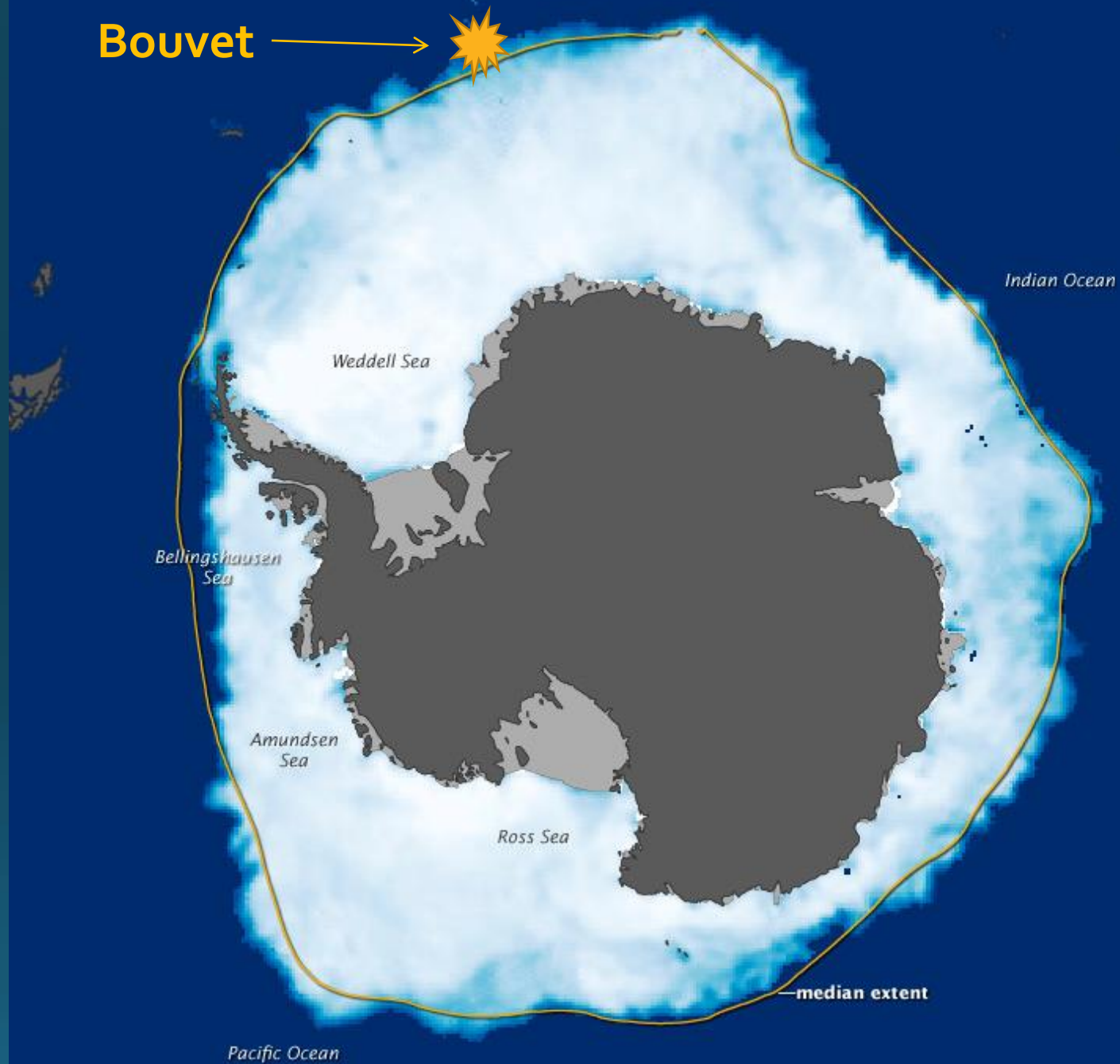


Arctic and Antarctic Standardized Anomaly and Trend

Nov. 1978 - Oct. 2011



Bouvet →



Indian Ocean

Weddell Sea

Bellingshausen Sea

Amundsen Sea

Ross Sea

—median extent

Pacific Ocean

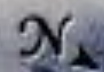
1,000 km



Bouvet Island

Kapp Valdivia

sea ice



ATLANTERHAVET



0 2 km
© Norsk Polarinstitut 2011

11/17/2009

EU

JA

NA



NW corner... location of all previous operations-Lousy QTH

Image © 2011 GeoEye
© 2011 Europa Technologies

Google earth

Bilddato: 11/17/2009 2008

54°24'25.78" S 3°17'39.33" Ø elevasjon 209 m

Øyehøyde 1.37 km

QTH Nyrøysa...this is the location of most previous operations



Previous Bouvetøya operations

- 1962 LH4C Gus Browning W4BPD – No documented landing
- 1977 3Y3CC Audun Hjelle 5 Q's
- 1977 3Y1VC John Snuggerud 27 Q's
- 1978 3Y5DQ Thor Winsnes 550 Q's
- 1978 3Y1VC John Snuggerud 1.930 Q's
- 1989/90 3Y5X by Club Bouvet 47.000 Q's
- 1997 3Y2GV Kåre Pedersen 200 Q's
- 2001 3Y0C Chuck Brady 17.000 Q's
- 2007 3Y/ZS6GCM ?? Q's

The 3Y1VC and 3Y3CC logs from 1977

CARL OLSEN
PAPIRHANDEL OG TRYKKERI
VED BESTILLING OPDØR:
Nr. **5998**
TELF. 42 30 37 - 42 57 32



DETTE BREV VAR
I LAND PÅ
BOUVETØYA
FEBRUAR 1977

24 1/2
25 25 SWT
15 VC 25 SWT 569 (559) Nørby - Tangs
R. for John Don -

- 00 5 X
00 5 F
00 5 AU - W 1 W Y
00 5 F
00 5 S
00 5 T
00 5 L

16 F JR 6 RRD: 549 (559) Orinav - MS -
Nyttabls. 19 1/2

14 F IV 6 ID 559 (569) Sarr diego M-S
under delen + Vip +

19 2 PH/ma 569 Fl. John 549 S
14 20 Pauran Bulb - Knit
då giv flere dager

QSL
Dnaro - Hotel
130 OH 2 BH 569 Fl. TKS MS
579

16 1 SM 3 P 2 X 569 For oslo M S

OE 1 ER 569 559 S

4X
45 02 1 LO 569 (569) Post 1/8
OH 2 QV 569 569 M-S
Guitab - Viste

15 SM 3 RL 569 (569) M S

14 1 PY 1 ET

LA 4 DD
LA 2 KD 559 Annuit S
14 SM 3 EVR 559 M S
17 UL 7 LAW 569 R S

LA 1 Ki 559 539 Annu show
OE 1 ER 569

02 7 HT 569 (339)
SM 3 EVR 559 559 3CC

LA 4 DD 559 559 1200 p. S. P. V
120 PY 1 HQ 579 LA 4 DD V

4X
4X
30 SM 3 XS 569 (Anden) M S
YU 2 DX 579 599 M-S
12 OH 2 RC 569 589 Buth-S
OH 2 AV 569 cheni
YU 2 RC 569 M-S
Guitab - Viste

1736 YU 2 RTW 579 M-S
SM 3 AUW 569 M-S
4X 4 FU 569 X
1740 SM 5 AQ 569 X
42 YU 2 RC 2 569 x (599)
1744 SM 3 XS 579 579 RM S
1745 SM 3 AUW X M S
1745 OH 2 BC D 569 579 M S
Dnaro - cheni - Deth

