Only four months needed for a man made extreme winter 1939/40?

www.climate-ocean.com

www.climate-ocean.com

The naval war share - A proof in three steps!

From where did winter of 1939/40 start?

Extract from a Martin Rodewald*) paper 1948**):

After mentioning that a series of cold winters occurred from 1780 to 1859 with about 4 severe winters in every decade, and that during the last 80 years since 1860 there had been only two cold winters, 1881 and 1929; he writes:

"Beginning in the previous century, a 'secular heat wave' made itself felt over most of the Earth, we noticed this especially in the increasing mildness of the winters, which became more and more striking between 1900 and 1939. So it is all the more surprising that there was a series of three severe winters in succession in 1939/40, 1940/41 and 1941/42, appearing to indicate a sudden reversal of the previous development rather than a slow deceleration, contrary to the sustainment tendency of circulation and temperature deviation."

*) Meteorologist at the German marine weather service „Seewarte" in WWII.

**) in Annalen der Meteorologie, April/Mai, 1948, pp.99-105 (The realisation of severe European winters)

The proof of this thesis concentrates on three observations/events:

1. The circumstances of the early appreance of sea ice in the North Sea;
2. The reasons for cold records in Central Europe;
3. The influence of naval activities on air temperatures and sea ice around the Baltic.

"All the News That's Fit to Print."

The New York Times.

EXTRA

VOL. LXXXVIII...No. 29,805. NEW YORK, FRIDAY, SEPTEMBER 1, 1939. THREE CENTS

GERMAN ARMY ATTACKS POLAND; CITIES BOMBED, PORT BLOCKADED; DANZIG IS ACCEPTED INTO REICH

RITISH MOBILIZING

lavy Raised to Its Full Strength, Army and Air Reserves Called Up

ARLIAMENT IS CONVOKED

Bulletins on Europe's Conflict

London Hears of Warsaw Bombing

LONDON, Friday, Sept. 1 (AP).—Reuters British news agency said it had learned from Polish sources in Paris that Warsaw was bombed today.

French Confirm Beginning of War

PARIS, Friday, Sept. 1 (AP).—The Havas news agency said today that official French dispatches from Germany indicated that "the Reich began hostilities on Poland this morning."

HOSTILITIES BEGU

Warsaw Reports Germar Offensive Moving on Three Objectives

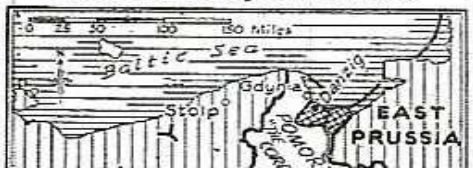
ROOSEVELT WARNS NAV

FREE CITY IS SEIZED

Forster Notifies Hitler of Order Putting Danzig Into the Reich

ACCEPTED BY CHANCELLOR

Hitler Acts Against Poland



HITLER GIVES WORI

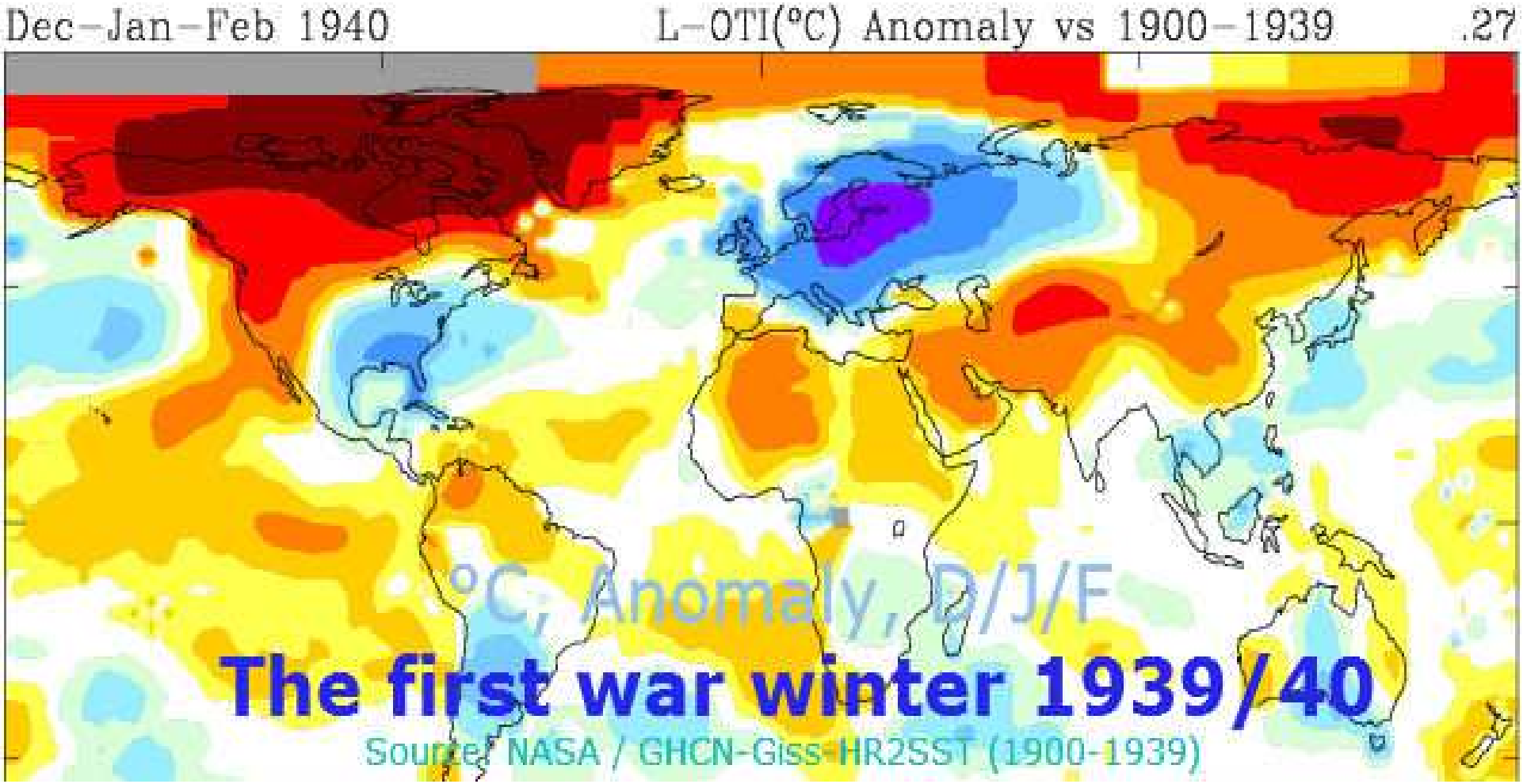
In a Proclamation H Accuses Warsaw of 'Appeal to Arms

FOREIGNERS ARE WARNE

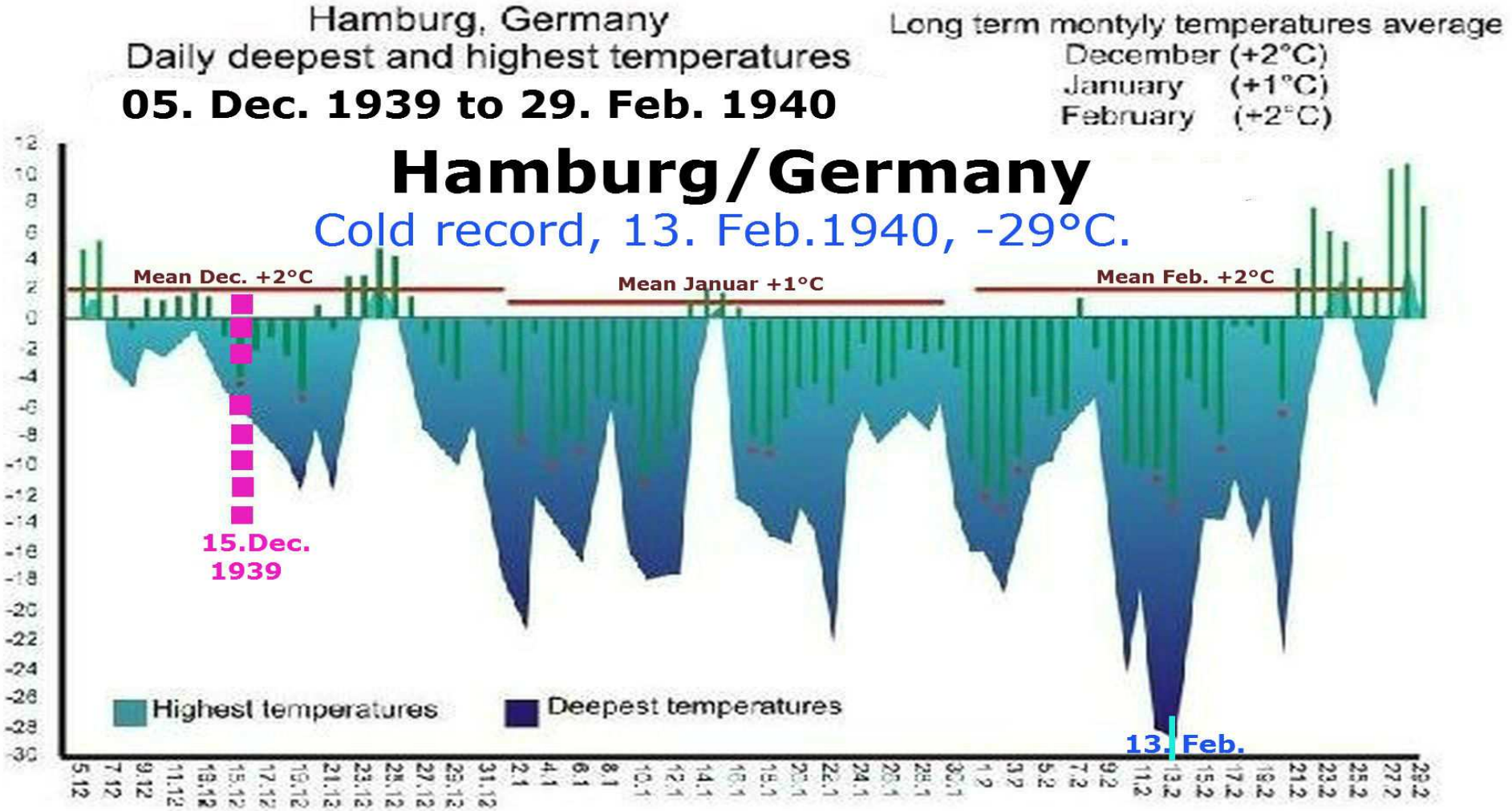
Naval war was like the start of a gigantic ‚field experiment', on a „clean" statistical basis, which from now on changed day by day as long as the war lasted.

