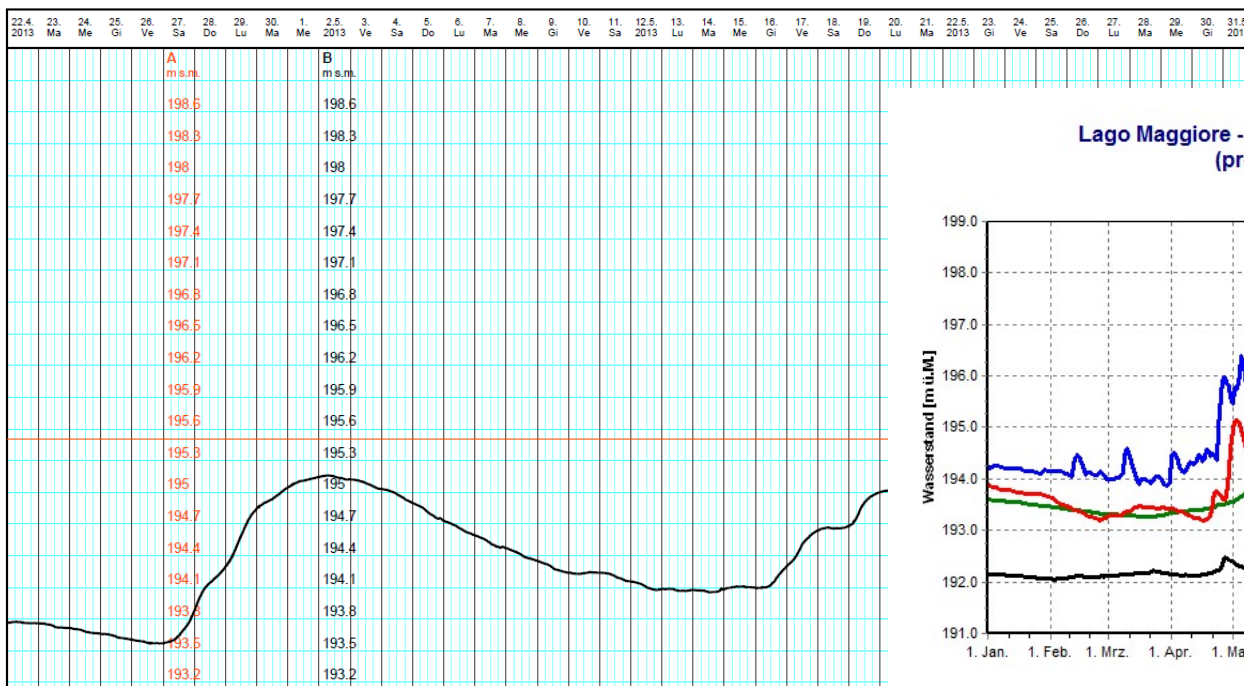




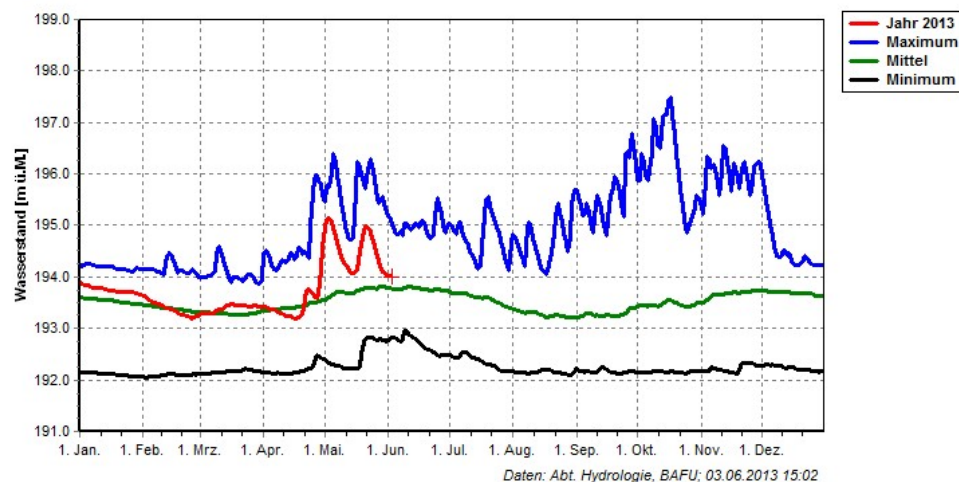
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Dipartimento federale dell'interno DFI
Ufficio federale di meteorologia e climatologia MeteoSvizzera

Primavera 2013



Lago Maggiore - Locarno, Tageswerte 1943-2012
(provisorische Daten)



Retrospettiva meteoclimatica

Matteo Buzzi



© MeteoSwiss

TanomM8110 v1.5, 2013-04-26 17:02

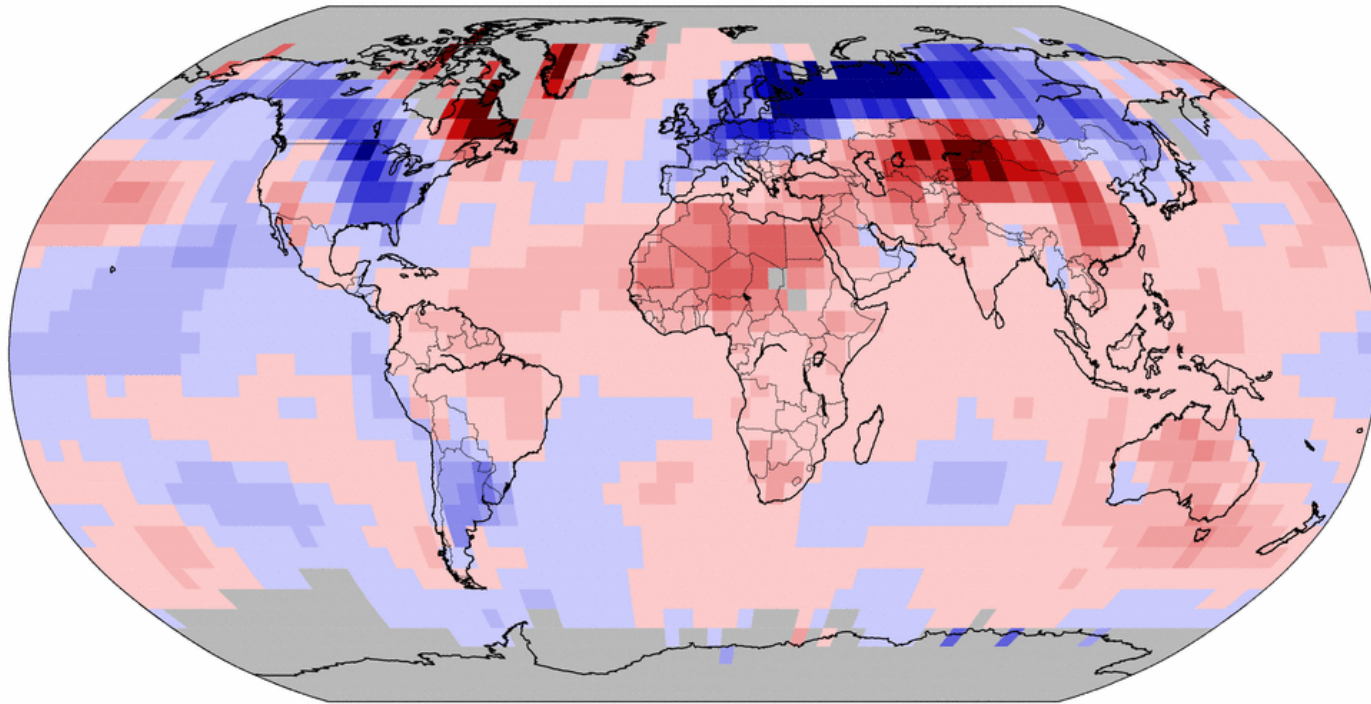
TanomM8110 v1.5, 2013-04-26 17:02



Temperatura: anomalie globali marzo 2013

Land & Ocean Temperature Anomalies Mar 2013
(with respect to a 1981–2010 base period)

Data Source: MLOST version 3.5.3



NOAA's National Climatic Data Center
Mon Apr 15 08:15:03 EDT 2013

Degrees Celsius

Please Note: Gray areas represent missing data
Map Projection: Robinson

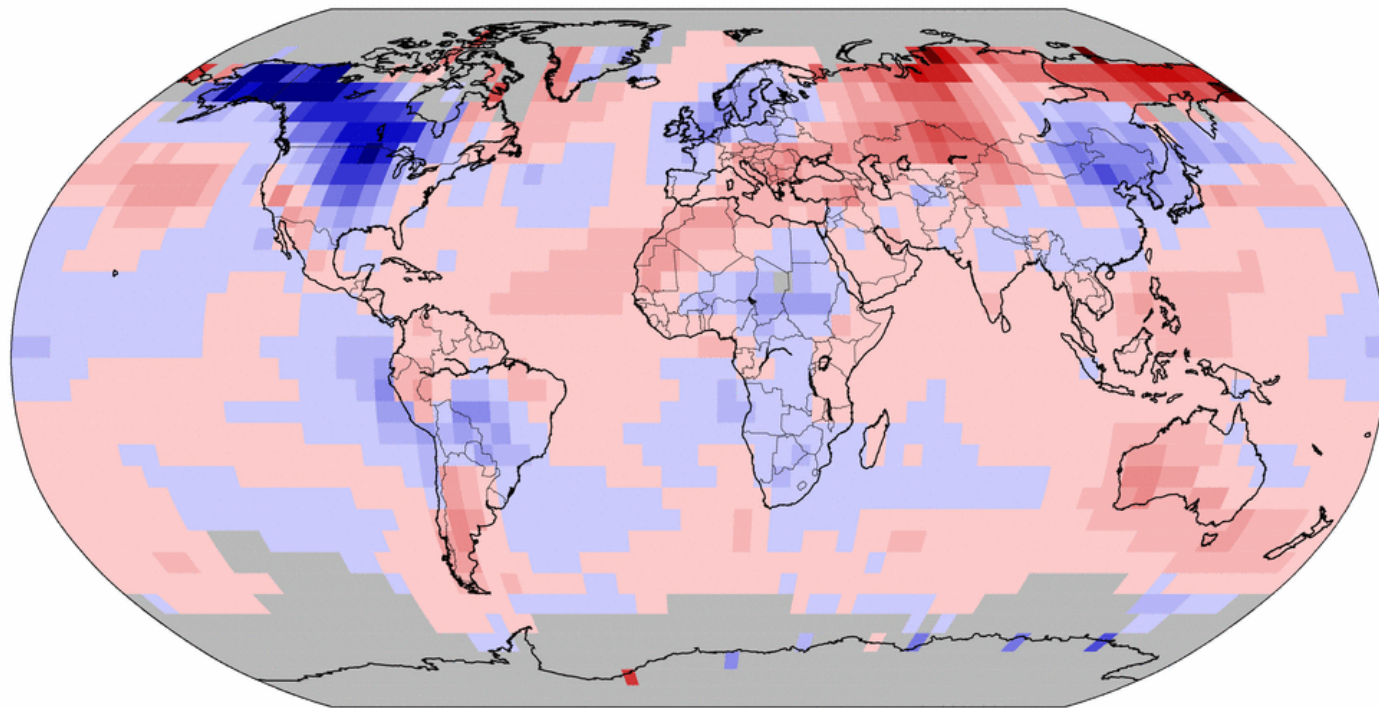




Temperatura: anomalie globali marzo 2013

Land & Ocean Temperature Anomalies Apr 2013
(with respect to a 1981–2010 base period)

Data Source: MLOST version 3.5.3



NOAA's National Climatic Data Center
Wed May 15 08:05:10 EDT 2013

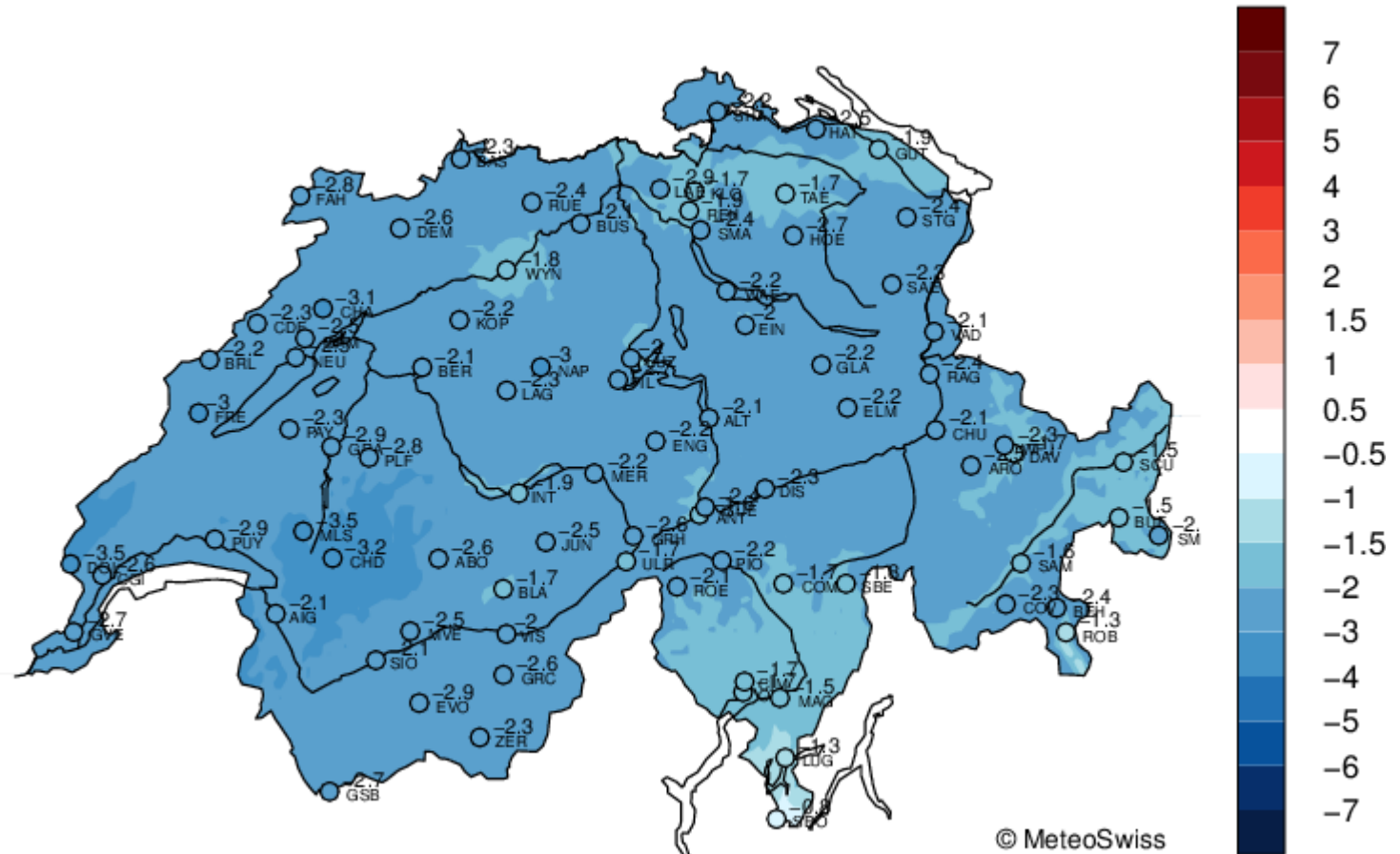
Degrees Celsius

Please Note: Gray areas represent missing data
Map Projection: Robinson



Temperatura: maggio 2013

Monthly Temperature Anomaly (degC) May 2013 (Ref. 1981–2010)



© MeteoSwiss

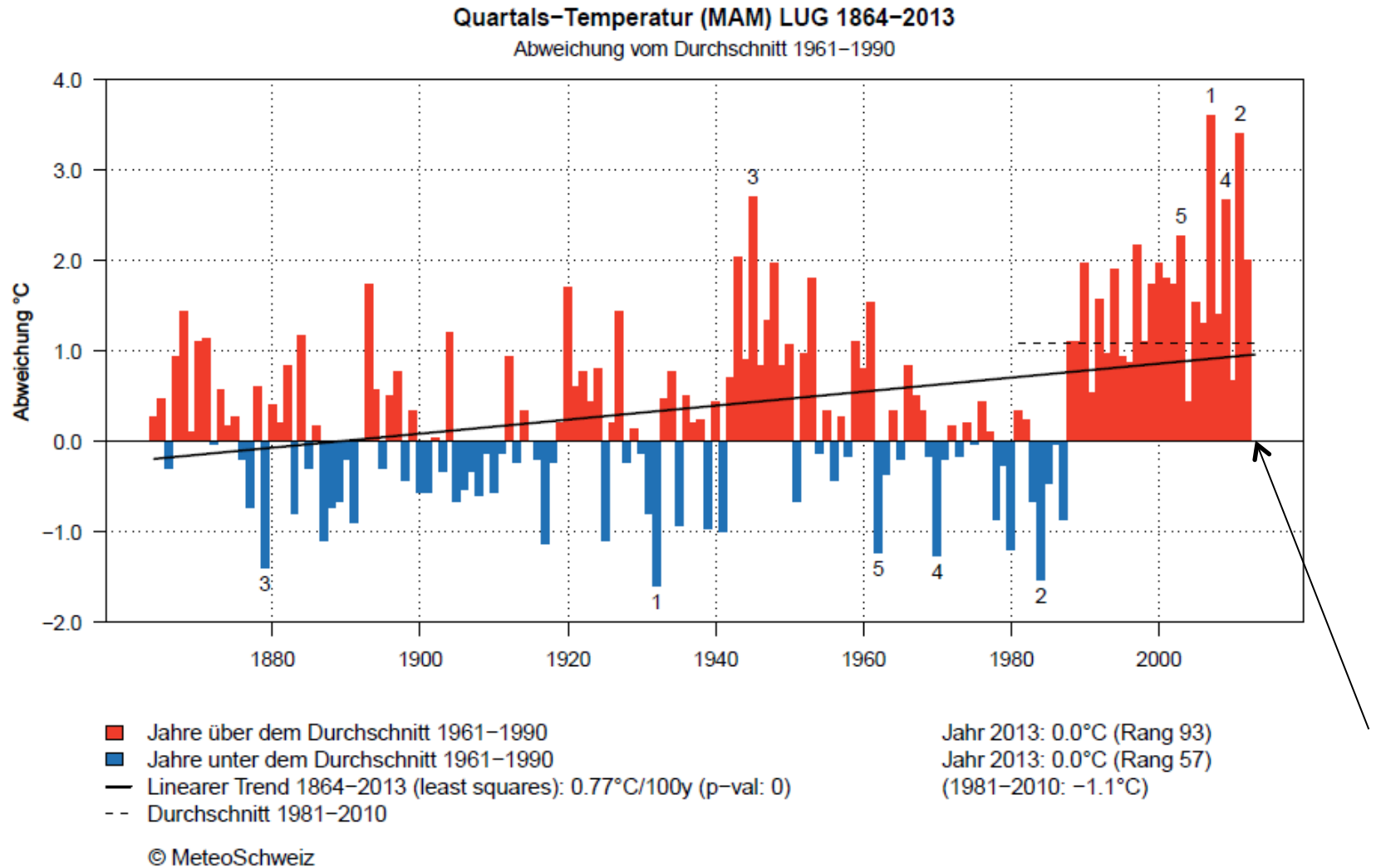
TanomM8110 v1.5, 2013-06-01 17:02



Temperatura: anomalie globali maggio 2013



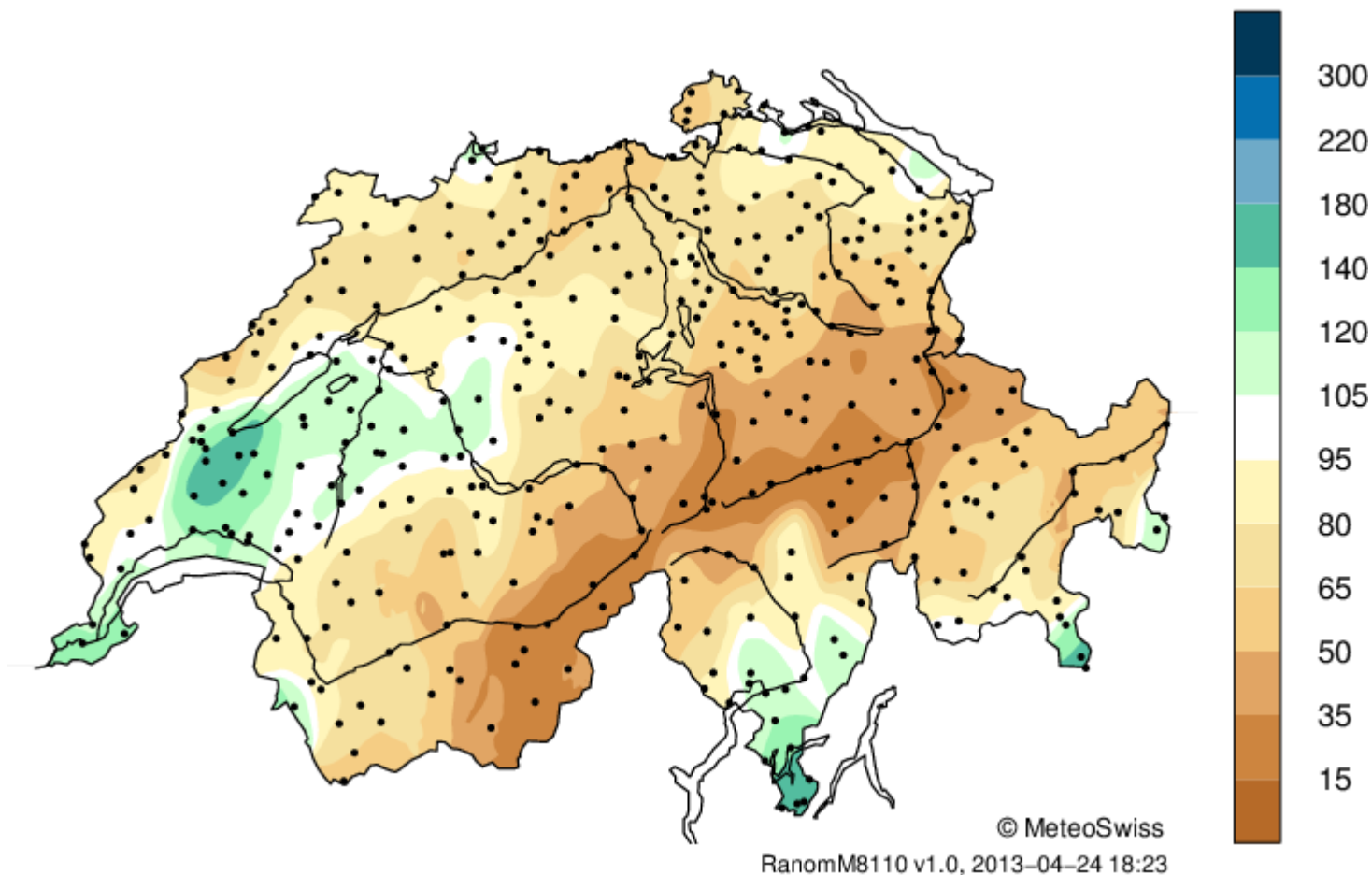
La primavera in TI 2013 rispetto alle altre





Precipitazioni: marzo 2013

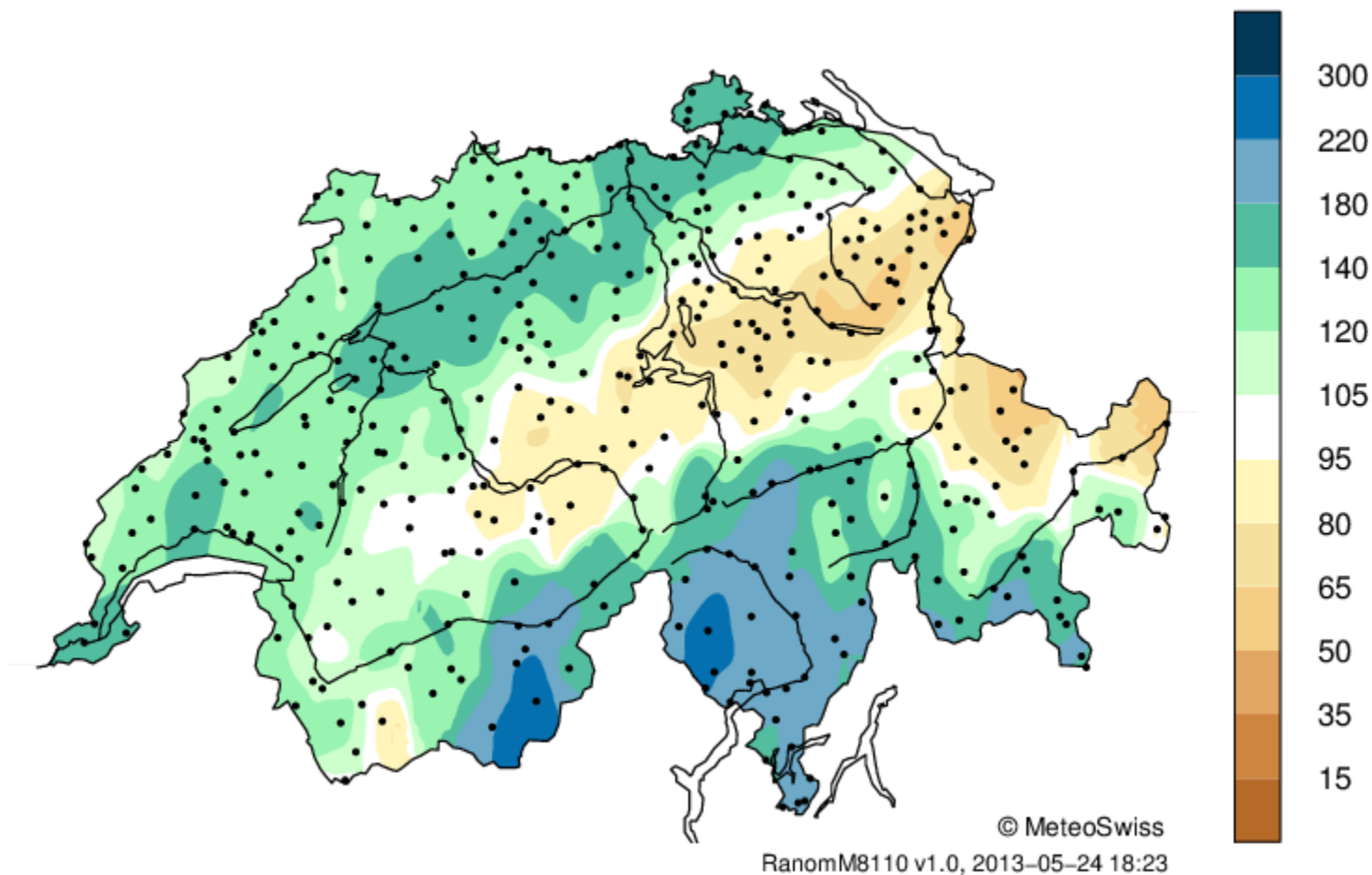
Monthly Precipitation Anomaly (%) Mar 2013 (Ref. 1981–2010)





Precipitazioni: aprile 2013

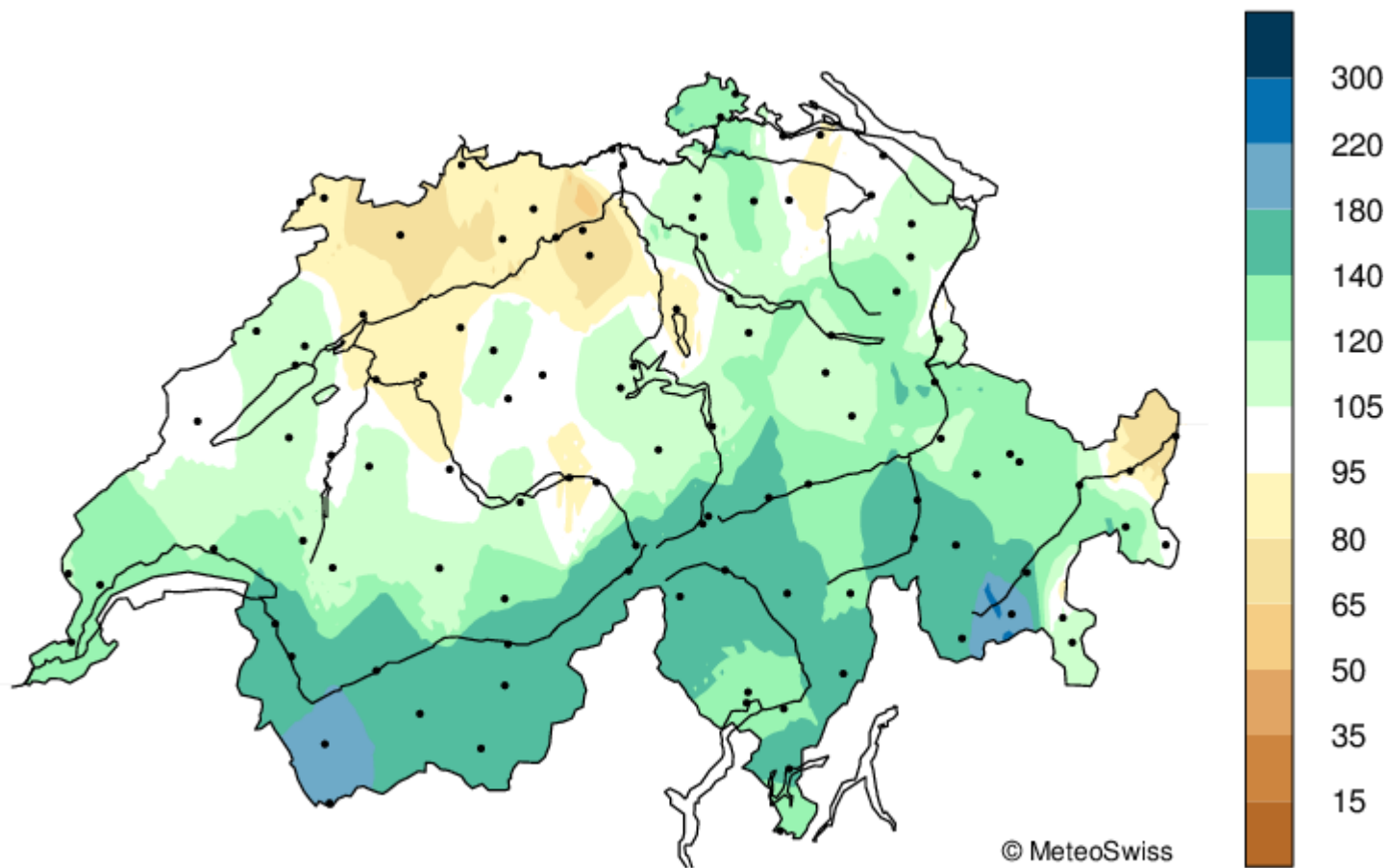
Monthly Precipitation Anomaly (%) Apr 2013 (Ref. 1981–2010)





Precipitazioni maggio 2013

Monthly Precipitation Anomaly (%) May 2013 (Ref. 1981–2010)

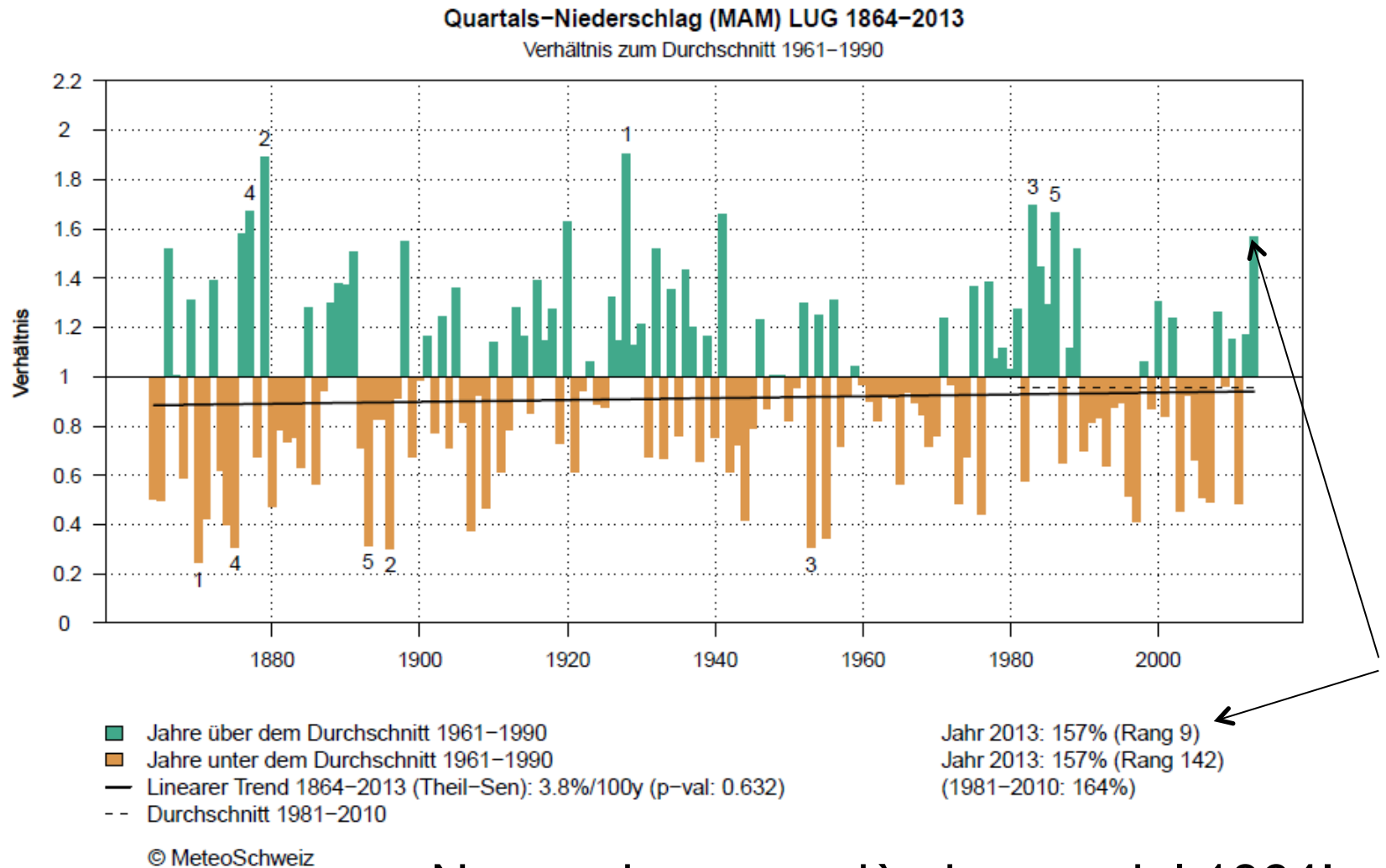


© MeteoSwiss

RanomM8110 v1.0, 2013-06-01 18:22



La primavera 2013 rispetto alle altre

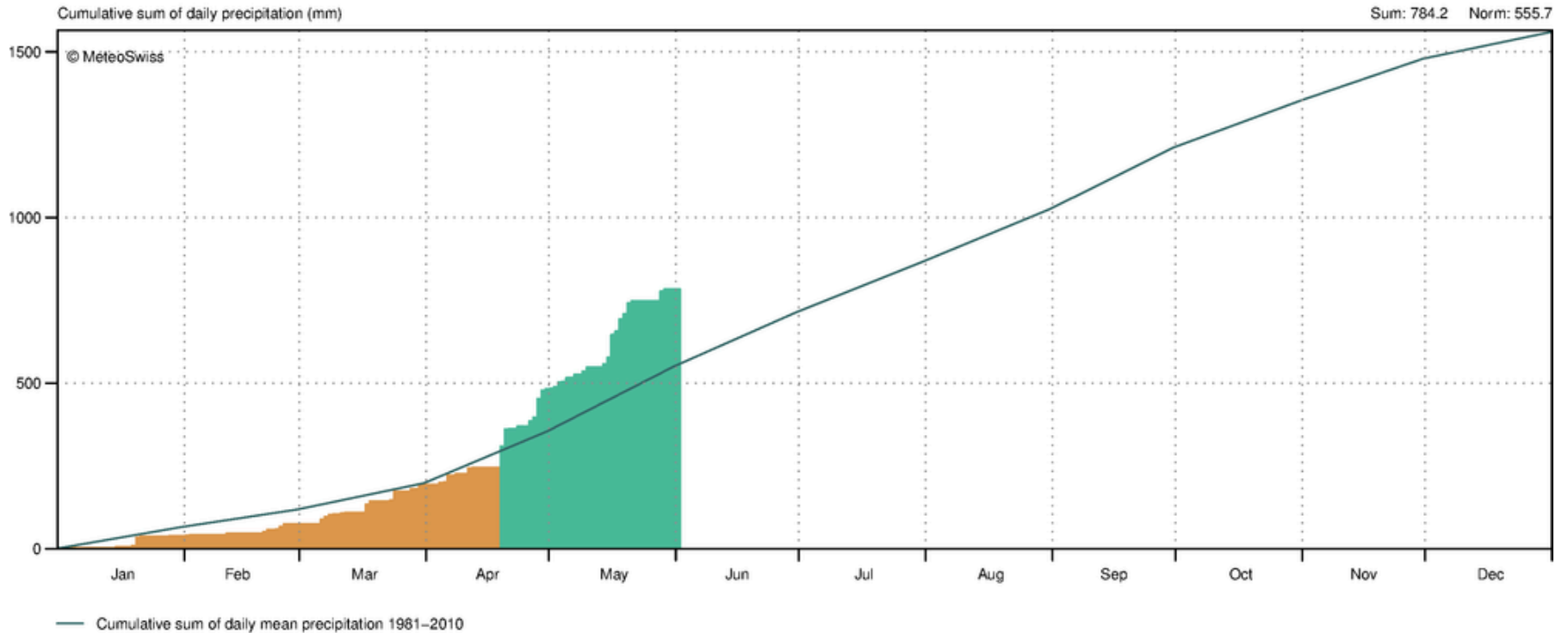


Nona primavera più piovosa dal 1864!
La più piovosa dal 1986!