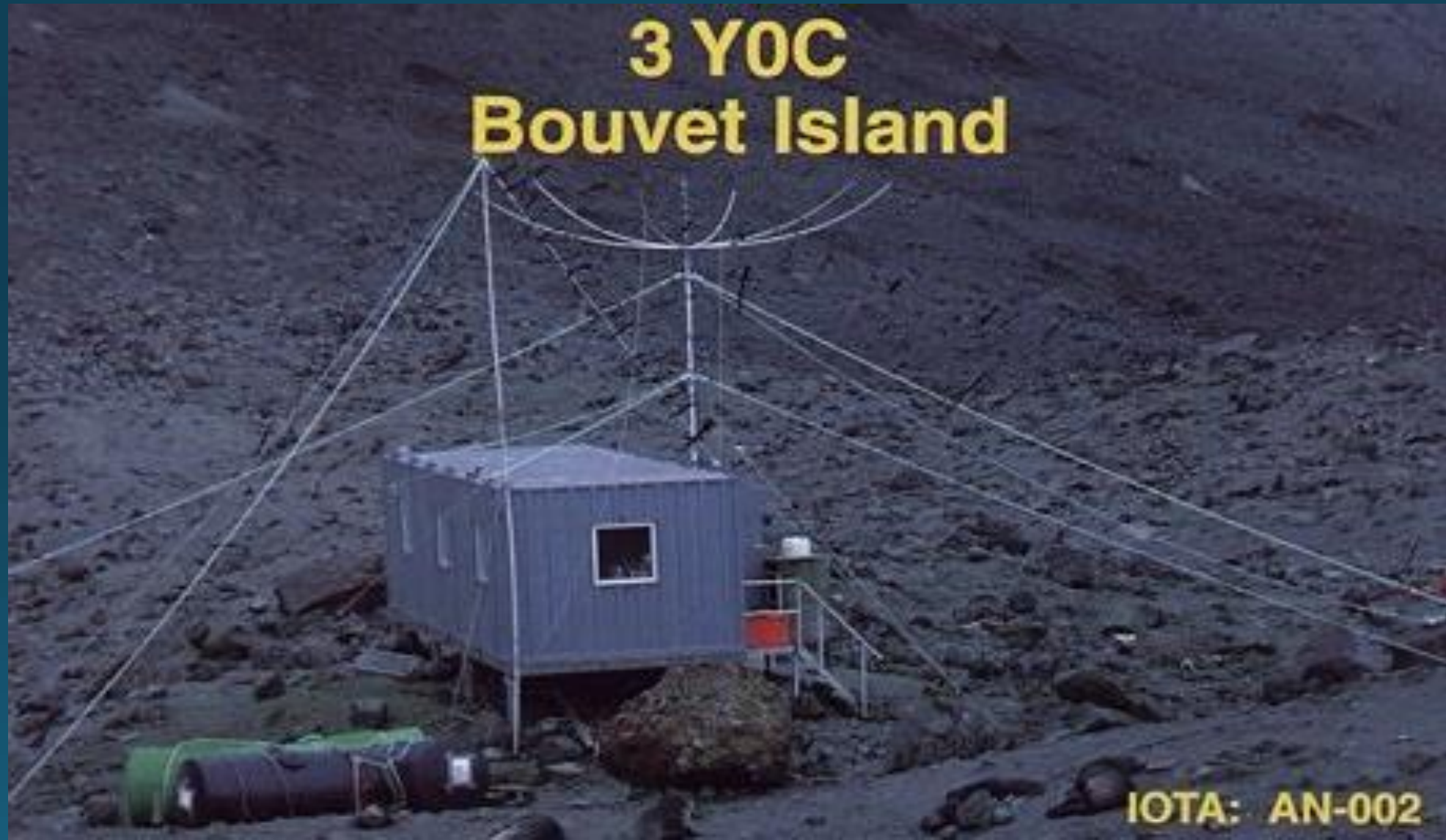
1990 3Y5X: 5 men, 16 days, 47,000 Q's



Nyrösa; New Rubble, bears its name with pride



2001 N4BQW, 3 months, 17,000 Q's.



**3 Y0C
Bouvet Island**

IOTA: AN-002

The new NPI station

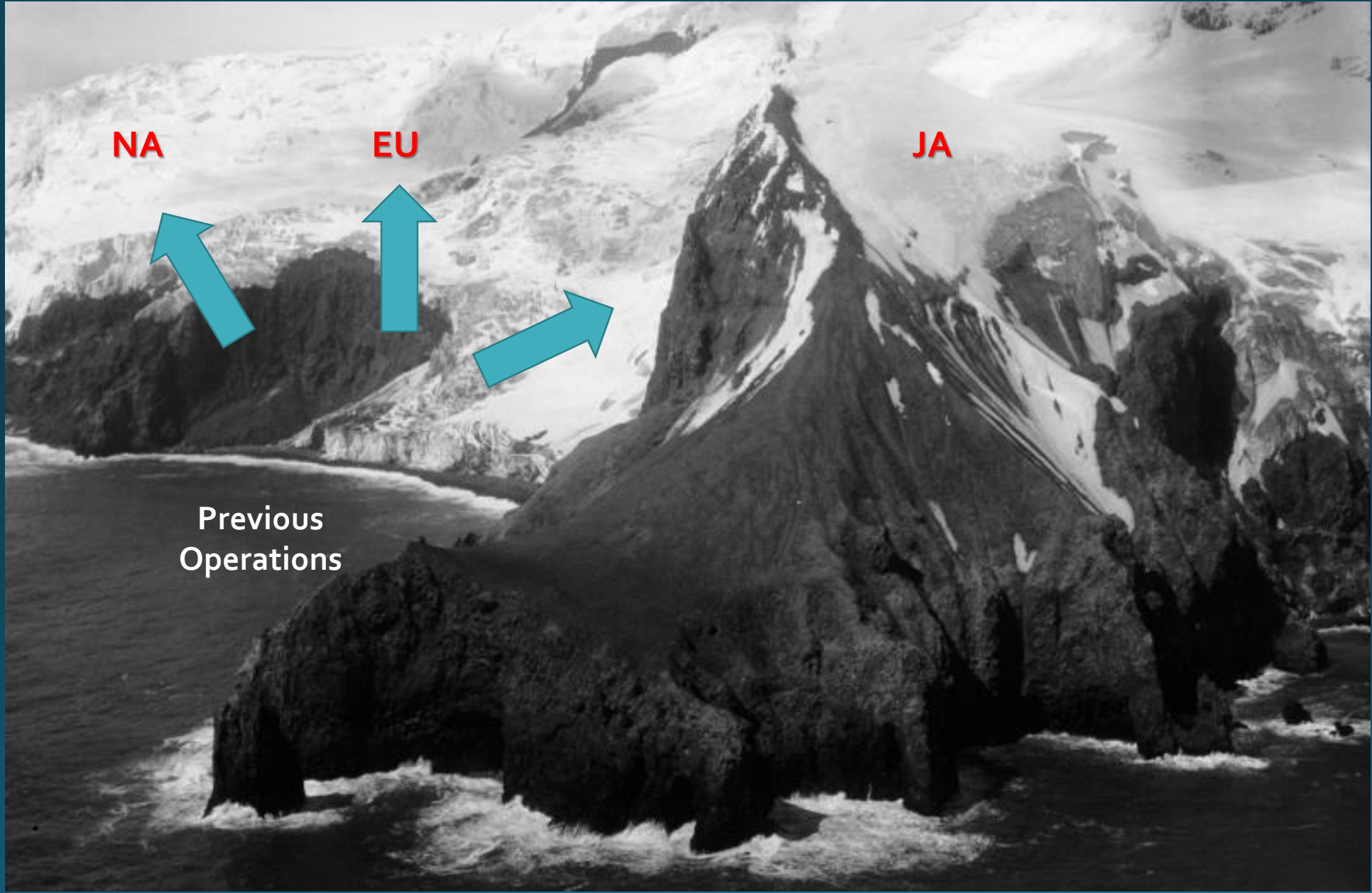


The new NPI station



?