Left: The German battle ship „Schleswig Holstein" shells Polish position.

At first an overview about the winter 1939/40.
The world temperature is above average,
only Europe and Baltic region are colder.



Day by day temperatures of a city between the North Sea and Baltic.



High naval activities in the North Sea and German Bight

__About 100‘T to 150‘T sea mines laid in autumn 1939;

__Frequent bombing attacks on ports, shipping and naval forces;

__A large part of the German Navy operates in and from the German Bight.

Headlines of NYT, 19. December 1939

_Air Fleets Fight Off Helgoland; German Cruser Sunk in the Elbe, British Submarine Hits 2 Others.

_34 Down, says Nazi; Only 10 Planes Get Away in Raid on Helgoland, German Contend.

_London admits Loss of 7.

_But Adds 12 Reich Ships Were Crippled in Biggest Air Battle of the War.

The New York Times.

LATE CITY EDITION
Cloudy, little change in temperature today. Tomorrow rain, colder at night.

NEW YORK, TUESDAY, DECEMBER 19, 1939. PPPPP THREE CENTS

AMEN SAYS INQUIRY MAY REACH HIGHER IN THE POLICE FORCE

Every Precinct in Brooklyn Is Said to Be Involved in Bail Bond Racket Charges

HERLANDS TO LEND AID

Mayor Names Him and at Same Time Discloses Complaint to Valentine in 1936

AIR FLEETS FIGHT OFF HELGOLAND; GERMAN CRUISER SUNK IN THE ELBE, BRITISH SUBMARINE HITS 2 OTHERS

Stalin to Purge Army As Failing, Swedes Hear

SHARP NAVAL BLOW

London Says Warship of Foe Was Destroyed in Heavily Guarded Area

U-BOAT SINKING DETAILED

This Feat and Crippling of Two Cruisers Are Credited to the Craft That Let Bremen Go

The International Situation

34 DOWN, SAY NAZIS

Only 10 Planes Get Away in Raid on Helgoland, Germans Contend

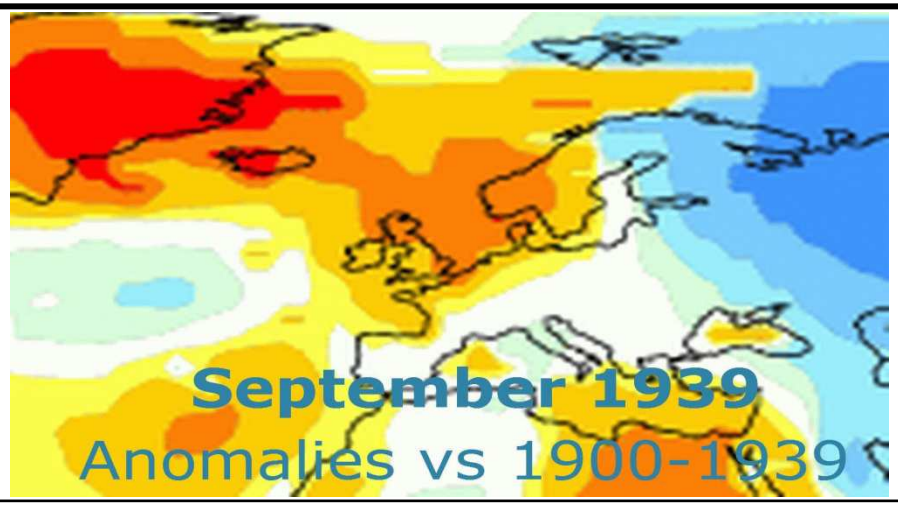
LONDON ADMITS LOSS OF 7

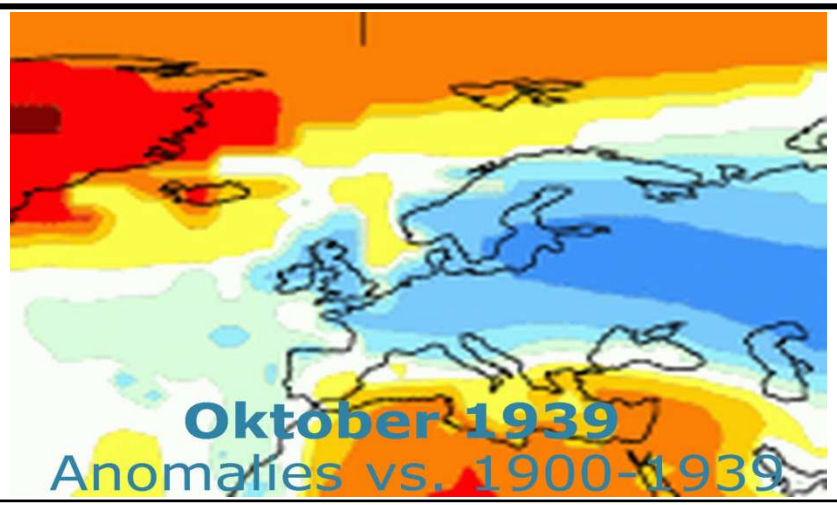
But Adds 12 Reich Ships Were Crippled in Biggest Air Battle of the War

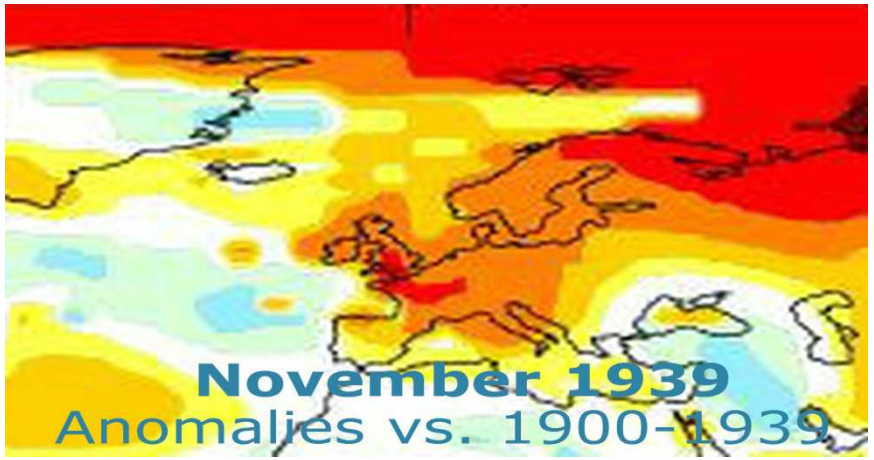
RUSSIANS CAPTURE FINNS' ARCTIC STRIP

Defenders Give Up Corridor in Fierce Soviet Attack—Gain on Other Fronts

It happened what presumably has never taken place before, sea ice arrived early despite of modest Air-T°C