Somma precipitazioni 2013

Lugano (273 m)
01.01.2013 – 01.06.2013

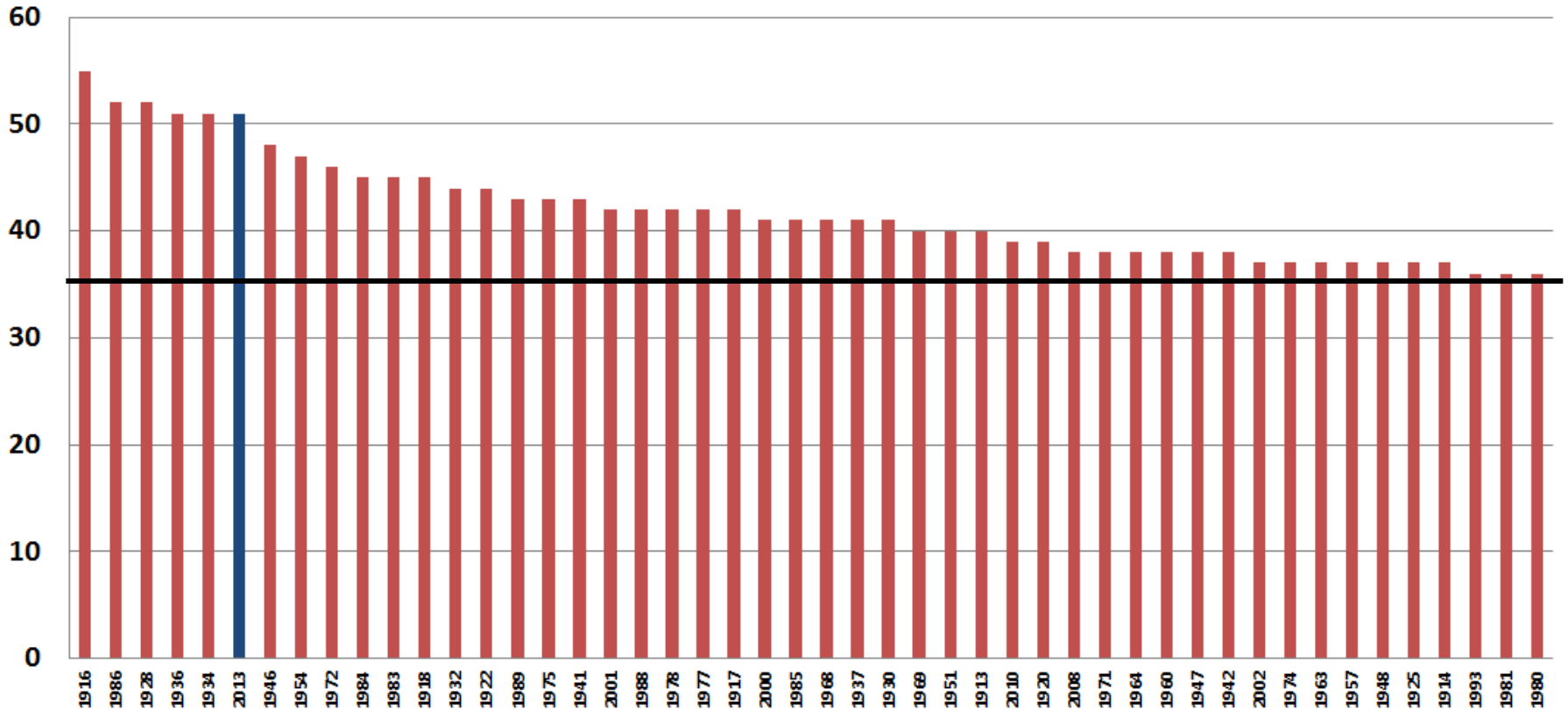


Status: 02.06.2013



Giorni di pioggia

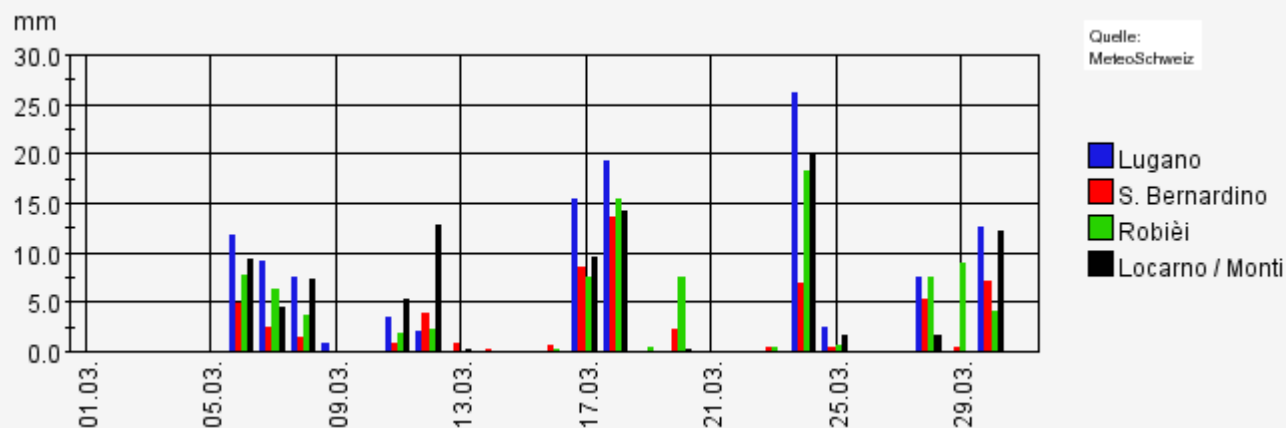
Primavera: numero di giorni con RR>0.3 mm



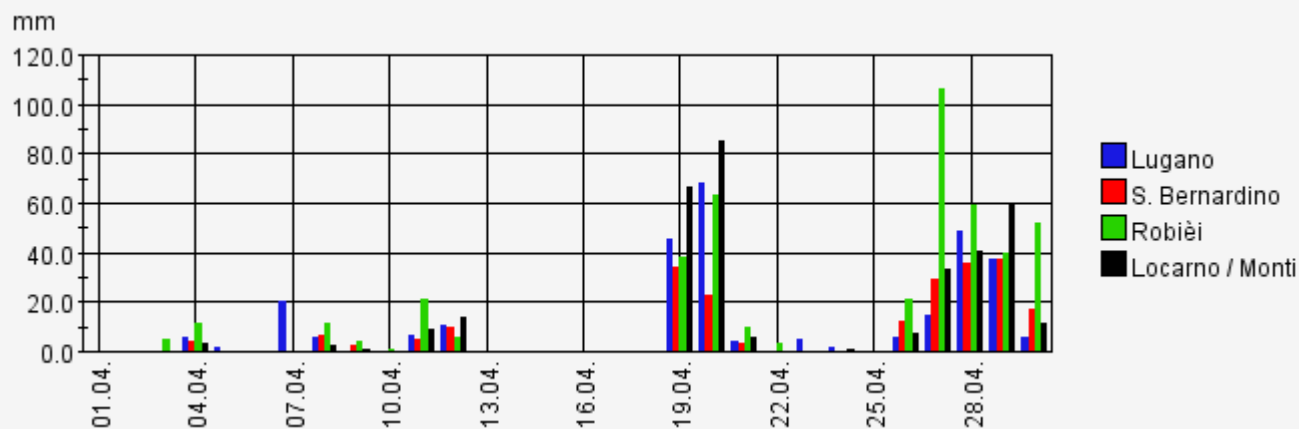
51 giorni: quarta primavera per giorni con pioggia!



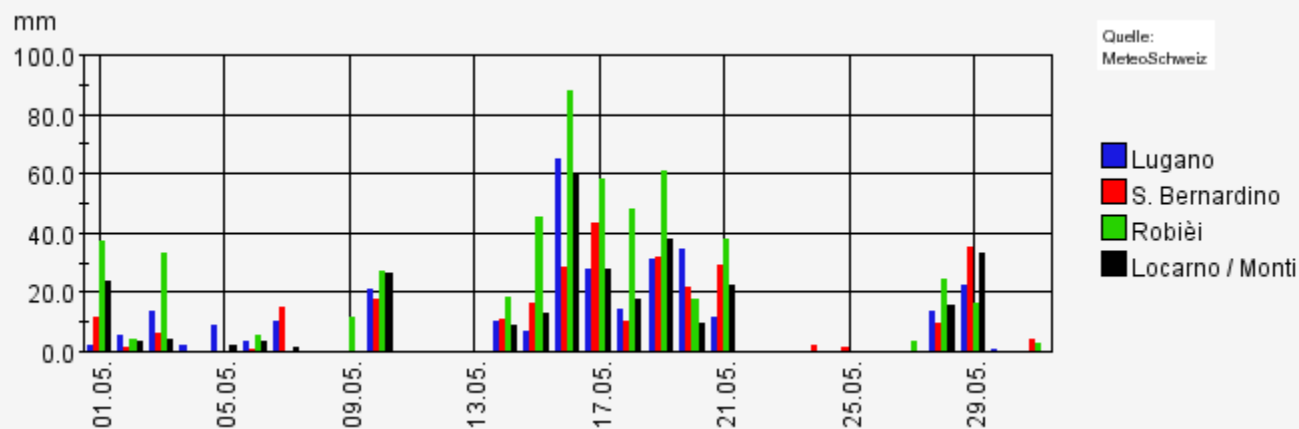
marzo



aprile

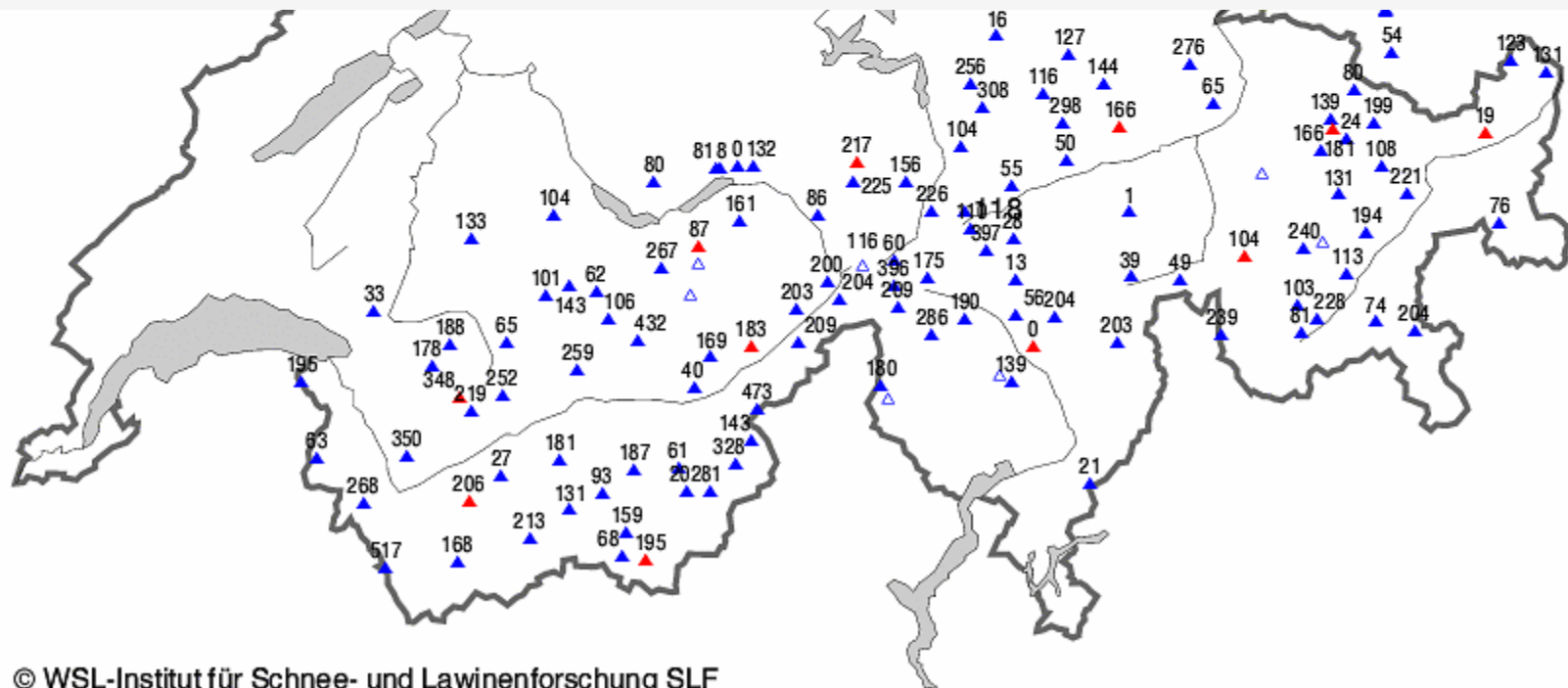
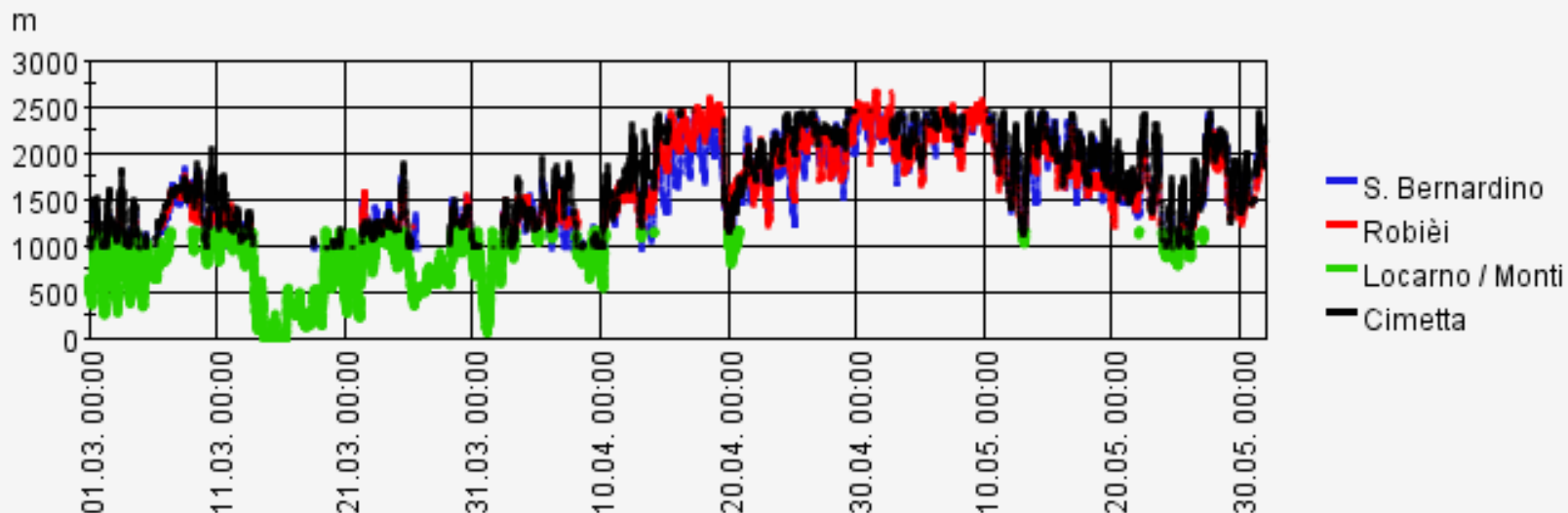


maggio





Limite delle nevicate e neve a fine maggio





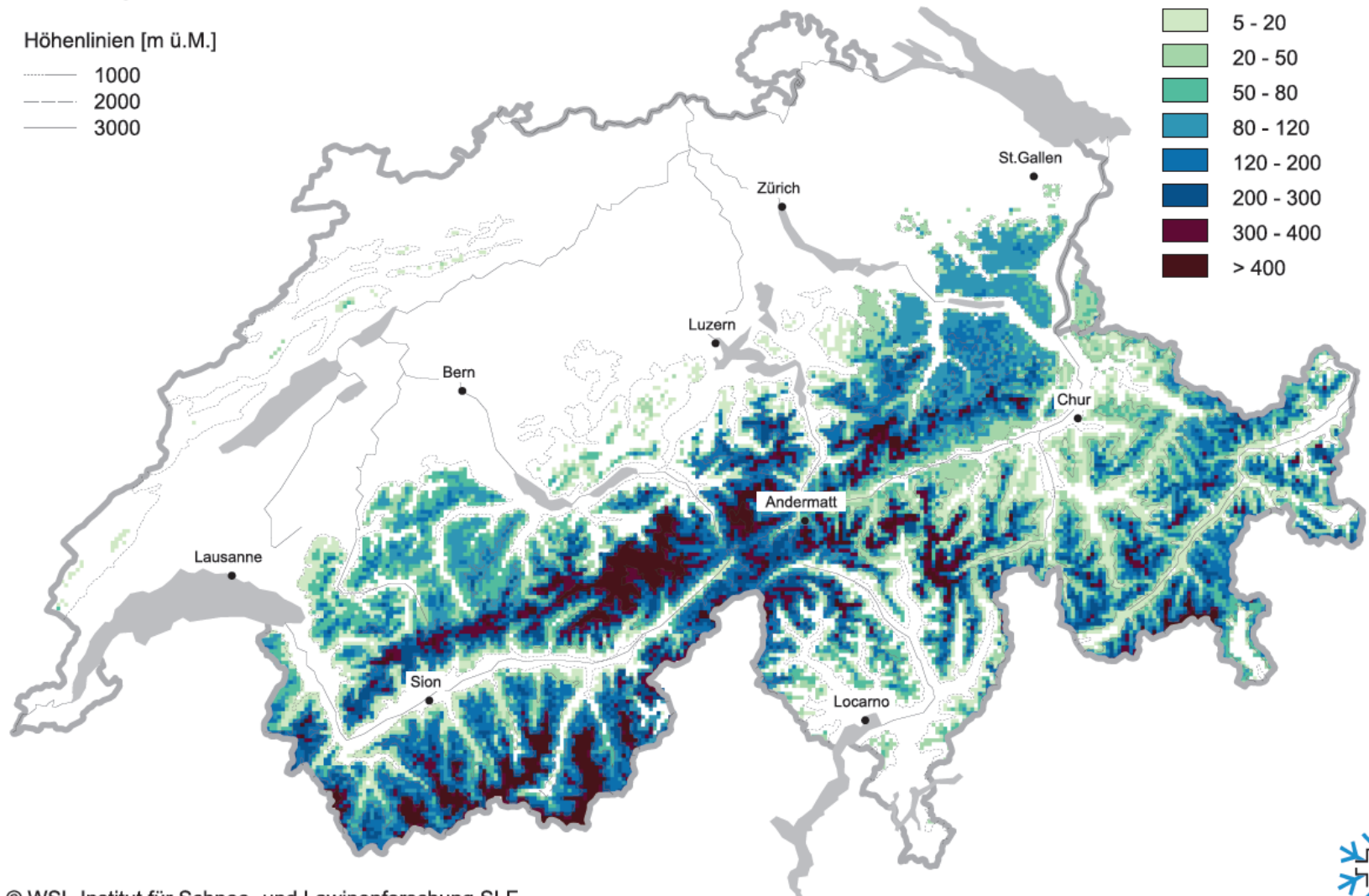
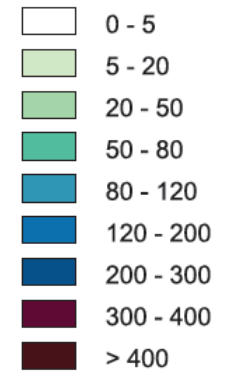
Schneehöhe

Donnerstag, 30. Mai 2013

Höhenlinien [m ü.M.]

----- 1000
----- 2000
----- 3000

Schneehöhe [cm]





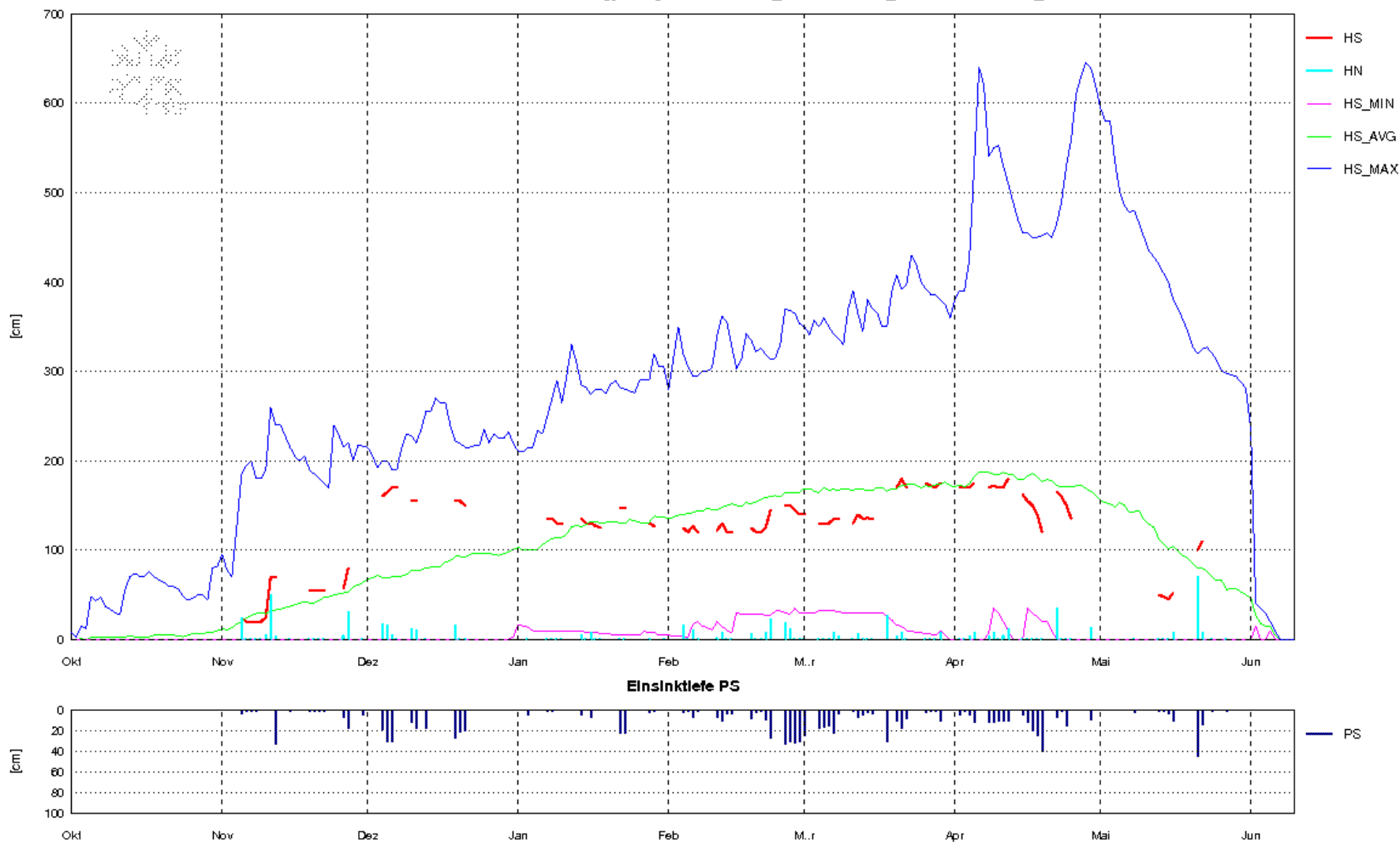
Neve Robiei

Winter 2012/13

Robiei 1890m (6RO)



Schneehoehe HS, 24h-Neuschnee HN, langjaehrige Minimum HS_MIN, Mittel HS_AVG, Maximum HS_MAX





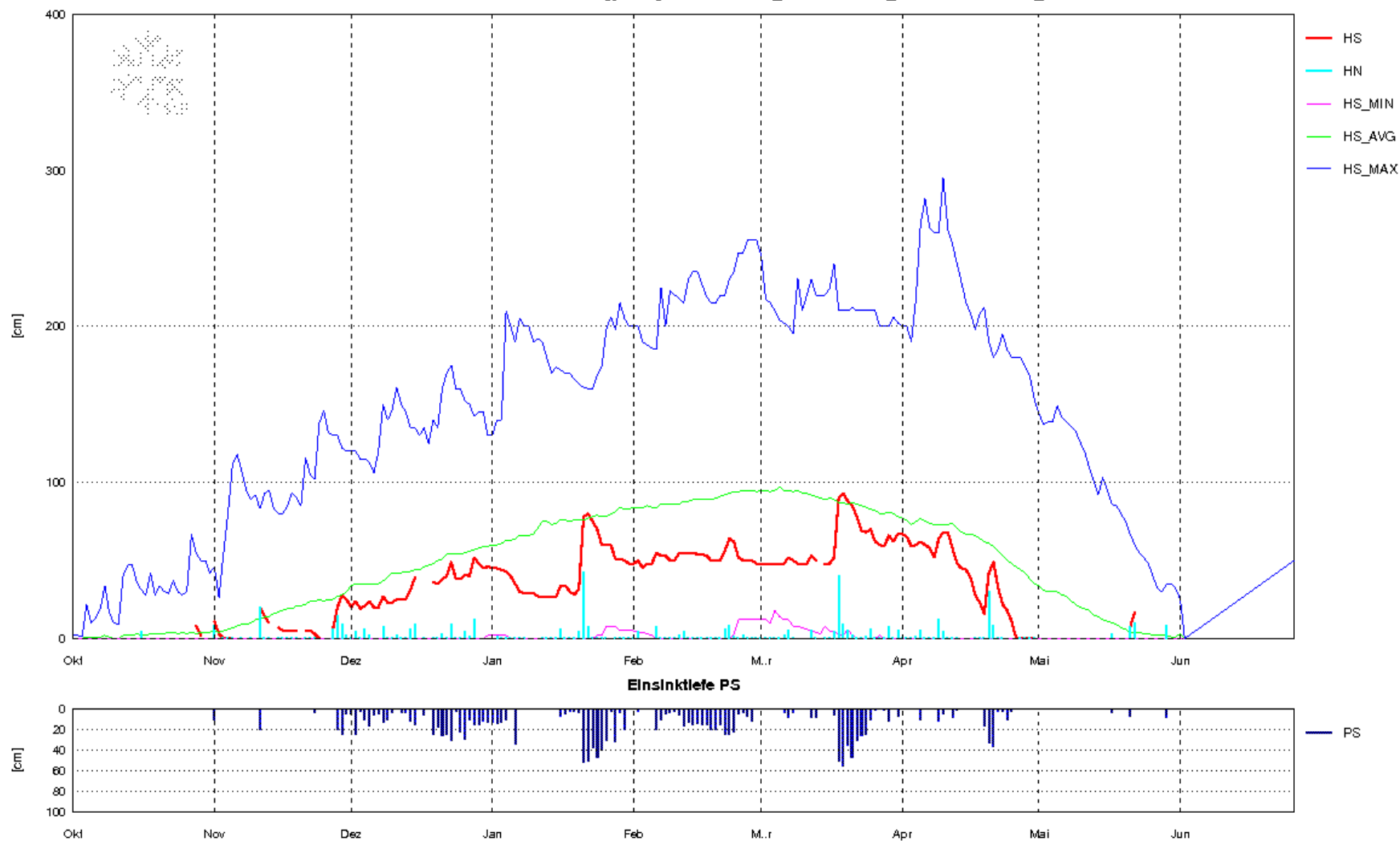
Neve San Bernardino

Winter 2012/13

San Bernardino 1640m (6SB)



Schneehoehe HS, 24h-Neuschnee HN, langjaehrige Minimum HS_MIN, Mittel HS_AVG, Maximum HS_MAX





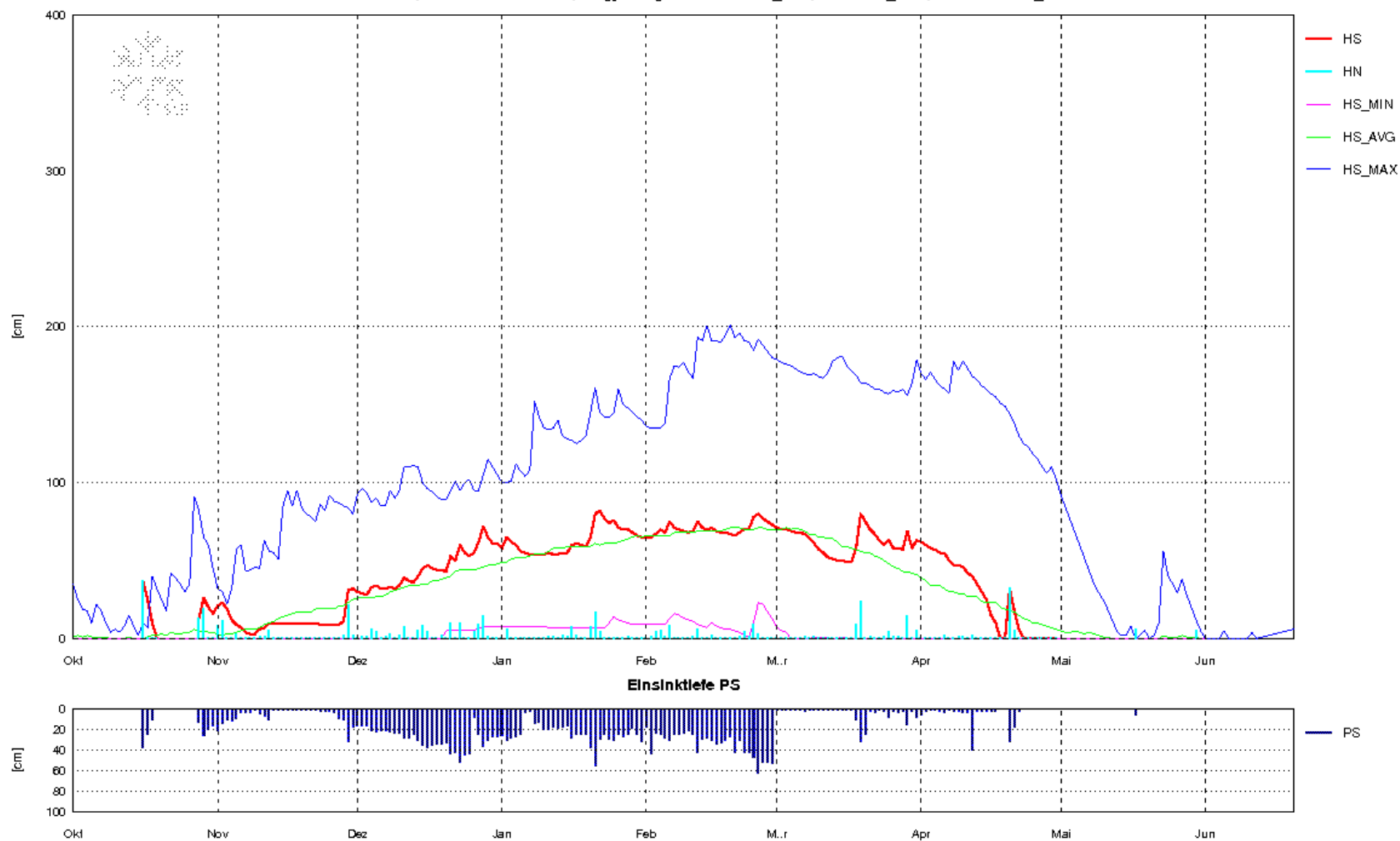
Neve St Moritz

Winter 2012/13

St.Moritz 1890m (7MZ)

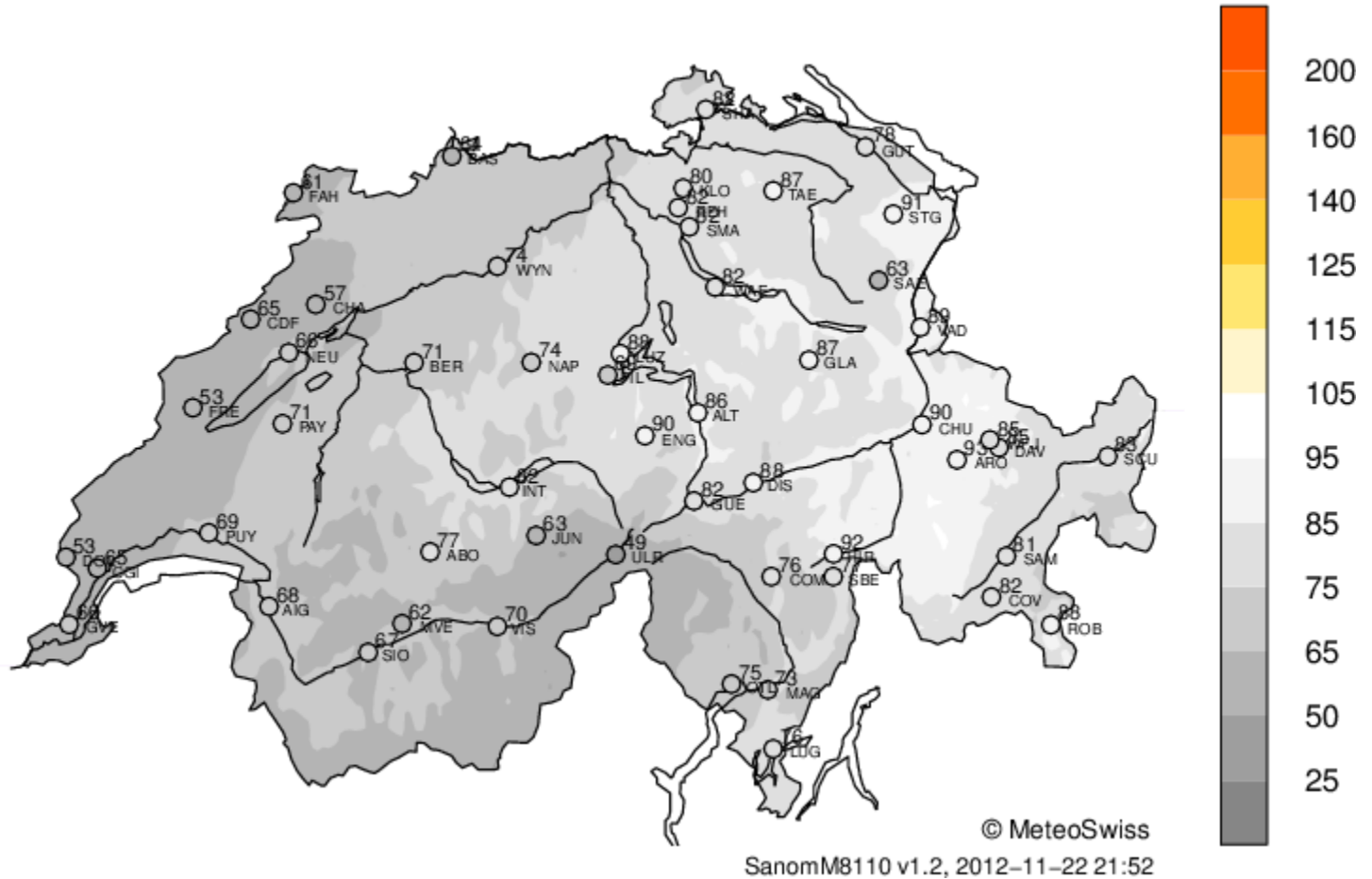


Schneehoehe HS, 24h-Neuschnee HN, langjaehrige Minimum HS_MIN, Mittel HS_AVG, Maximum HS_MAX



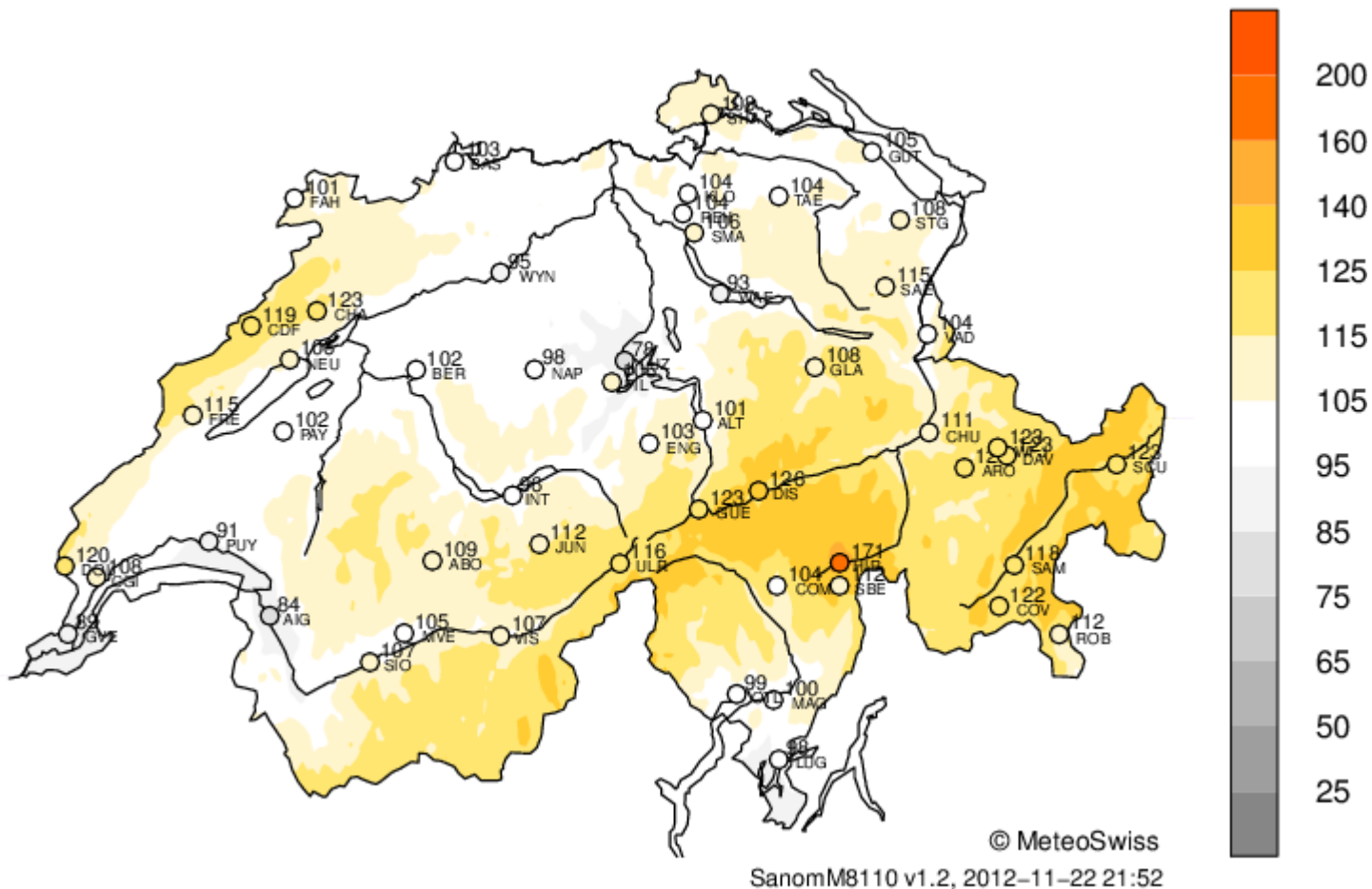


Monthly Sunshine Duration Anomaly (%) Mar 1981 (Ref. 1981–2010)