NA

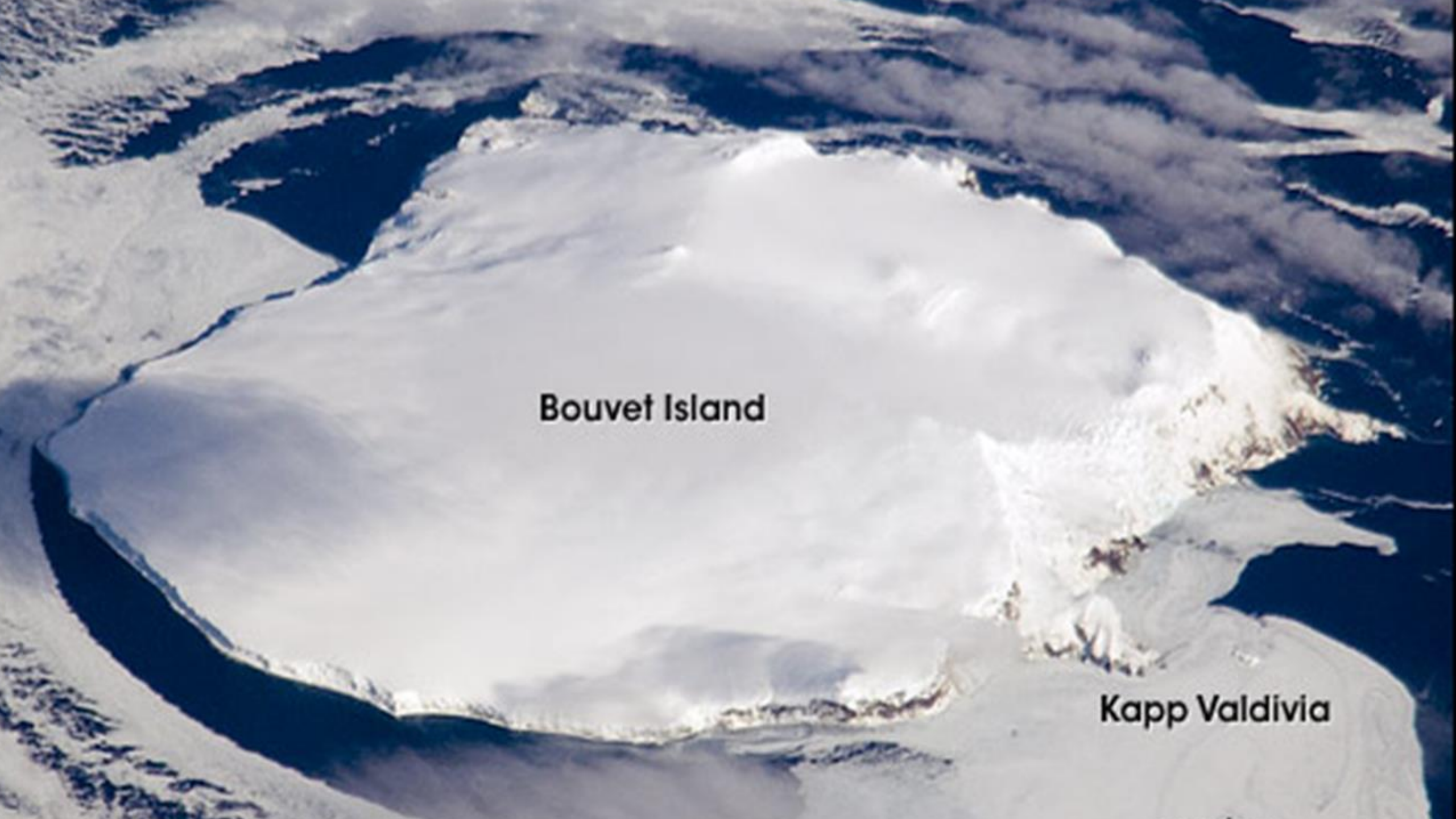
EU

JA

Previous
Operations

Cape Valdivia, where one expedition planned to stay





Bouvet Island

Kapp Valdivia

View from North America

**Olavtoppen - 780m
summit plateau**



**eastern flank
'Slakhallet'**



Cape Valdivia



Cape Circoncision

View from North America

**eastern flank
'Slakhallet'**



**Olavtoppen - 780m
summit plateau**



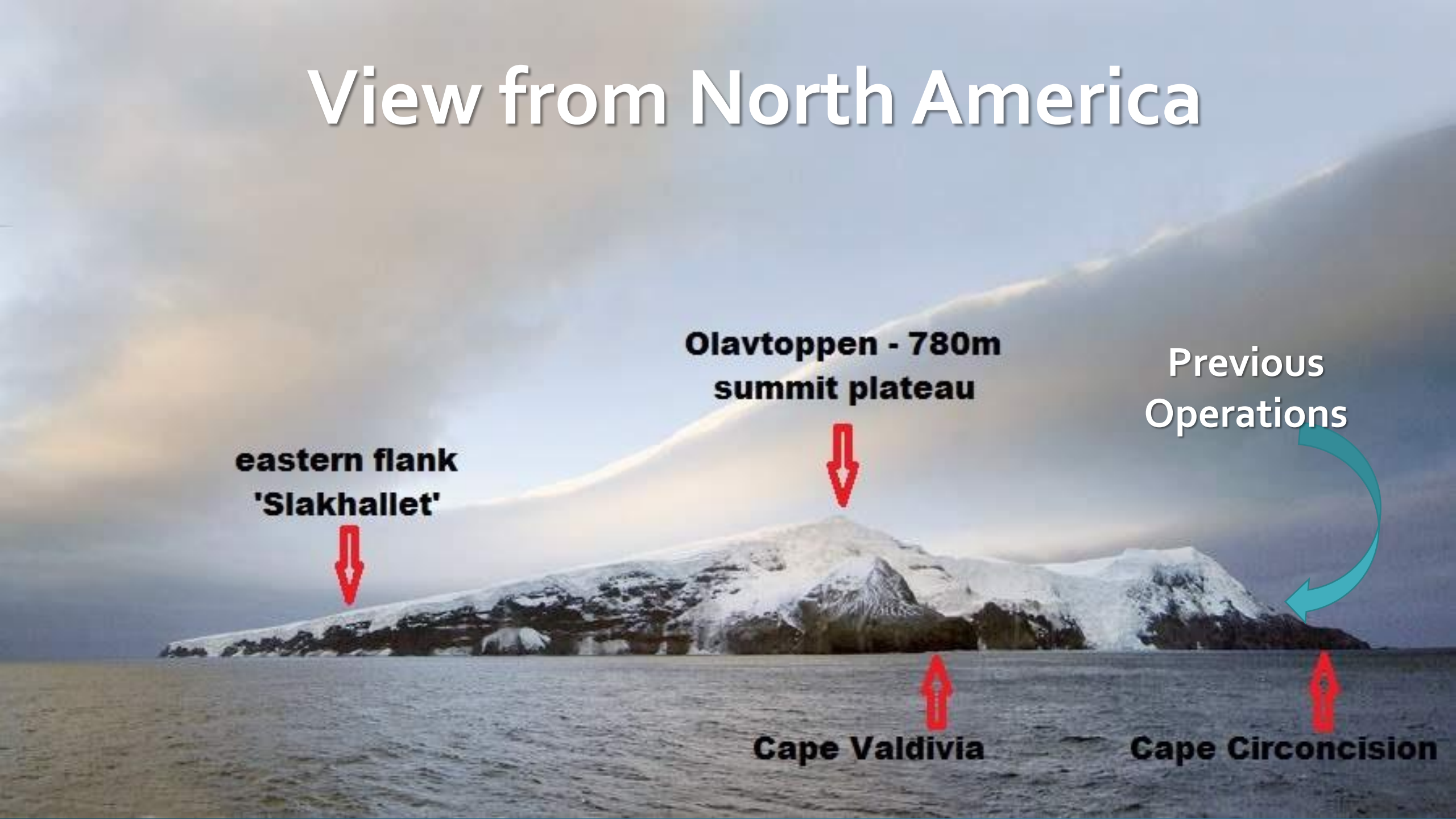
**Previous
Operations**



Cape Valdivia



Cape Circoncision



View from North America

Our QTH !

**eastern flank
'Slakhallet'**



**Olavtoppen - 780m
summit plateau**



**Previous
Operations**

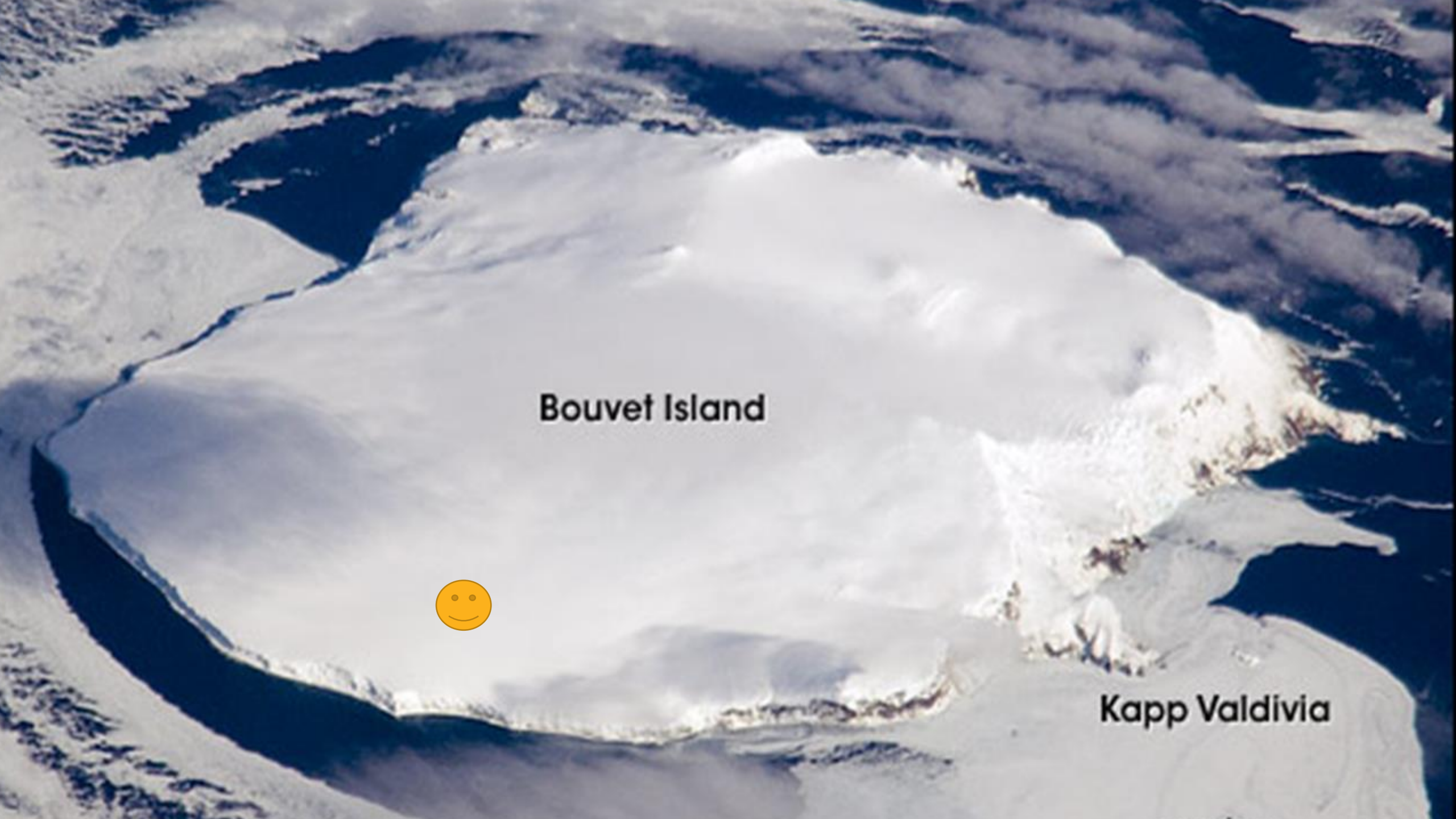


Cape Valdivia



Cape Circoncision





Bouvet Island






Kapp Valdivia





The Challenges:



- A landing permit and license---easy!
- Transportation (helo required)---Difficult
- A competent, experienced team---Difficult
(\$18,000-20,000, 7-8+ weeks away)
- A huge budget---Difficult
- SAFETY must be paramount---Difficult
- Extreme weather, rapid changes---Difficult
 - 300 storms/year
- Propagation challenges---Difficult

Bouvetøya WX now

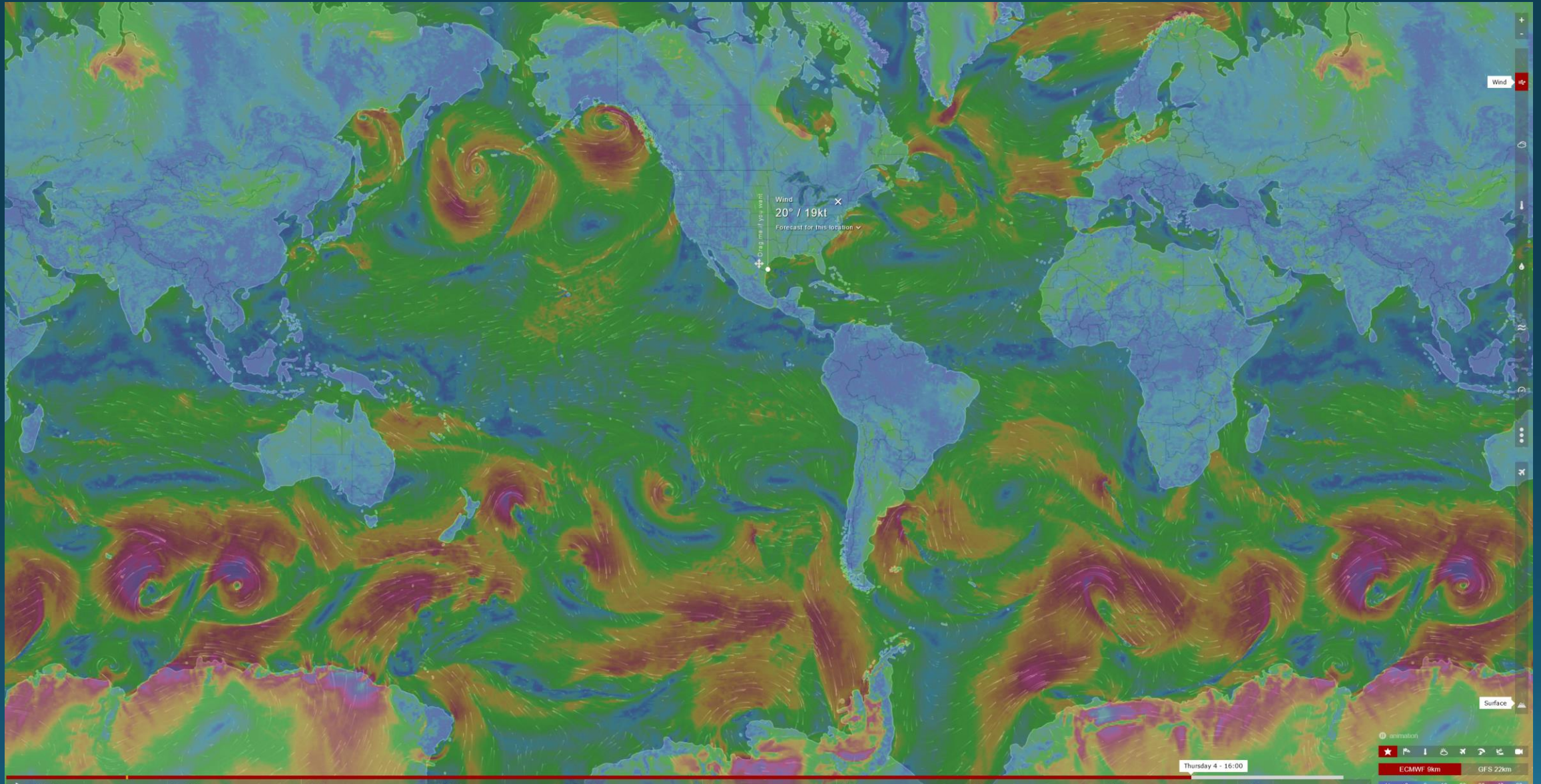
TODAY APR 27	FRI APR 28	SAT APR 29	SUN APR 30	MON MAY 1
				