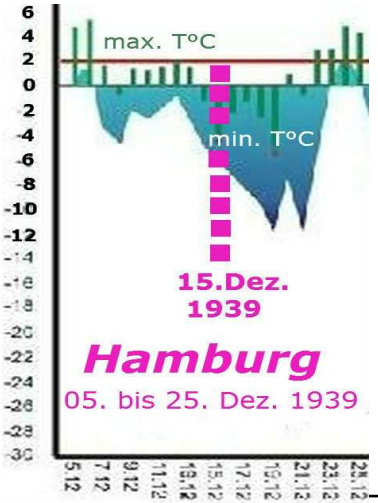




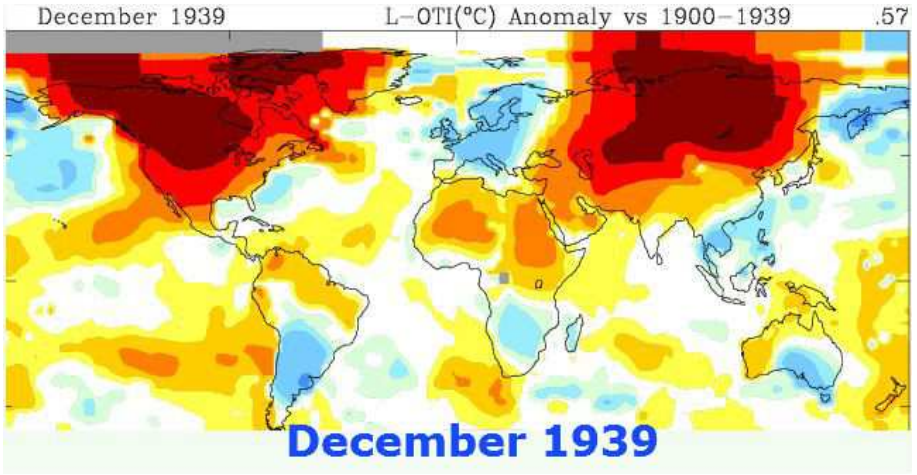
Autumn air temperature
HELGOLAND-1939

	average high	average low	monthly mean
Sept	18,0	14,1	15,9
Okt	9,8	6.9	8,3
Nov	8,4	5,5	7,0
Dez	3,5	0,6	2,1

The early appreance of sea ice in the North Sea already on 16. Dec. 1939, lasting for up to 100 days proves a connection.



The December air temperature in the North Sea had not been exceptionaly low, but SST were well below average.



Helgoland
German Bight
Sea surface T°C deviation

	September	October	November	December
1930/38	+ 0,86	+ 0,54	+ 0,56	+ 0,47
1938	+ 1,0	+ 0,6	+ 1,7	+ 0,6
1939	+ 2,6	- 0,6	- 0,4	- 0,3

Seewasser-Temperaturanomalien bezogen auf 1901- 1930
nach Erich Goedecke, 1954

Min. & Max. T°C in Dec. 1939

The first Minus-Temp: - 0,3 (11.Dez)

11. Dec. = + 1,1 // - 0,3;

12. Dec. = + 2,0 // + 0,6;

13. Dec. = + 0,7 // –1,0;

14. Dec. = - 0,7 // - 1,6;

15. Dec. = - 3,4 // - 4,4;

16. Dec. = - 2,2 // - 4,5

17-19 Dec. = Minimum -2,6 bis -3,0;

20-25 Dec. = Minimum +0,2 bis +5,7°;

26-31 Dec. = Minimum -0,5 bis -3,5°.

German Bight icing about 2 to 3 weeks earlier as in the Western Baltic

(German sea stations)

Sea Ice - Winter 1939/40

North Sea - German Station

Beobachtungsstation	1st day	1939/40 Letztes Eis	ice days
Borkum, Westerems	19/12	3/3	63
Borkum, Randzelgat	18/12	3/3	62
Ems, Randzelgat bis Emden	x	x	x
Emden, Emsgebiet	18/12	12/3	86
Emden, Große Seeschleuse	18/12	12/3	86
Norderney, Seegat	19/12	4/3	66
Norderney, Watten	18/12	9/3	75
Wangerooog-Fahrwasser, Außenjade	21/12	2/3	50
Wangeroog, Harle	18/12	2/3	57
Wangeroog, Watten	18/12	2/3	61
Schillig, sichtbares Jadegebiet	3/1	3/3	56
Wilhelmshaven, Innenjade	19/12	4/3	74
Wilhelmshaven, Hafeneinfahrt	18/12	4/3	74
Roter Sand, Wesermündung	6/1	2/3	51
Roter Sand, Alte Jade	6/1	2/3	51
Hohe Weg, sichtbares Wesergebiet	19/12	8/3	62
Bremerhaven, sichtbares Wesergebiet	19/12	11/3	82
Brake, sichtbares Wesergebiet	19/12	3/3	62
Bremen, sichtbares Wesergebiet	20/12	5/3	72
Helgoland, Einläufe und Hafen	27/1	23/2	10
Neuwerk, sichtbares Seegebiet	5/1	10/3	63
Neuwerk, Elbe bis Cuxhaven	5/1	10/3	63
Cuxhaven, sichtbares Elbegebiet	19/12	15/3	71
Cuxhaven, Hafen und Einfahrt	19/12	15/3	71
Belumerschanze, sichtbares Elbegebiet	19/12	17/3	87
Brunsbüttelkoog, sichtbares Elbegebiet	19/12	19/3	92
Glückstadt, sichtbares Elbegebiet	16/12	16/3	92
Glückstadt, Einfahrt und Hafen	x	x	x
Brunshausen, sichtbares Elbegebiet	16/12	19/3	89
Altona, vorliegendes Elbegebiet	16/12	19/3	95
Hamburg-Landungsbrücken, Elbegebiet	18/12	18/3	90
Hamburg, Elbbrücken bis Kehrwieder	x	x	x
Harburg, sichtbares Elbegebiet	16/12	16/3	89
Meldorf Bucht	x	x	x
Meldorf Hafen	x	x	x
Büsum, sichtbare Süderpiep	x	x	x
Büsum, Norderpiep	x	x	x
Büsum, Hafen	x	x	x
Tönning, sichtbares Eidergebiet	17/12	25/3	100
Tönning, Hafen	x	x	x
Lexfähr, Eider	15/12	25/3	102
Nordstrand, Hever	x	x	x
Husum, Aue und Hafen	18/12	21/3	95
Amrum, Schmaltief, Rütergat	8/1	19/3	66
Amrum, Vortrapptief	8/1	19/3	66
Amrum, Hafen Wittdün	x	x	x
Wyk/Föhr, Norder Aue	x	x	x
Wyk/Föhr, Hafen	x	x	x
Dagebüll, Norder Aue	x	x	x
Dagebüll, Landebrücke	x	x	x
Ellenbogen, Seegebiet und Lister Tief	6/1	14/3	60

Very early stations (15. - 20. Dec)