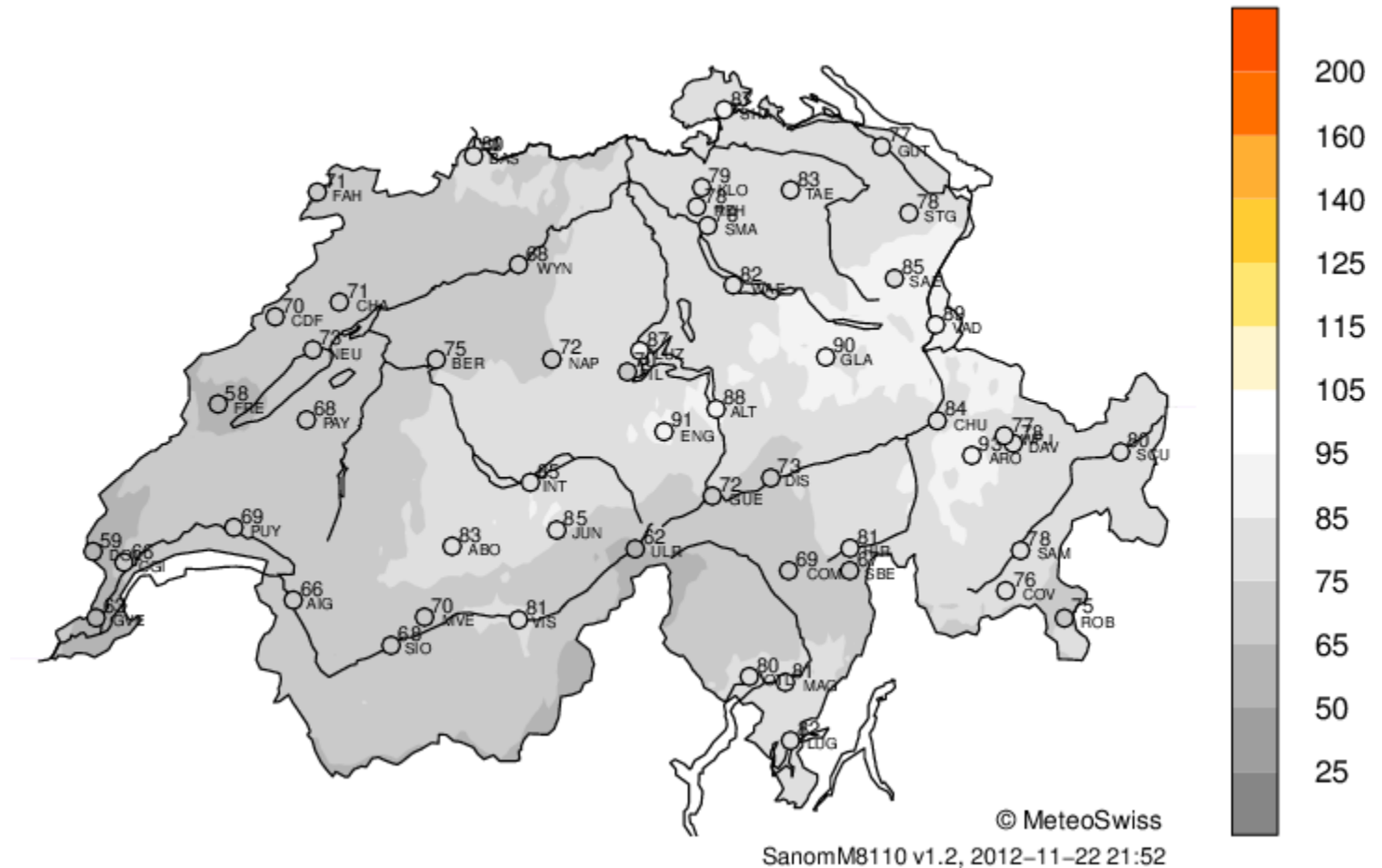


Monthly Sunshine Duration Anomaly (%) Apr 1981 (Ref. 1981–2010)



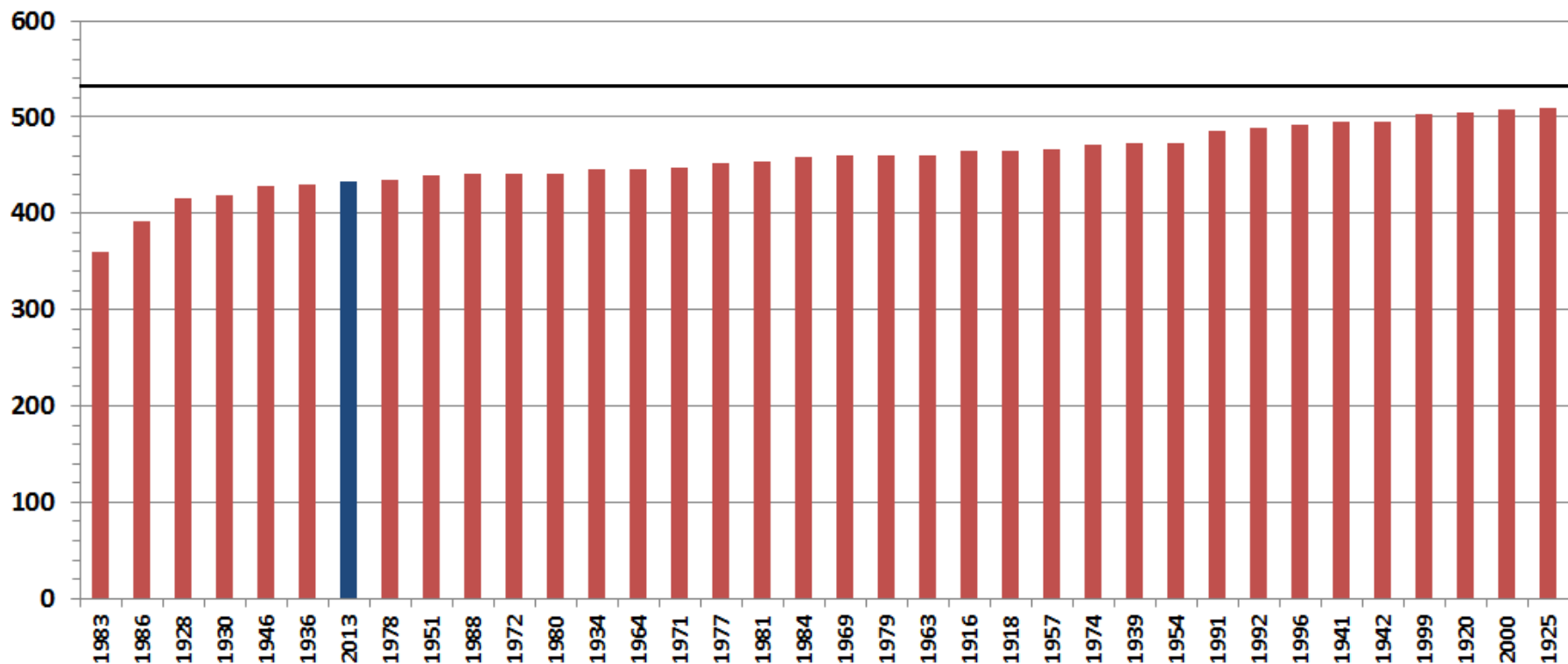


Monthly Sunshine Duration Anomaly (%) May 1981 (Ref. 1981–2010)





Ore di sole a Lugano

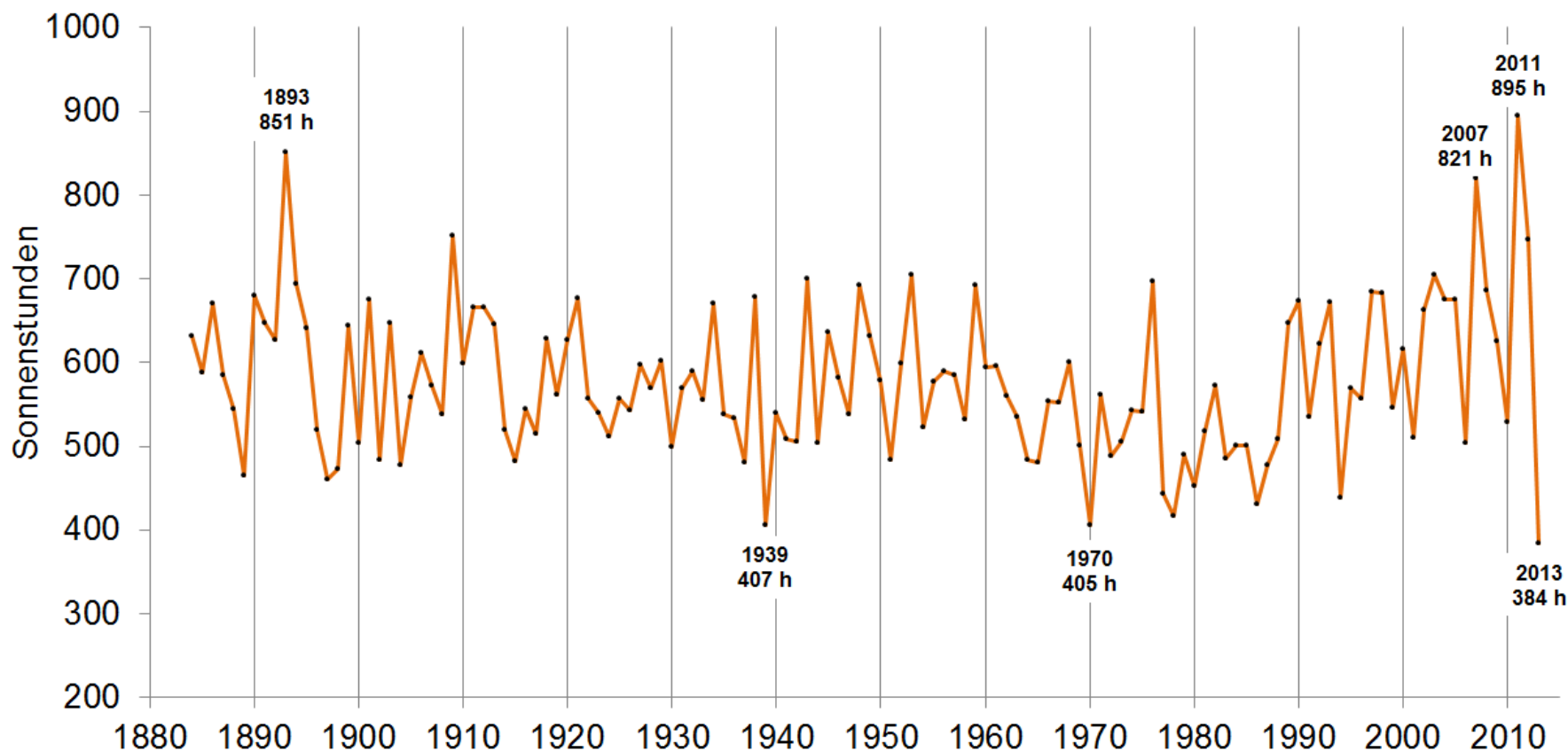


Settimana primavera con meno sole dal 1914!



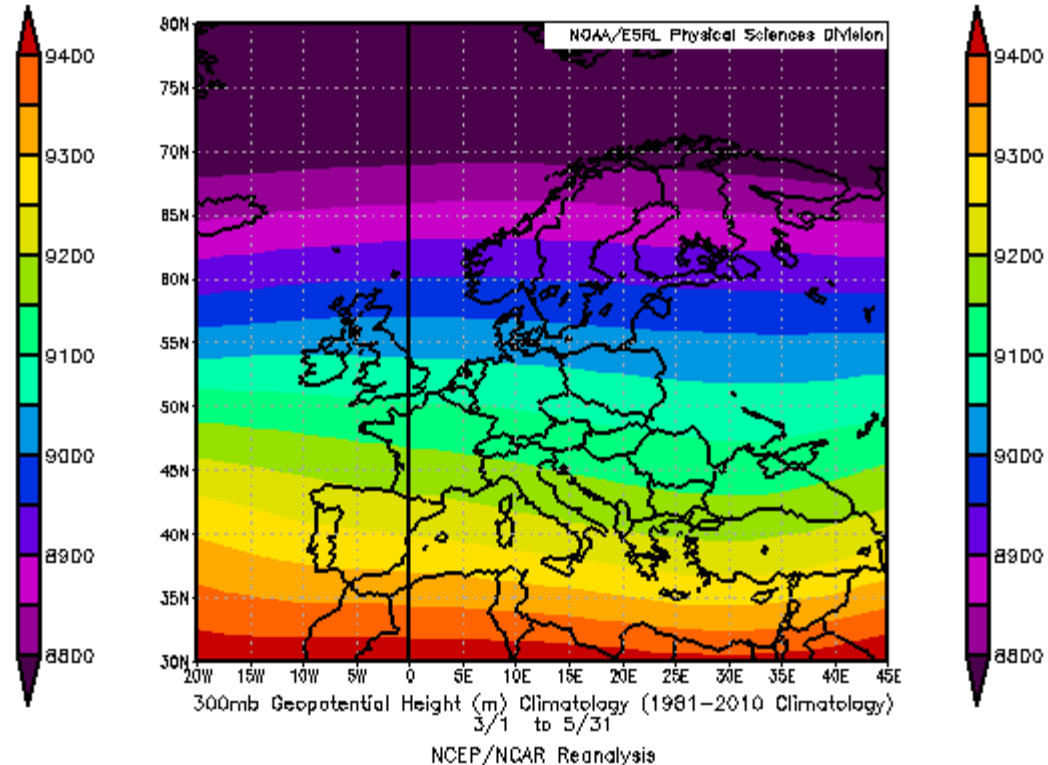
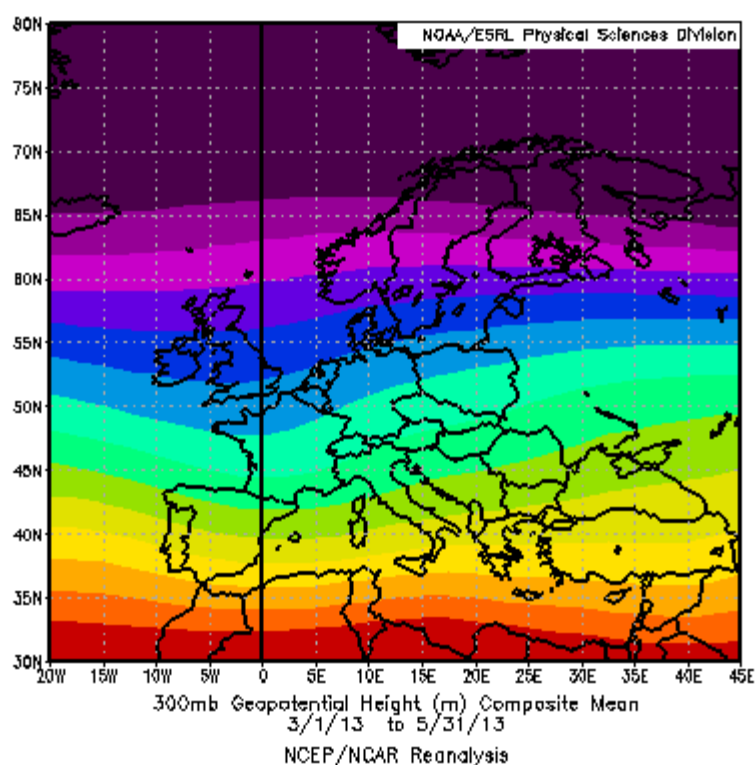
Il peggiore al nord delle Alpi

Sonnenscheindauer Januar - Mai, Zürich-Fluntern 1884 - 2013





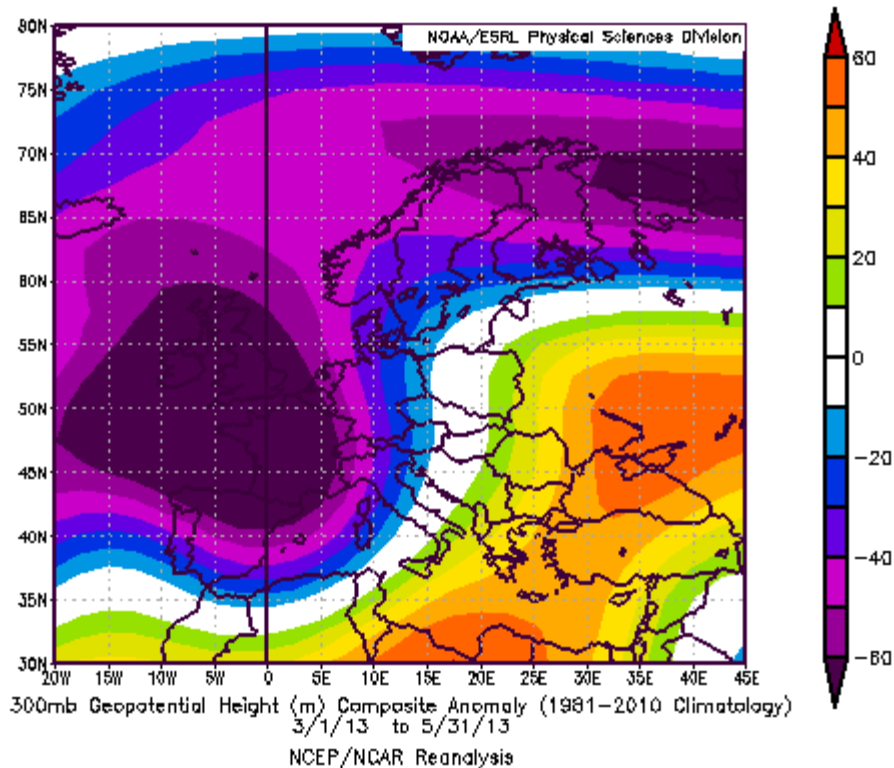
h@300hPa: 2013 vs. media



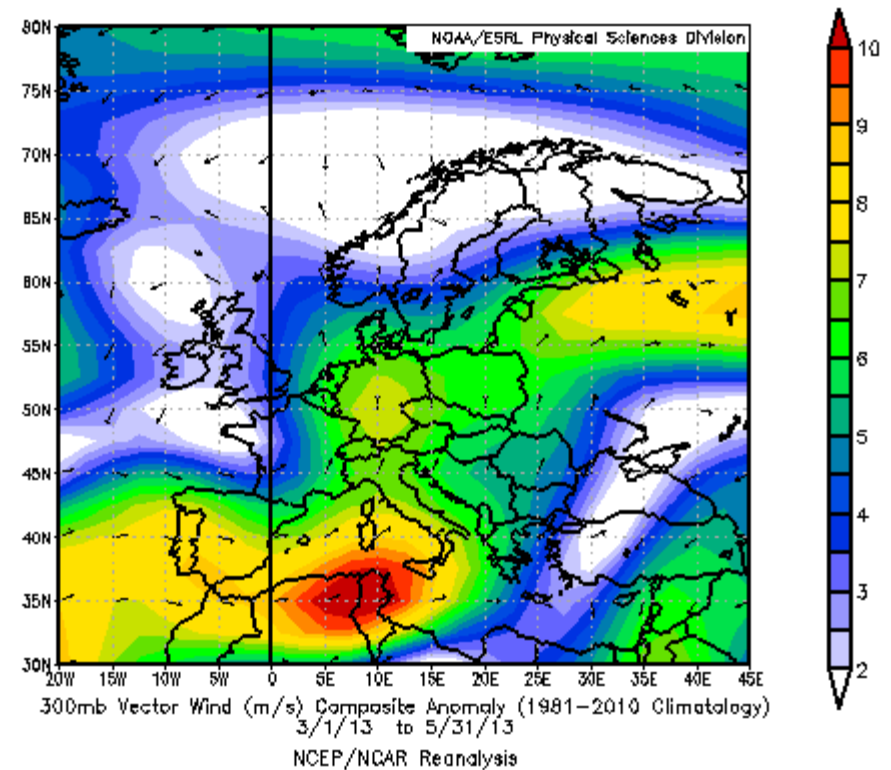


2013 anomalie

h@300hPa



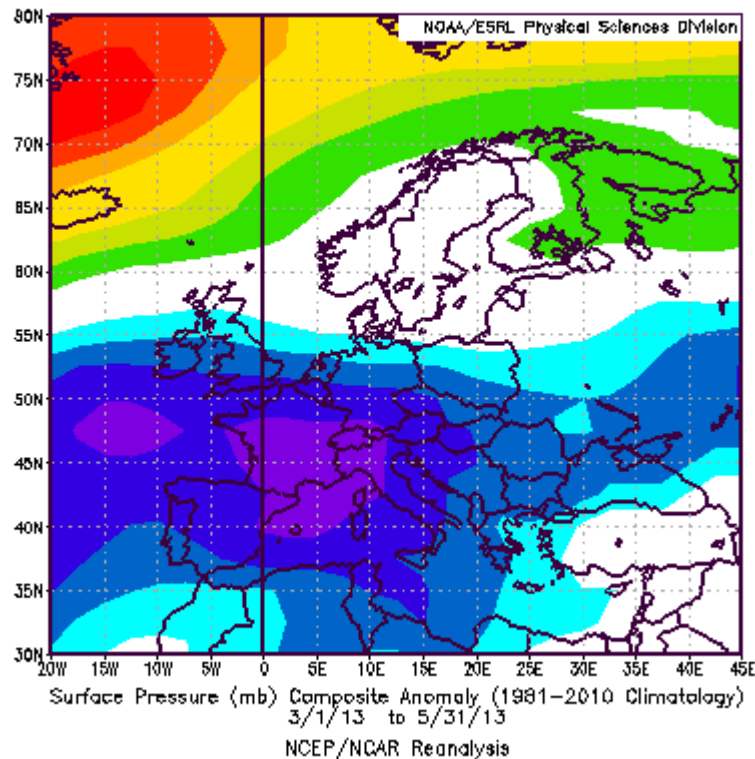
FF@300hPa



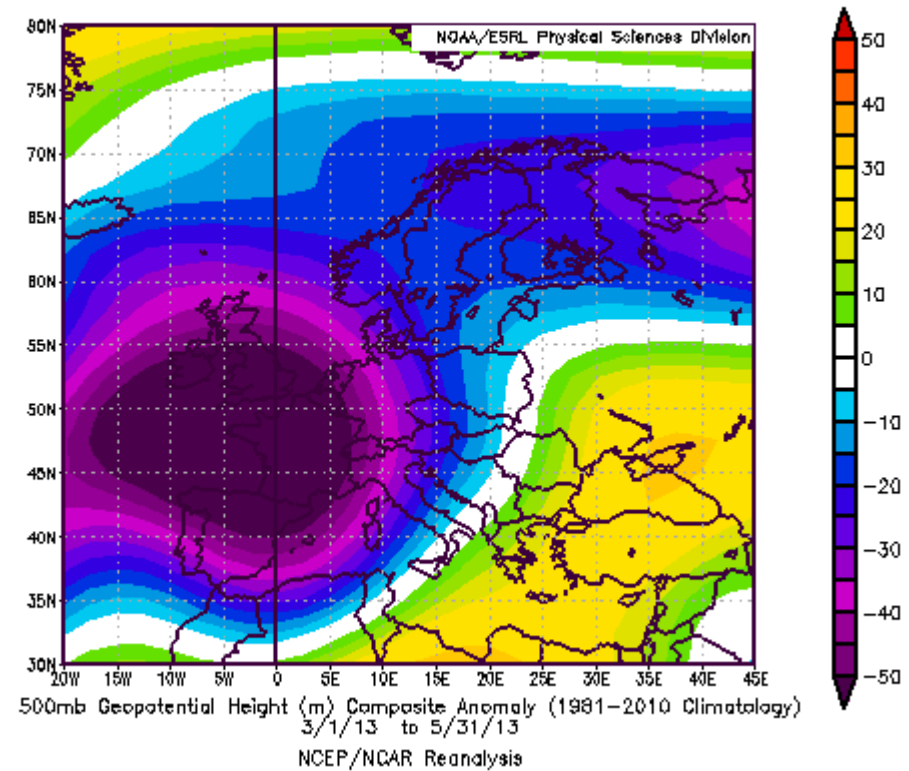


Anomalie primavera 2013

pressione al suolo hPa



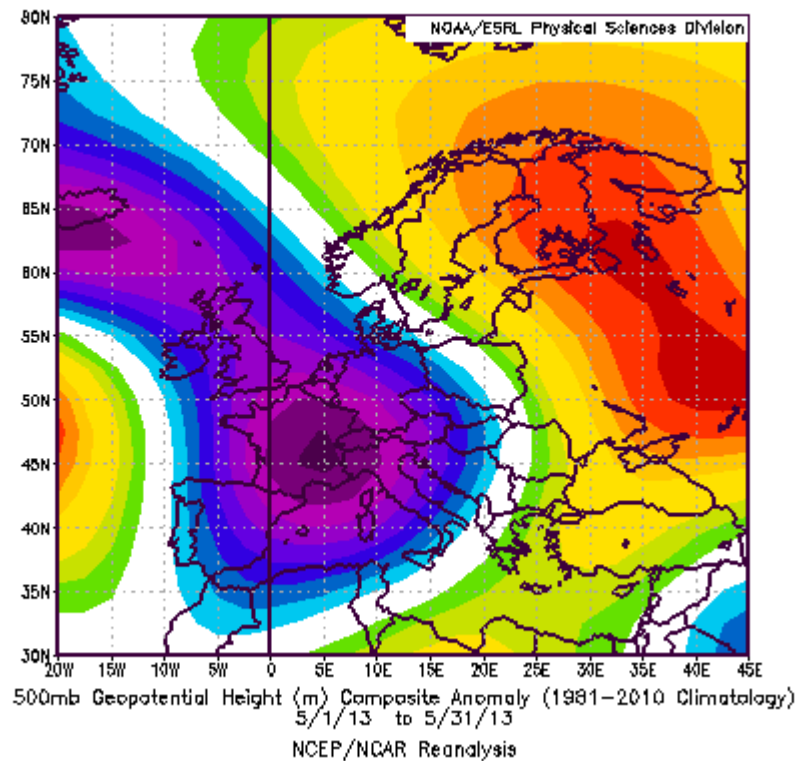
h@500hPa



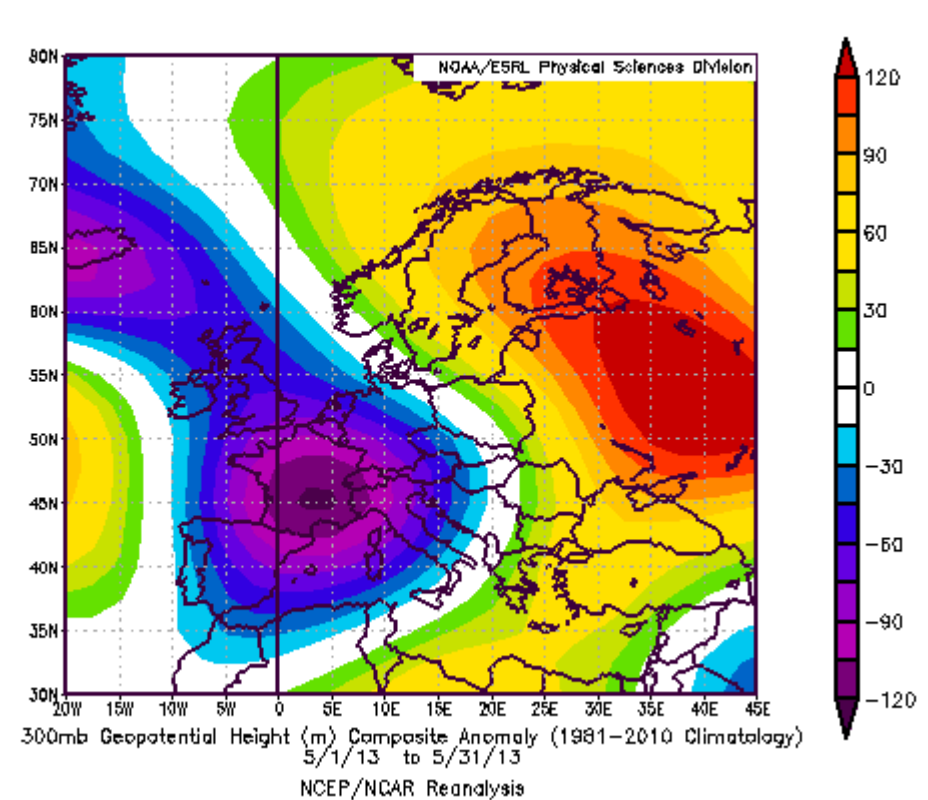


Anomalie maggio 2013

h@500hPa



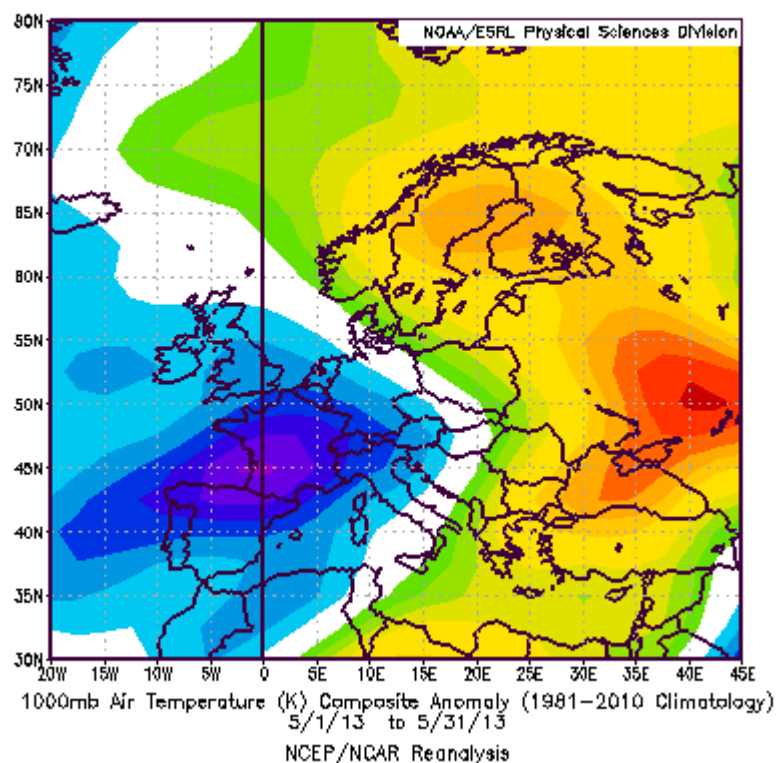
h@300hPa



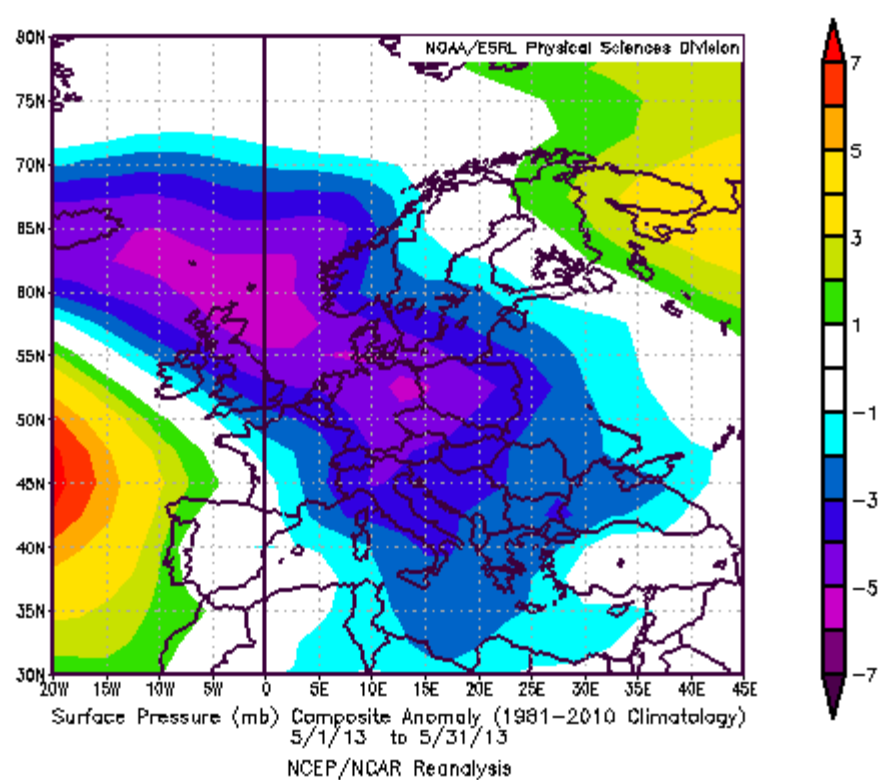


Anomalie maggio 2013

T@1000hPa

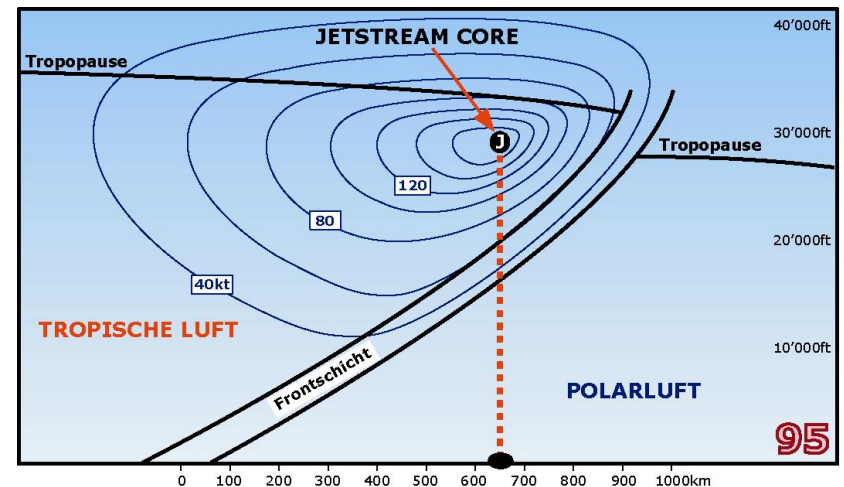
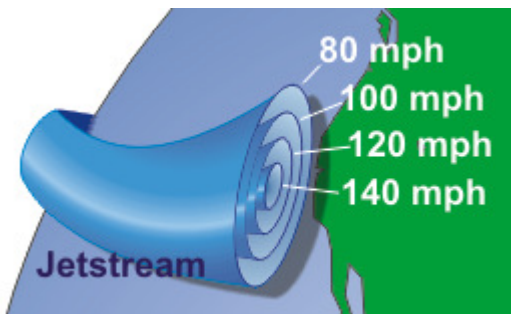
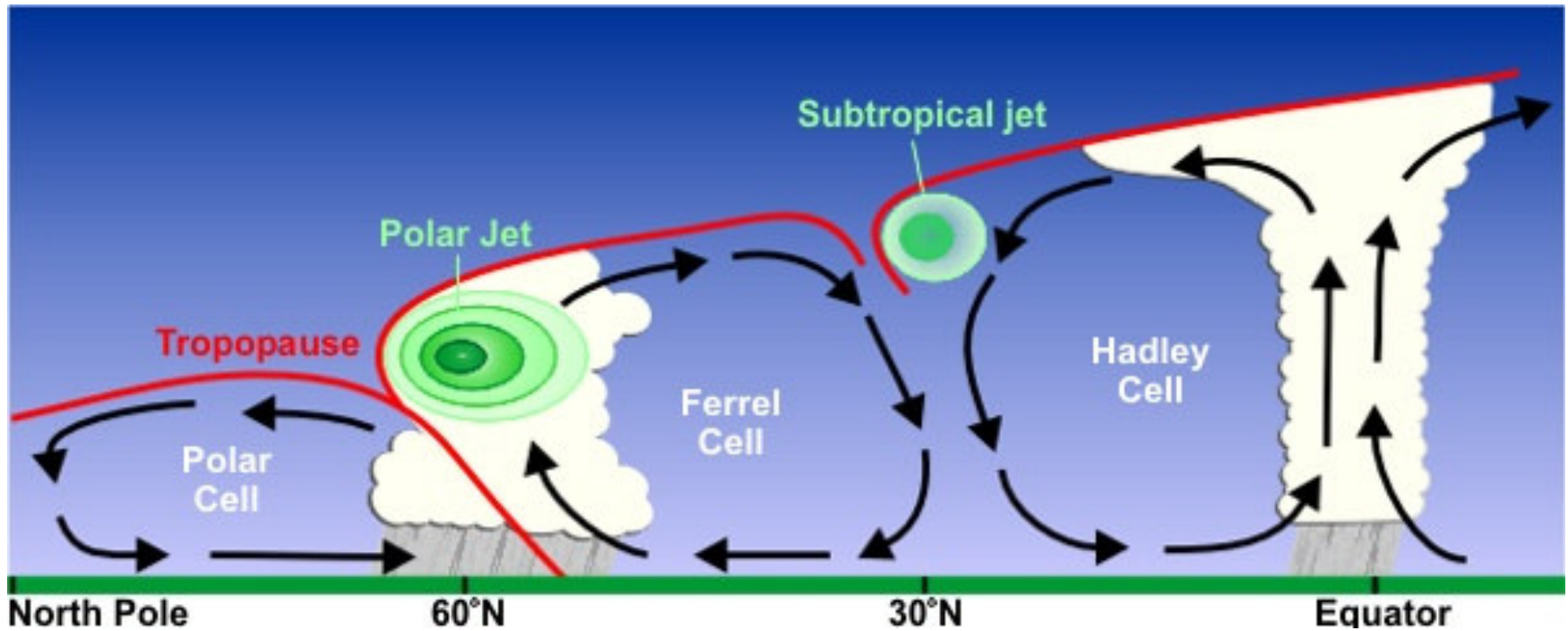