-3°/-5°C	3°/0°	4°/1°	3°/-4°	-3°/-6°
Some sleet in the afternoon	Cloudy and windy	Very windy; cloudy	Cloudy, a shower; windy	Cloudy, a little rain; colder
	More	More	More	More

Now	Daily	Hourly	Morning	Afternoon	Evening	Overnight
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DAY	NIGHT
-3°_{HI}	-5°_{LO}
RealFeel® -16° Precipitation 56%	RealFeel® -19° Precipitation 56%
	
Some sun, then clouds, breezy and colder; morning flurries followed by some sleet in the afternoon	Cloudy and windy; a little snow and sleet in the evening followed by a bit of ice late

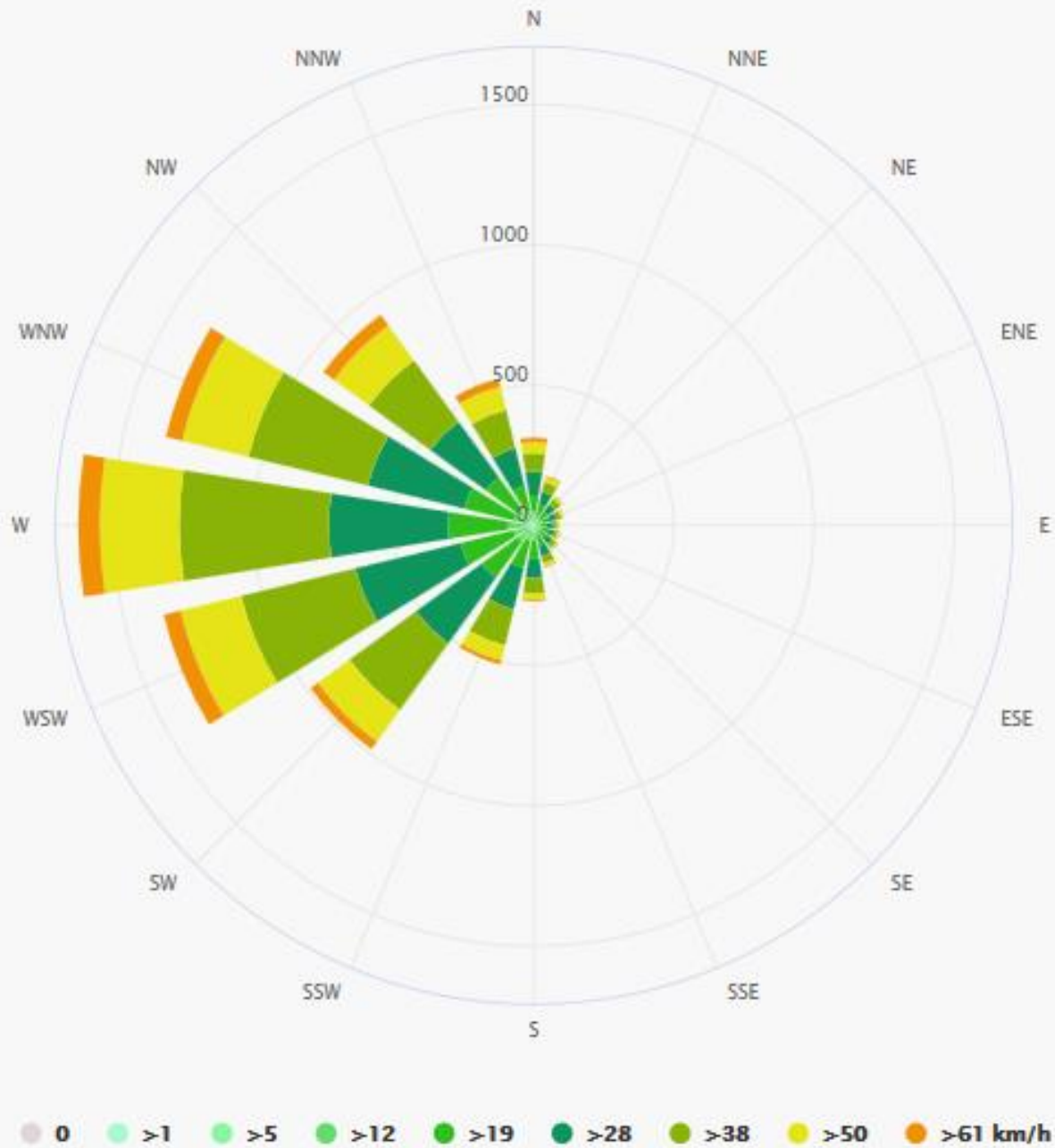
NW 39 km/h Gusts: 56 km/h		WNW 48 km/h Gusts: 63 km/h	
Max UV Index: 1 (Low) Thunderstorms: 0% Precipitation: 4 mm Rain: 0 mm Snow: 0.5 CM Ice: 4 mm Hours of Precipitation: 3 hrs Hours of Rain: 0 hrs		Max UV Index: N/A Thunderstorms: 0% Precipitation: 2 mm Rain: 0 mm Snow: 0.5 CM Ice: 1 mm Hours of Precipitation: 2.5 hrs Hours of Rain: 0 hrs	

Weather: 300 storms/year !



Annual Wind Rose

Wind rose





2006 Mountaineering Expedition Landing



Helicopter ---our lifeline



m/v Betanzos (home port-Punta Arenas, Chile)



m/v Betanzos (home port-Punta Arenas, Chile)

200' x 33' - 1438T
6 kt



m/v Betanzos (home port-Punta Arenas, Chile)

200' x 33' - 1438T

6 kt

15 days



Tried and True....experienced ops (4,600,000 QSOs)

BOUVET
ISLAND
DXPEDITION 2018

ANNOUNCING THE BOUVET ISLAND DXPEDITION 2018



The Team ▶



www.bouvetdx.org

Guaranteed: 21 days AT Bouvet

- 14-15 days TO Bouvet
- 21 days AT Bouvet
 - Weather windows – could be days
 - Best scenario – 12-14 days of operation
- 15-16 days RETURN

Minimum 7 weeks

INCREDIBLE SUPPORT !!!



INCREDIBLE SUPPORT !!!



- Antennas
- Masts
- Coax

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INCREDIBLE SUPPORT !!!