up to 100 days ○ Hamburg 90/d

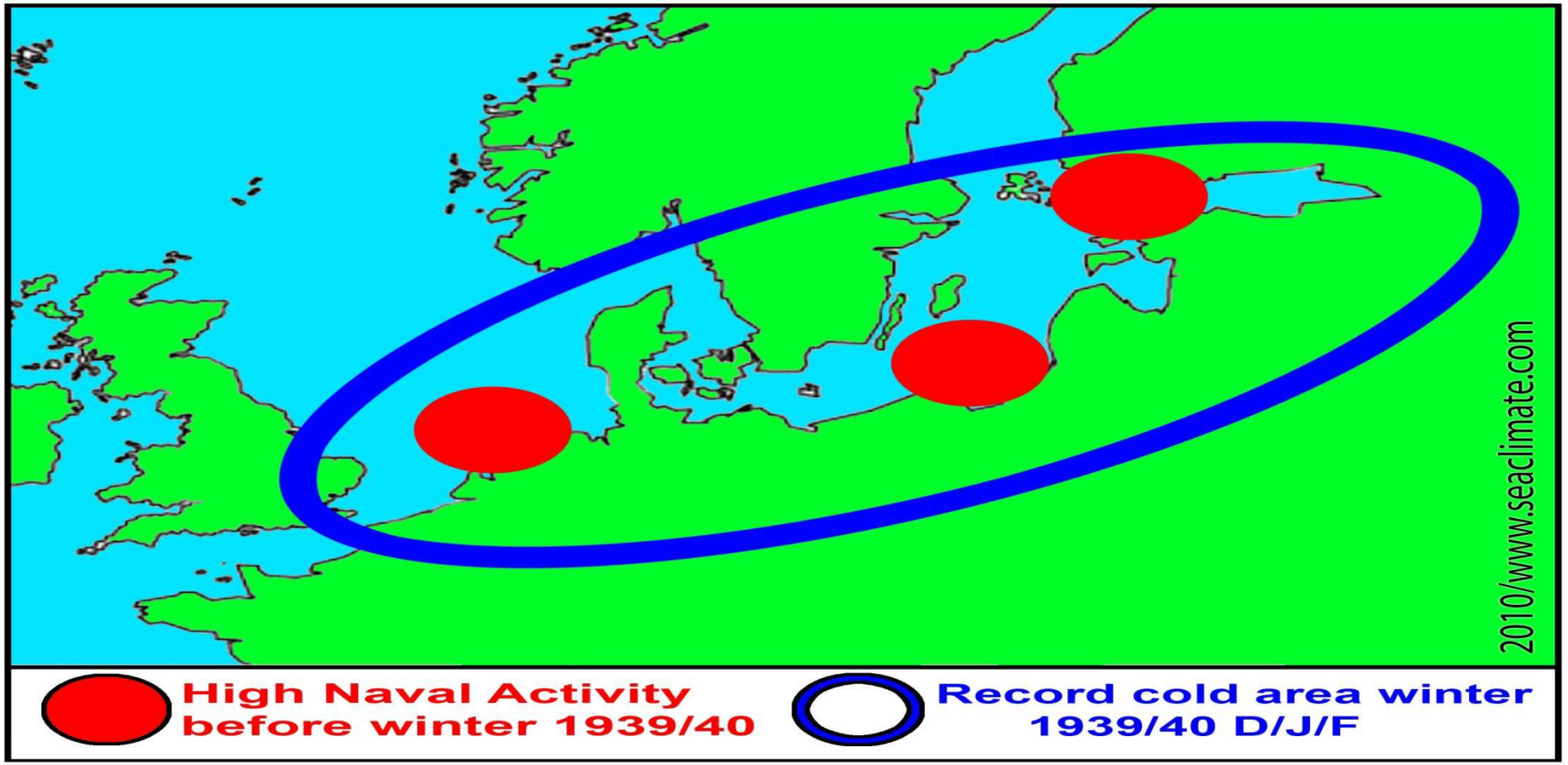
Baltic Sea ice - Winter 1939/40

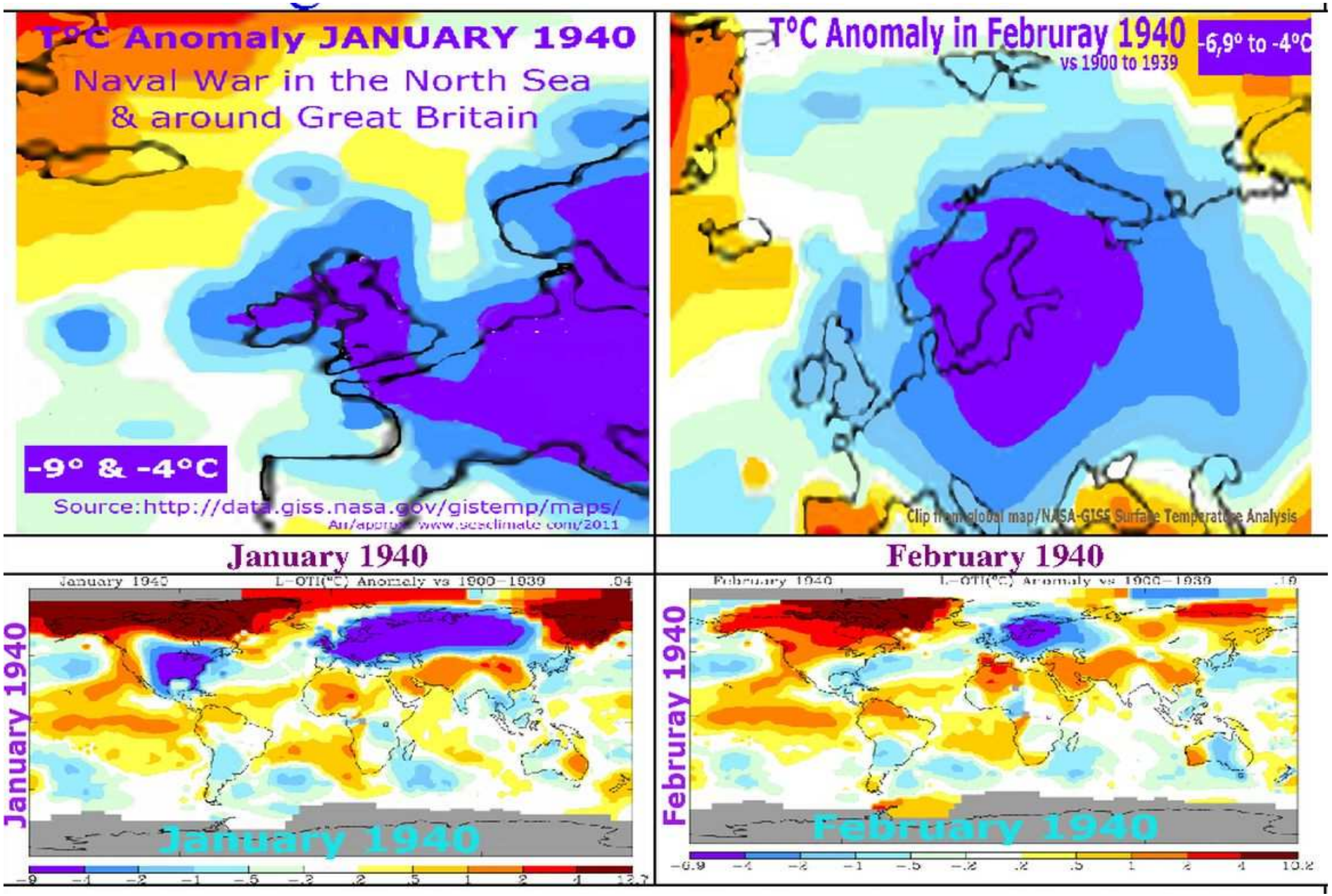
●17.-21.Dez ●28./12.-08./01 ●08.-13.Jan.

Beobachtungsstation German Stations	1st ice Erstes Eis	1939/40 last ice Letztes Eis	ice/d Tage mit Eis
Flensburg, Außenförde	28/12	28/3	85
Flensburg, Innenförde	28/12	28/3	83
Schlei, Schleimünde bis Kappeln	20/12	31/3	97
Schlei, Kappeln bis Schleswig	20/12	31/3	100
Eckernförde, Bucht	7/1	27/3	79
Eckernförde, Hafen	7/1	27/3	79
Bülk, sichtbares Seegebiet	5/1	1/4	78
Friedrichsort, Holtenau bis Laboe	8/1	20/3	68
Kiel, Binnenhafen	21/1	18/3	58
Wester-Markelsdorf, sichtbares Seegebiet	11/1	31/3	71
Marienleuchte, sichtbares Seegebiet	13/1	31/3	73
Hohwachter Bucht	x	x	x
Heiligenhafen, Hafen	x	x	x
Fehmarnsund, Westeingang	x	x	x
Fehmarnsund	5/1	27/3	76
Travemünde, sichtbares Seegebiet	9/1	31/3	78
Travemünde, Hafen	19/12	15/3	60
Trave, Travemünde bis Lübeck	17/12	17/3	88
Nord-Ostsee-Kanal			
Brunsbüttelkoog, Kanalreede	19/12	27/3	100
Kanal: Brunsbüttelkoog bis Rendsburg	19/12	26/3	95
Kanal: Rendsburg bis Holtenau	19/12	23/3	88
Holtenau, Kanalreede, Binnenhafen	4/1	20/3	66

From the first icing it stayed permanently at all stations, and was the most severe and lasting ever observed.