Pressione al suolo



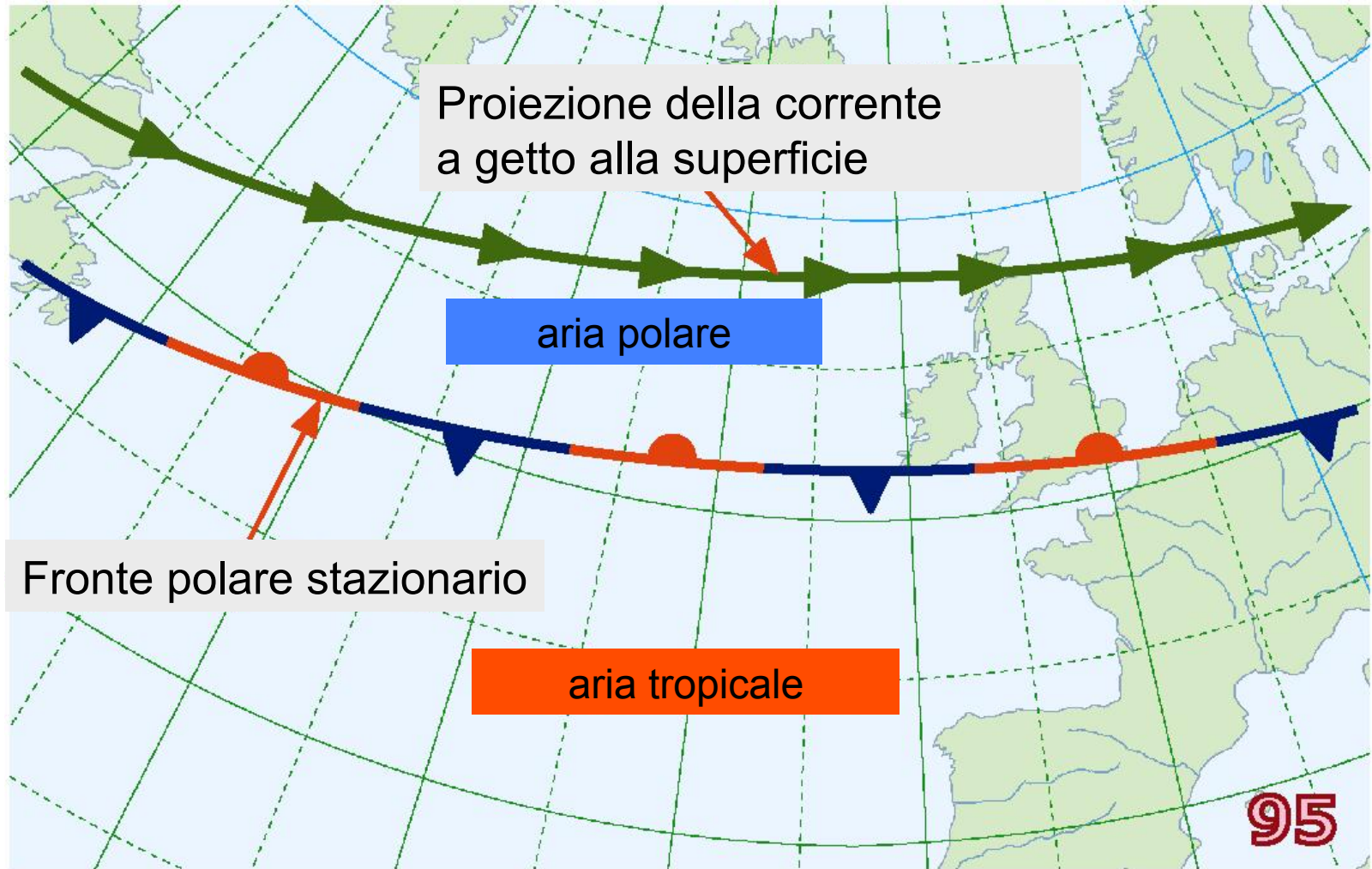


Jet stream





Il fronte polare stazionario



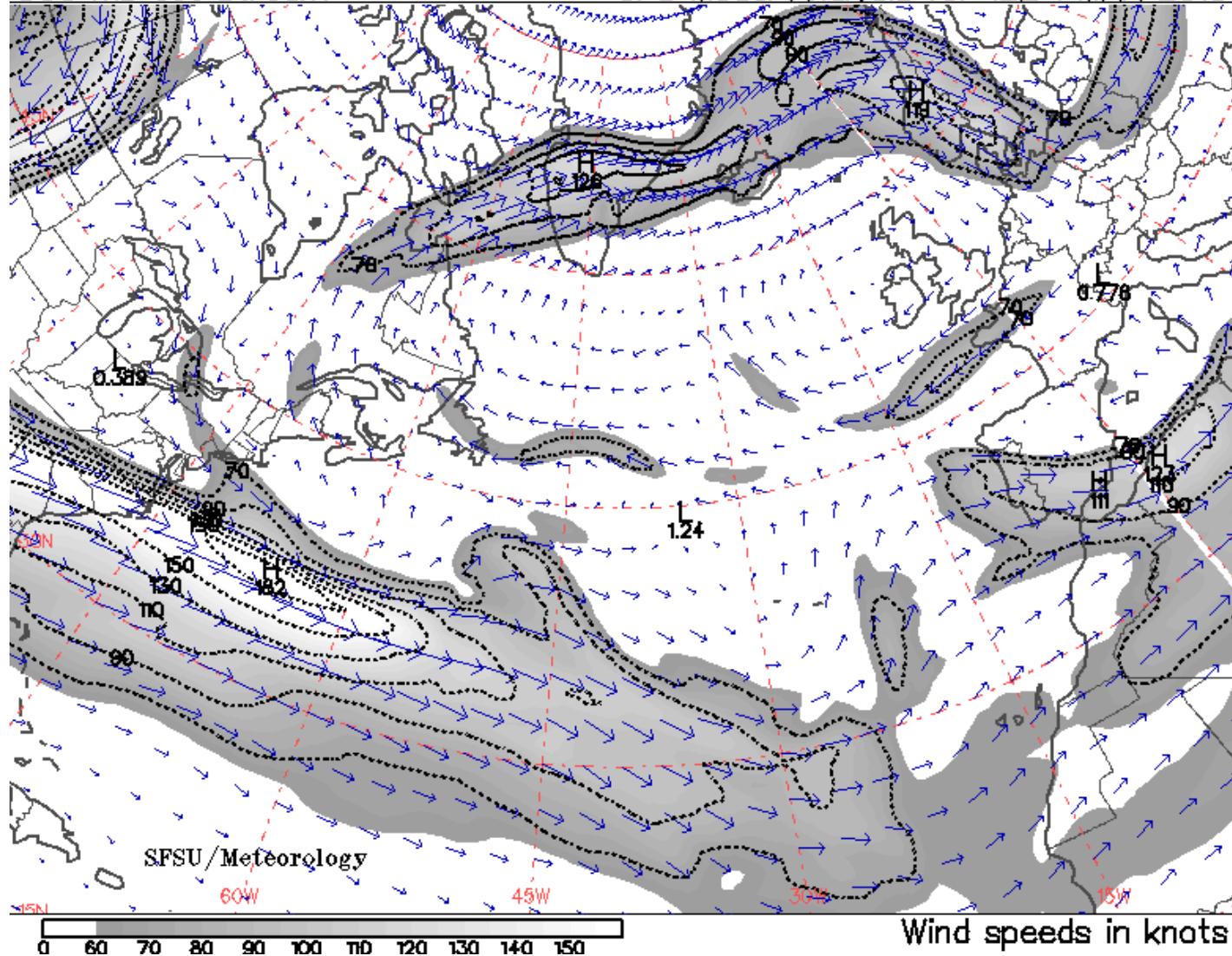
95



Fonte: sito internet <http://squall.sfsu.edu/crws/archive/jetstr>

300 mb Jet Stream

GFS Model Analysis for 12Z 1 MAR 2013

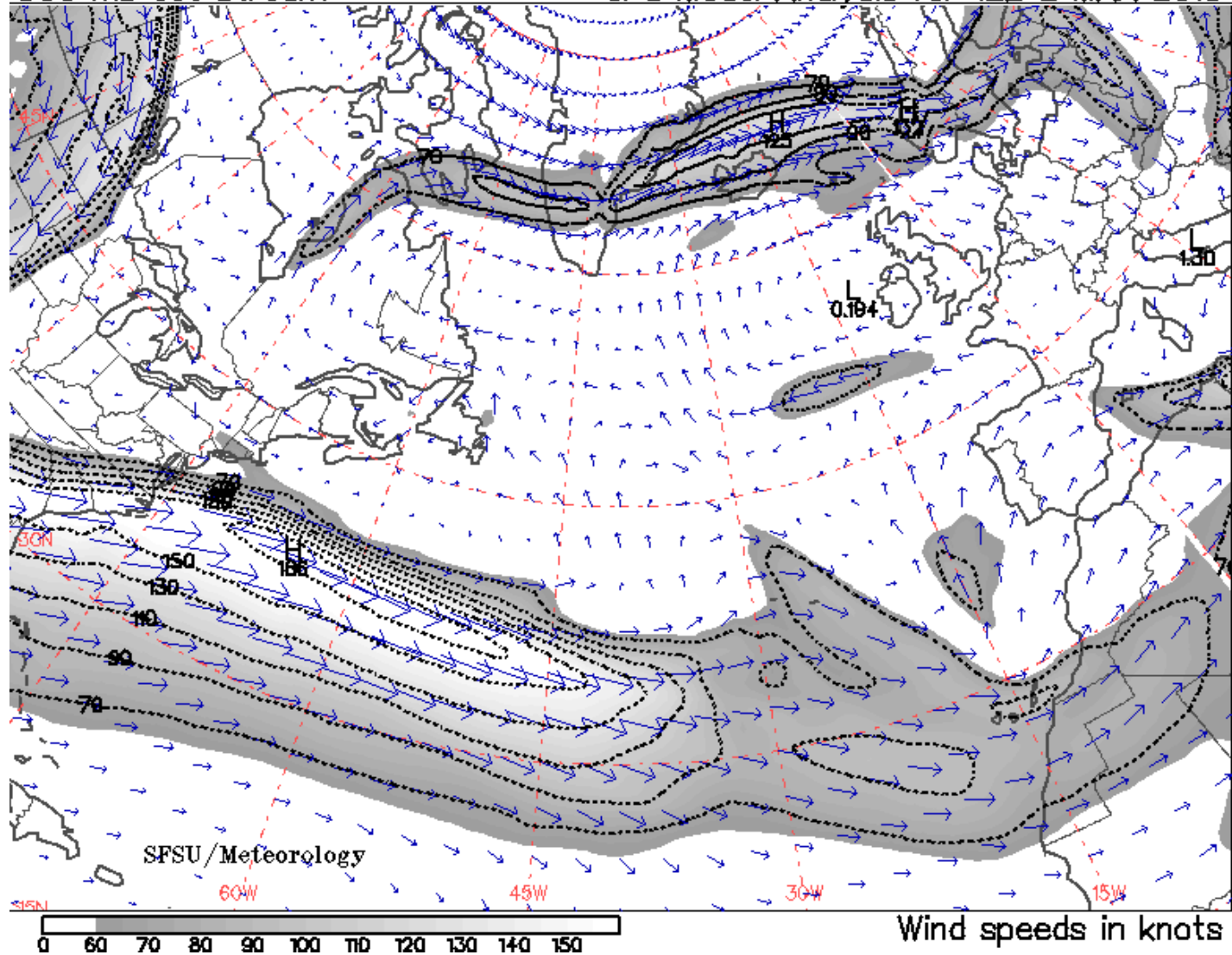


Mauro Guerini



300 mb Jet Stream

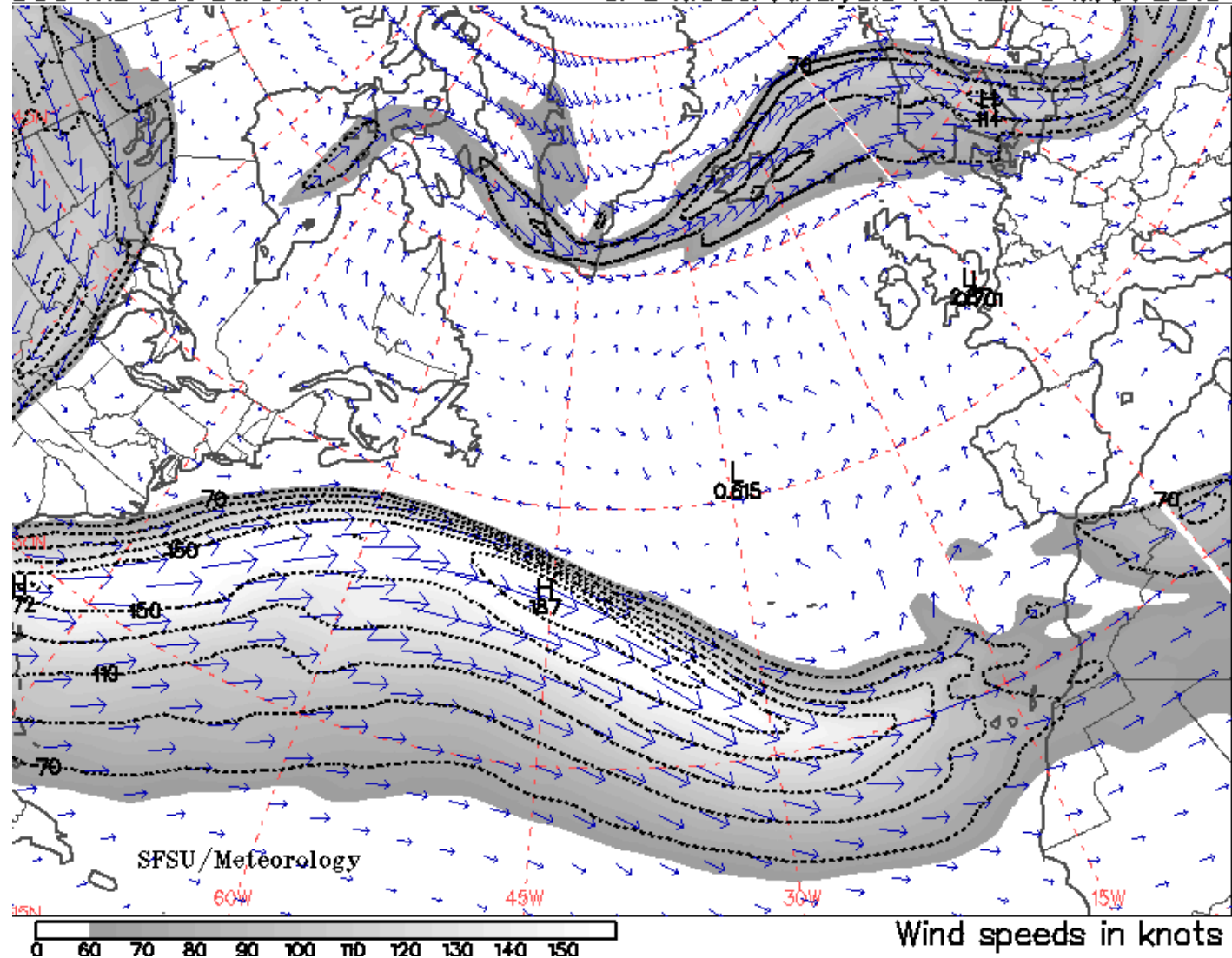
GFS Model Analysis for 12Z 2 MAR 2013





300 mb Jet Stream

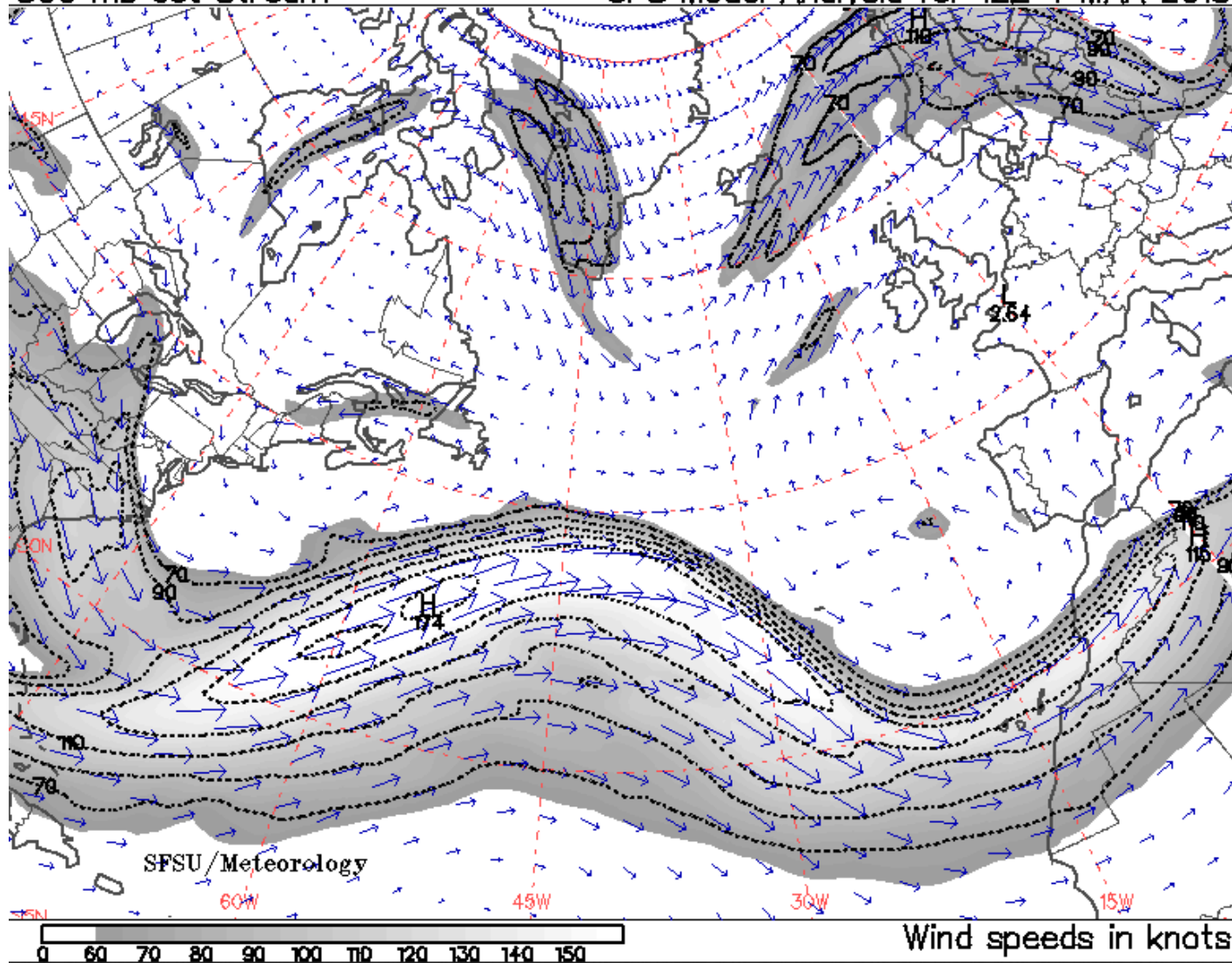
GFS Model Analysis for 12Z 3 MAR 2013





300 mb Jet Stream

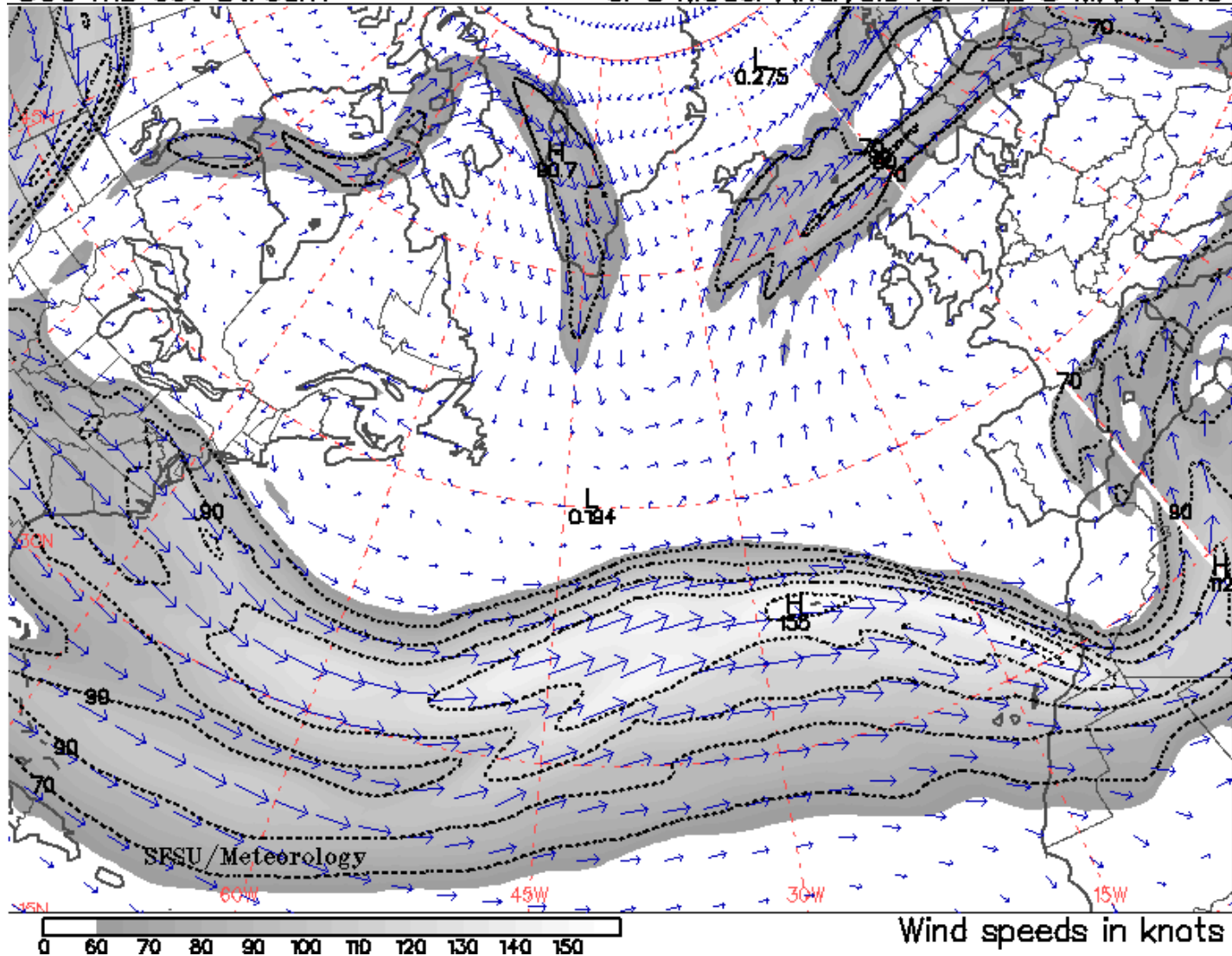
GFS Model Analysis for 12Z 4 MAR 2013





300 mb Jet Stream

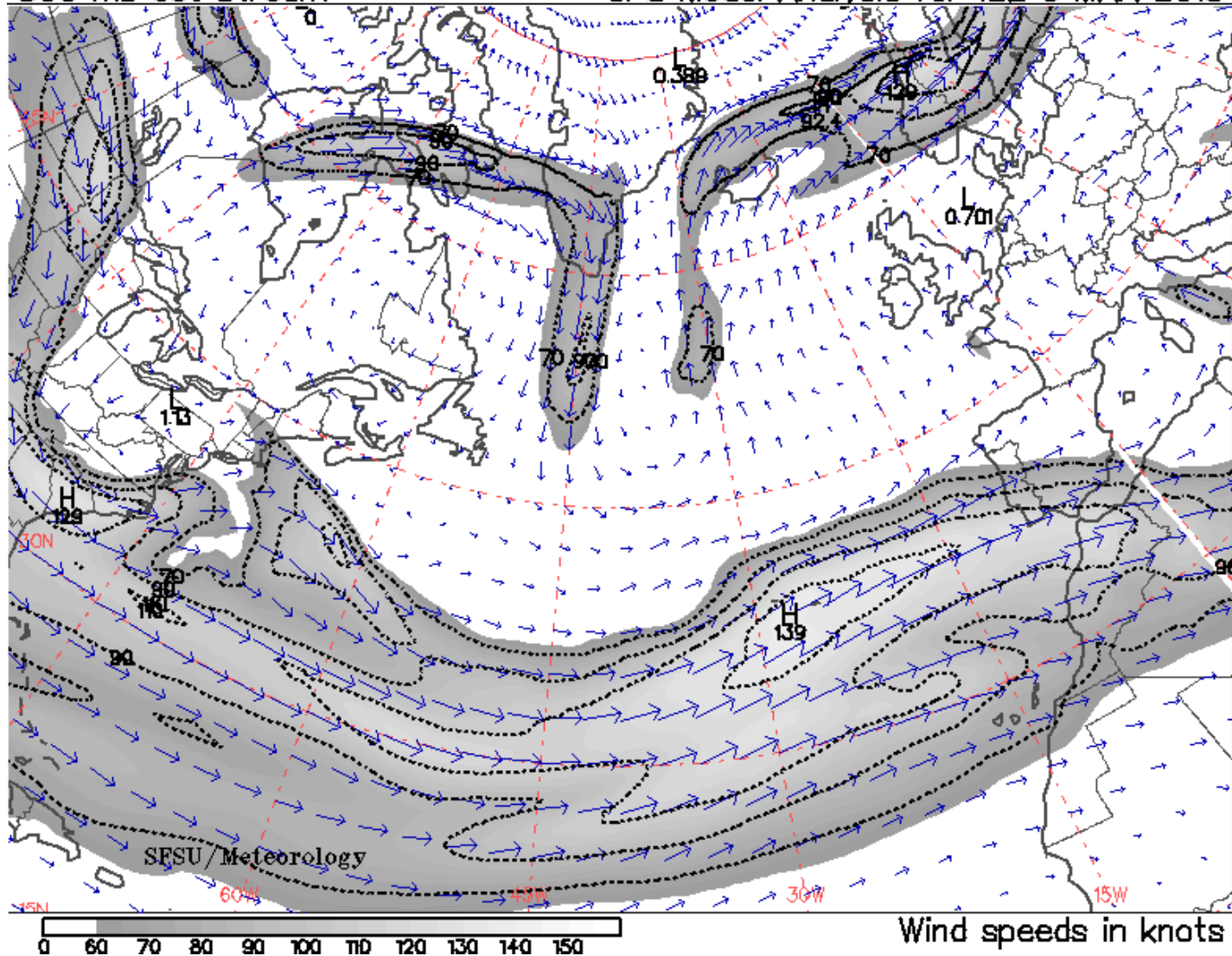
GFS Model Analysis for 12Z 5 MAR 2013





300 mb Jet Stream

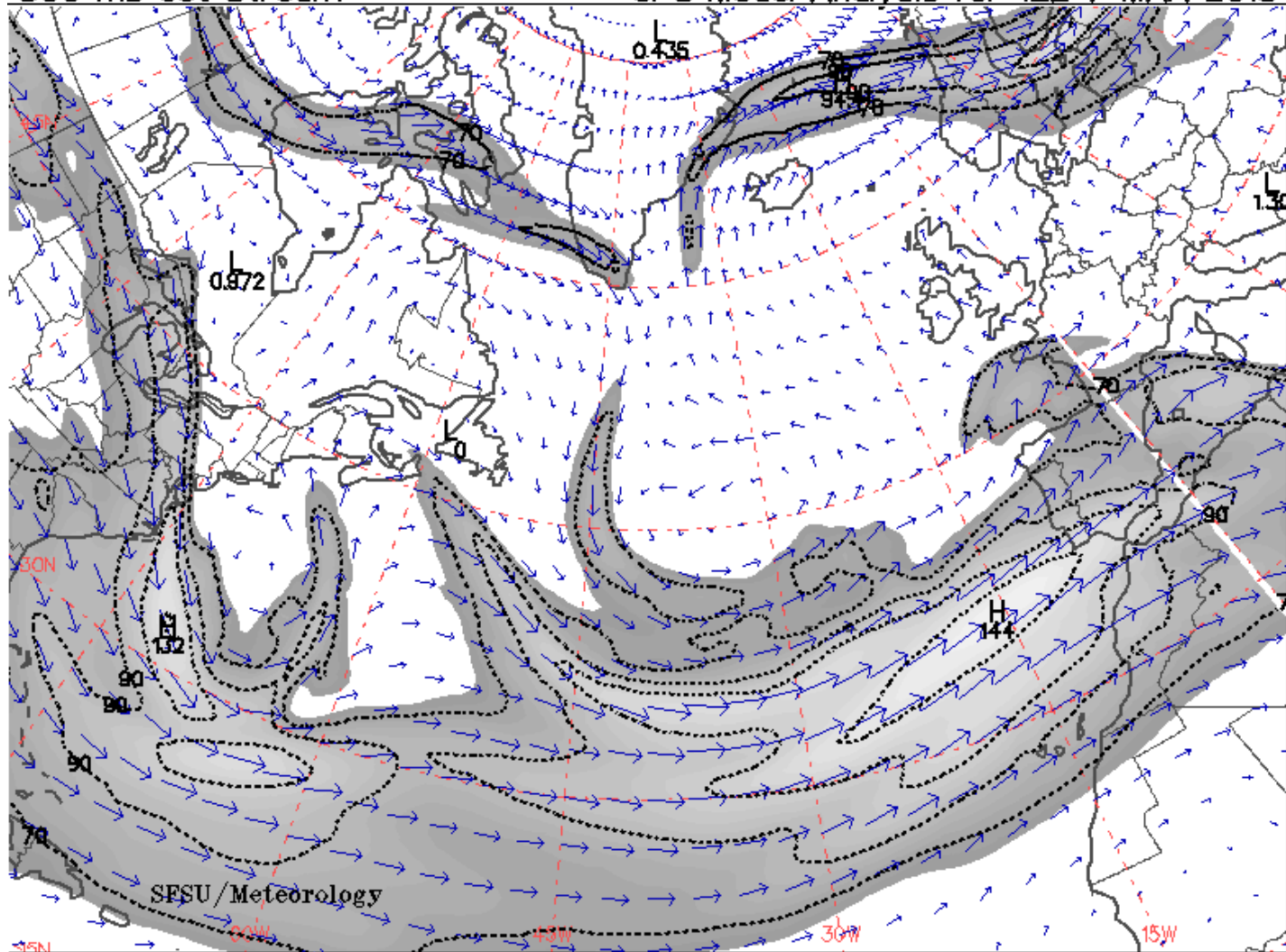
GFS Model Analysis for 12Z 6 MAR 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 7 MAR 2013