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- Coax



Masts

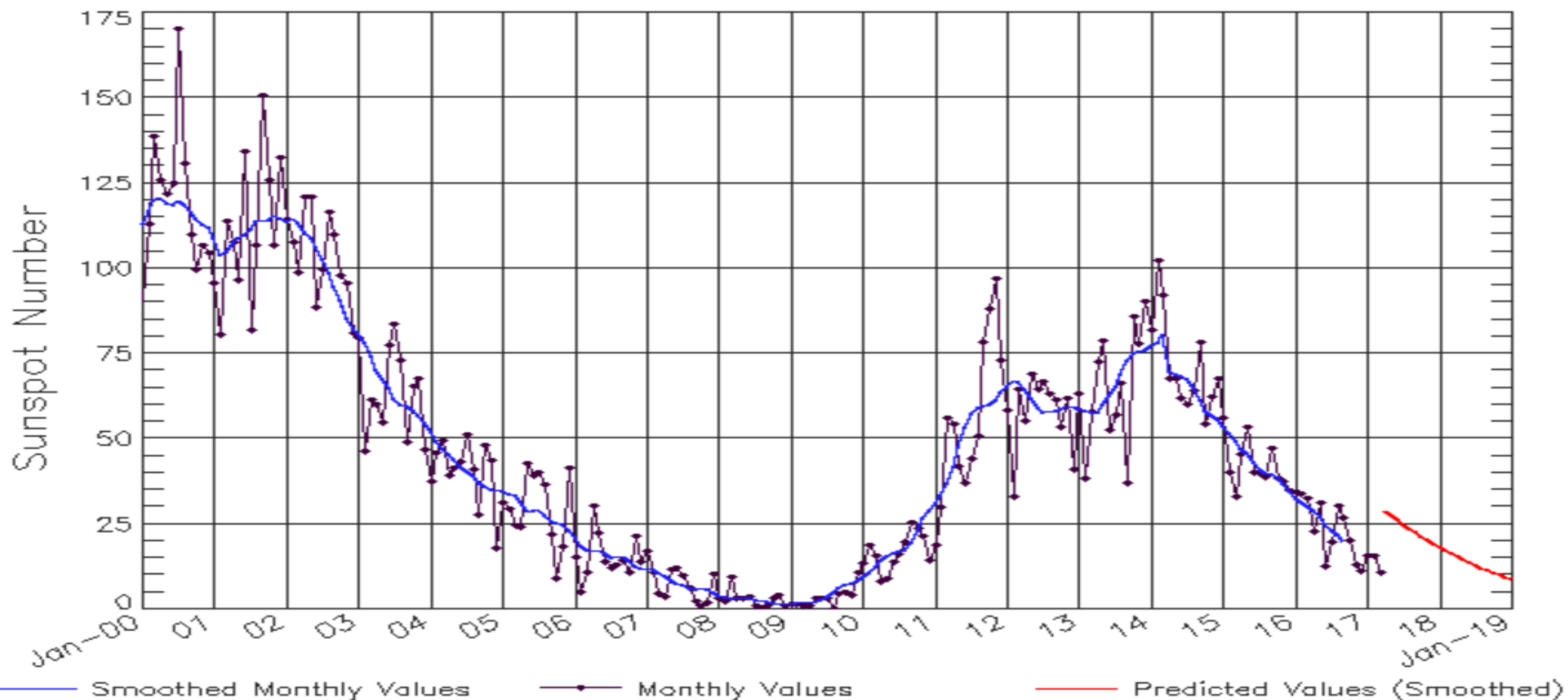


Falling derrick – engine block test

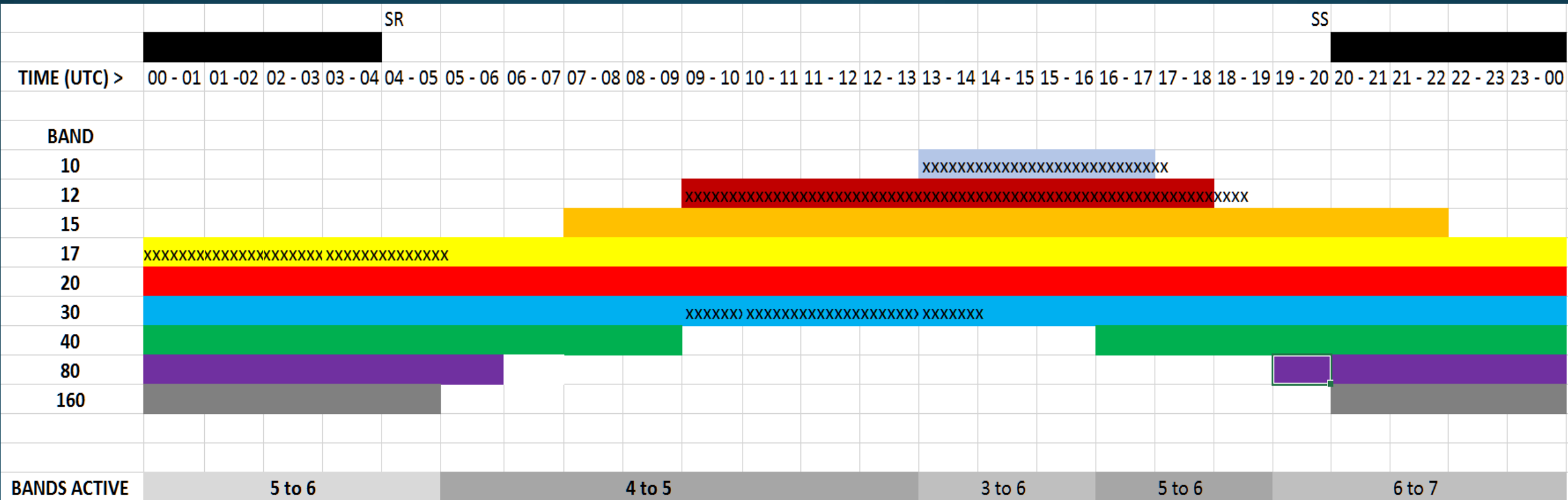


Sunspot Number Progression

ISES Solar Cycle Sunspot Number Progression
Observed data through Mar 2017



Propagation Analysis

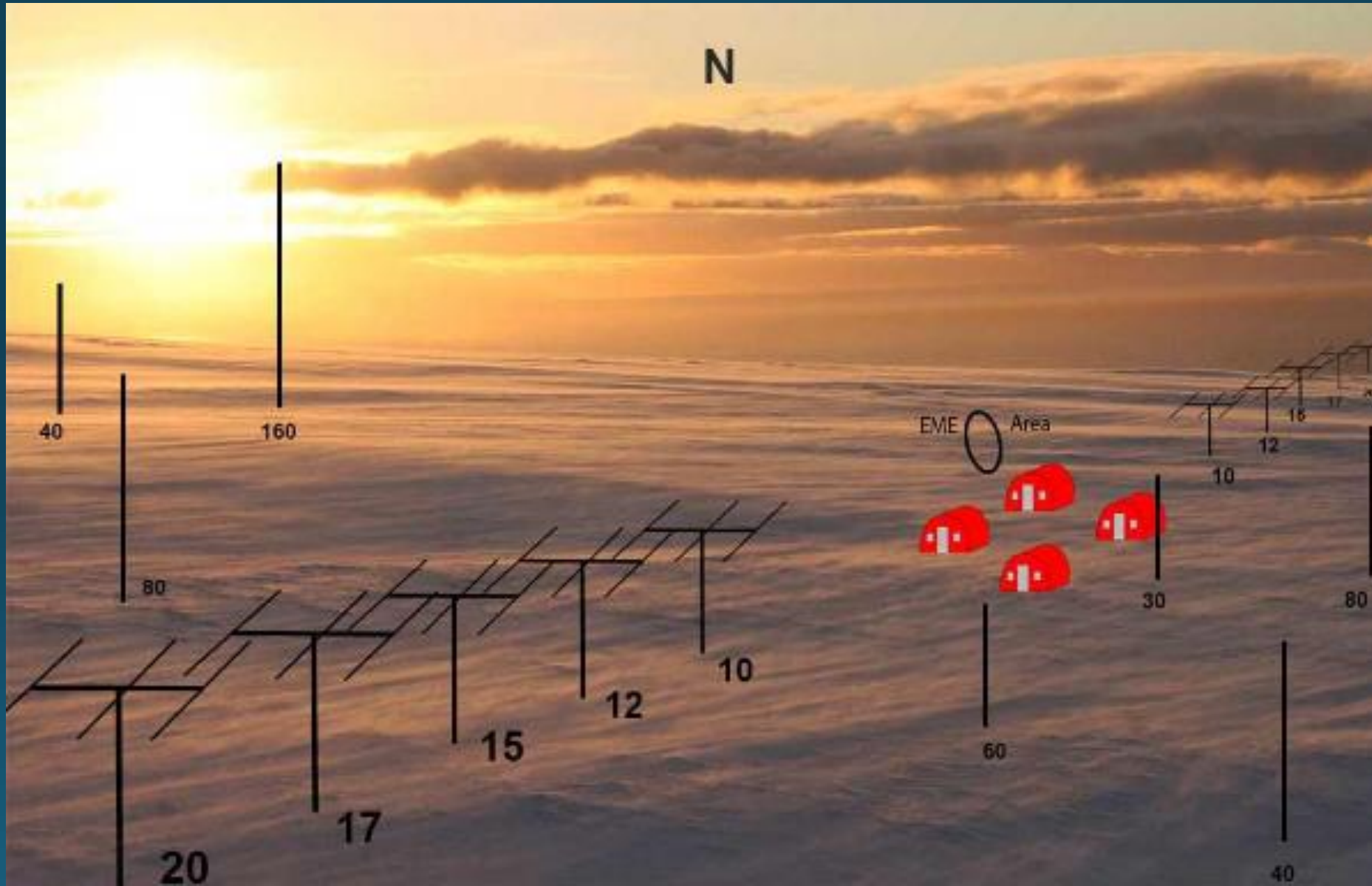


Nine stations could be active at any given time.

xxxx indicates light or lower probability opening.