Main naval battle areas



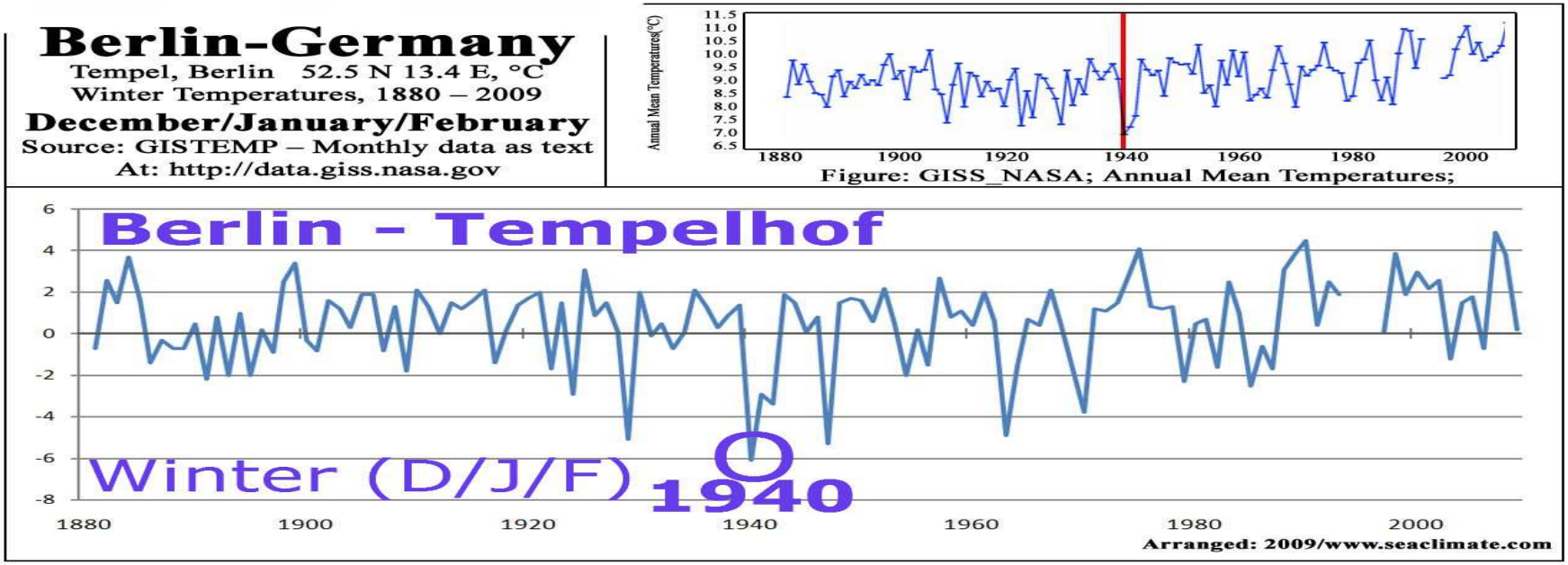

T°C Anomaly JANUARY 1940
Naval War in the North Sea
& around Great Britain
-9° & -4°C
Source:http://data.giss.nasa.gov/gistemp/maps/
T°C Anomaly in Februray 1940
vs 1900 to 1939
-6,9° to -4°C
Clip from global map/NASA-GISS Surface Temperature Analysis
January 1940
January 1940
January 1940
February 1940
Februray 1940
February 1940

Record low temperatures for

- Poland −41.0 °C (−41.8 °F),
  Siedlce 11th January 1940
- Moscow -42°C, 17.Jan.40
- Estonia -43,5°C, 17. Jan.
- Minsk -40°C, 17. Jan.
- Rhaydear/UK 23.Jan.40

Hamburg - 27°C, (13. Feb.)

Hungary -35°, (16. Feb.)



The Place of Winter 1939/40 in the record of 239 years

Station: Berlin-Tempelhof/Germany (1701-1940)

Coldest: Jan/Feb = 1709; 2nd Coldest = 1940

Year	Coldest January	Coldest January + February	Jan/Feb + previous December	Coldest Dec/Jan/Feb
1709	-13.2°C	-13.2 (+) -6.9 = -20,1°C	(Dec.1708) -4.6°C	-24.7°C
1740		-8.5 (+) -7.3 = -15,8°C	(Dec.1739) +1.5°C	
1823	-11.6°C	-11.6 (+) -0.4 = -12,0°C	(Dec.1822) -2.2°C	
1830		-7.4 (+) -3.4 = -10.8°C	(Dec.1929) -8.5°C	-19.3°C
1838	-10.0°C	-10.0 (+) -4.6 = -14,6°C	(Dec. 1837) +0.7°C	
1929		-4.4 (+) -10.4 = -14,4°C	(Dec. 1928) -0.3°C	
1940	**-9.6°C**	**-9.6 (+) -7.1 = -16.8°C**	**(Dec. 1939) -1.3°C**	**-18.1°C**
1940	**Rank IV**	**Rank II**	**Rank: ~ 37th**	**Rank III**

Data source: Wetterzentrale/2009 Arranged by: www.seaclimate.com/2009

BERLIN

The decade before Berlin‘s coldest winter

1709 vs 1940

calculated on the months

JANUARY & FEBRUARY

The two coldest winter (in Berlin from 1701 - 1940) in context with the previous decade

1709			1940		
Year	JAN	FEB	Year	JAN	FEB
1701	-4.2	-1.5 °C	1932	1.7	-1.1 °C
1702	2.0	-0.5 °C	1933	-3.0	0.1 °C
1703	-2.8	-0.9 °C	1934	1.2	2.7 °C
1704	-4.9	-0.5 °C	1935	-.5	2.6 °C
1705	-7.1	NN (-1)	1936	3.3	0 °C
1706	-3.4	-2.8 °C	1937	-3.0	2.2 °C
1707	-2.3	1.0 °C	1938	1.8	1.9 °C
1708	1.4	-0.7 °C	1939	3.0	3.0 °C
Total mean 1701/08:			Total mean 1932/39		
-1.75 °C			**+1.00 °C**		
1709			**1940**		
Jan: -13.2, Feb: -6.9			**Jan: -9.6, Feb: -7.1**		
mean: -10.05°			mean –8.35°		
1701-08 ./. 1709			**1932/39 ./. 1940**		
= - 8.3 °C			**= - 9.35 °C**		

Station: Berlin Tempelhof // Calculation by approximation

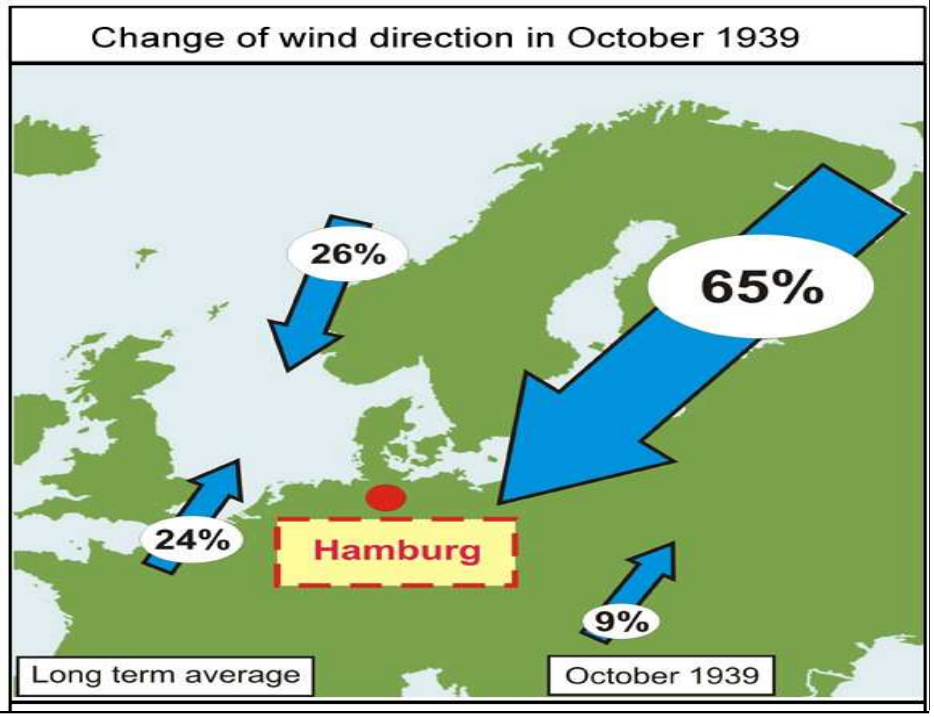
Data source: wetterzentrale.de Arranged by; www.seaclimate.com/2009

The record temperatures in early 1940 had been preceeded by a number of bizarre events, for example:

_Due to heavy rain Hitler had to give up invading France in November.

_Substatial wind shift over N-Europe.

Submarine hunter protecting naval unit



Few more examples:

Helgoland - Record high Sea Water Temperature in September 1939, and lower in O/N/D/, is an indication of naval warfare activities in the German Bight.					
Mean SST 1901-30	Aug. 16.3°	Sep. 15.6°	Oct. 13.1°	Nov. 9.7°	Dec. 6.5°
Deviation: 1930-37	+1.05	+0.85	+0.55	+0.3	+0.5
Deviation: 1938	+1.6	+1.0	+0.6	+1.7	+0.6
Deviation: 1939 ./. mean SST	**+1.7**	**+2.6**	**-0.6**	**-0.4**	**-0.3**
Data source: Erich Goedecke (1954) .				Arranged by www.seaclimate.com/ 2011	

Location	1940	Mean air temp.	Deviation from mean	Lowest/day
Westerland	January	- 4.2°C	**- 5.3°C**	-13.5°C/Jan.19
Helgoland	January	- 3.2°C	**- 5.1°C**	-12.4°C/Jan.31
Emden	January	- 7.0°C	**- 8.1°C**	-17.9°C/Jan.10

Winter temperature along the German North Sea coast /1940

Location	1940	Mean air temp.	Deviation from mean	Lowest/day
Westerland	February	- 6.1°C	**- 6.9°C**	-13.5°C/Jan.19
Helgoland	February	- 4.1°C	**- 5.7°C**	-12.4°C/Jan.31
Emden	February	- 3.7°C	**- 5.3°C**	-17.9°C/Jan.10