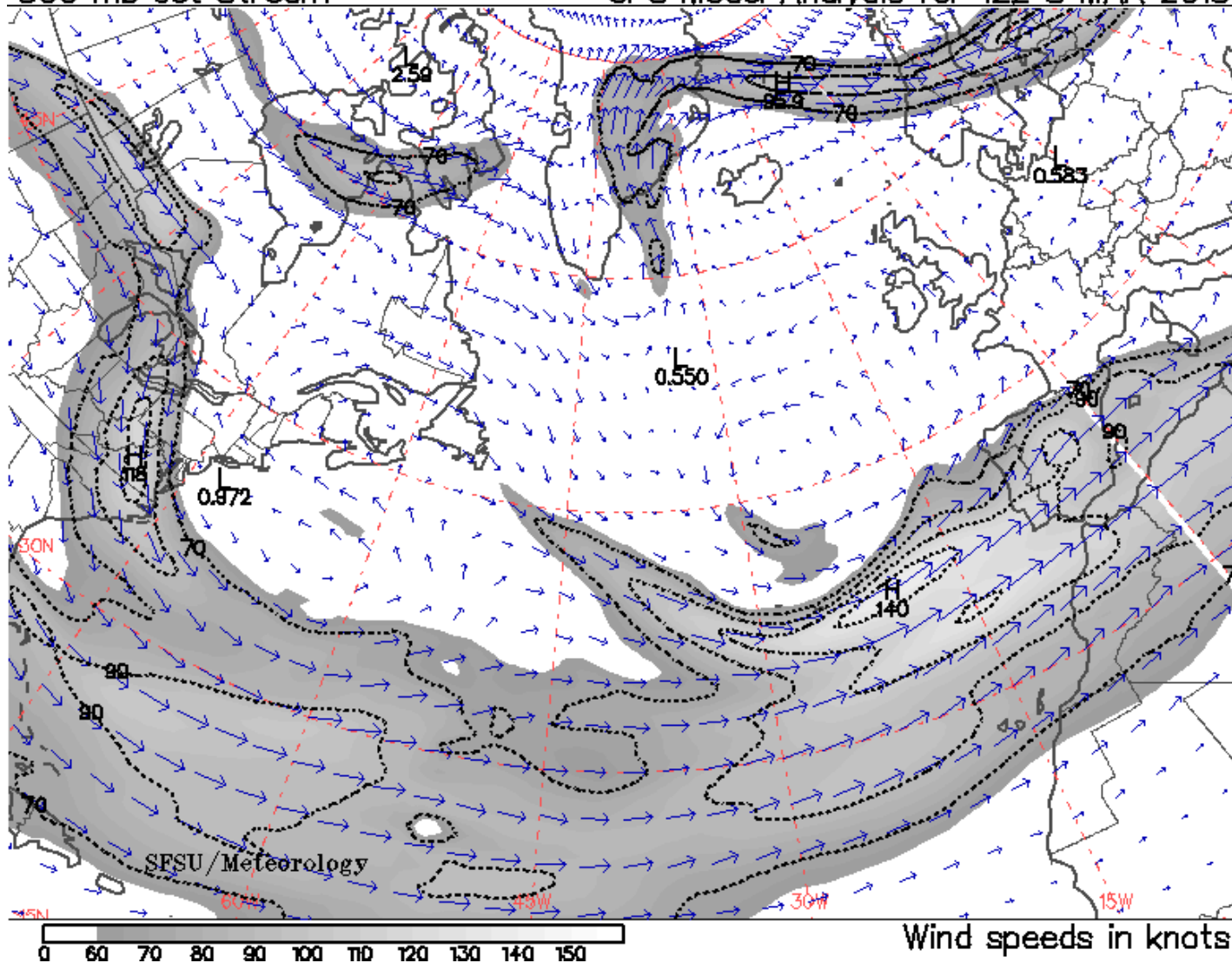
0 60 70 80 90 100 110 120 130 140 150

Wind speeds in knots



300 mb Jet Stream

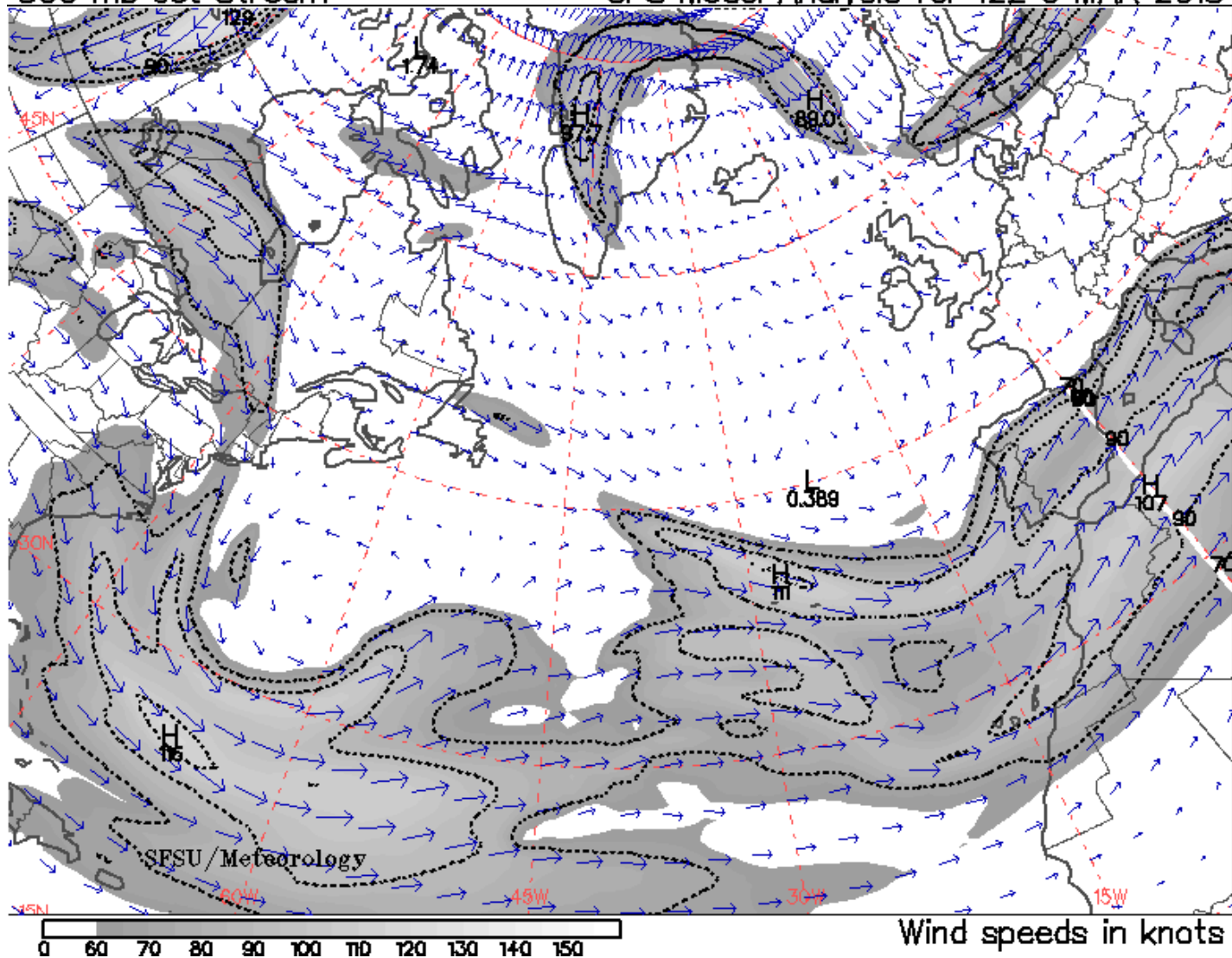
GFS Model Analysis for 12Z 8 MAR 2013





300 mb Jet Stream

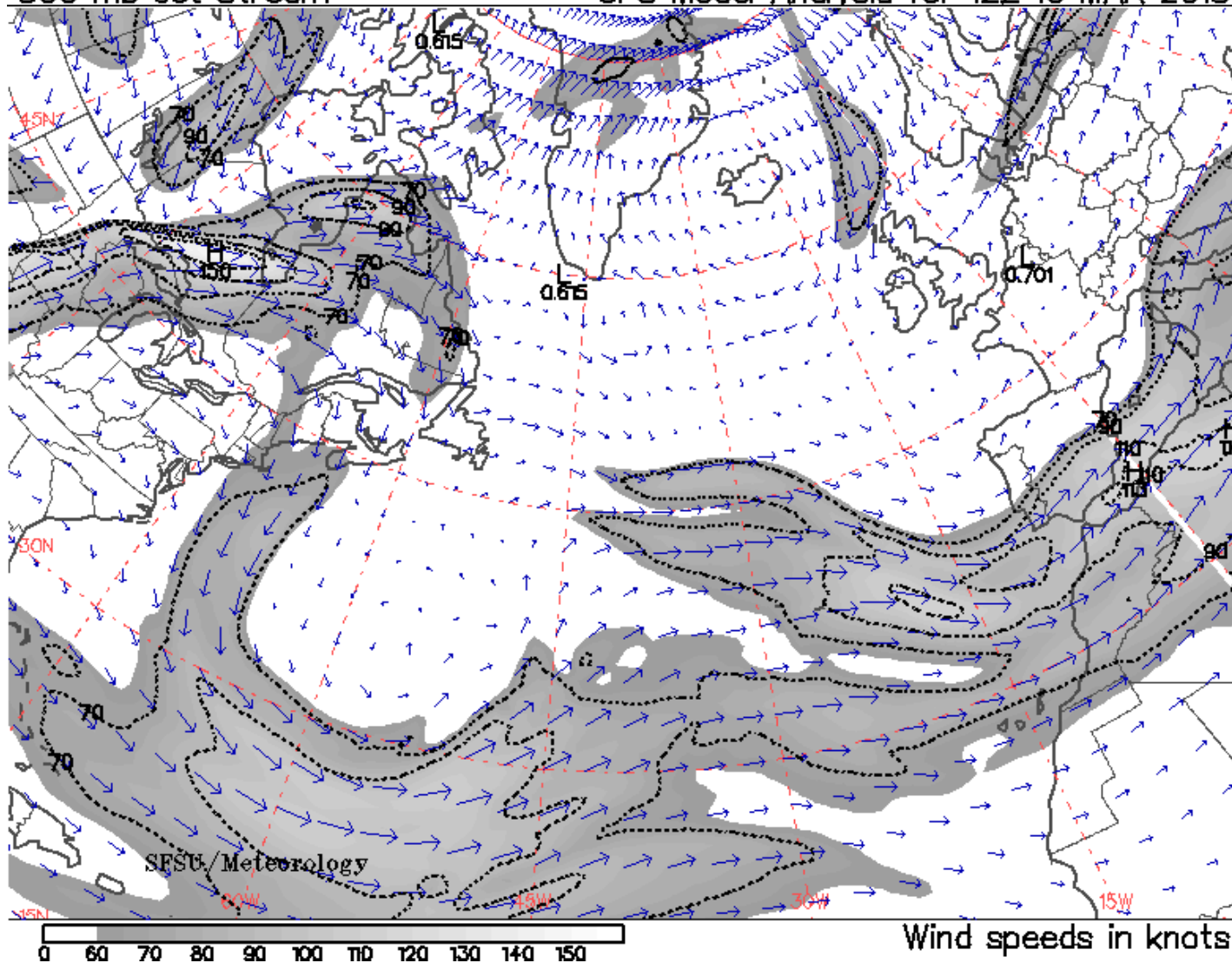
GFS Model Analysis for 12Z 9 MAR 2013





300 mb Jet Stream

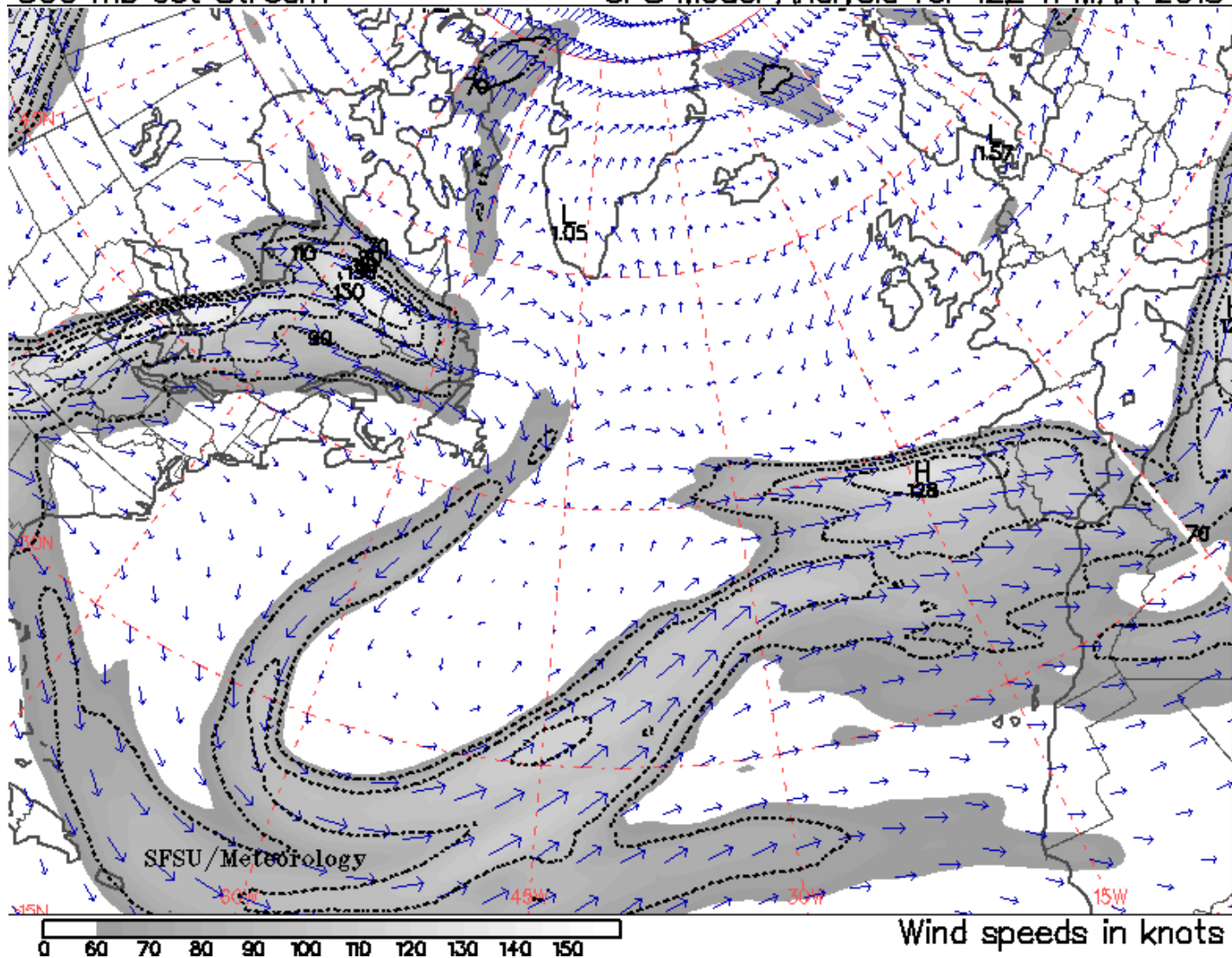
GFS Model Analysis for 12Z 10 MAR 2013





300 mb Jet Stream

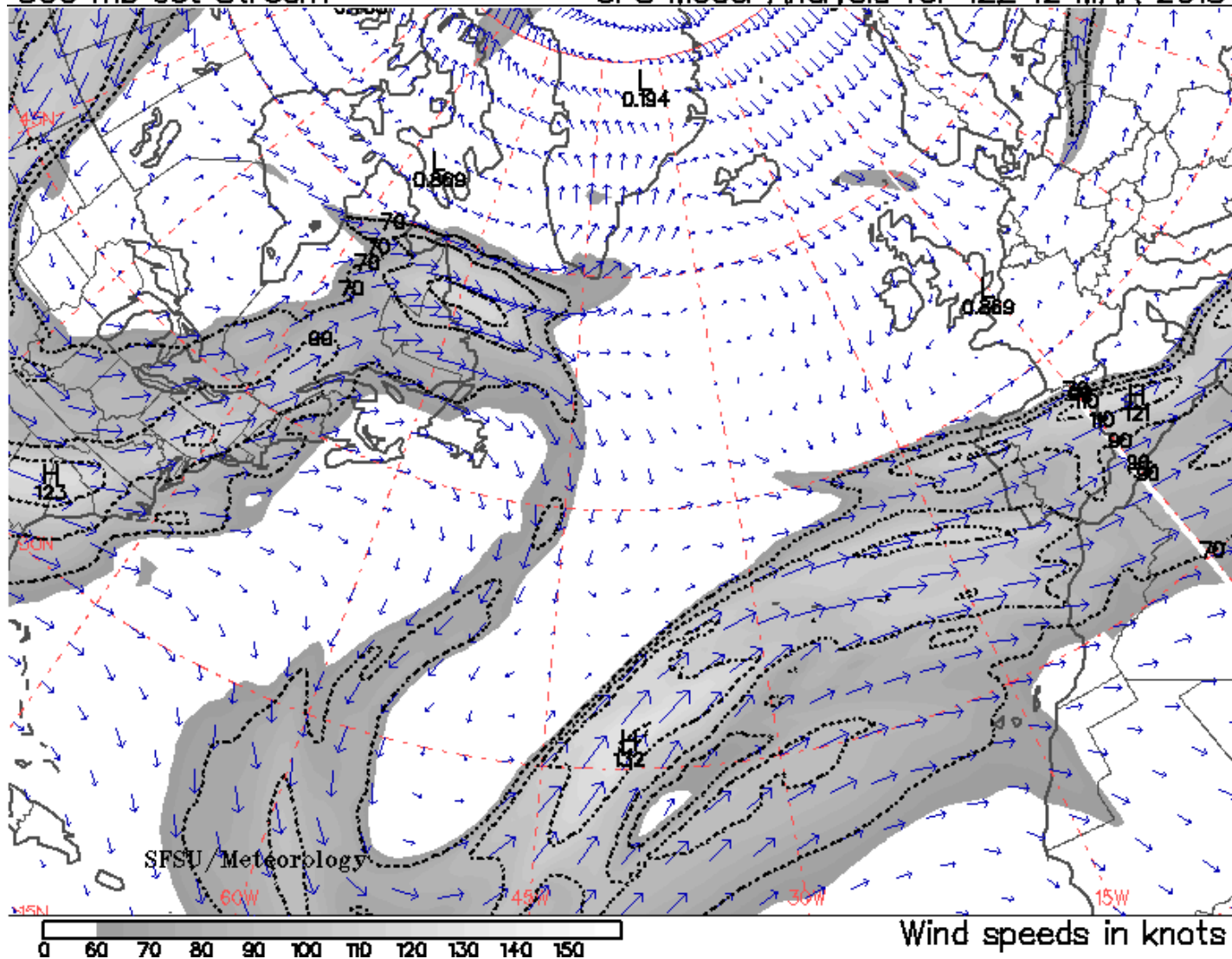
GFS Model Analysis for 12Z 11 MAR 2013





300 mb Jet Stream

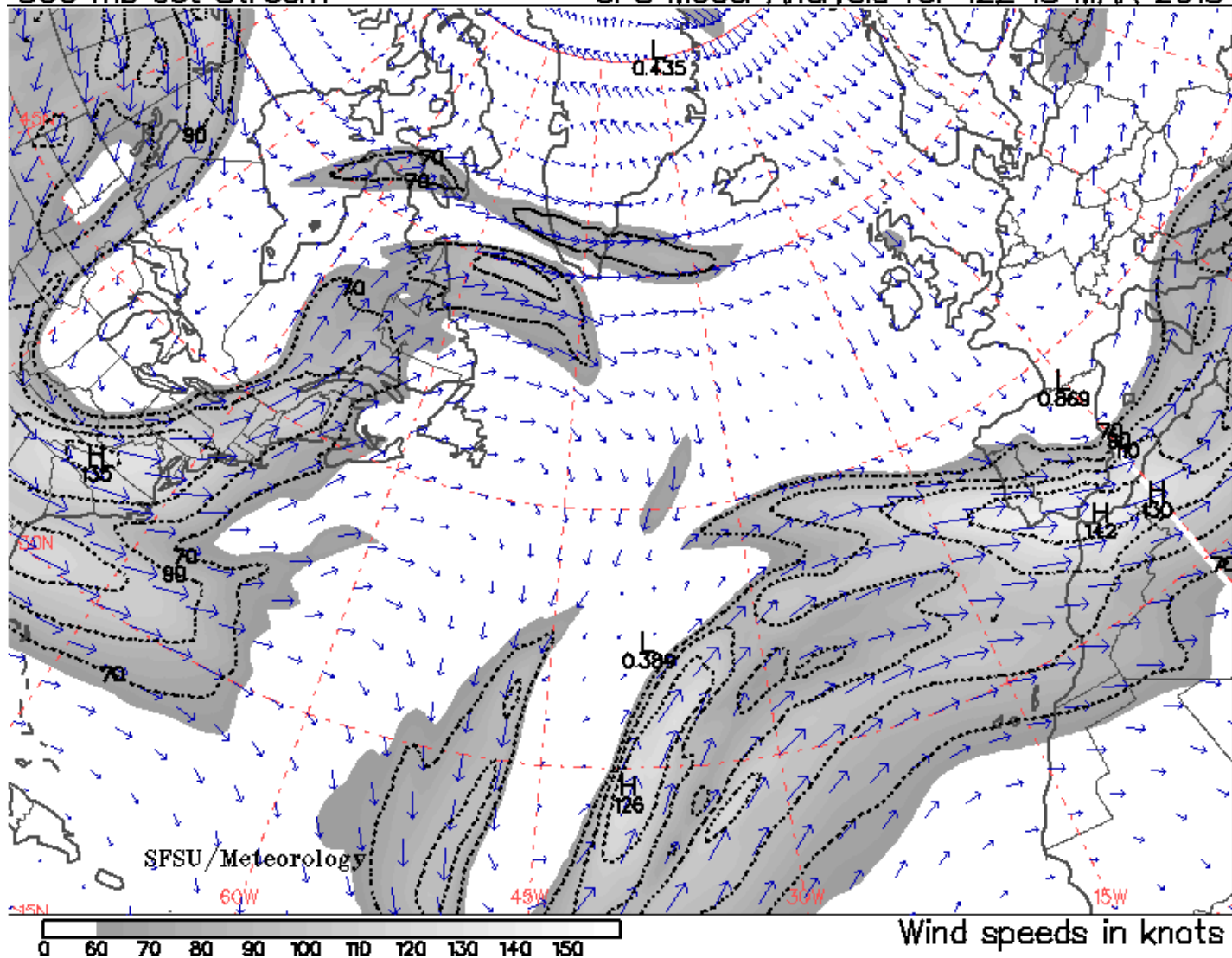
GFS Model Analysis for 12Z 12 MAR 2013





300 mb Jet Stream

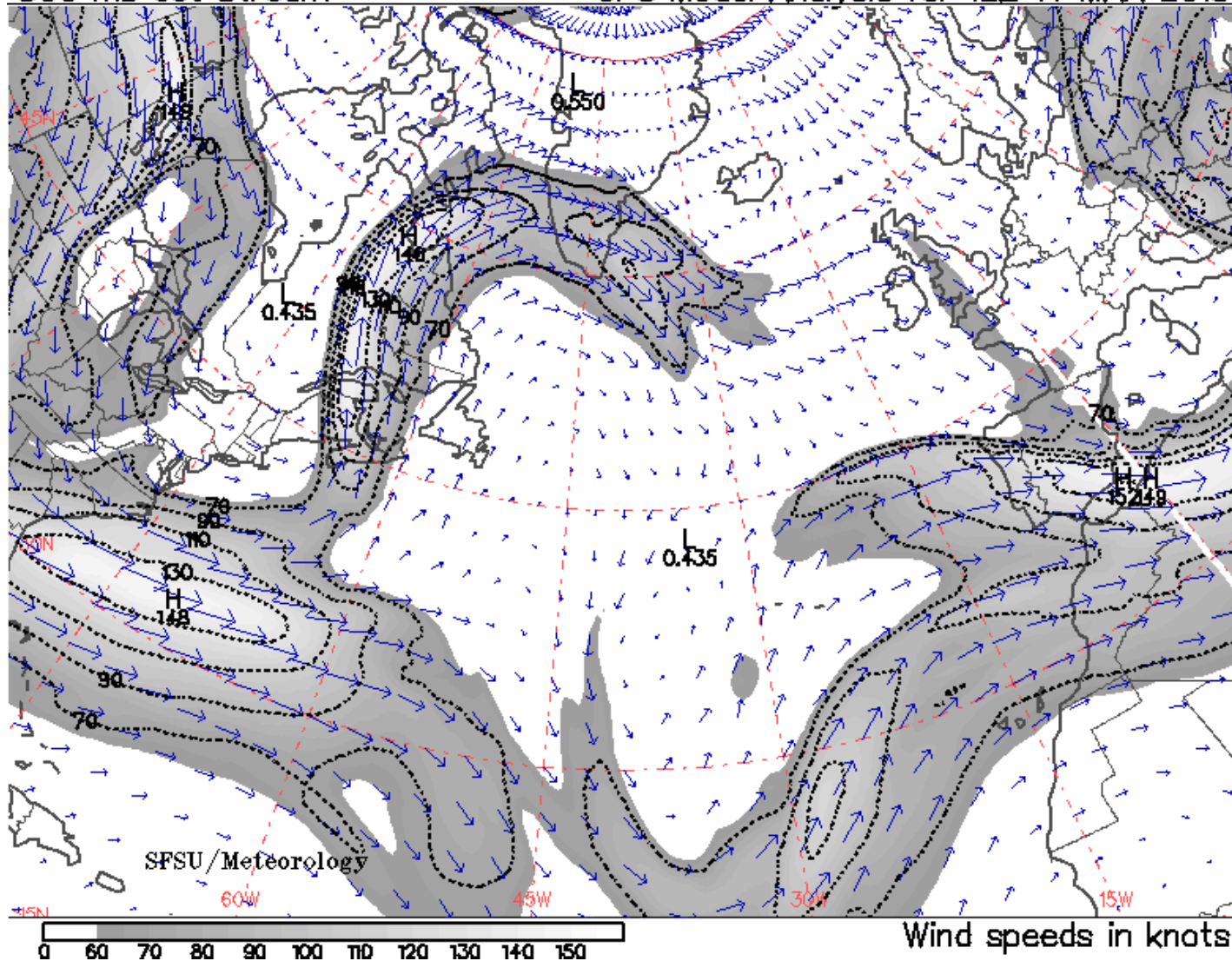
GFS Model Analysis for 12Z 13 MAR 2013





300 mb Jet Stream

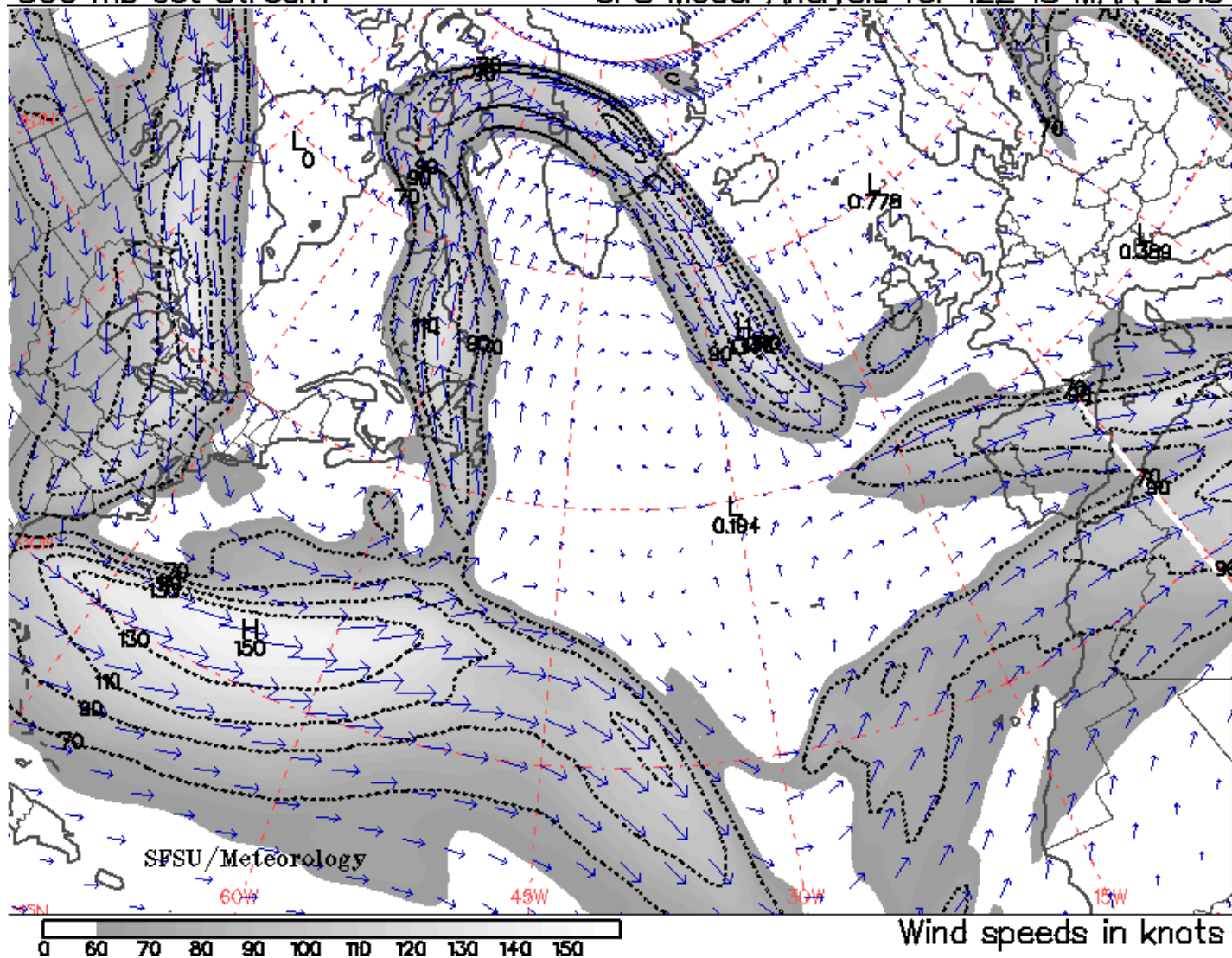
GFS Model Analysis for 12Z 14 MAR 2013





300 mb Jet Stream

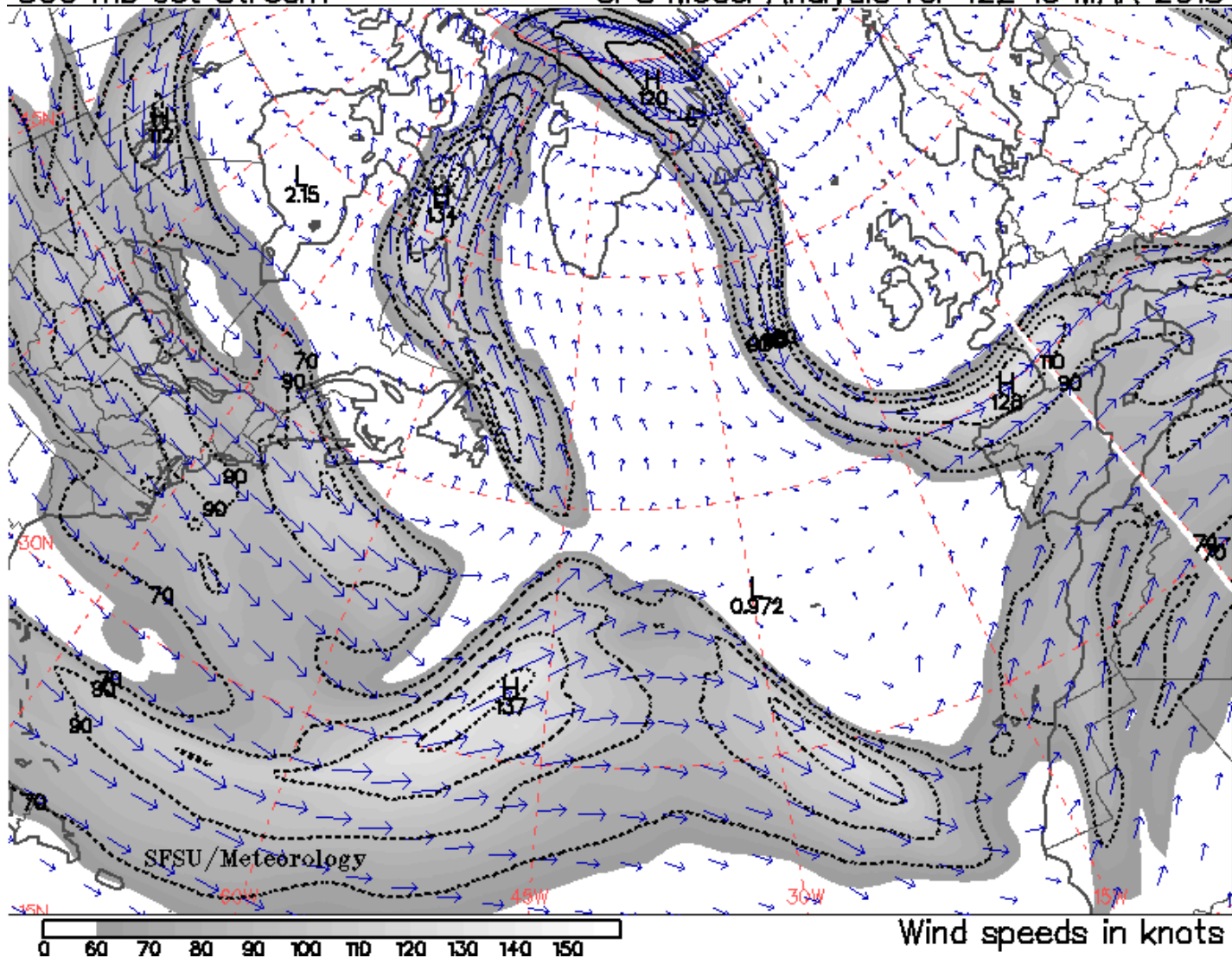
GFS Model Analysis for 12Z 15 MAR 2013





300 mb Jet Stream

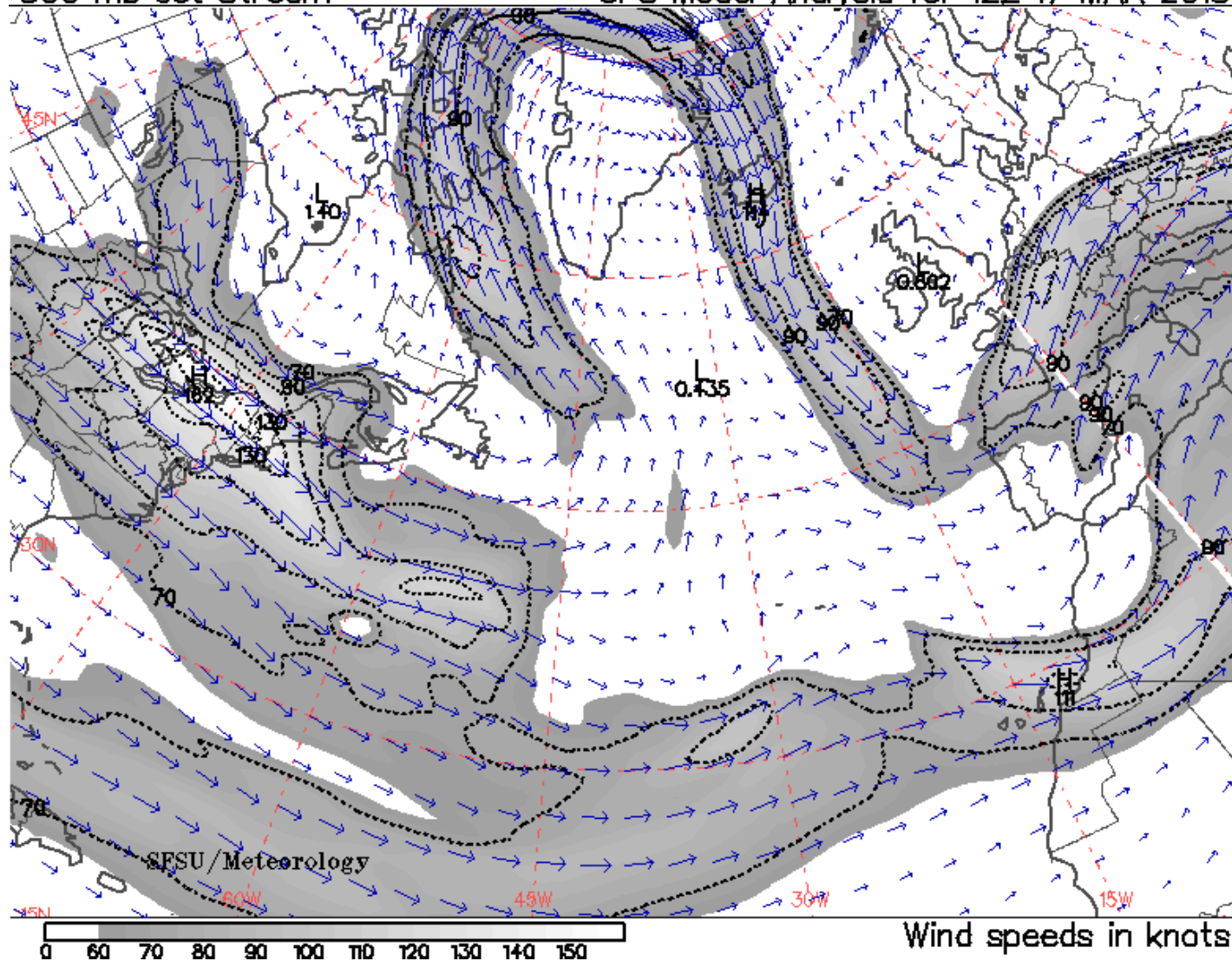
GFS Model Analysis for 12Z 16 MAR 2013





300 mb Jet Stream

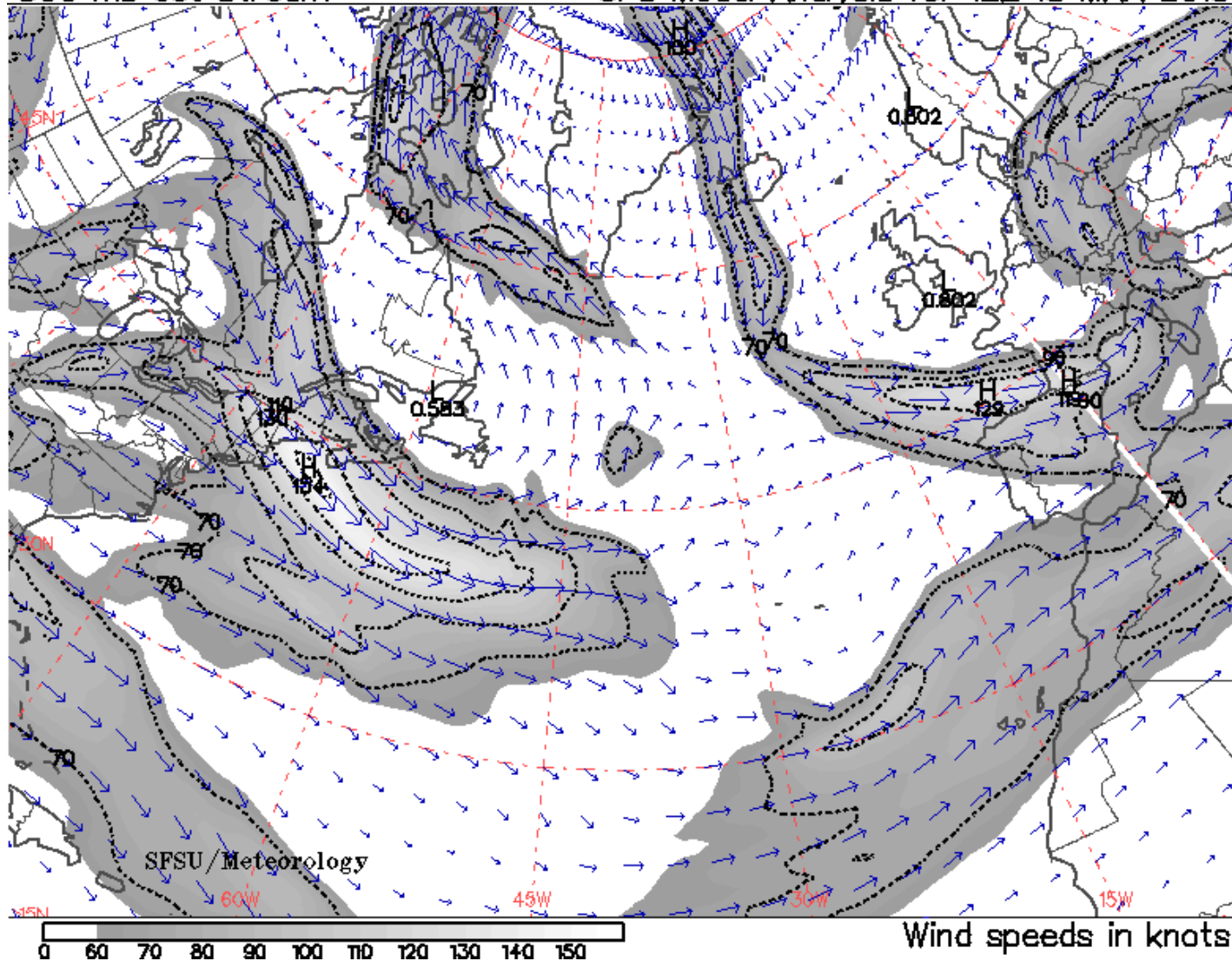
GFS Model Analysis for 12Z 17 MAR 2013