EME stations not included in this analysis

Antenna layout

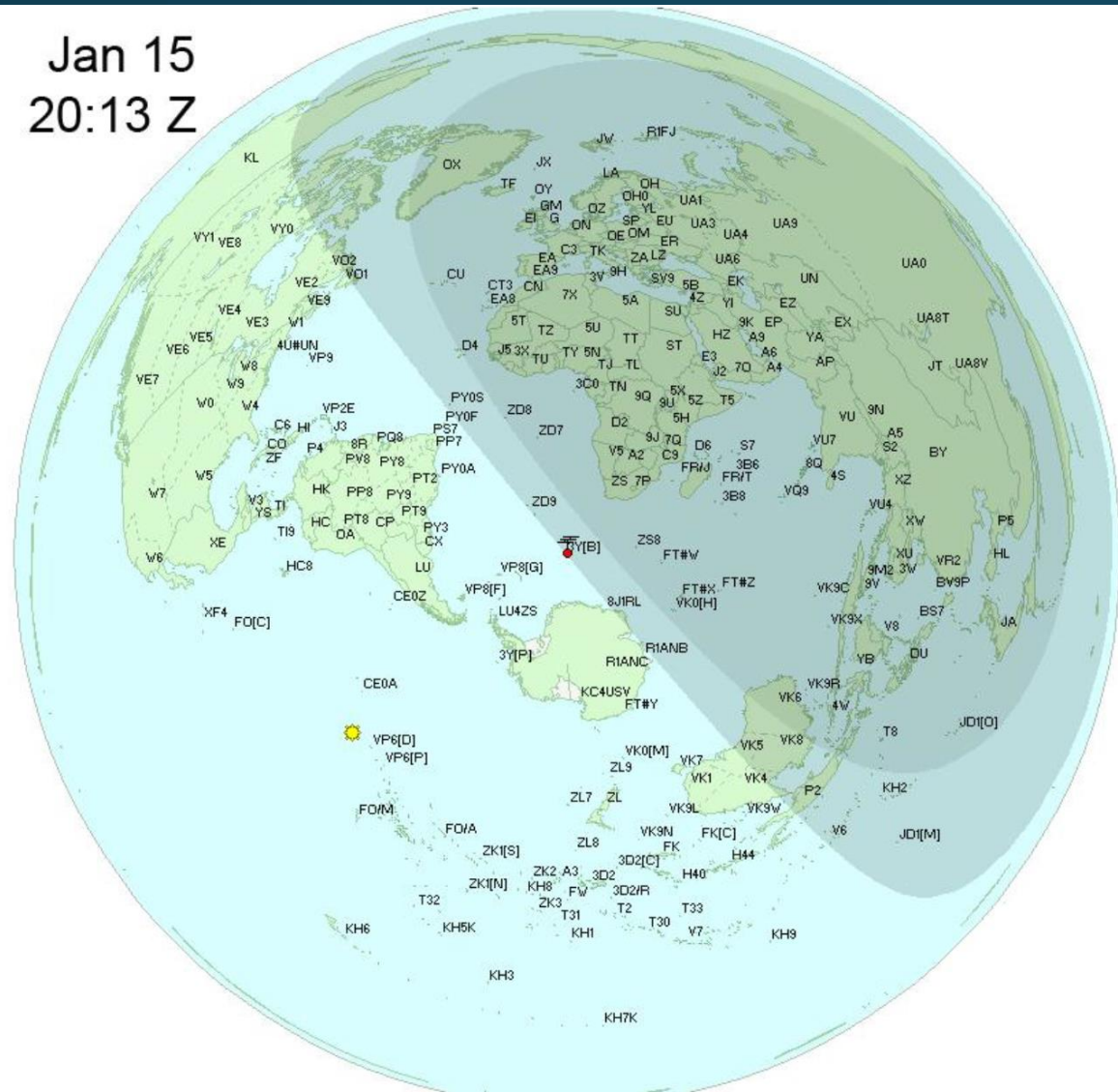


Operation

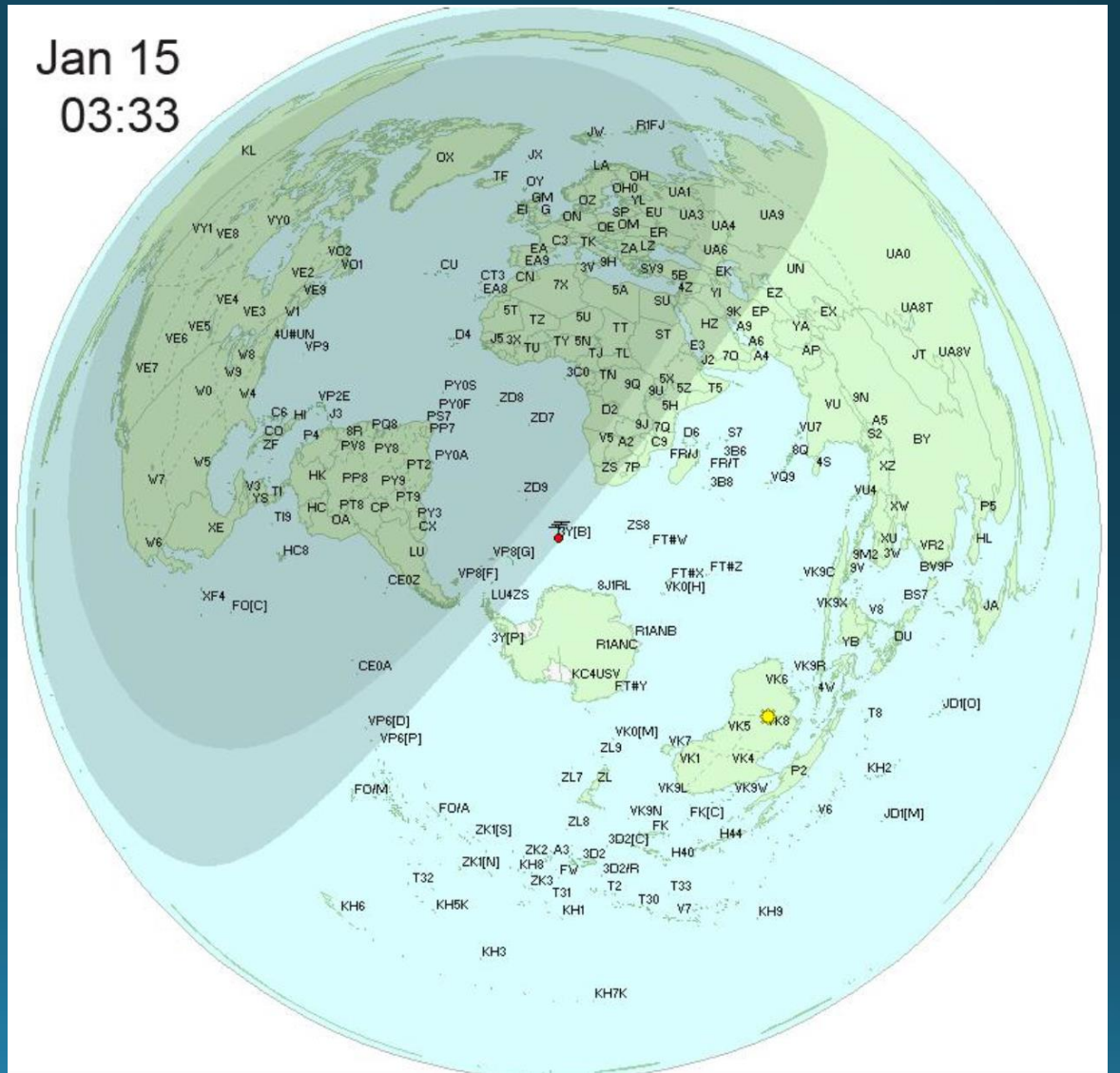
- 9 stations
- 160 – 10m
- 6 and 2m EME
- CW, SSB, RTTY
- 8 HF stations Flex 6500 with 1.5 kW Flex amplifiers
- 1 stn 2m, Flex 6700 with 1kW amplifier
- 3 ele monoband yagis for 20-10m
- Verticals for 160, 80, 60, 40 (4-SQ) and 30m
- Yagi arrays for 6 and 2m