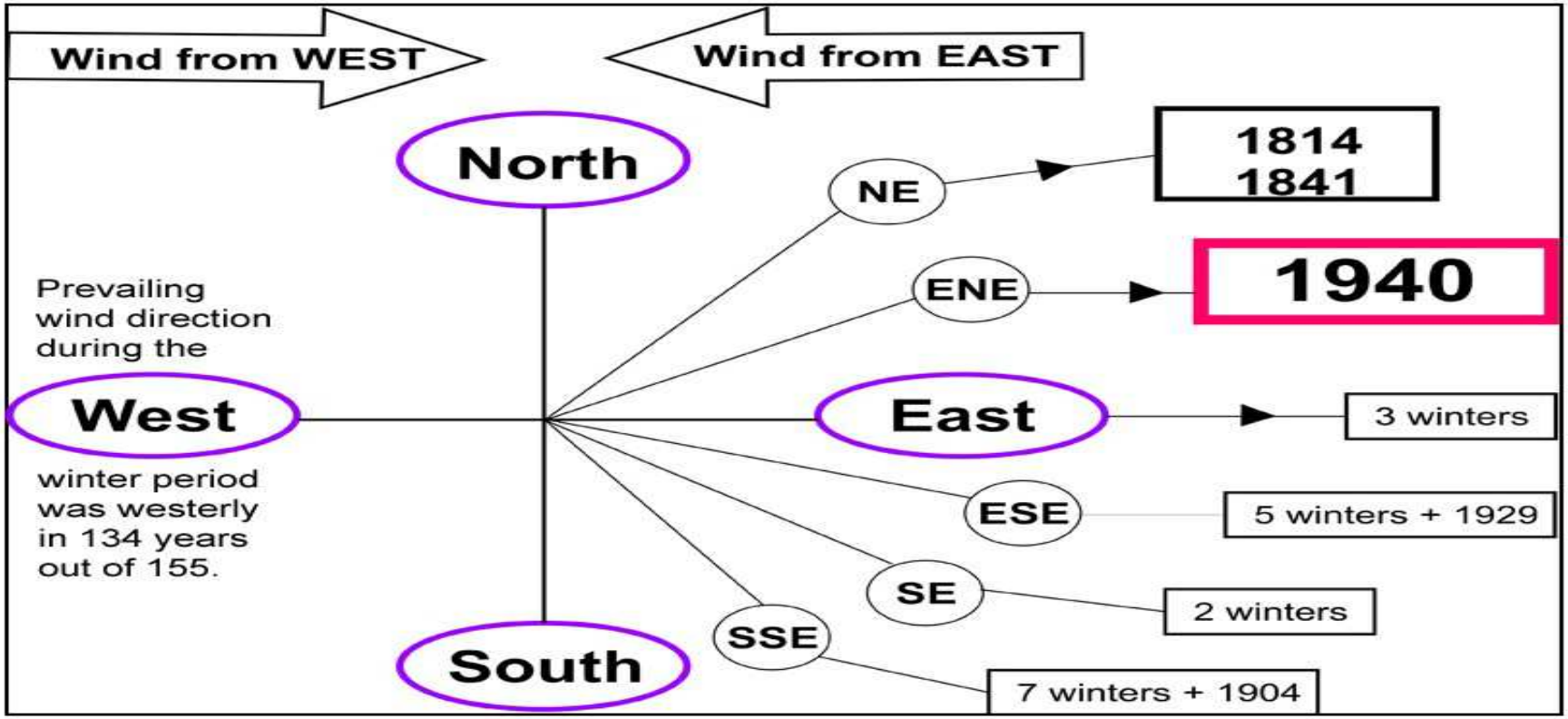
Out of 155 years the wind in London came over

--134 winters from WEST;

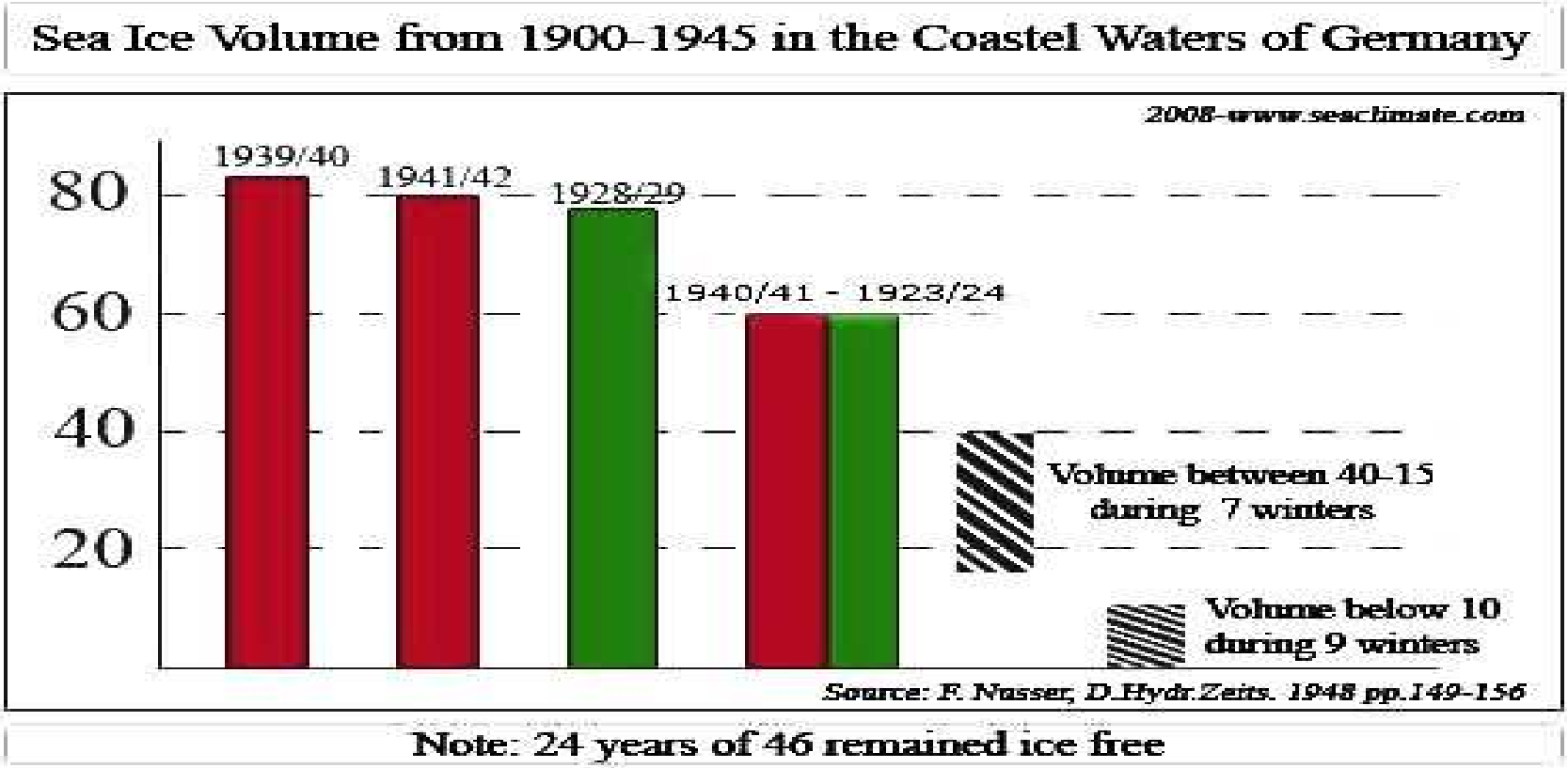
--17 winters from South to East

--3 winters from East to North

Wind direction in London and district throughout the winter period from 1788 -1942



After early sea ice in the German Bight (16.Dec.) it became the most severe in 7 decades.



Heaviest sea ice along German‘s coast ever recorded.

Western Baltic ice appeared 2-3 weeks later than in the German Bight.

26. January 1940

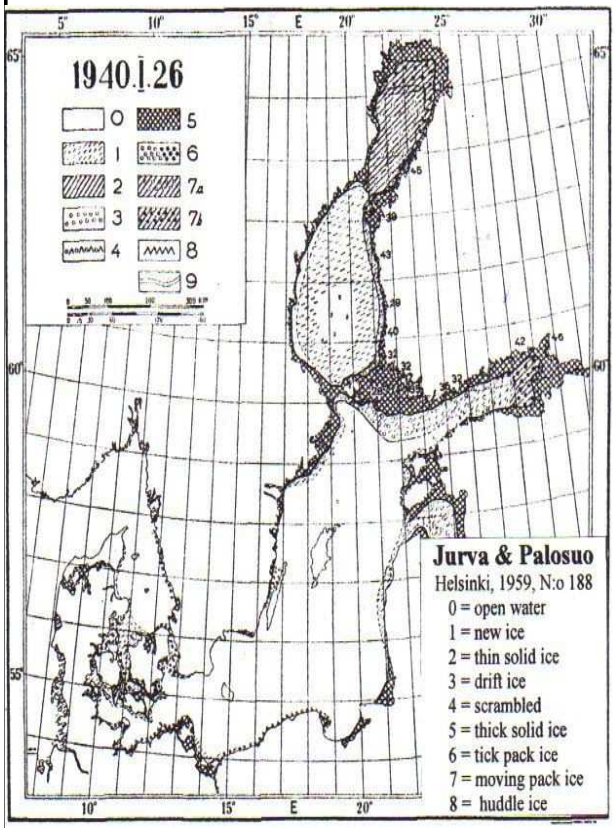


Abb. 15. Die Eislage am 26. Januar 1940.