300 mb Jet Stream

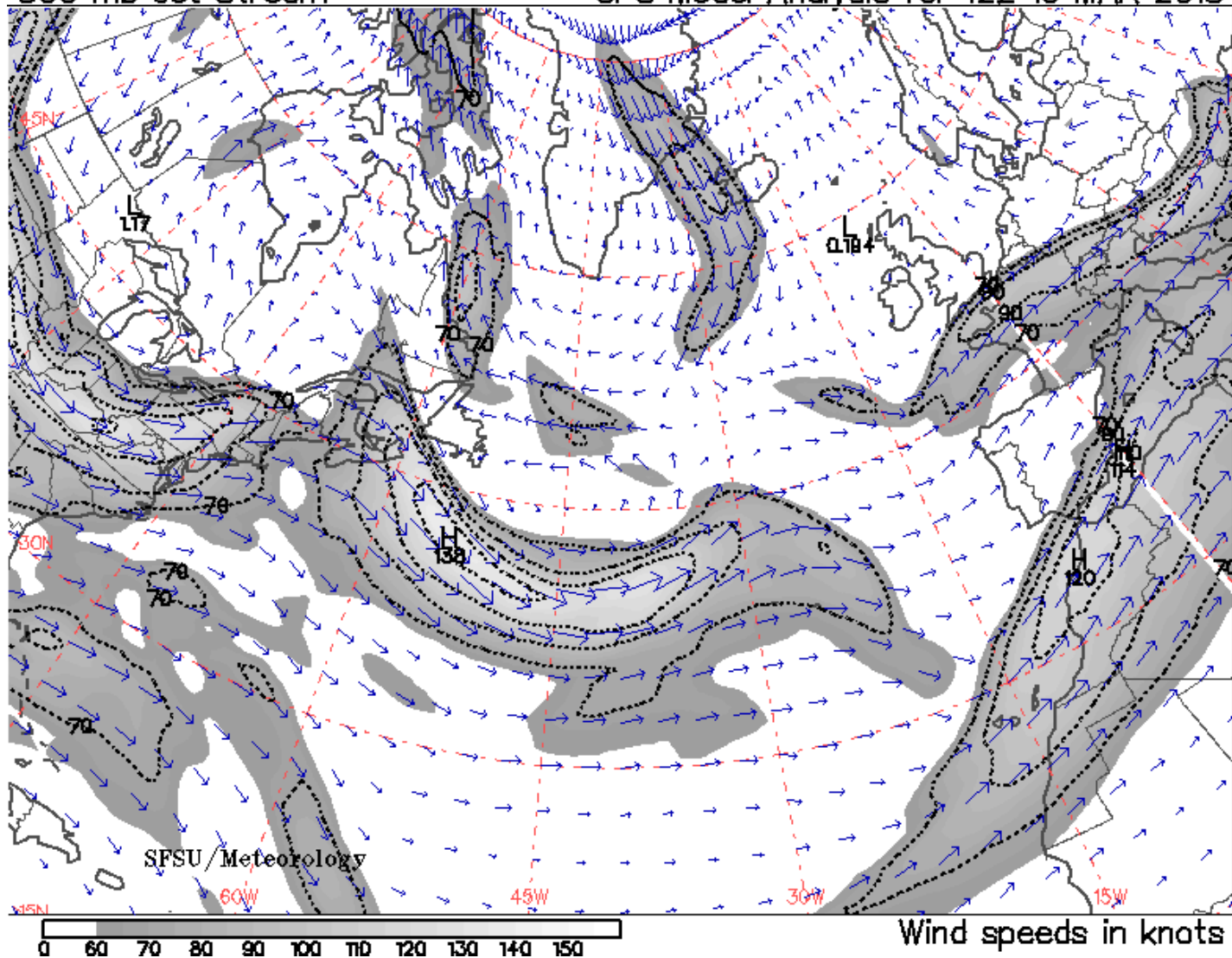
GFS Model Analysis for 12Z 18 MAR 2013





300 mb Jet Stream

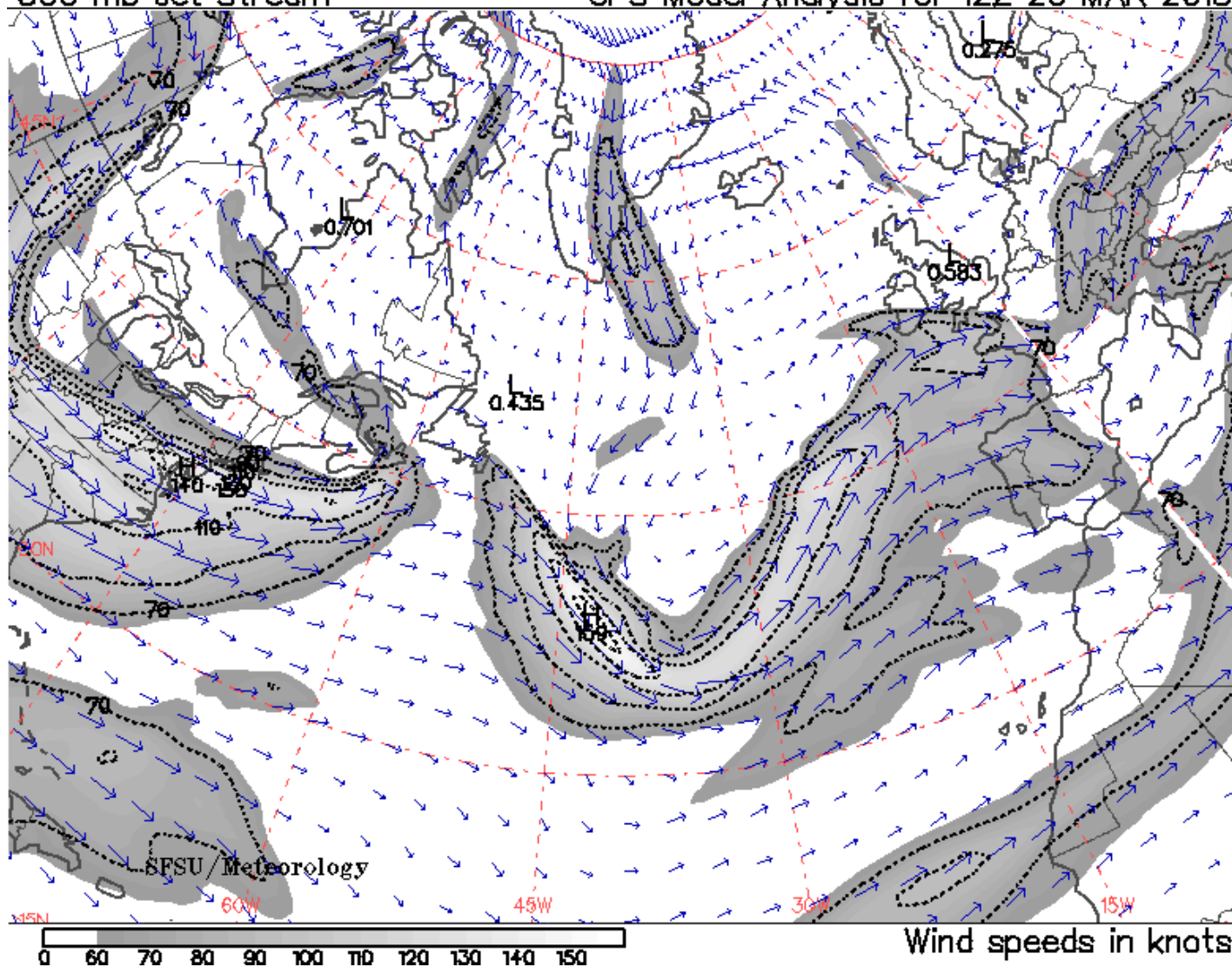
GFS Model Analysis for 12Z 19 MAR 2013

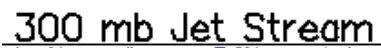




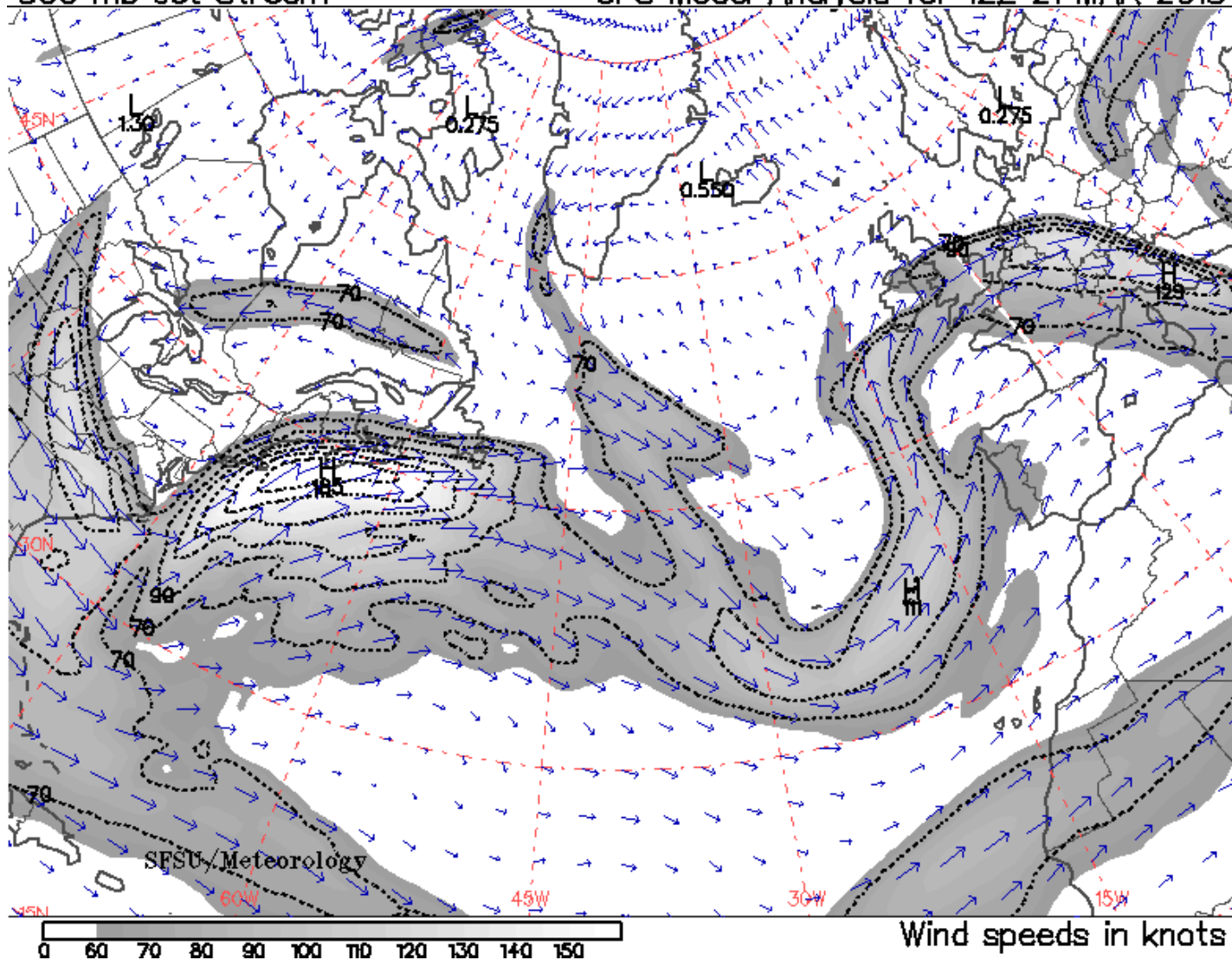
300 mb Jet Stream

GFS Model Analysis for 12Z 20 MAR 2013





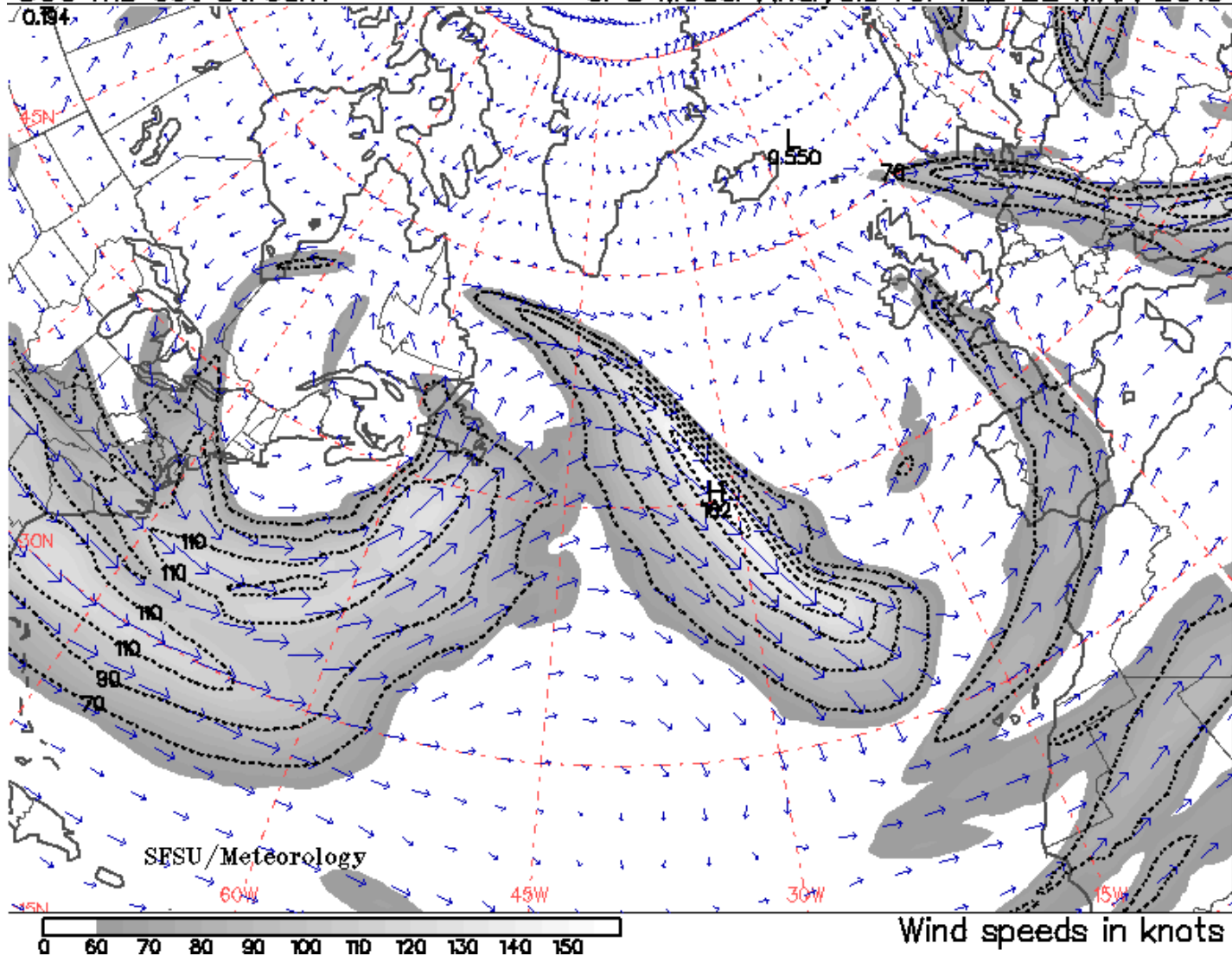
GFS Model Analysis for 12Z 21 MAR 2013





300 mb Jet Stream

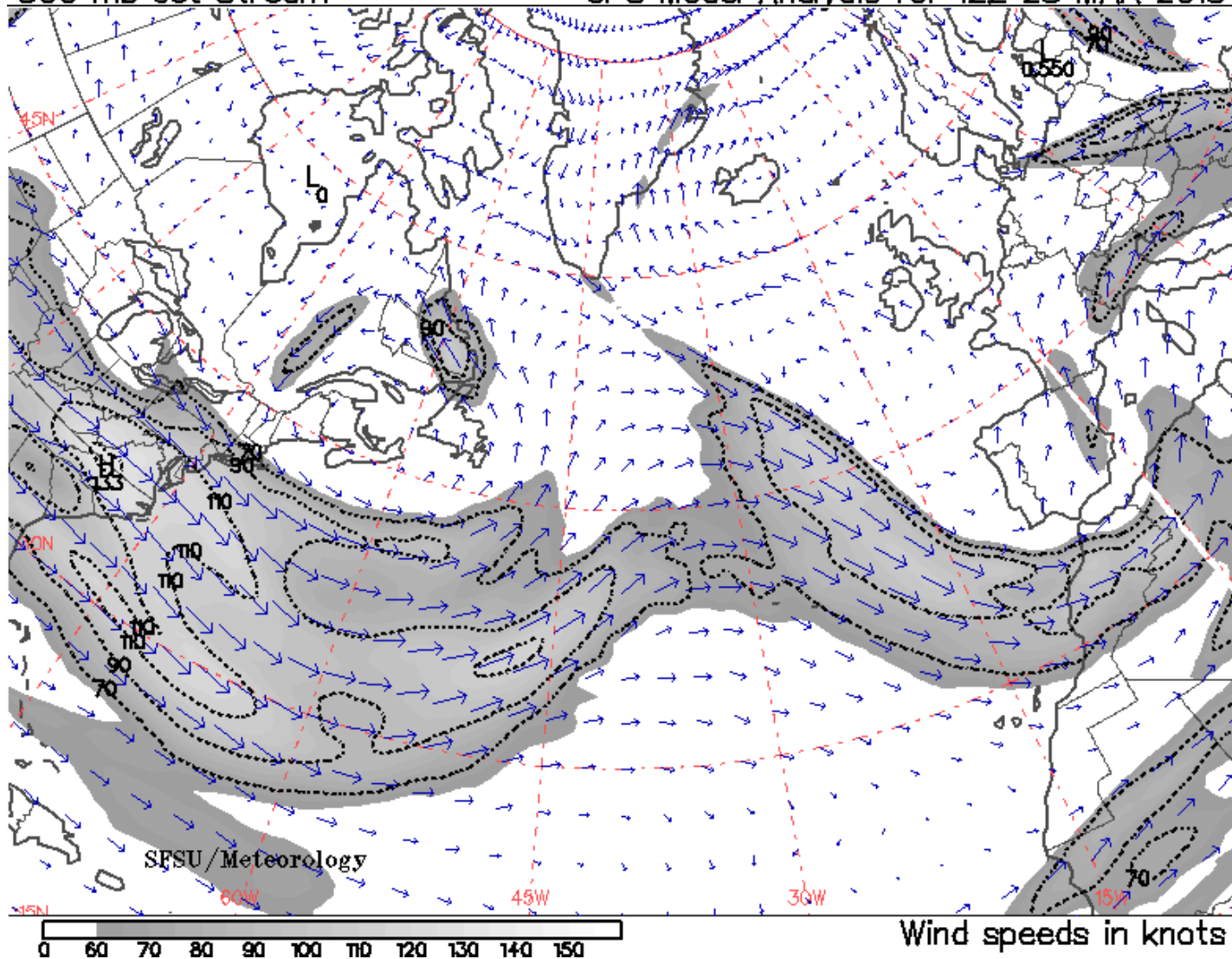
GFS Model Analysis for 12Z 22 MAR 2013





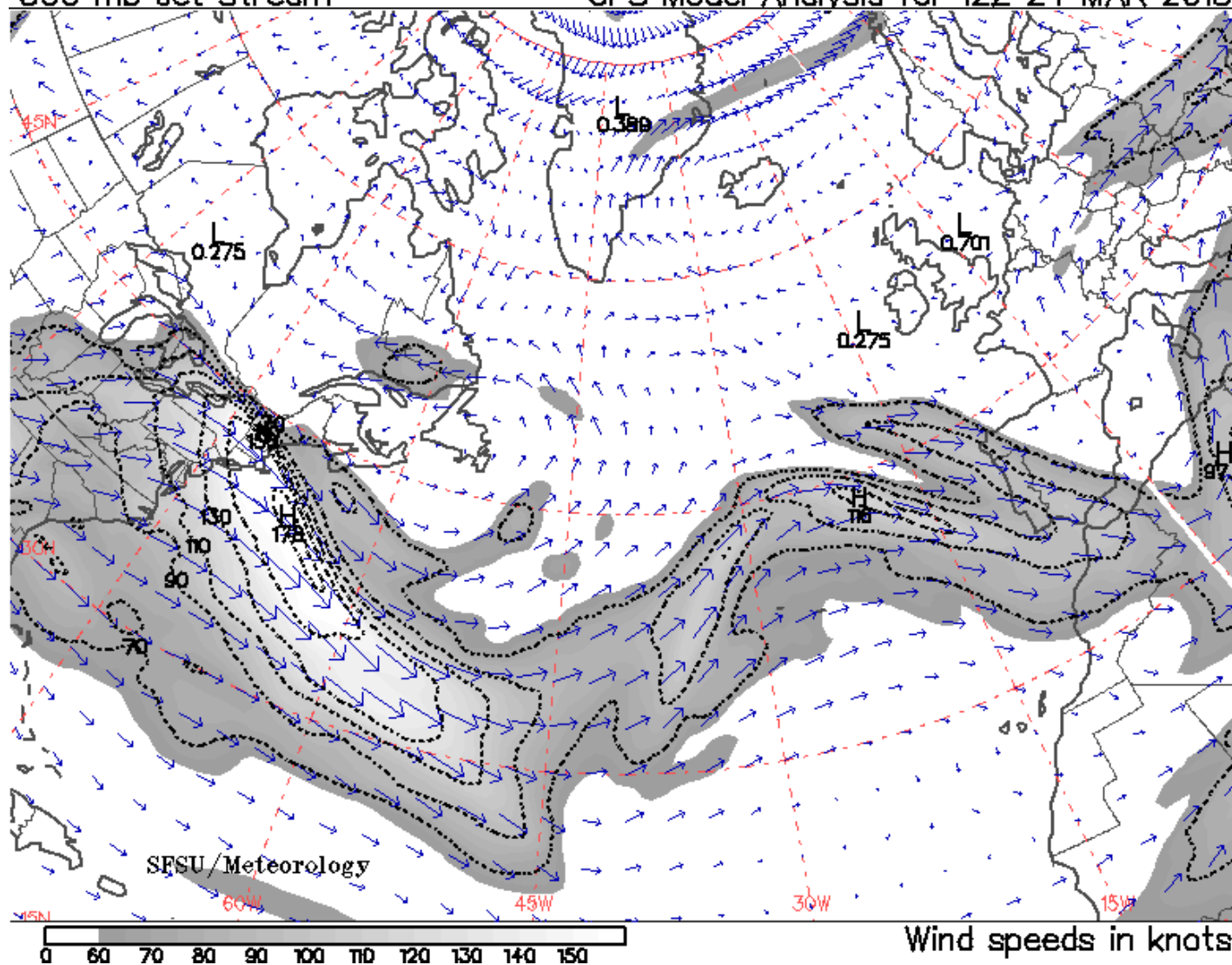
300 mb Jet Stream

GFS Model Analysis for 12Z 23 MAR 2013





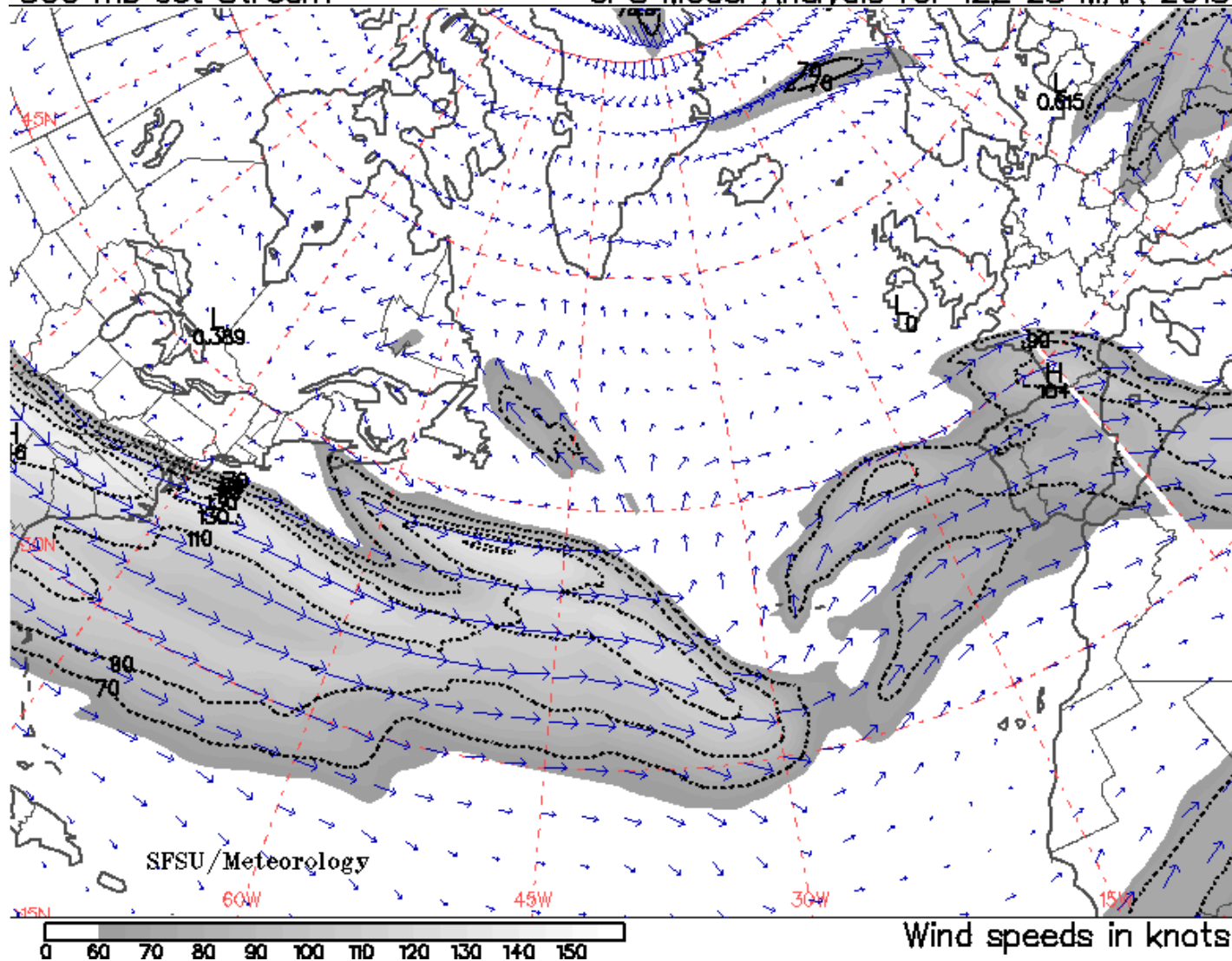
GFS Model Analysis for 12Z 24 MAR 2013





300 mb Jet Stream

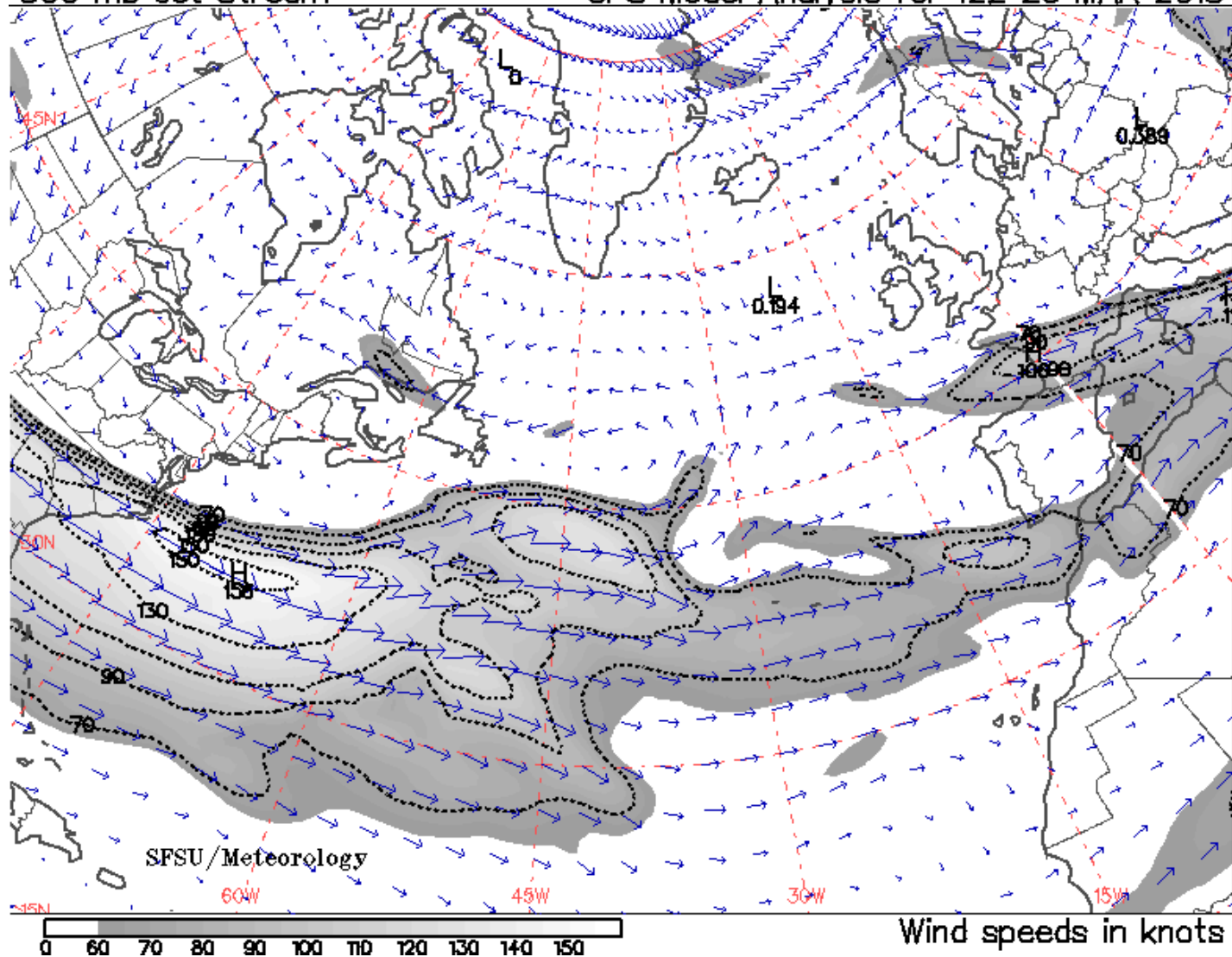
GFS Model Analysis for 12Z 25 MAR 2013





300 mb Jet Stream

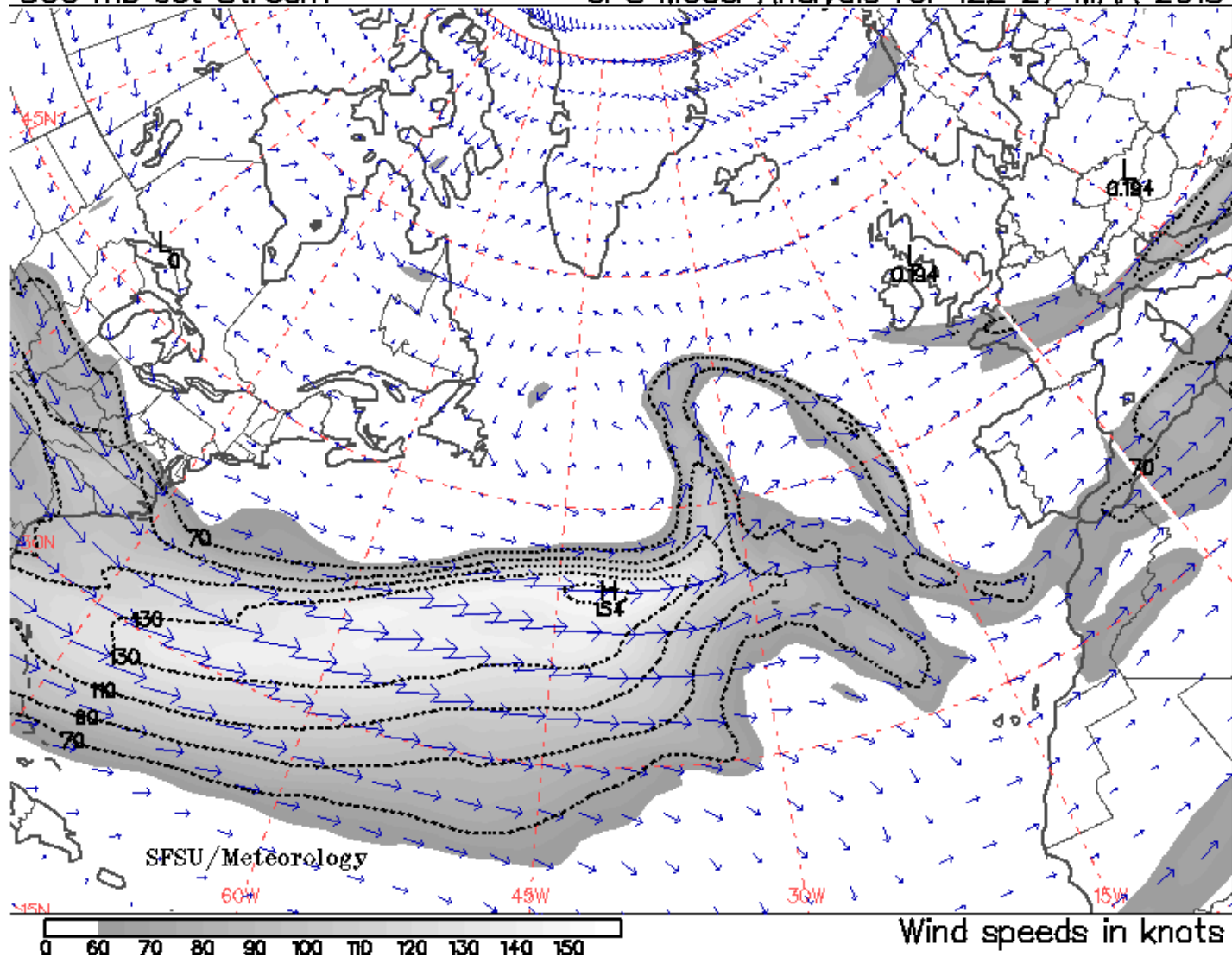
GFS Model Analysis for 12Z 26 MAR 2013





300 mb Jet Stream

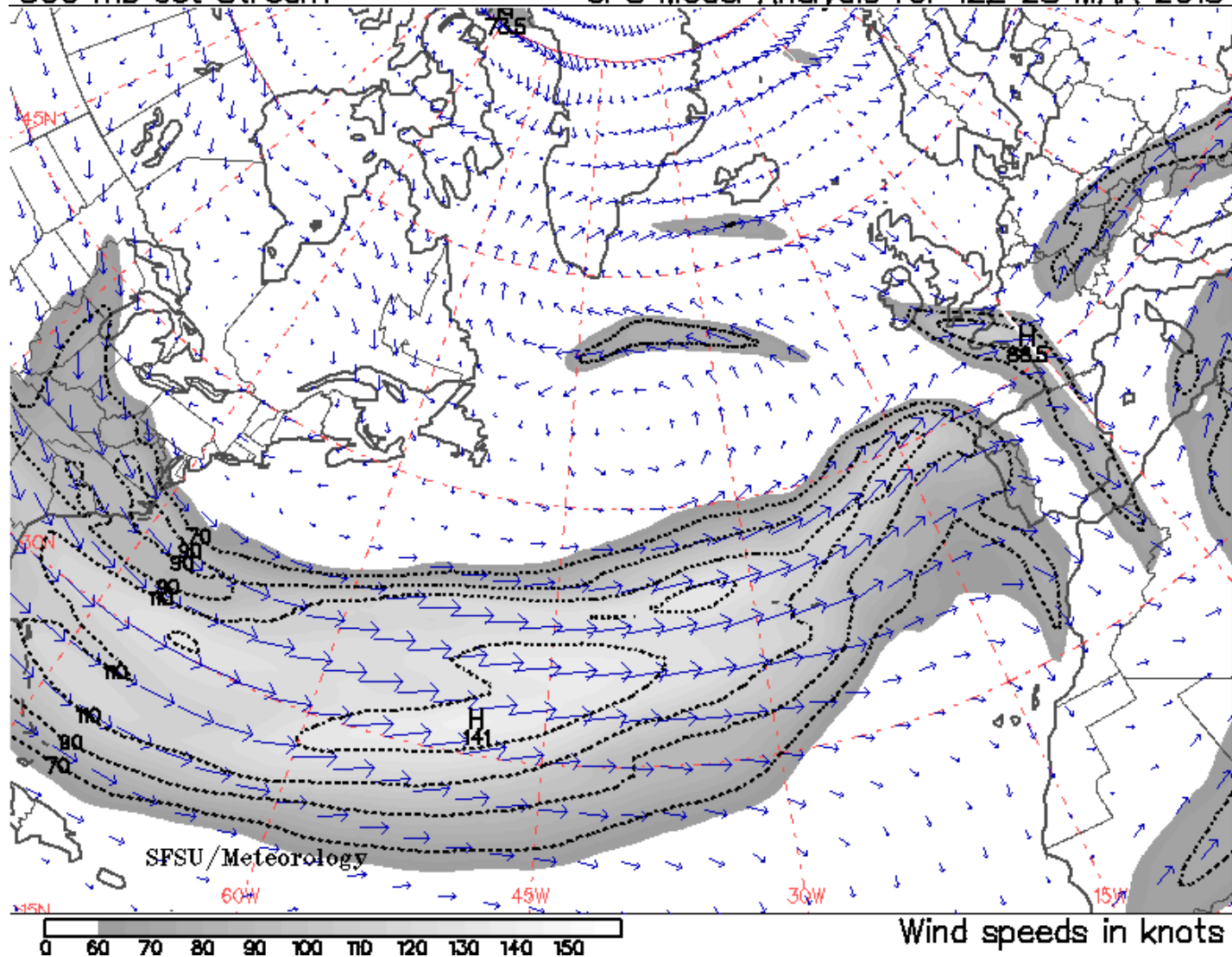
GFS Model Analysis for 12Z 27 MAR 2013





300 mb Jet Stream

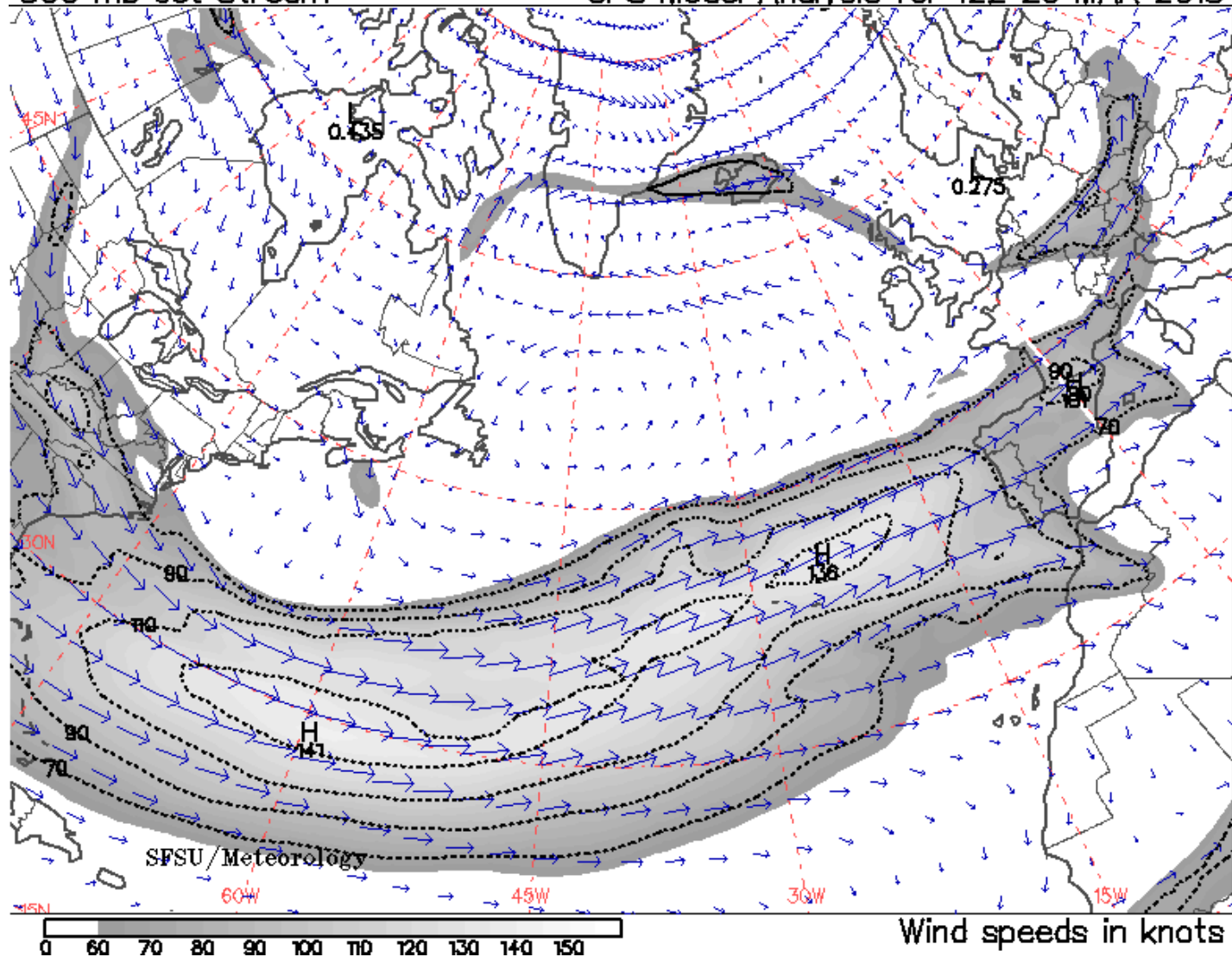