Gray line

Jan 15
20:13 Z

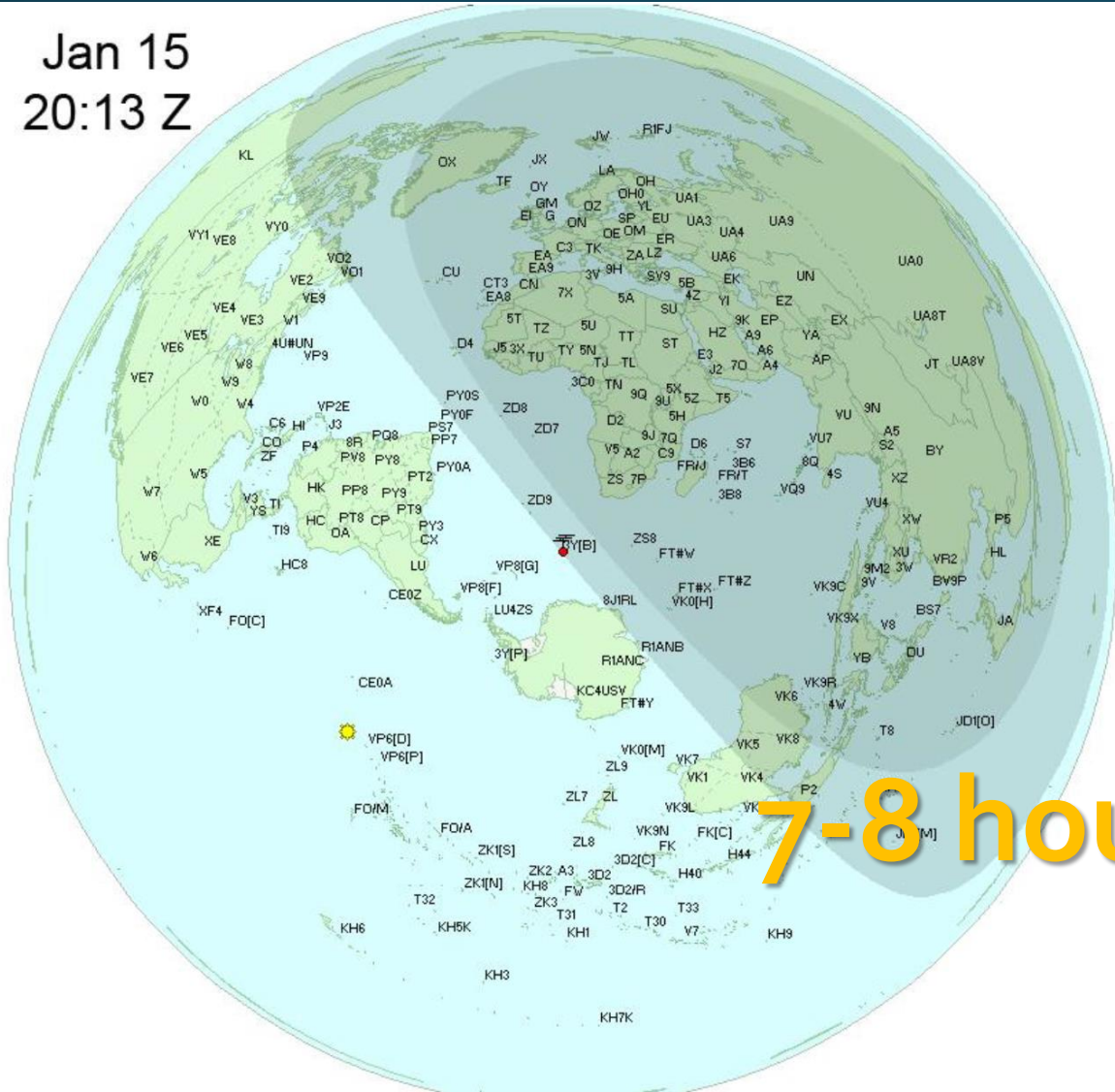


Jan 15
03:33

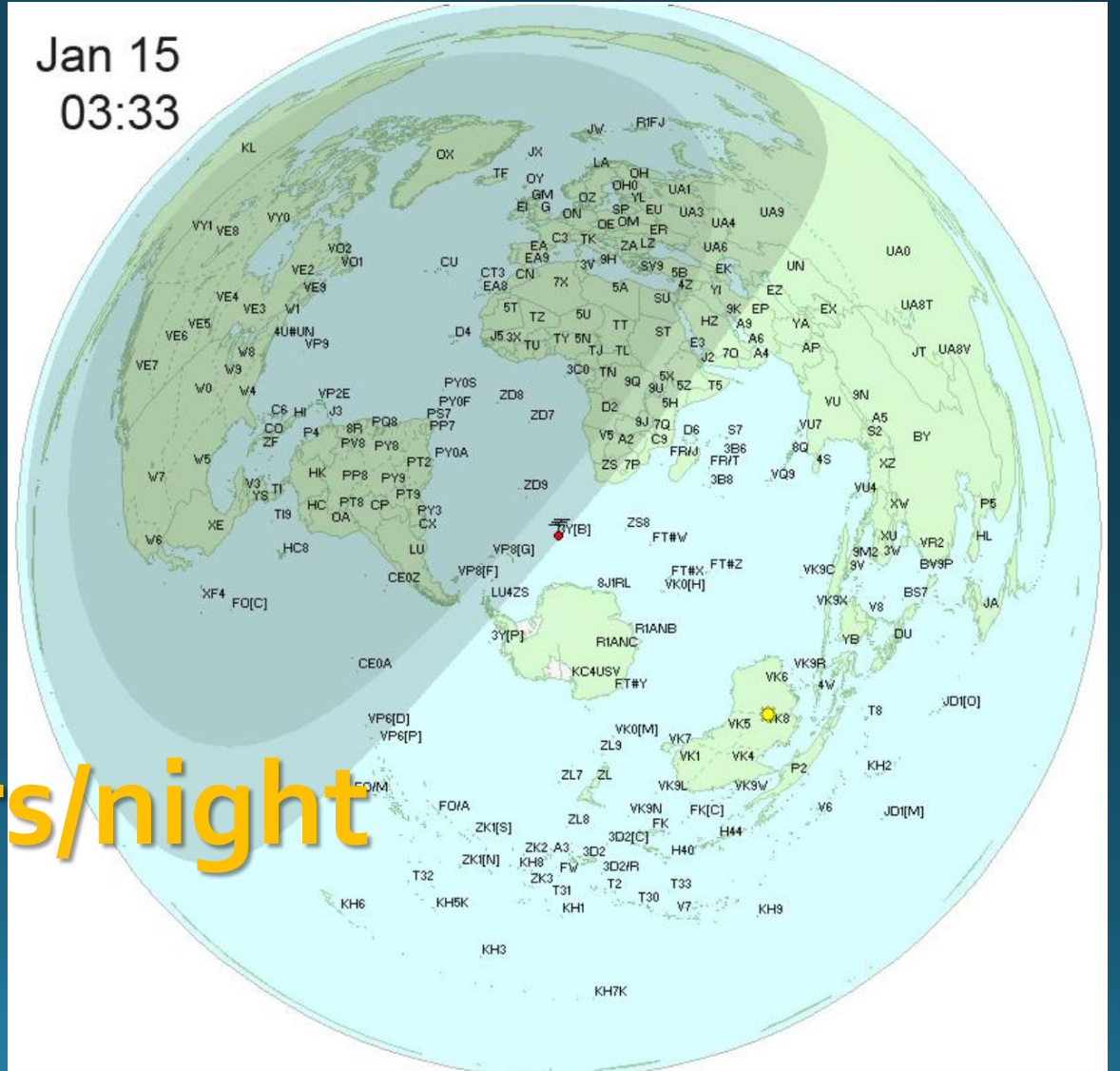


Gray line

Jan 15
20:13 Z



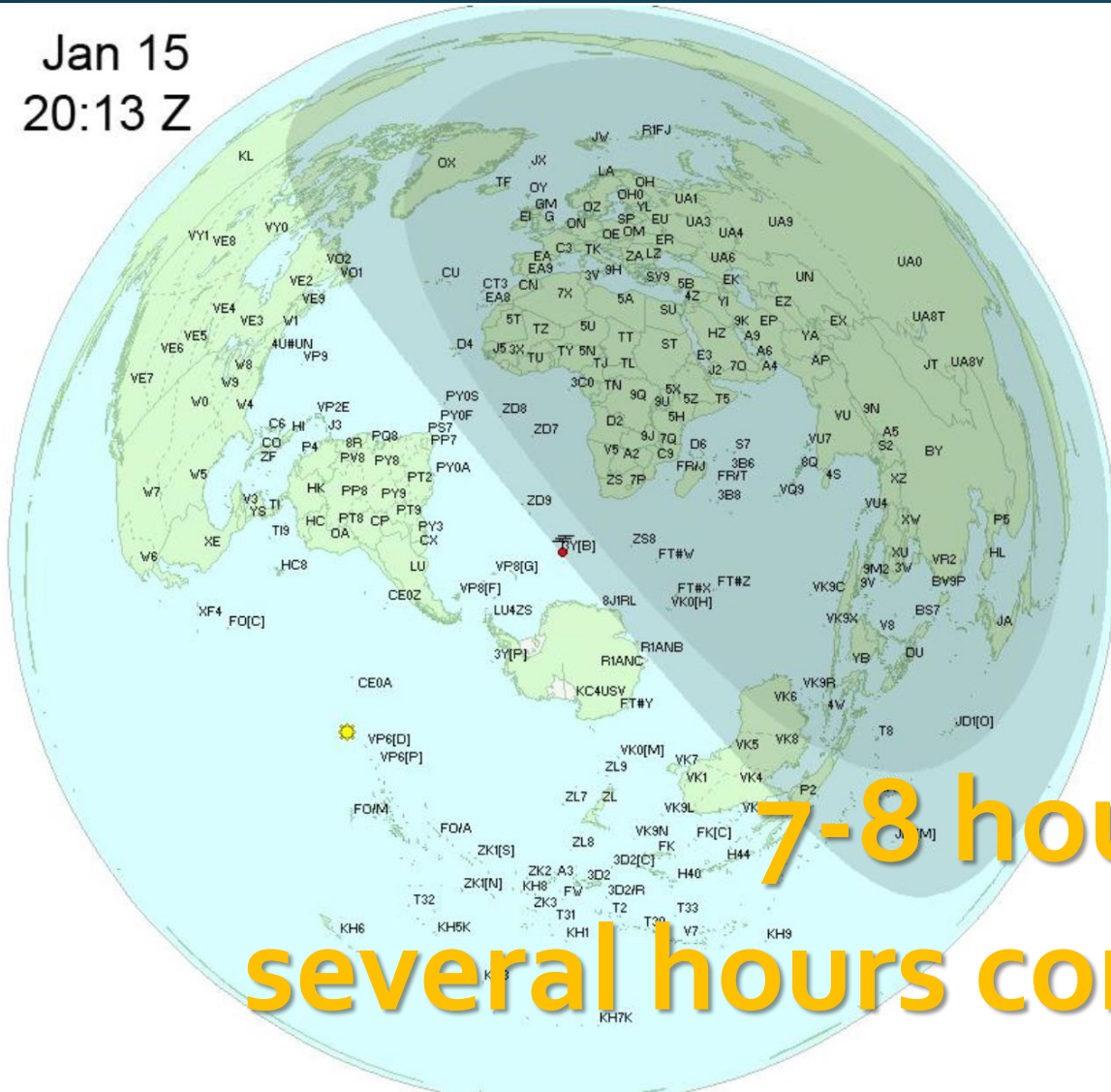
Jan 15
03:33



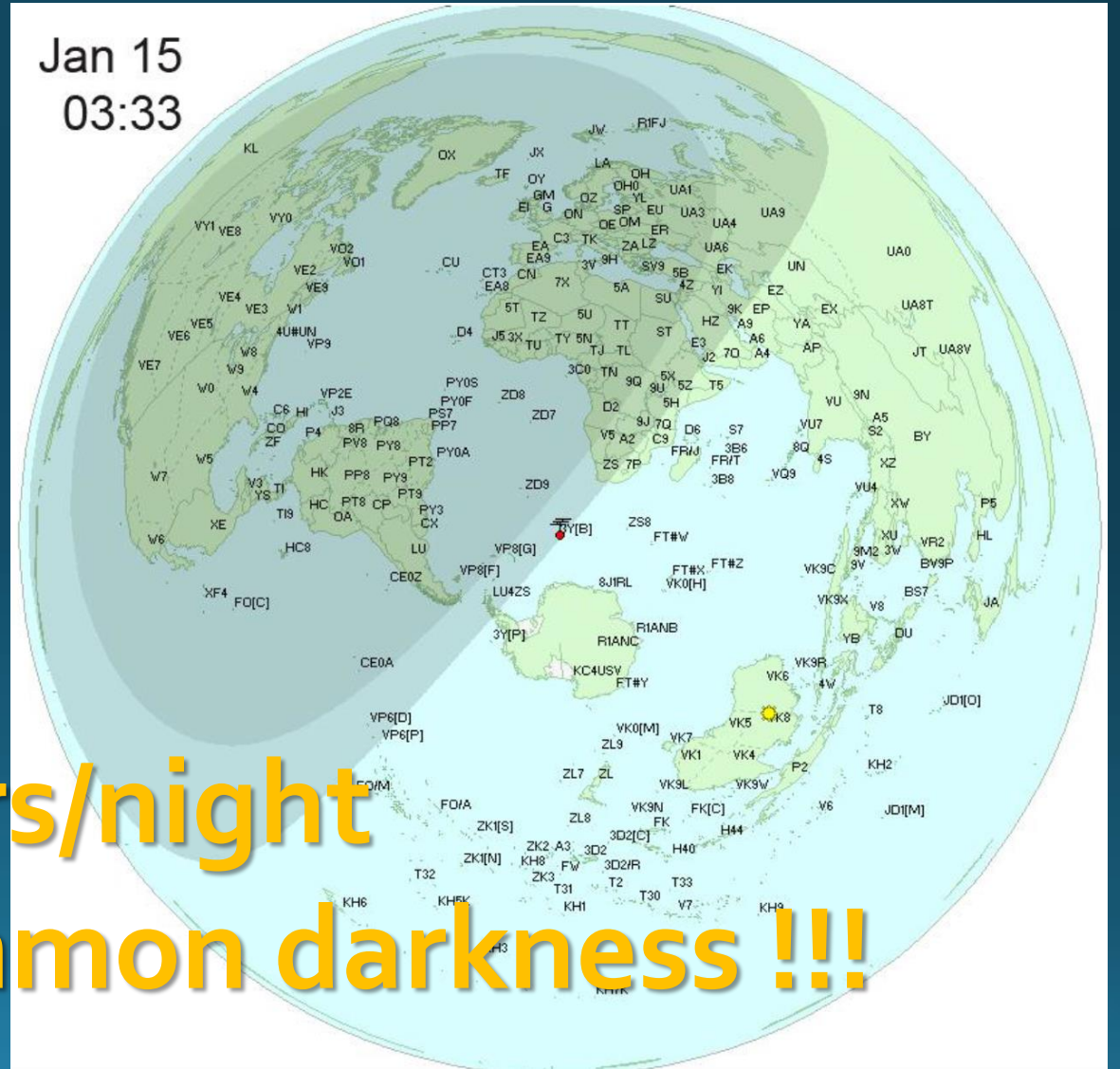
7-8 hours/night

Gray line

Jan 15
20:13 Z



Jan 15
03:33



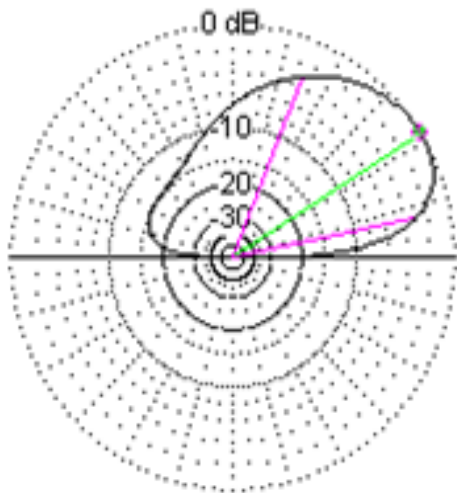
7-8 hours/night
several hours common darkness !!!

160M Beam

^ Total Field

Horizontal Pol

Vertical Pol



EZNEC Pro/2

1.832 MHz

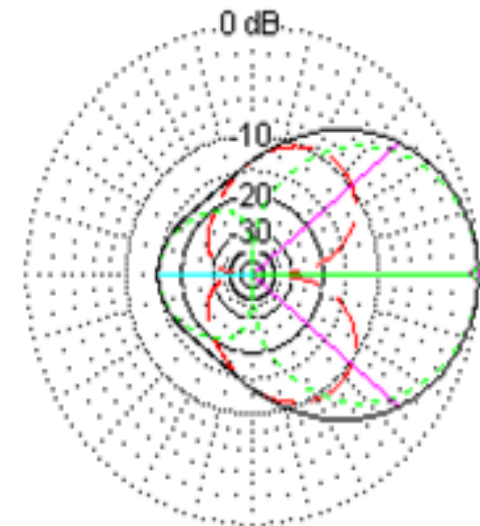
Elevation Plot		Cursor Elev	32.0 deg.
Azimuth Angle	0.0 deg.	Gain	3.55 dBi
Outer Ring	3.55 dBi		0.0 dBmax

Slice Max Gain	3.55 dBi @ Elev Angle = 32.0 deg.
Beamwidth	56.4 deg.; -3dB @ 11.3, 67.7 deg.
Sidelobe Gain	< -100 dBi
Front/Sidelobe	> 100 dB

^ Total Field

Horizontal Pol

Vertical Pol



EZNEC Pro/2

1.832 MHz

Azimuth Plot		Cursor Az	0.0 deg.
Elevation Angle	32.0 deg.	Gain	3.55 dBi
Outer Ring	3.55 dBi		0.0 dBmax

Slice Max Gain	3.55 dBi @ Az Angle = 0.0 deg.
Front/Back	14.97 dB
Beamwidth	77.6 deg.; -3dB @ 321.2, 38.8 deg.
Sidelobe Gain	-11.42 dBi @ Az Angle = 180.0 deg.
Front/Sidelobe	14.97 dB