Erläuterungen: 0 = offenes Wasser, 1 = neues Eis. 2 = dünnes Festeis, 3 = Treibeis, 4 = zusammengedrängter Eisbrei, 5 = dickes Festeis, 6 = dichtes Packeis, 7 = bewegliches Meereseis, 7b = zusammengefrorenes Meereseis, 8 = Zusammendrängungen, 9 = Eisrinne in Richtung der Küste

16.February 1940

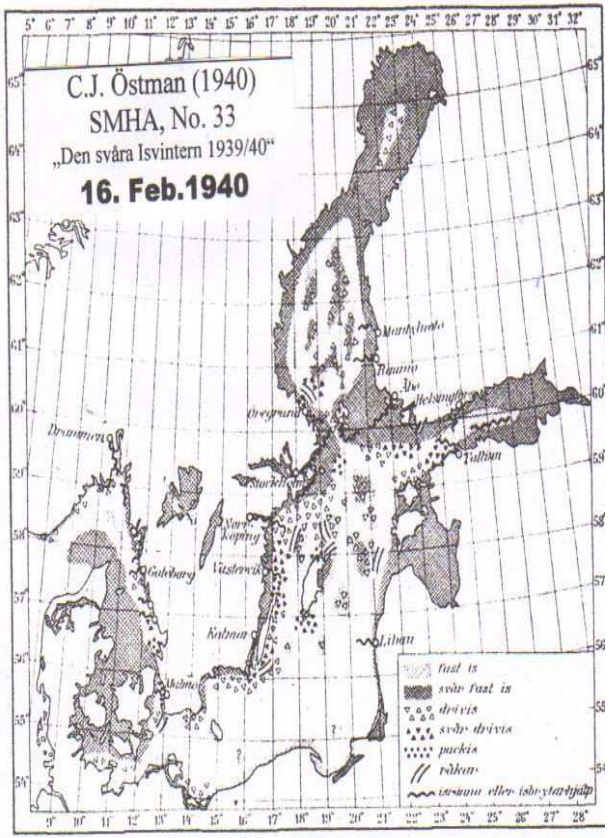


Fig. 1. Kartan visar isläget den 16 februari 1940. Havsvaken i Bottenviken var sannolikt icke ännu helt tillfrusen. Till sjöss i Bottenhavet förekomma stora fält av fast is eller drivis, vilket även var förhållandet på norra Östersjön. I större delen av Finska viken samt hela Rigabukten låg svår fast is. Stora och Lilla Bält samt Kattegatt, frånsett en bred råk längs svenska västkusten, voro tillfrusna. Till ett flertal svenska och finska hamnar höll man sjöfarten öppen med isbrytarhjälp.

8. March 1940

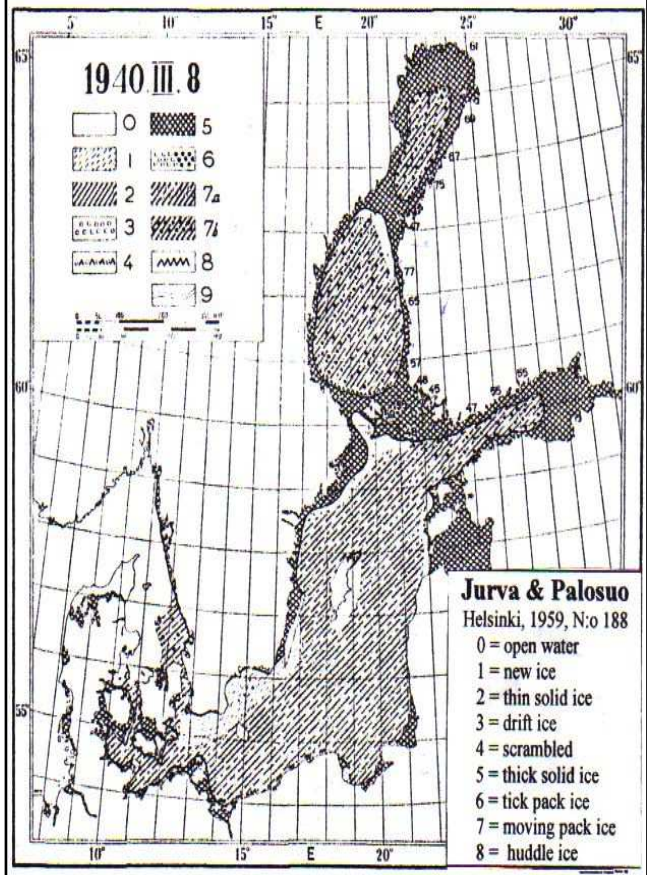
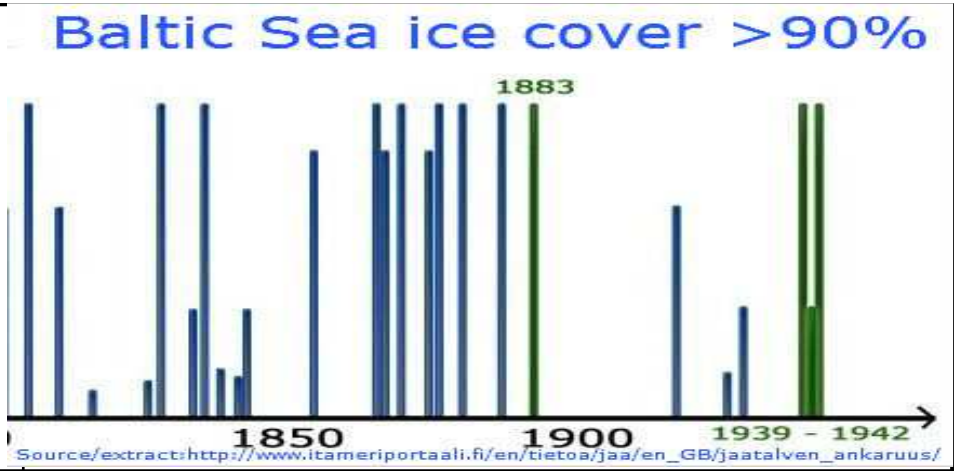
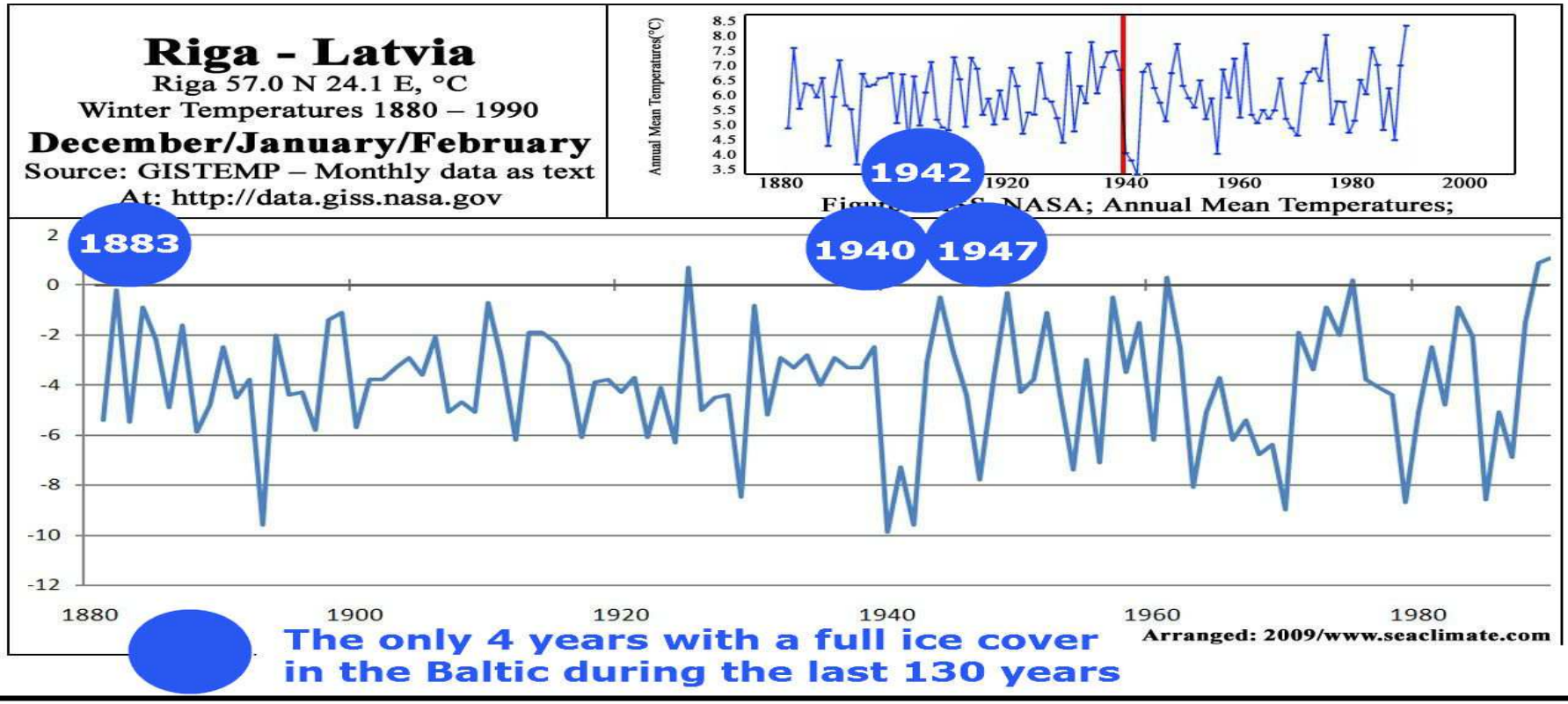