GFS Model Analysis for 12Z 28 MAR 2013





300 mb Jet Stream

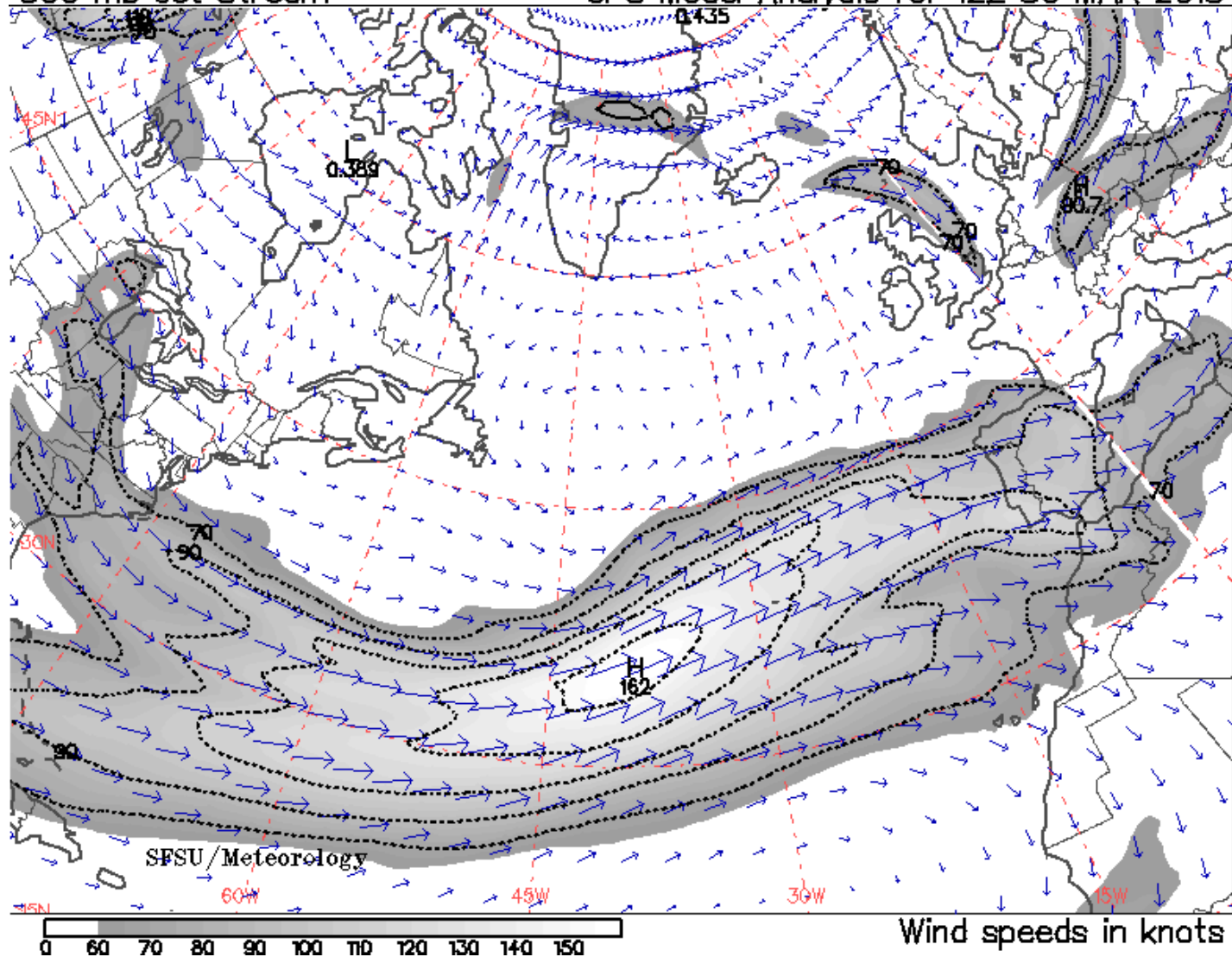
GFS Model Analysis for 12Z 29 MAR 2013





300 mb Jet Stream

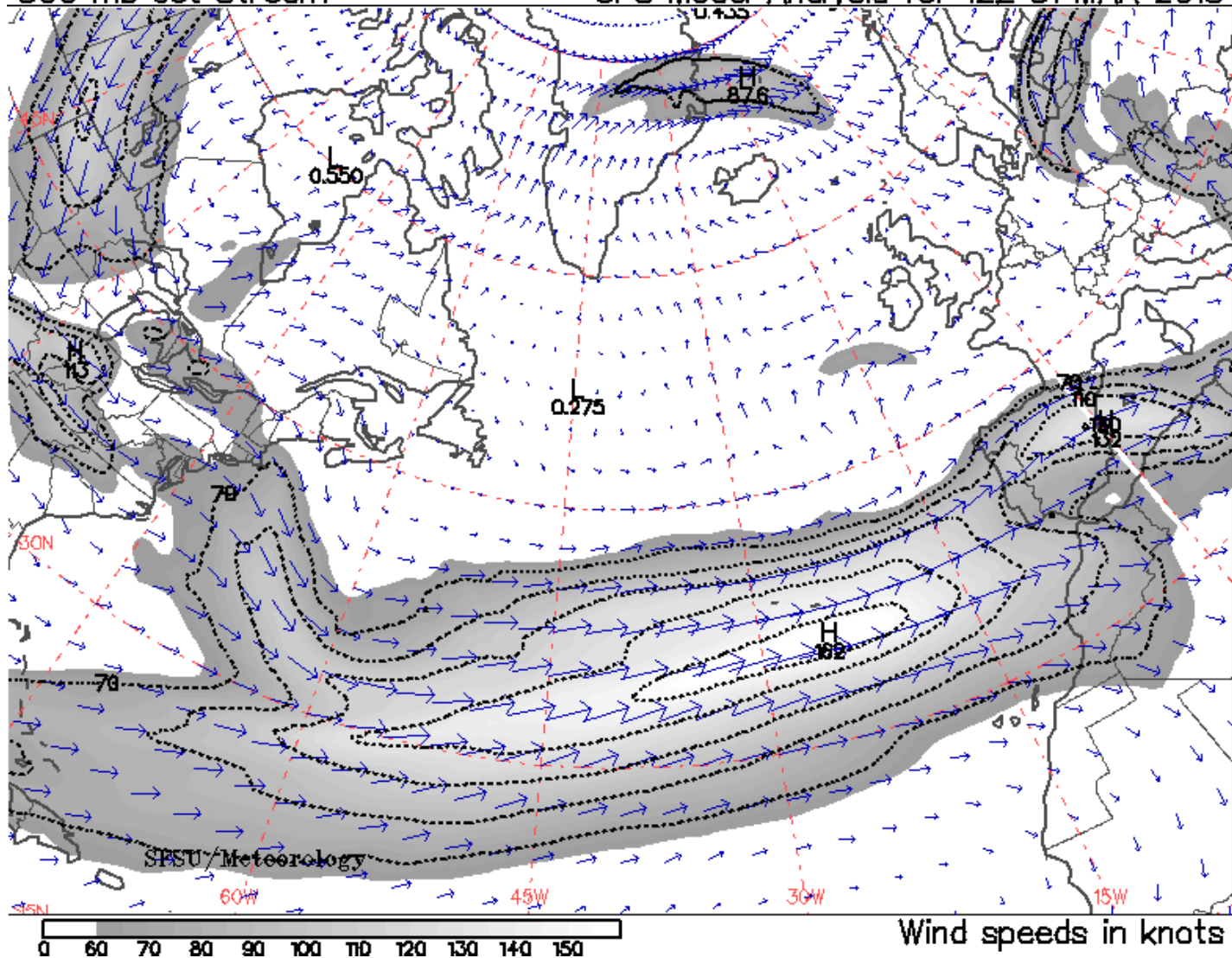
GFS Model Analysis for 12Z 30 MAR 2013





300 mb Jet Stream

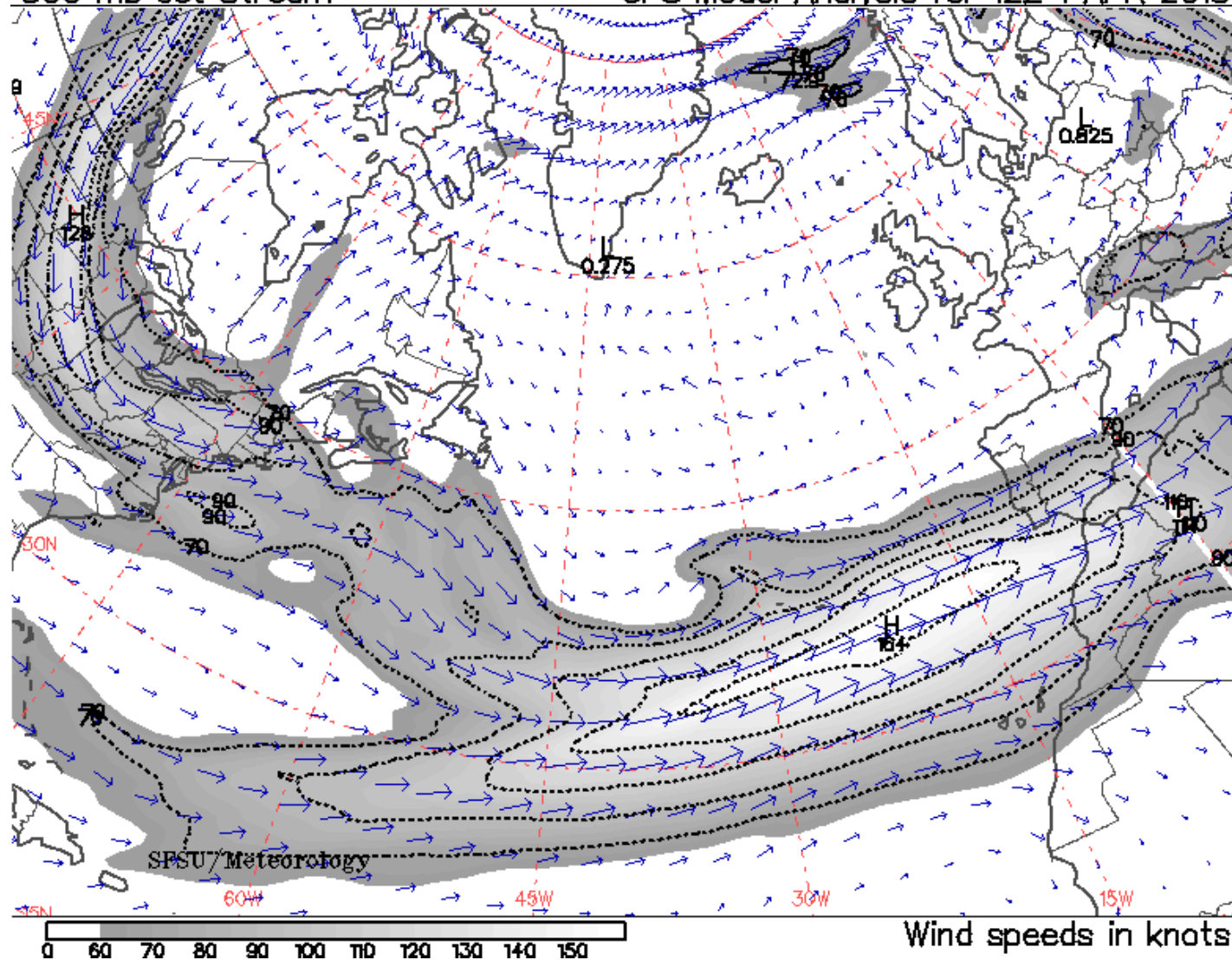
GFS Model Analysis for 12Z 31 MAR 2013





300 mb Jet Stream

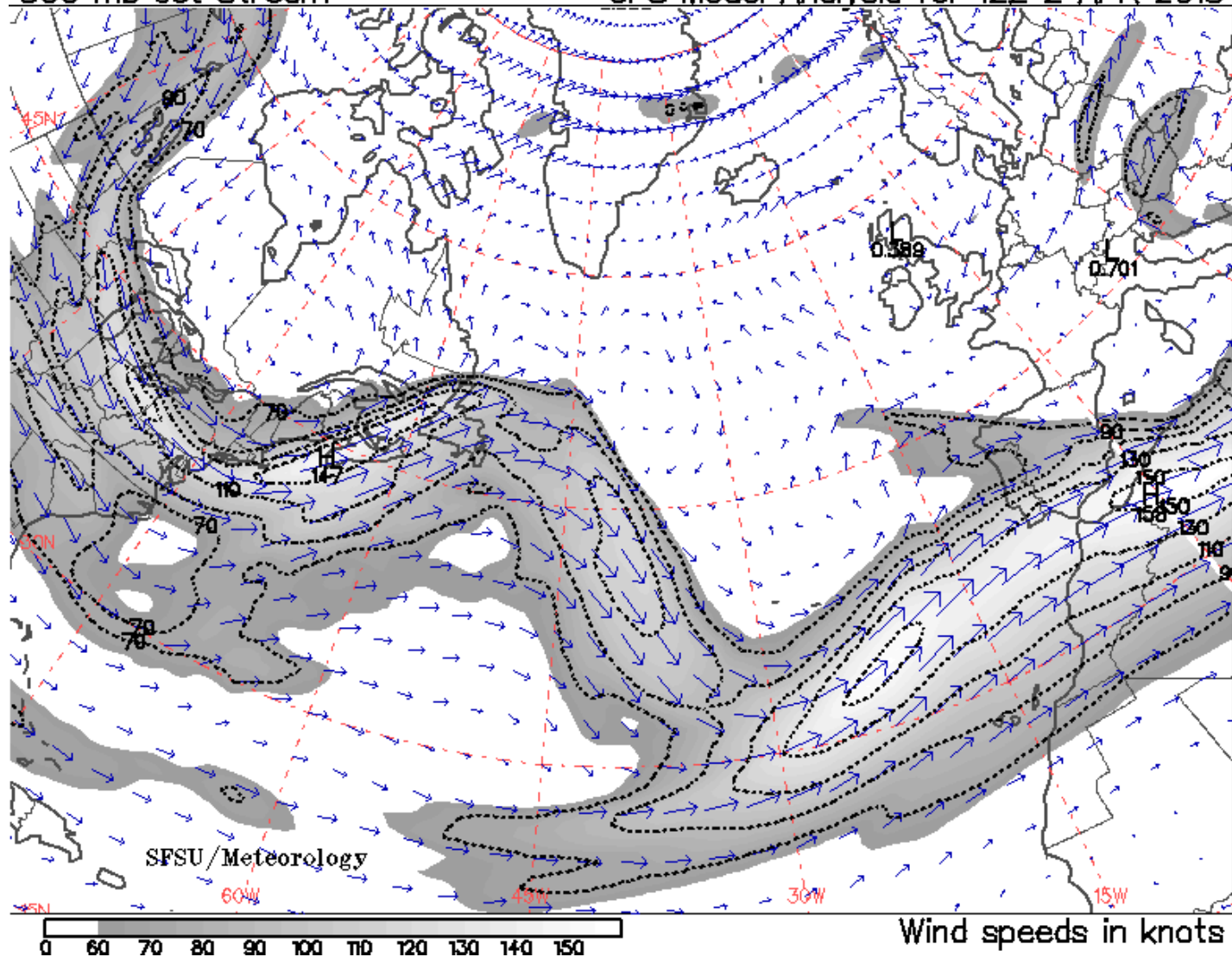
GFS Model Analysis for 12Z 1 APR 2013





300 mb Jet Stream

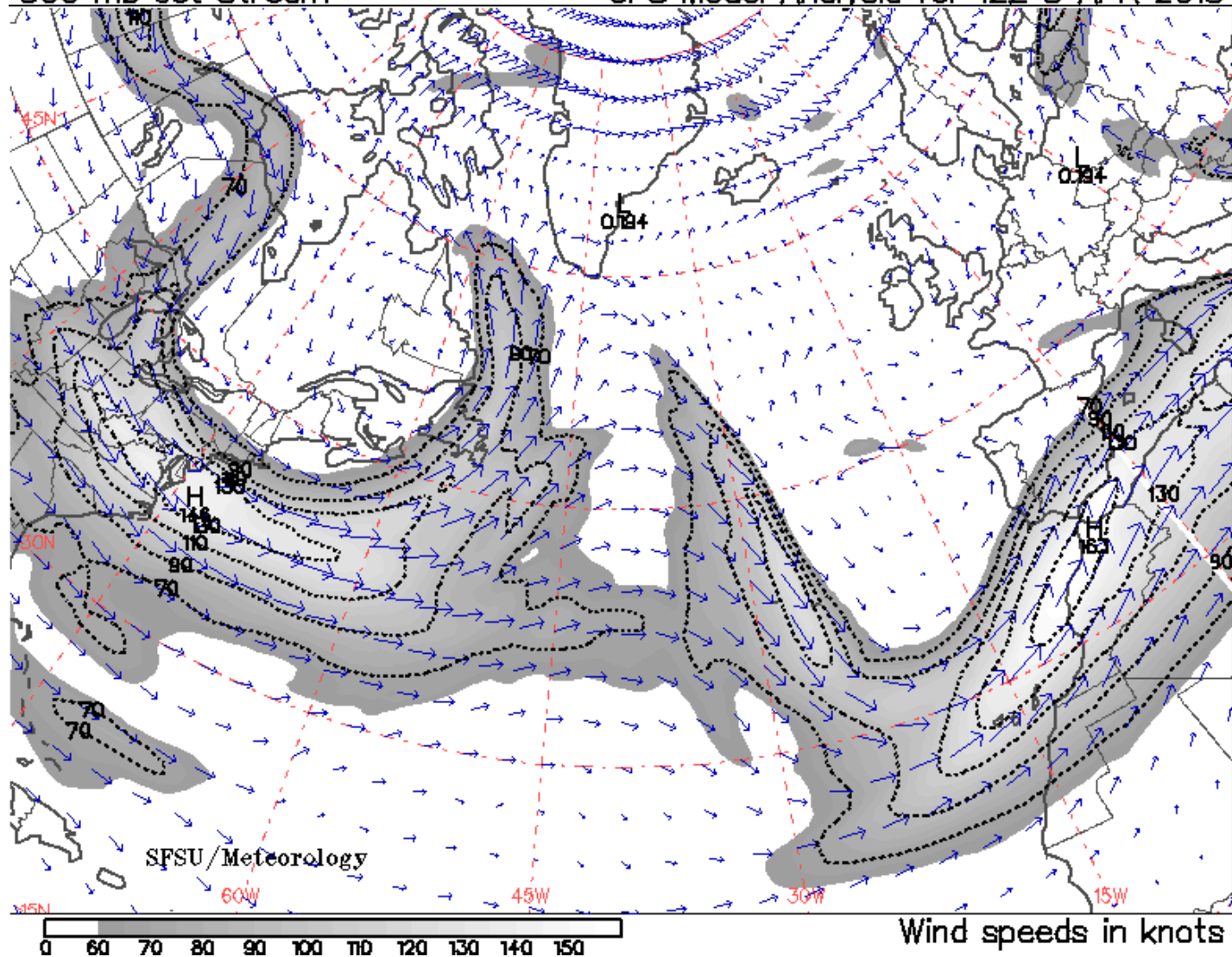
GFS Model Analysis for 12Z 2 APR 2013





300 mb Jet Stream

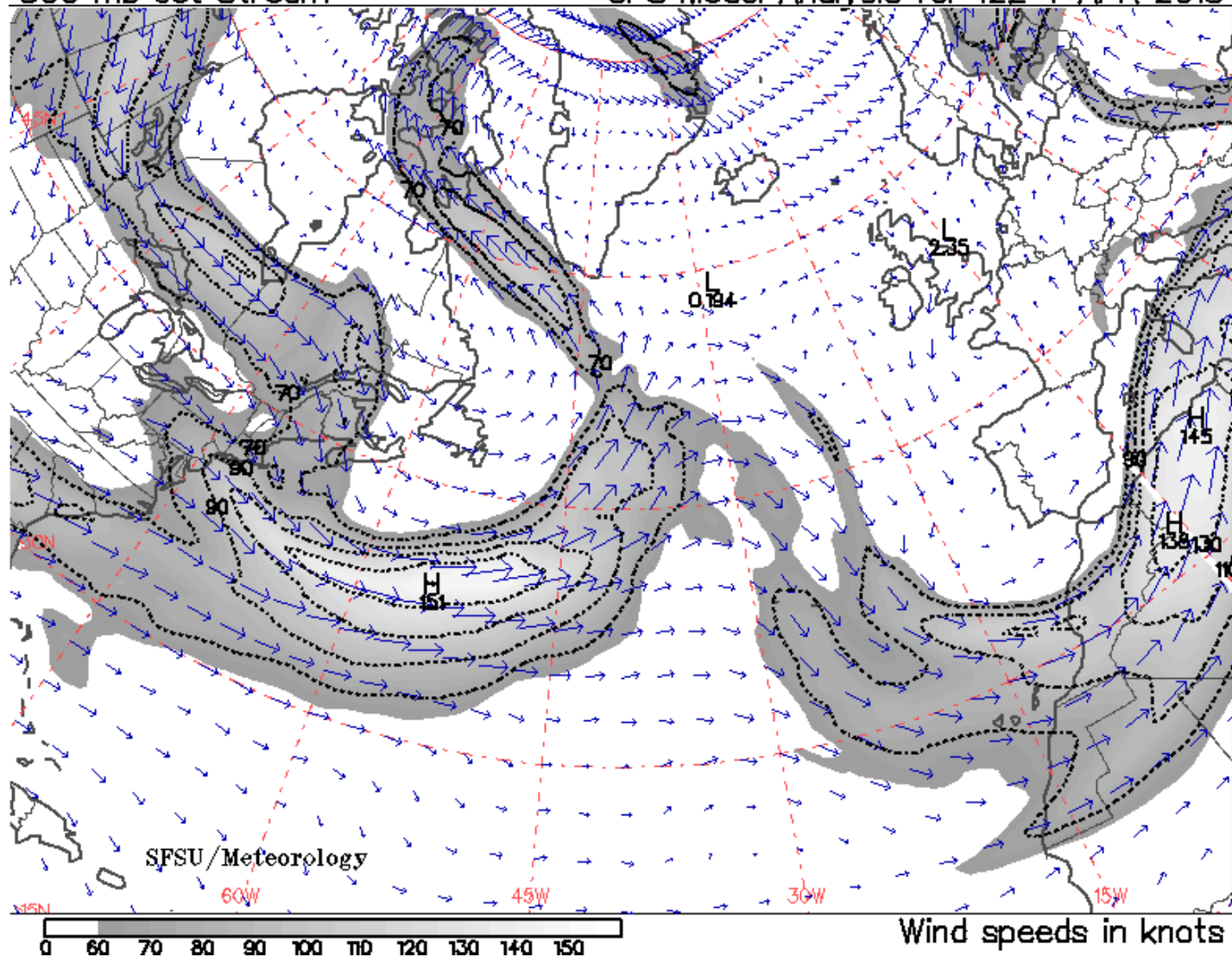
GFS Model Analysis for 12Z 3 APR 2013





300 mb Jet Stream

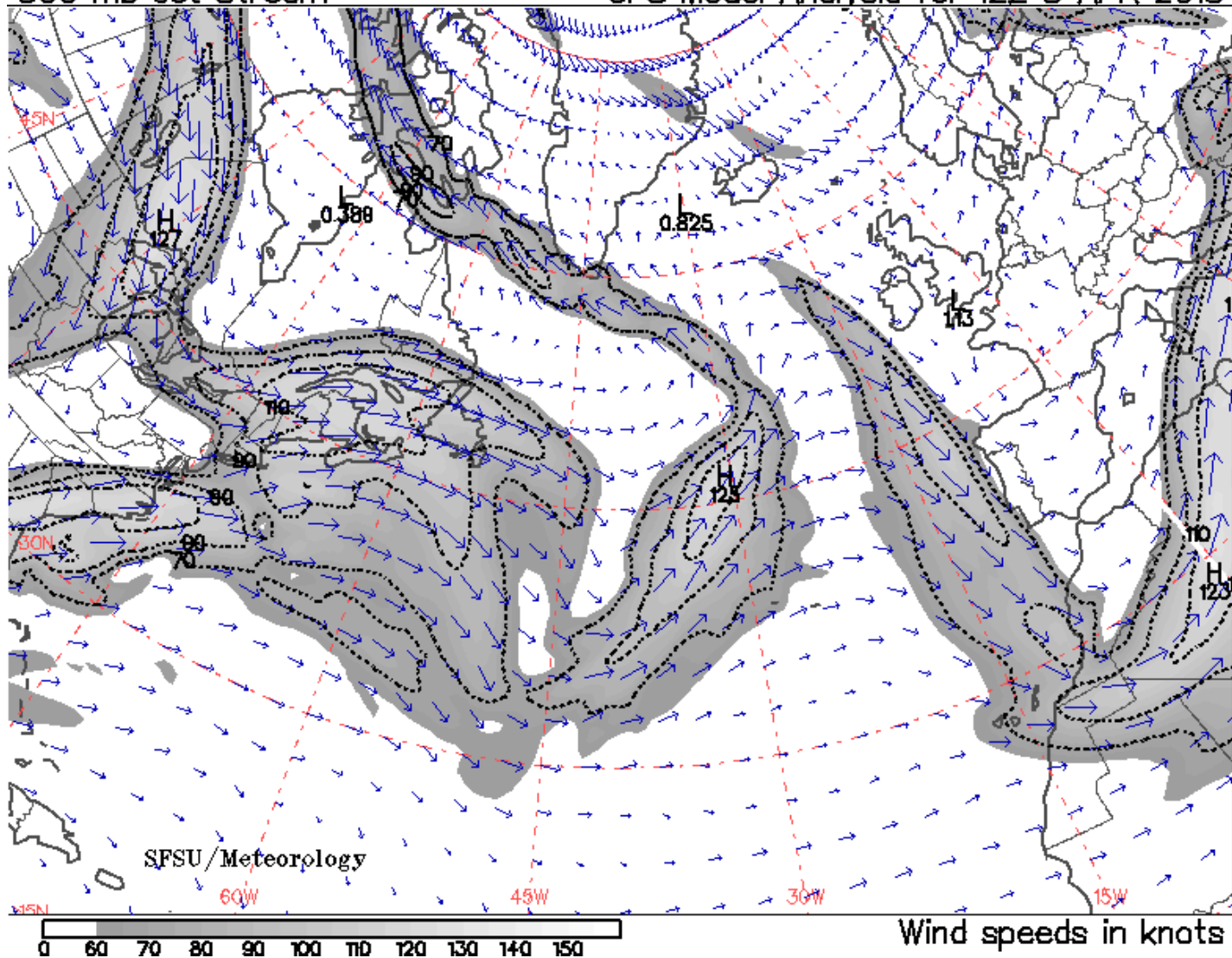
GFS Model Analysis for 12Z 4 APR 2013





300 mb Jet Stream

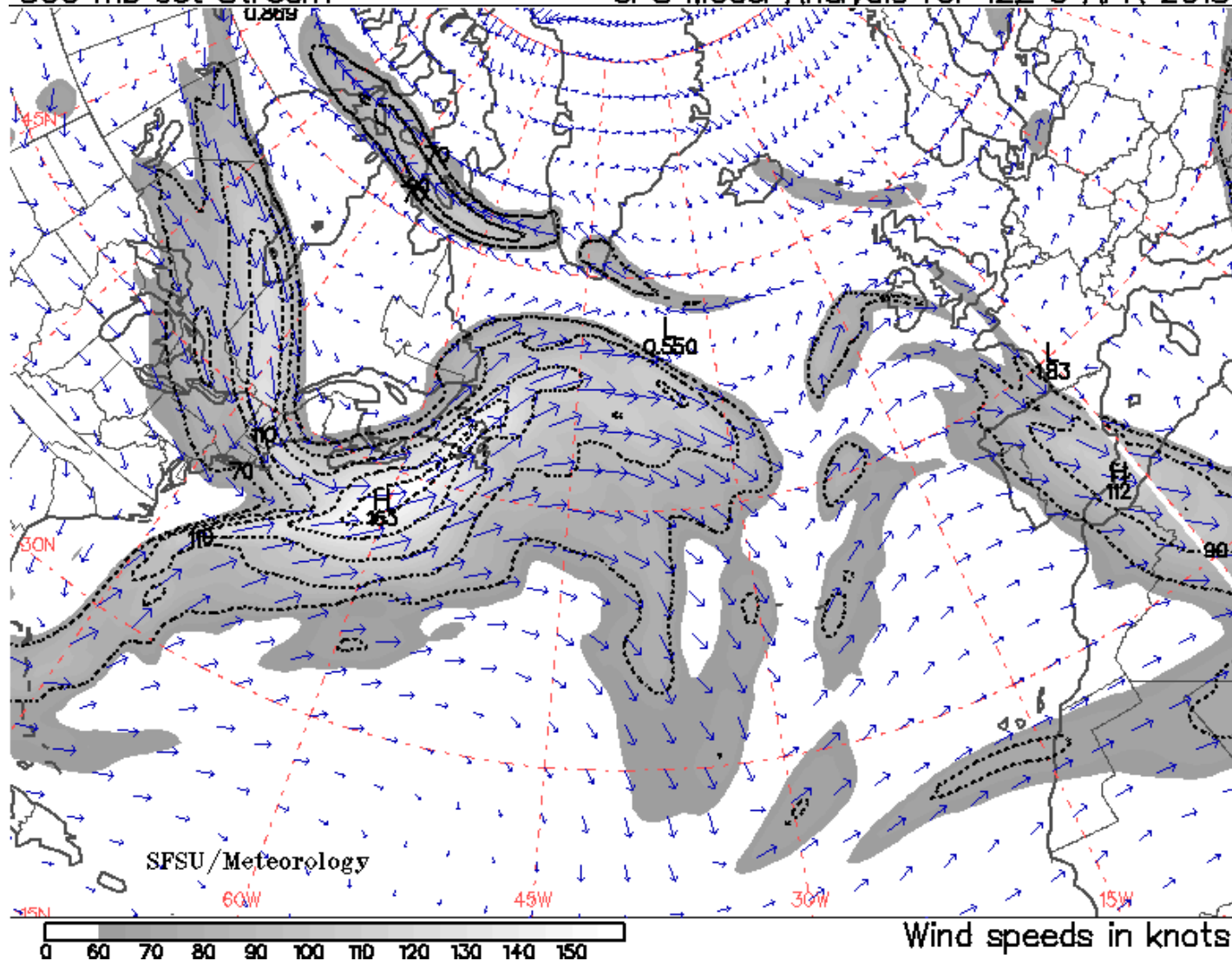
GFS Model Analysis for 12Z 5 APR 2013





300 mb Jet Stream

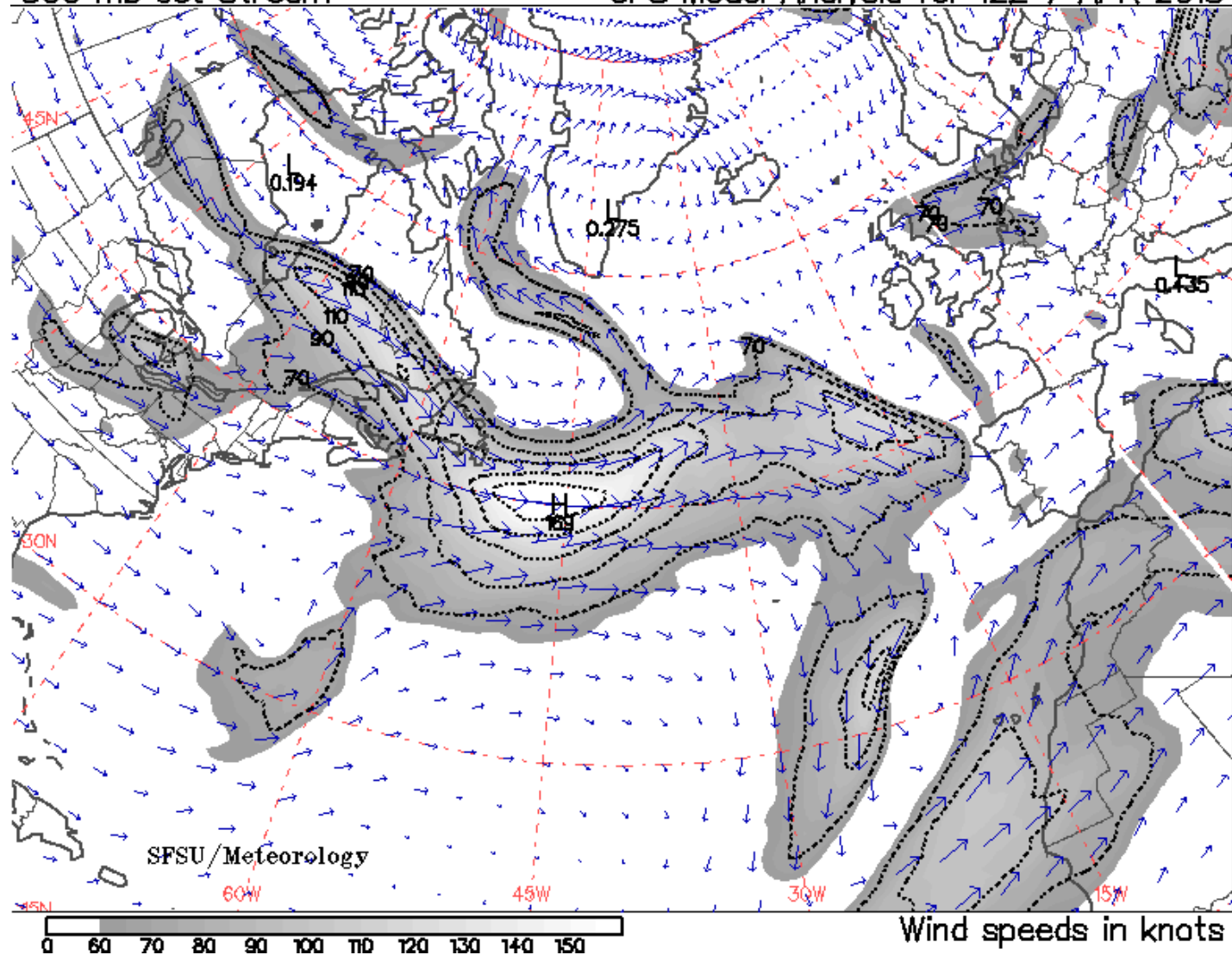
GFS Model Analysis for 12Z 6 APR 2013





300 mb Jet Stream

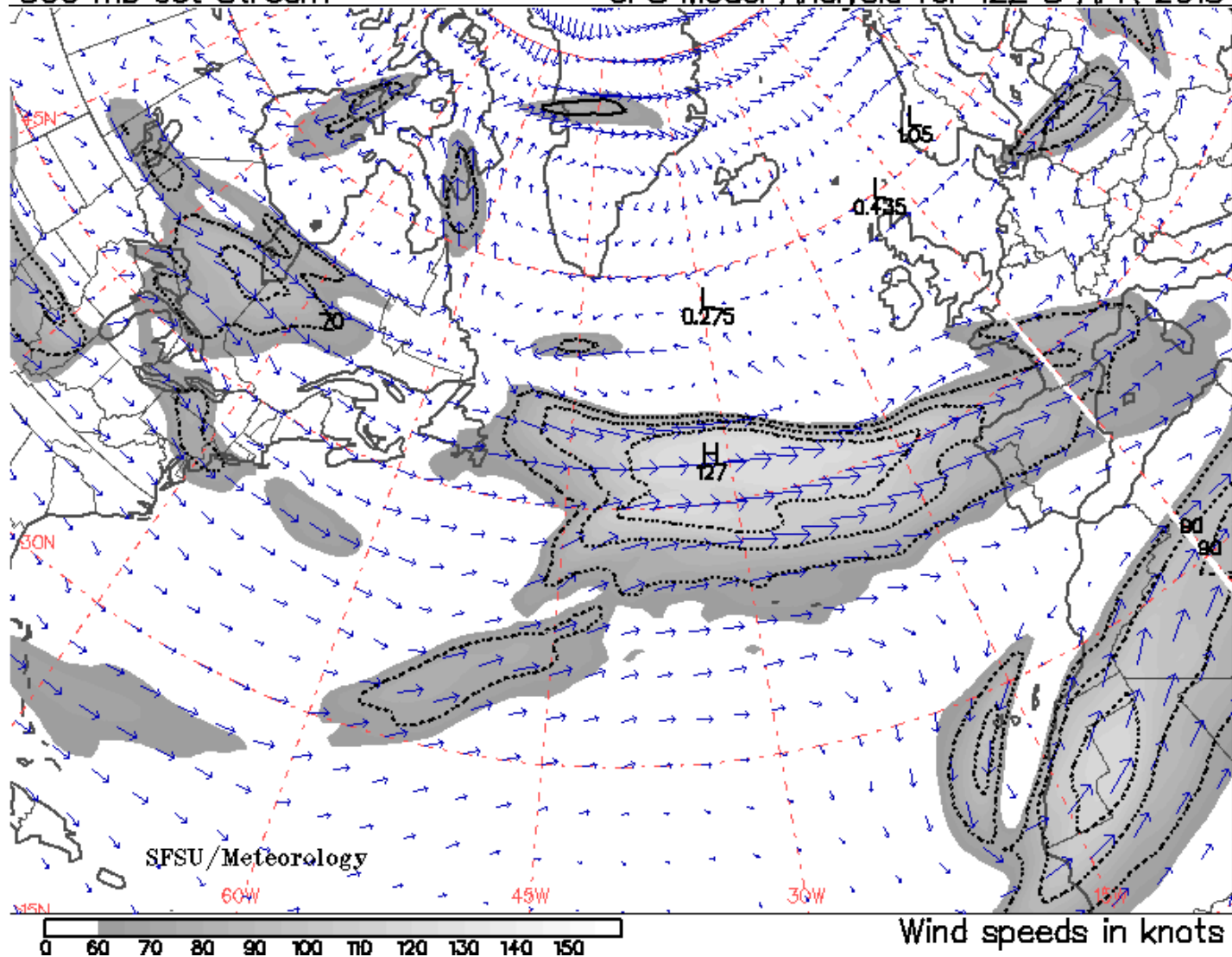
GFS Model Analysis for 12Z 7 APR 2013





300 mb Jet Stream

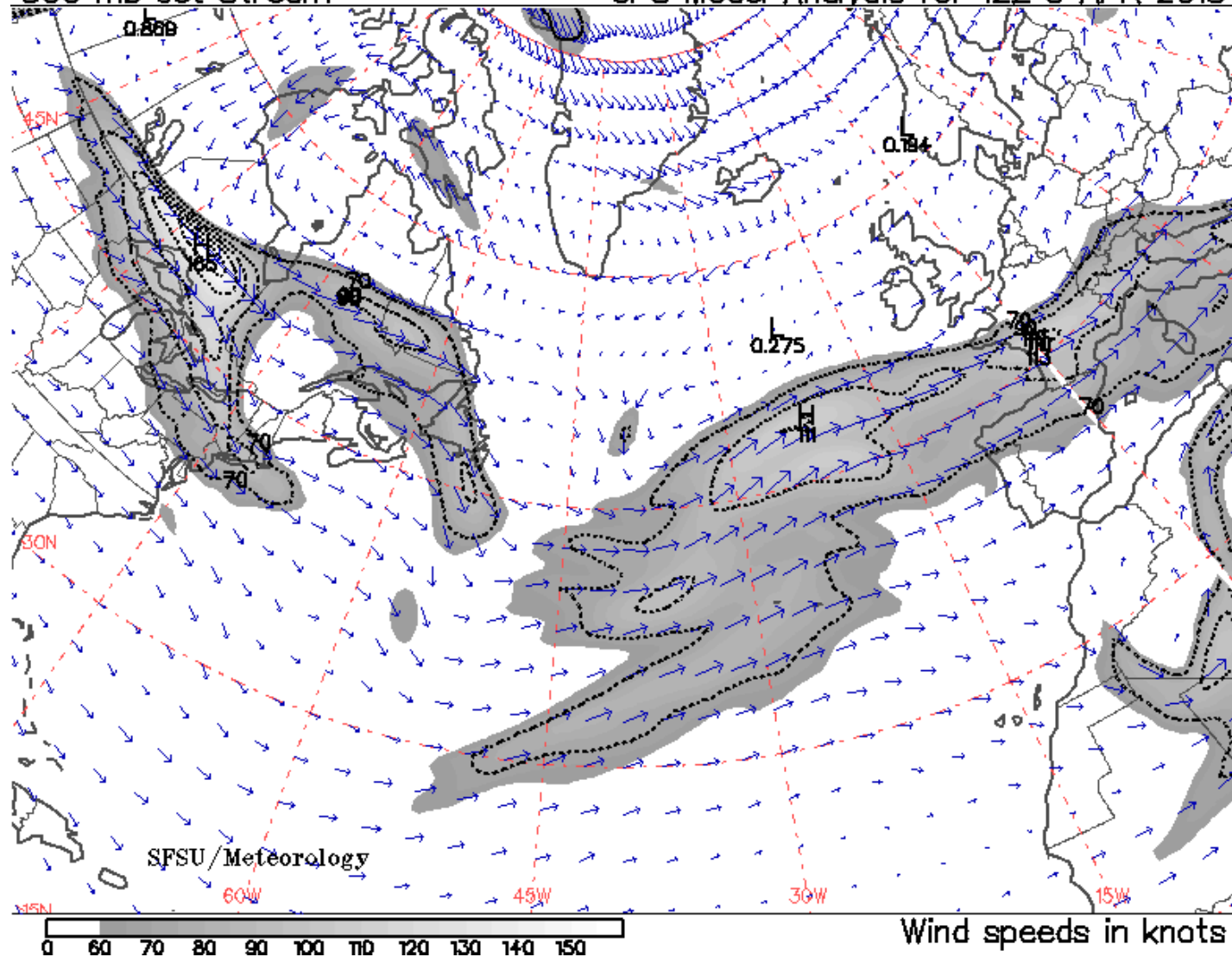