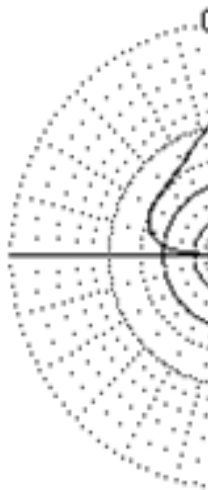
160M Beam

Antenna parameters:

Reflector: 264.0 feet
Driven Element : 255.5 feet
Director: 240.0 feet

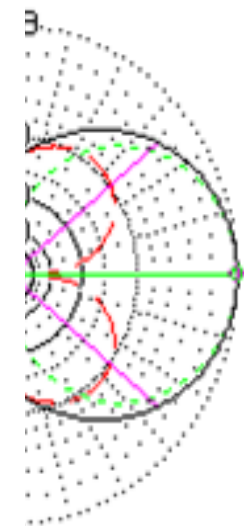
Spacing:
Reflector – Driven Element 100 feet
Reflector – Director 204 feet

^ Total Field
Horizontal Pol
Vertical Pol



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 3.55 dBi

Slice Max Gain 3.55 dBi @ Elev A
Beamwidth 56.4 deg.; -3dB @
Sidelobe Gain < -100 dBi
Front/Sidelobe > 100 dB



EZNEC Pro/2

1.832 MHz

Cursor Az 0.0 deg.
Gain 3.55 dBi
0.0 dBmax

φ = 0.0 deg.
θ = 21.2, 38.8 deg.
ψ = 180.0 deg.



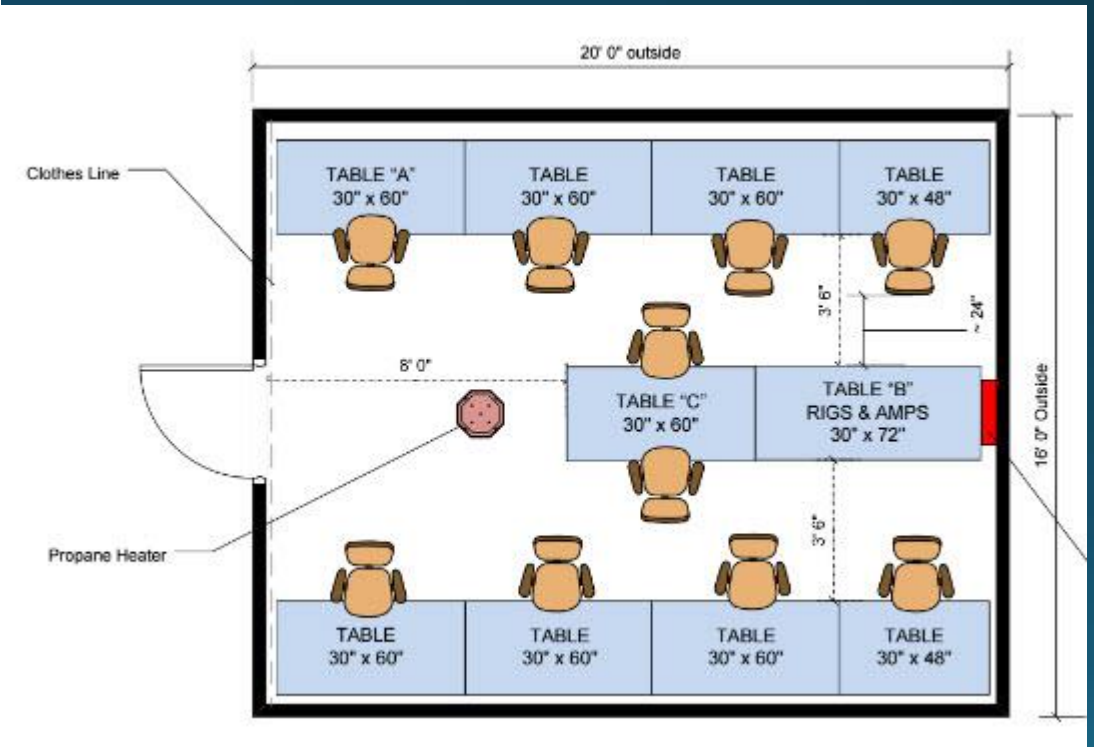
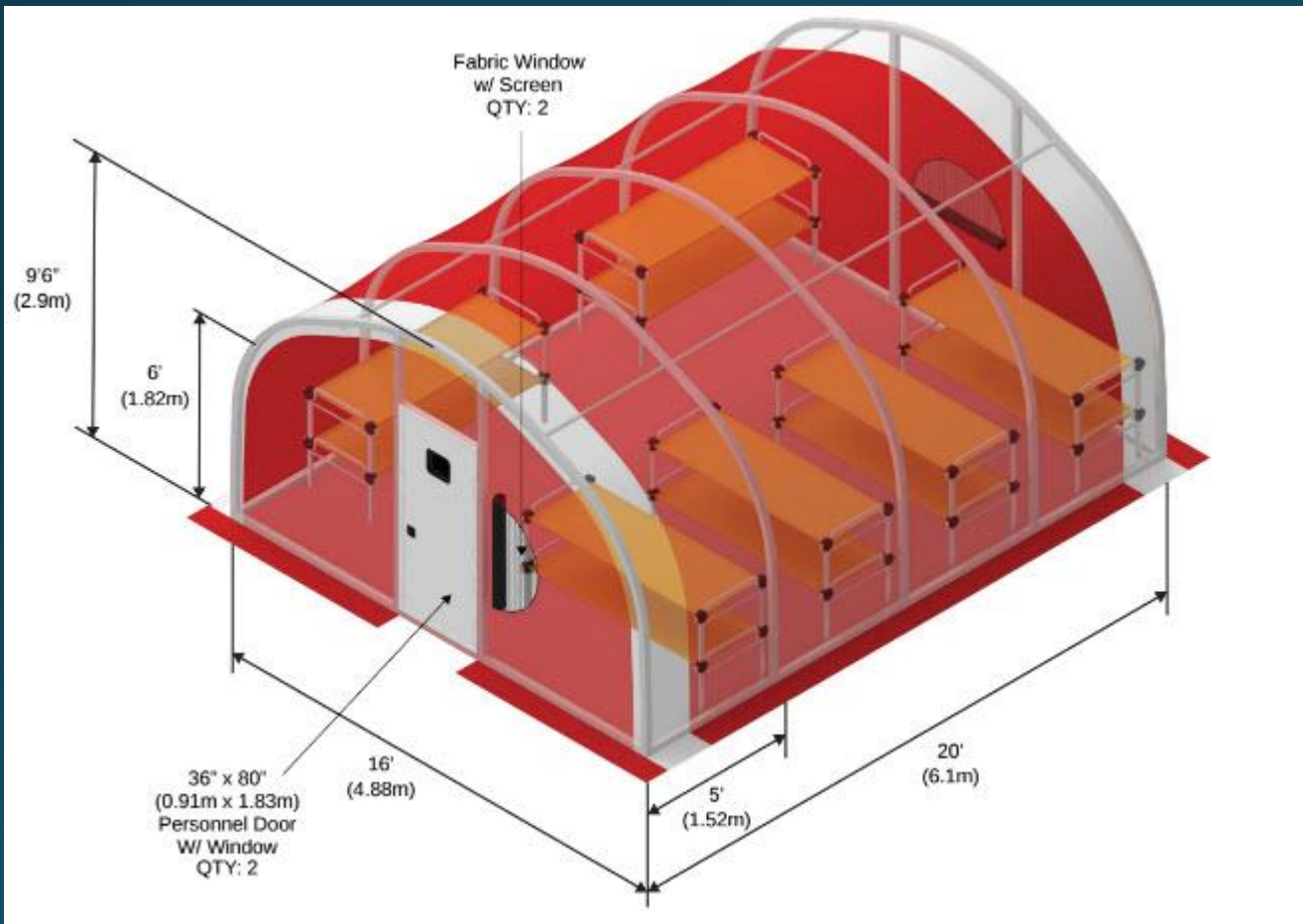


EME From Bouvet



Shelters

Two sleep shelters, one operating shelter and a MEG shelter



The Budget.....

- Expenses \$741,000+ (most expensive yet!)
- \$650,000 for vessel, helicopter, pilot, crew
- Most \$\$\$ due upfront

Income...

- The Operators committed to--- 50 %
- DX Community---the remainder
 - Includes DX Foundations---(NCDXF, INDEXA, GDXF, Chiltern DXC, etc.)
 - DX Clubs worldwide---70% from NA
 - INDIVIDUAL DXers---worldwide
 - QSLing process--- Direct QSL requests + OQRS (preferred)
 - Souvenir Sales---

How you can help...

- Donate NOW! www.bouvetdx.org
- Encourage your local Clubs to donate
- Include more than return postage in your direct QSL requests
- Use OQRS...include an additional contribution.



**BAND
CONDITION
SPRAY**



**DESIGNED TO
ENHANCE HF
PROPAGATION**

WORK RARE DX EASILY

WORKS FOR ALL MODES

*WILL NOT DAMAGE
THE IONOSPHERE*

*LICENCED AMATEUR
USE ONLY*

January 2018....

CU in the PILEUPS!

73, de 3YØZ



The Bouvet Island DXpedition 2018



The Most Remote Island on Earth

3YØZ

Hey, hold it right there.... we're not finished!

Aren't there other parties also planning to go to Bouvetøya...?

The list is long... it will get crowded....

- 3YoG : ON4WW, License valid January 1 to April 30, 2017
Originally based on helo landing, but has no valid landing permission as of today.
Some say that Mark is not planning to go “this year”.
- 3YoH : RA9USU; license valid from January 1, 2018 to February 28, 2018.
Has helo landing permission, November 2017 to February 2018
- 3YoI : 3Z9DX, license valid from January 13, 2017 to December 31, 2017
Sailboat with Zodiac landing, no landing permission required.
- 3YoZ : LA6VM, K0IR, K4UEE, etc, license valid December 1, 2017 to April 30, 2018
Has helo landing permission



2006 Mountaineering Expedition Landing



Beach Boys.....



But it is not that easy ...


- Through the years a number of persona have announced plans to go to Bouvet
- The problem is not to get a landing permit or a license
 - Anyone will get these for the asking
- The problem is to get there, to land with the required operators and equipment, and to return safely
... and at an “affordable” cost!



3YØZ

Bouvet Island

54°S 3°E

 *FlexRadio Systems*[®]
Software Defined Radios

The Most Remote Place on Earth

January 2018

www.bouvetdx.org



www.bouvetdx.org