Abb. 17. Die Eislage am 8 März 1940

Erläuterungen: 0 = offenes Wasser, 1 = neues Eis. 2 = dünnes Festeis, 3 = Treibeis, 4 = zusammengedrängter Eisbrei, 5 = dickes Festeis, 6 = dichtes Packeis, 7 = bewegliches Meereseis, 7b = zusammengefrorenes Meereseis, 8 = Zusammendrängungen, 9 = Eisrinne in Richtung der Küste

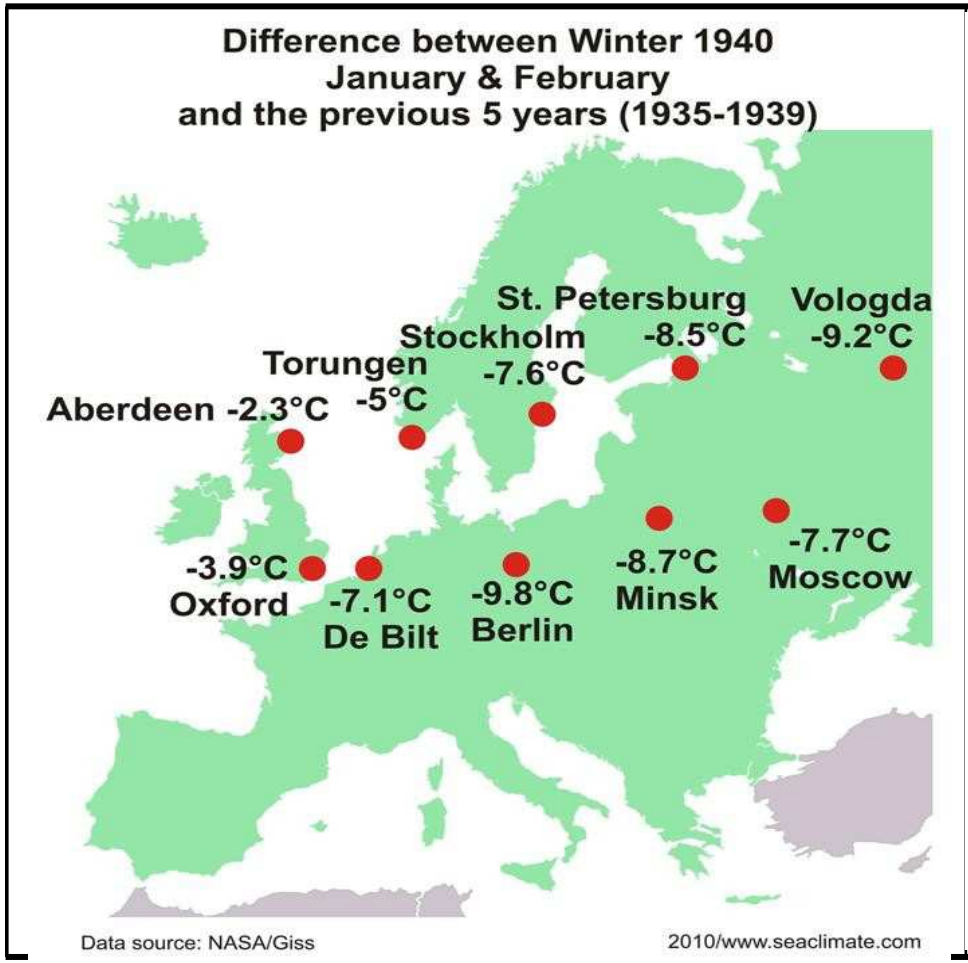
A thorough analysis of temperatures and the icing process quickly shows the exceptionallity, and that an „unusal force“ was involved!

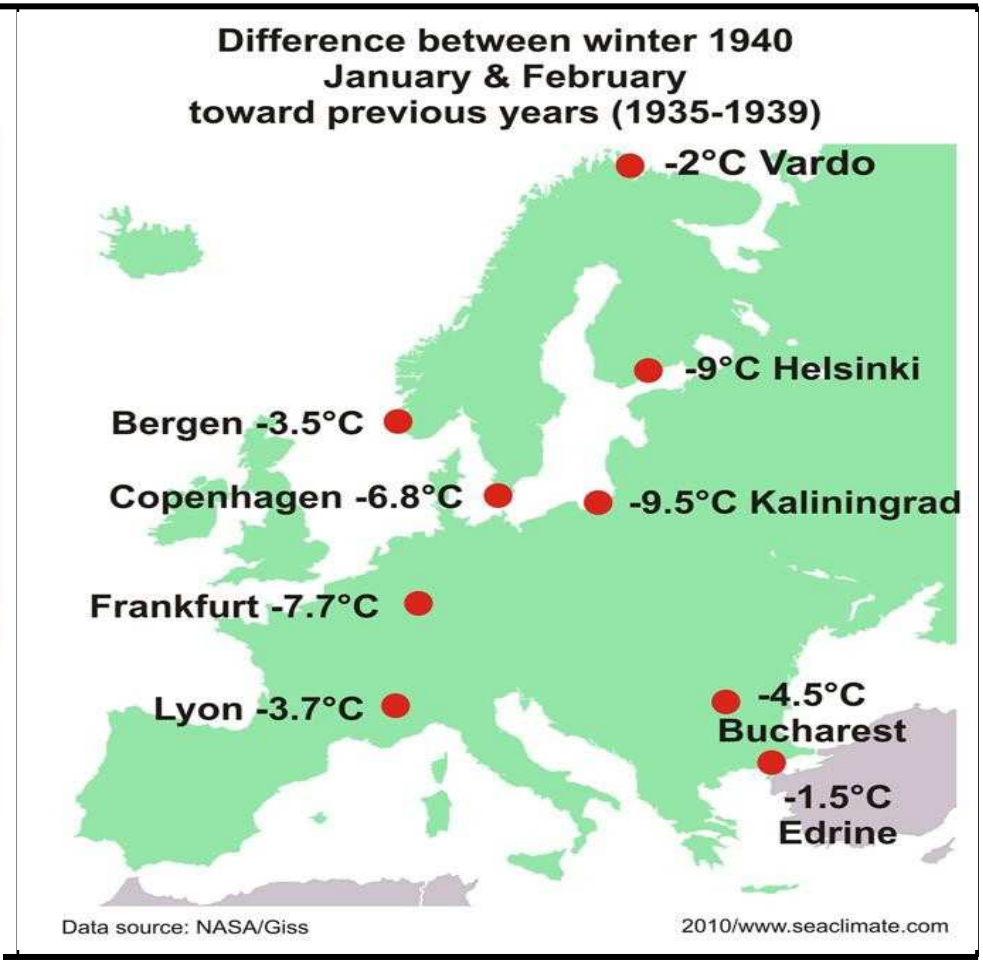




Temperature difference between winter months January & February versus the previous 5 years.

Cold corridor via North Sea and the Baltic is evident!

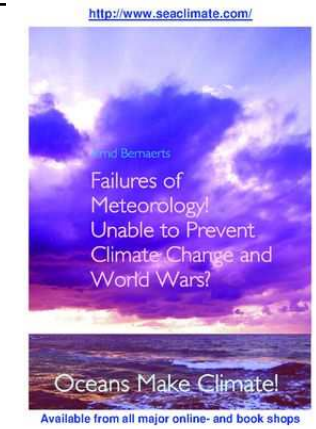




CONCLUSION:

A thorough analysis provides strong evidence of a link between the extrordinary winter conditions in Europe and naval warfare

Many thanks for your kind interest!



The lecture is based on the book:

Failures of Meteorology! Unable to Prevent Climate Change and World Wars?
Oceans Make Climate!

Pages: 232, about 200 figures and images, 14 color pages.Book on Demand/BoD; ISBN 978-3-8448-1284-8

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