GFS Model Analysis for 12Z 8 APR 2013





300 mb Jet Stream

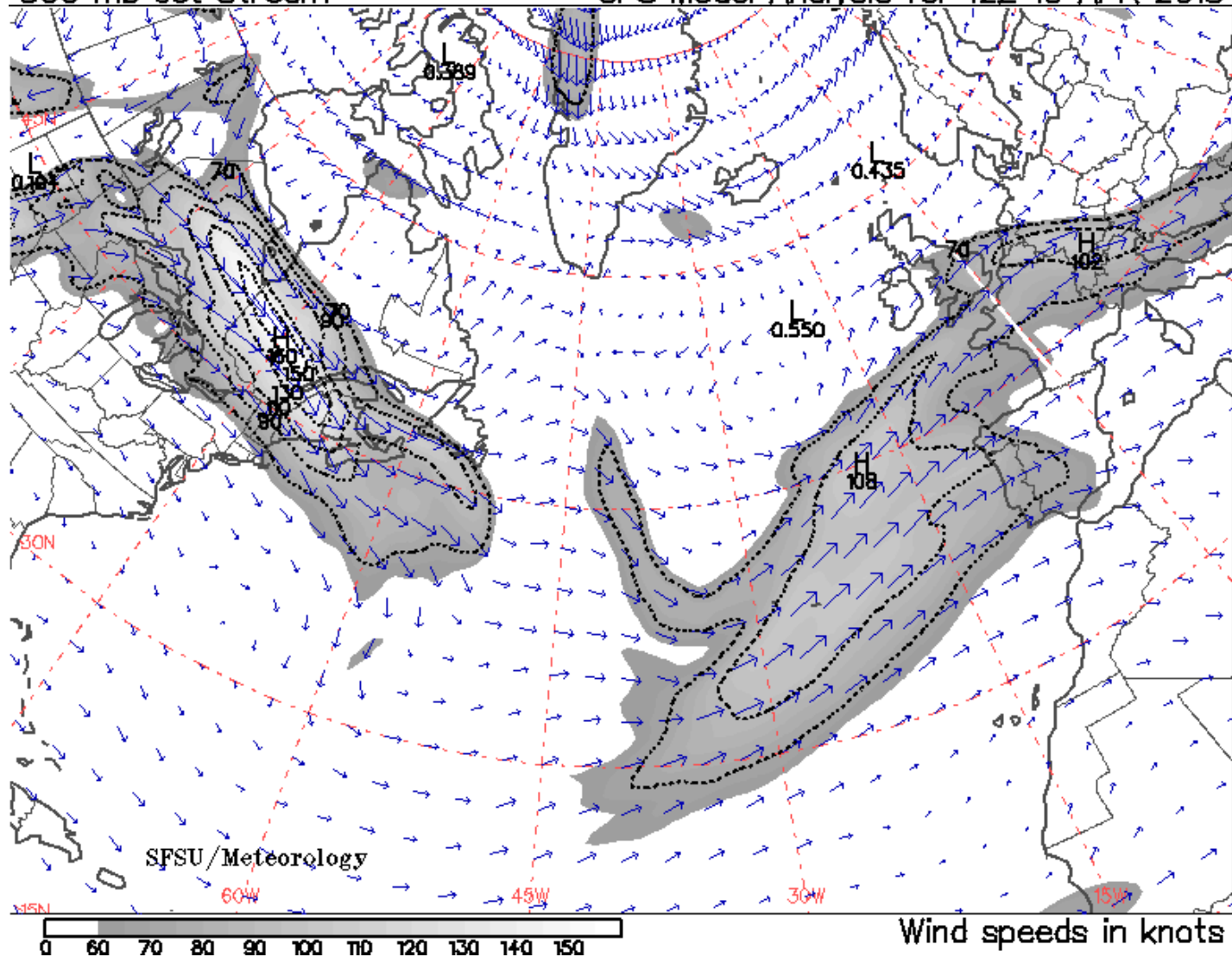
GFS Model Analysis for 12Z 9 APR 2013





300 mb Jet Stream

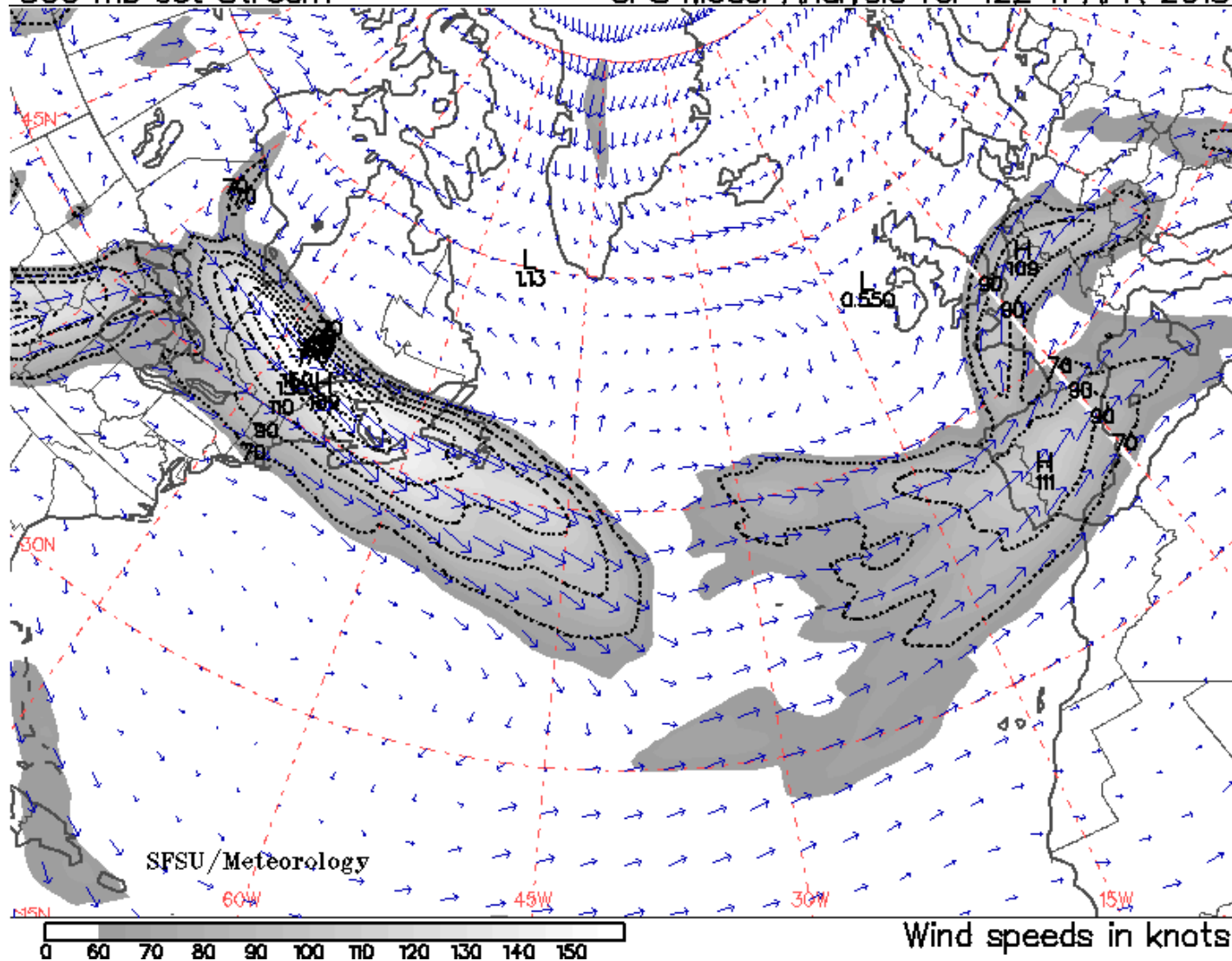
GFS Model Analysis for 12Z 10 APR 2013





300 mb Jet Stream

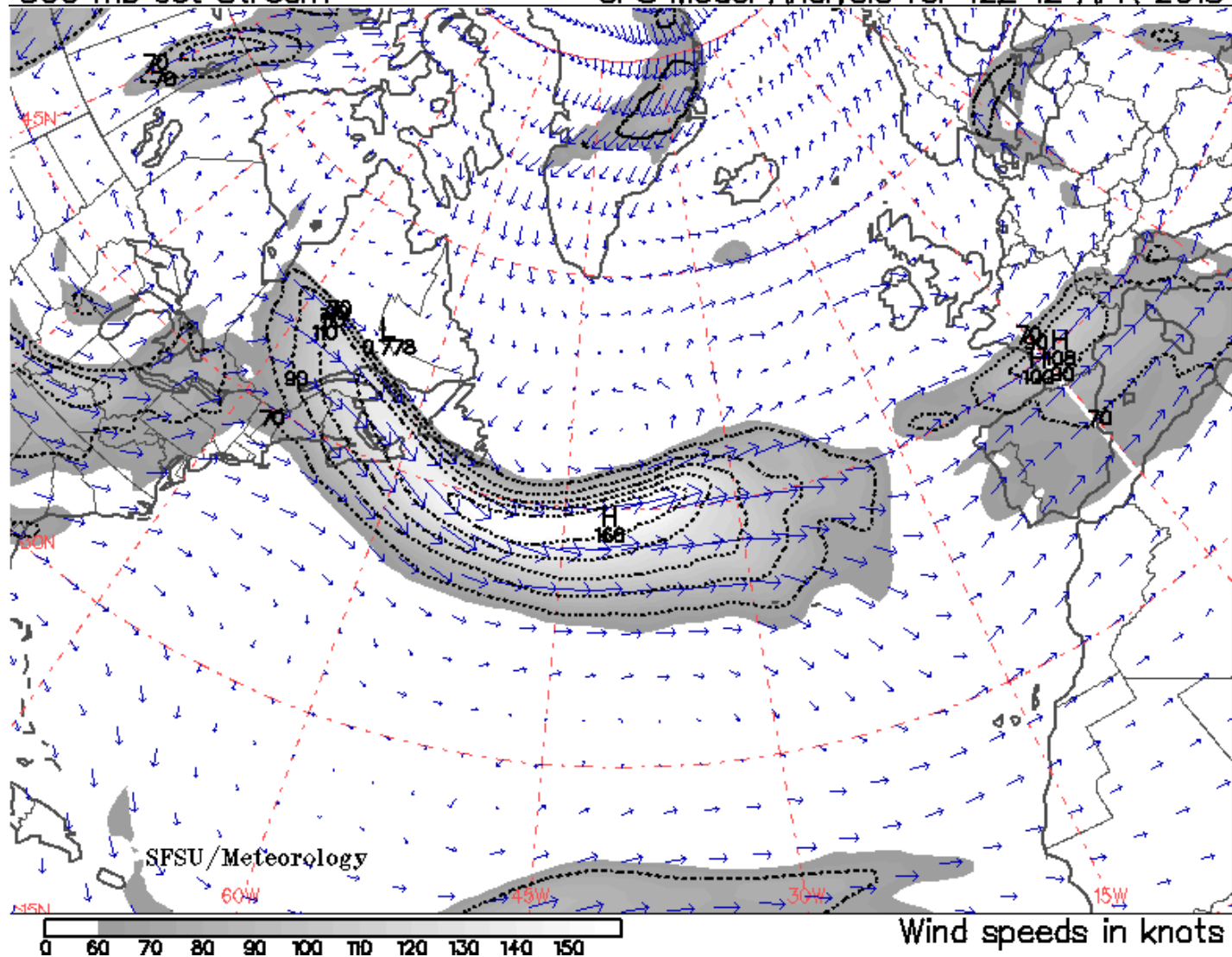
GFS Model Analysis for 12Z 11 APR 2013





300 mb Jet Stream

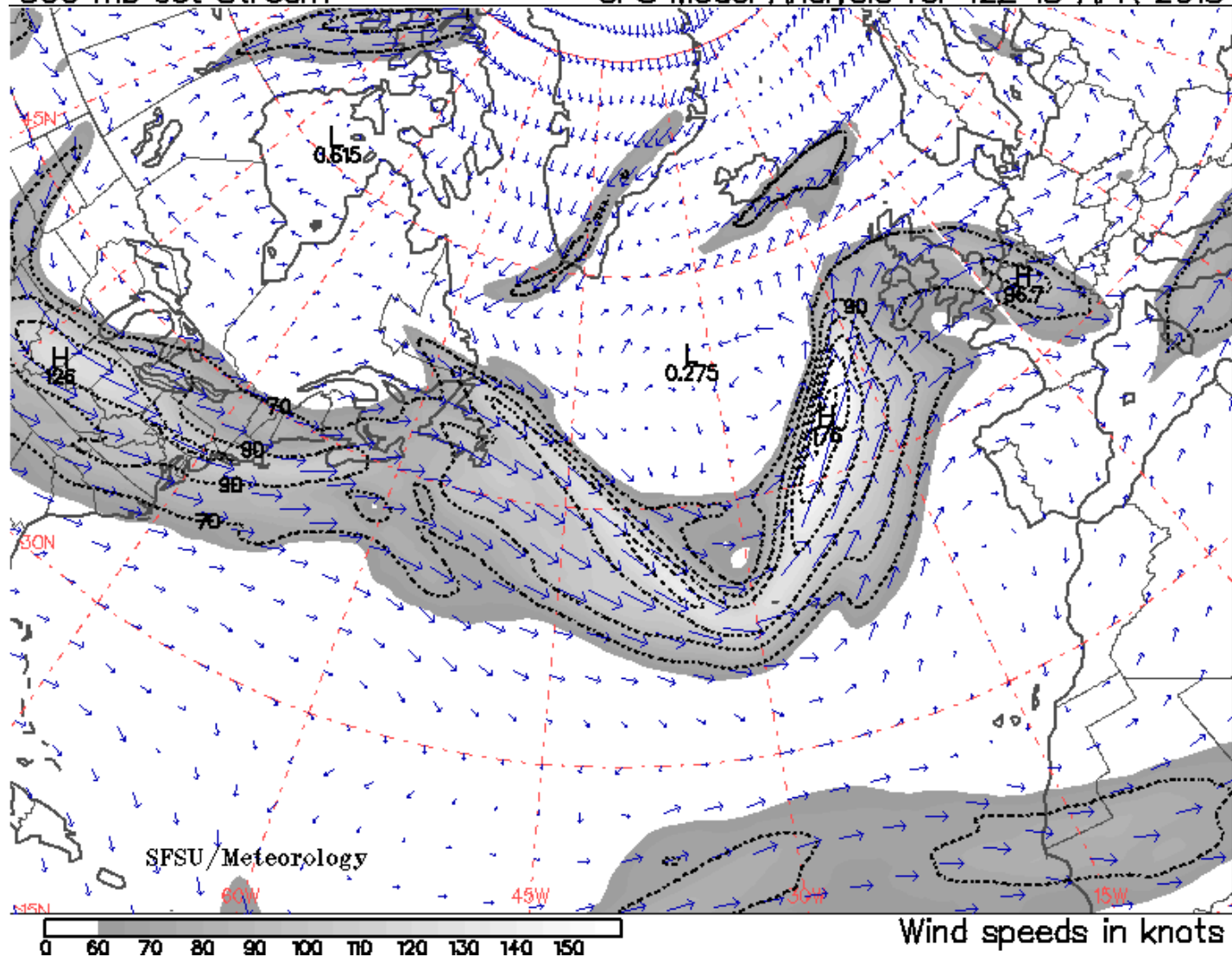
GFS Model Analysis for 12Z 12 APR 2013





300 mb Jet Stream

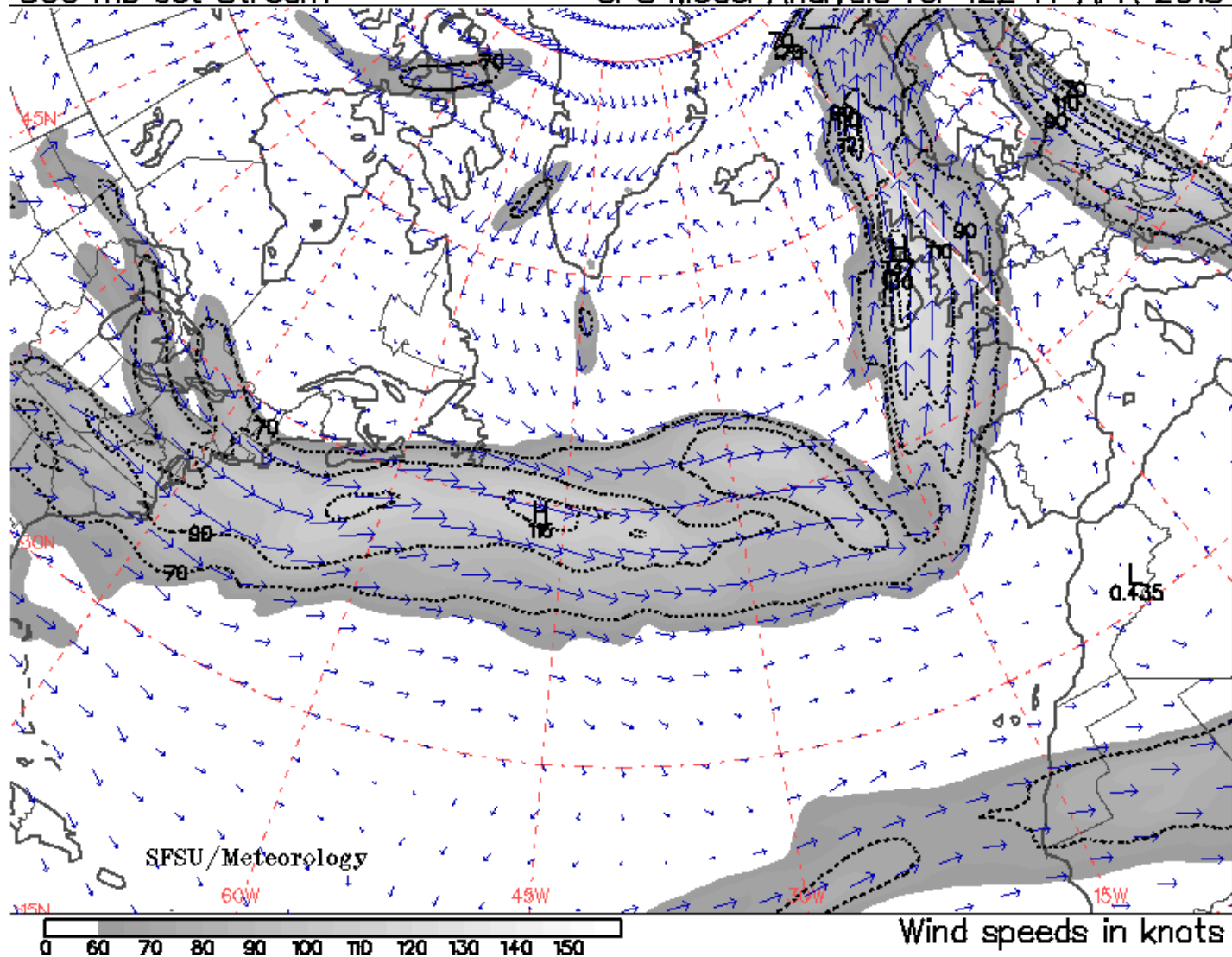
GFS Model Analysis for 12Z 13 APR 2013





300 mb Jet Stream

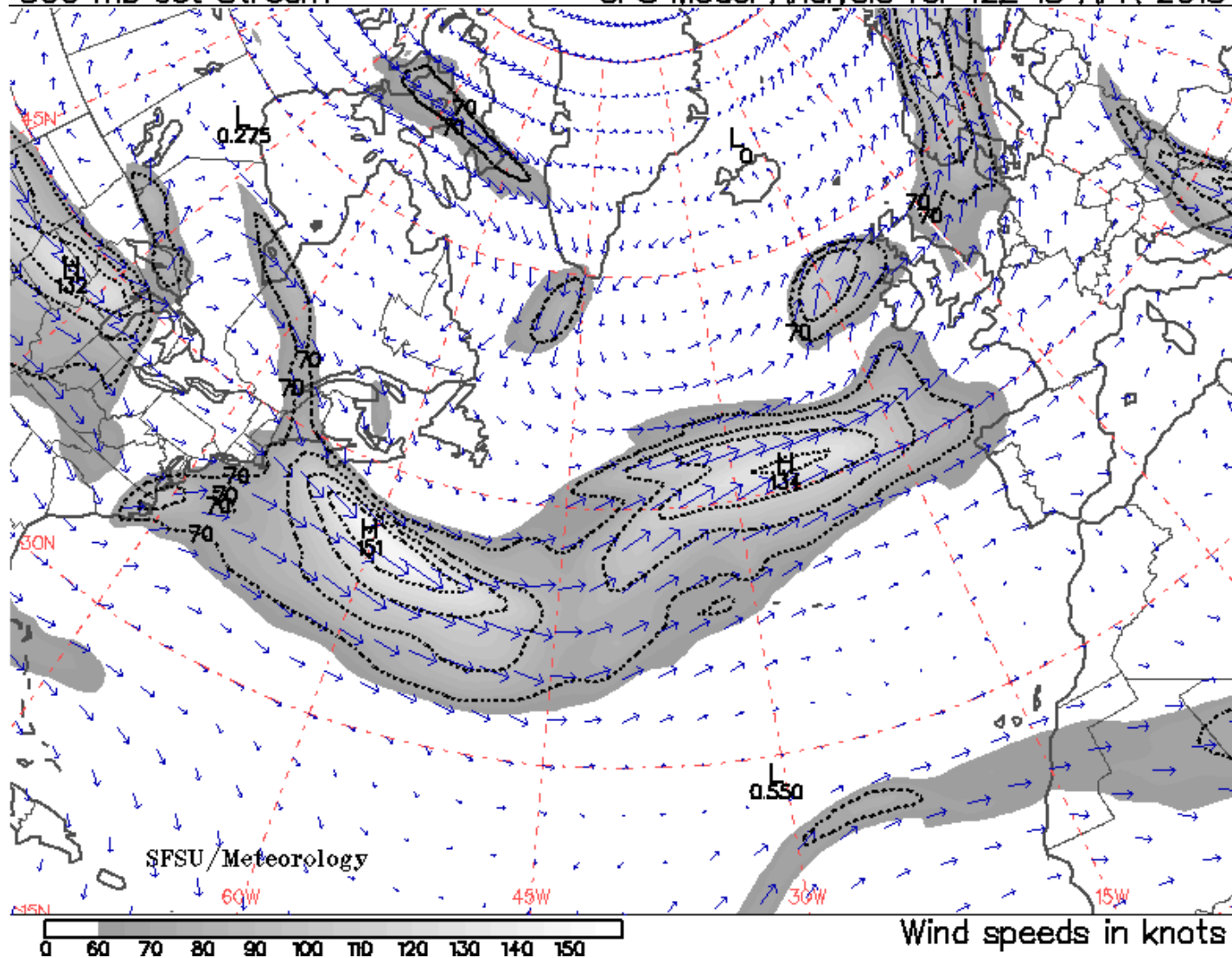
GFS Model Analysis for 12Z 14 APR 2013





300 mb Jet Stream

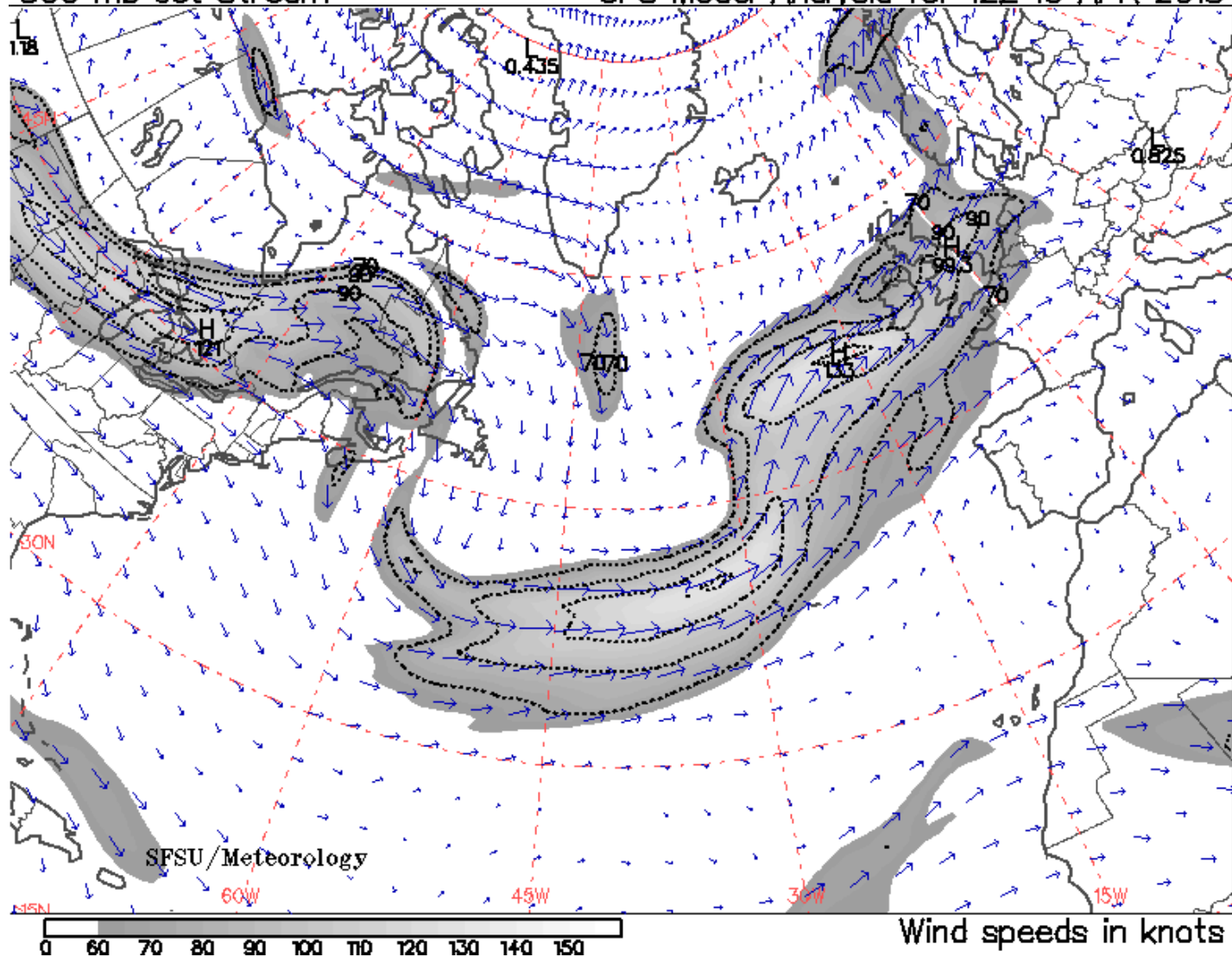
GFS Model Analysis for 12Z 15 APR 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 16 APR 2013

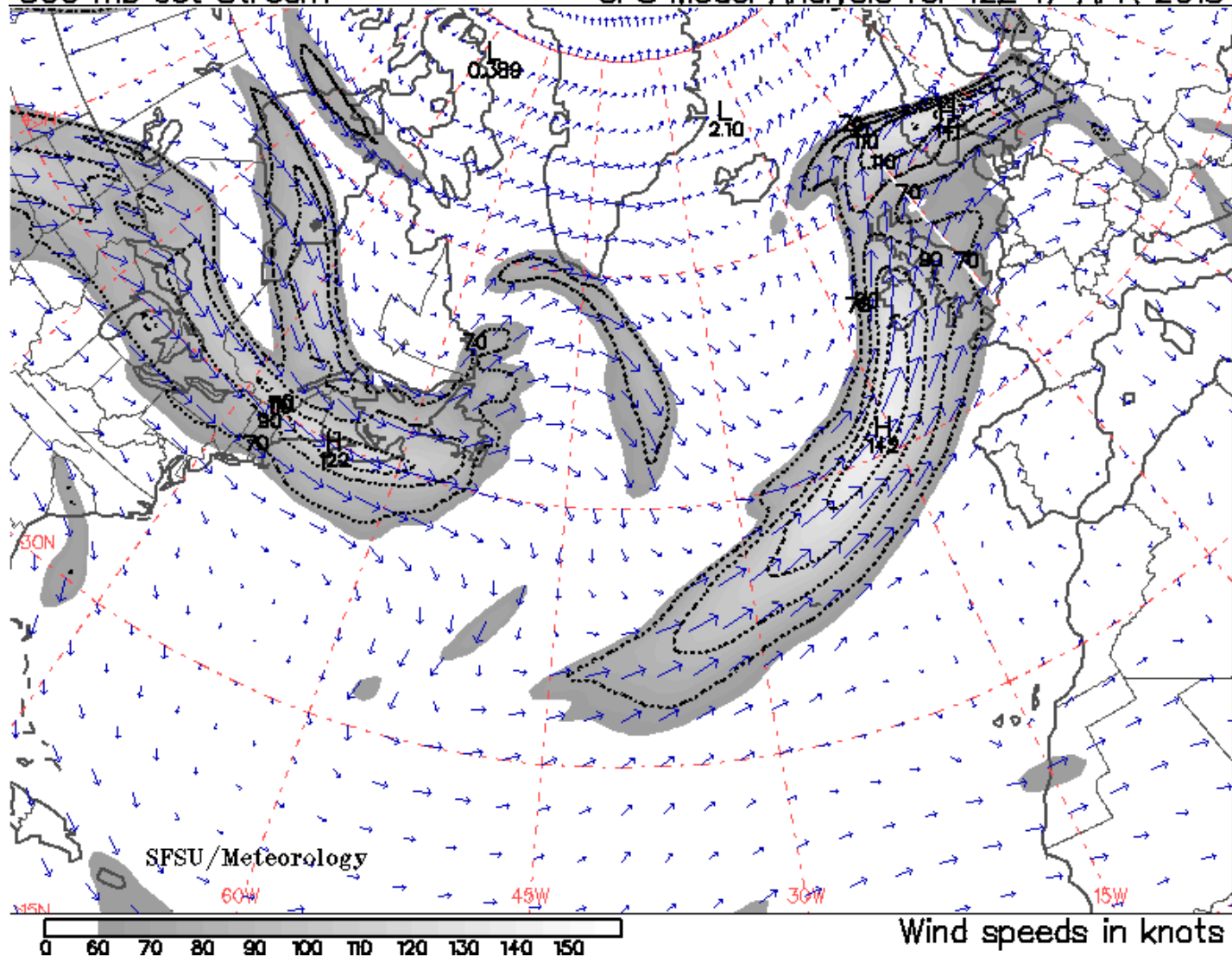


Wind speeds in knots



300 mb Jet Stream

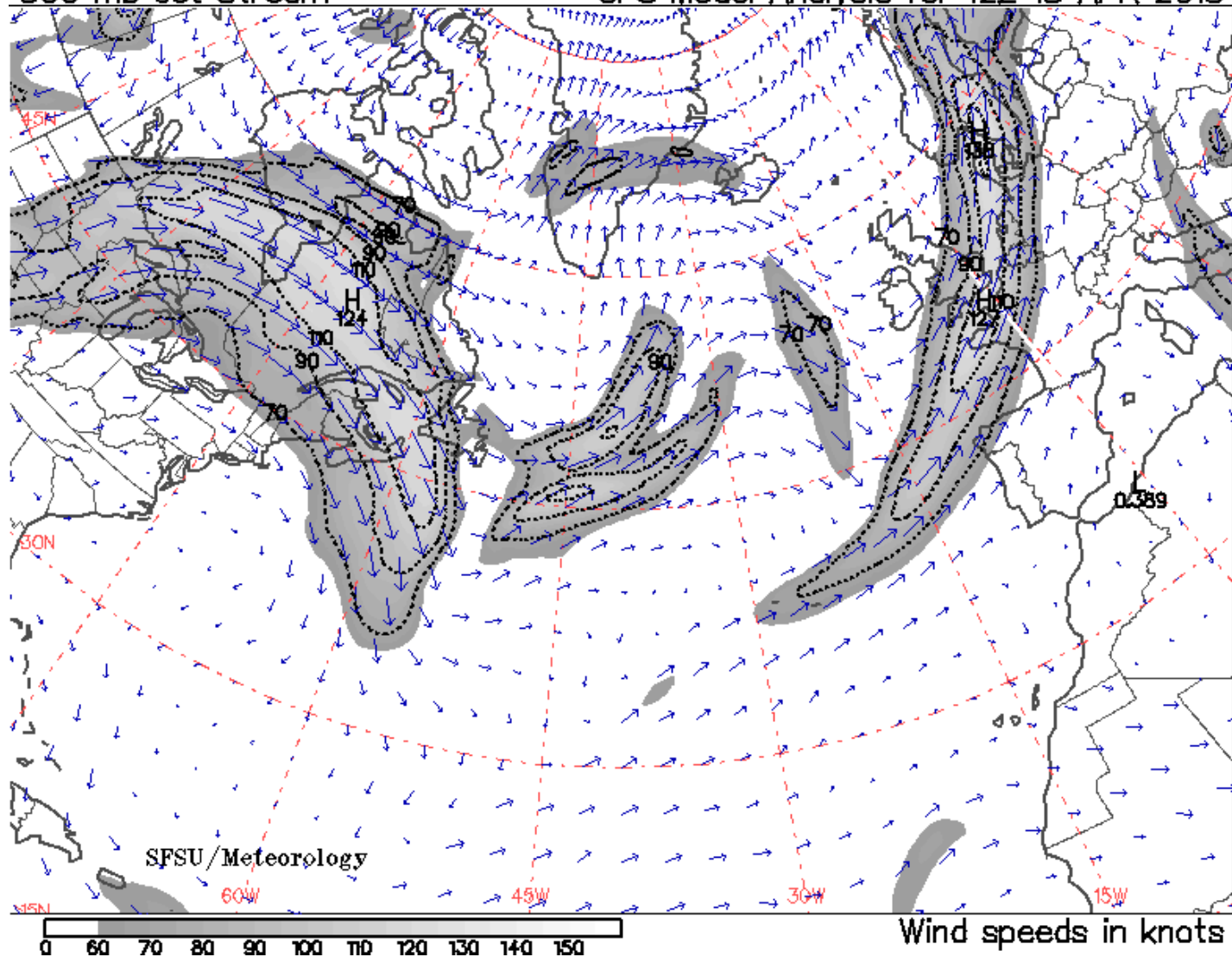
GFS Model Analysis for 12Z 17 APR 2013





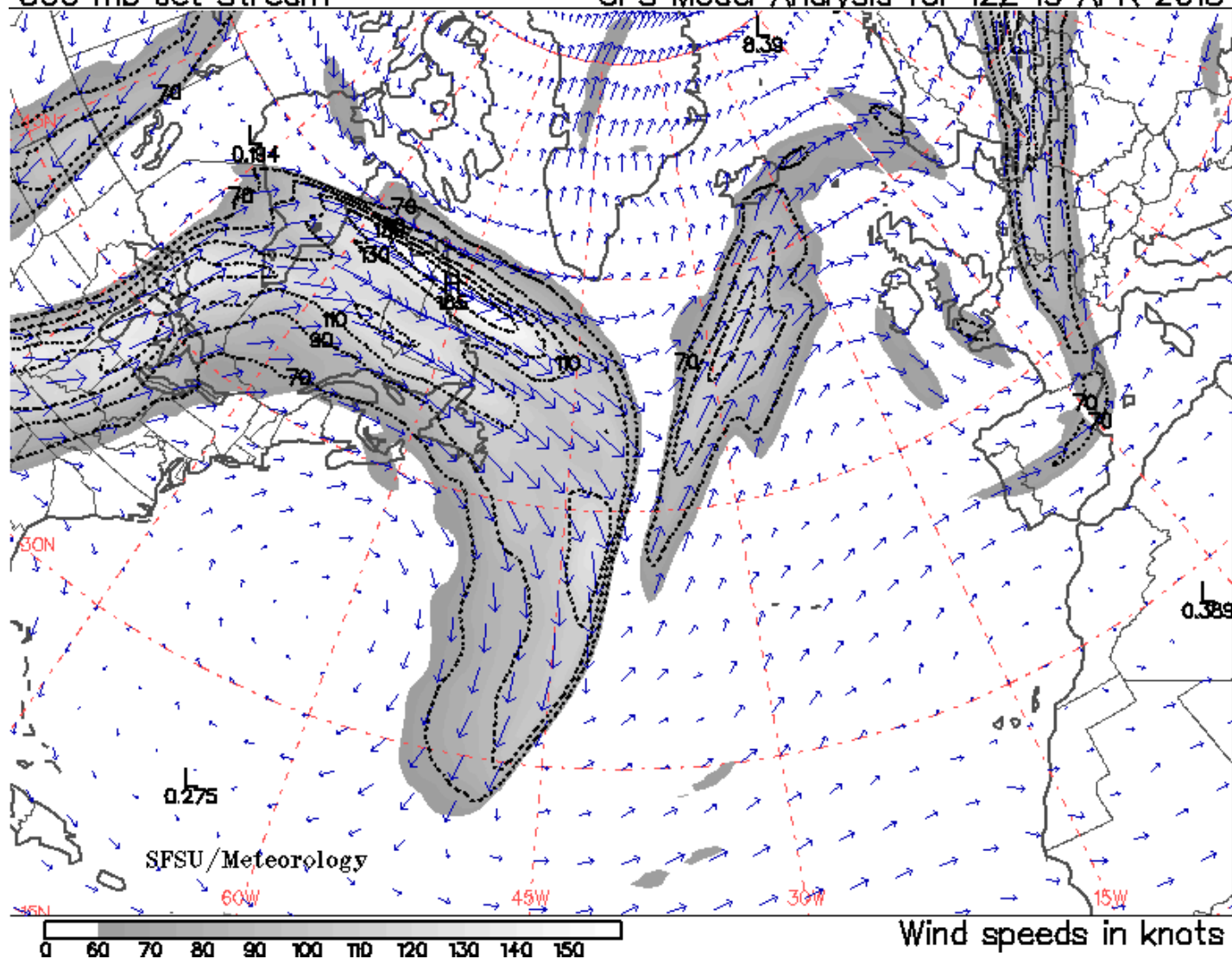
300 mb Jet Stream

GFS Model Analysis for 12Z 18 APR 2013





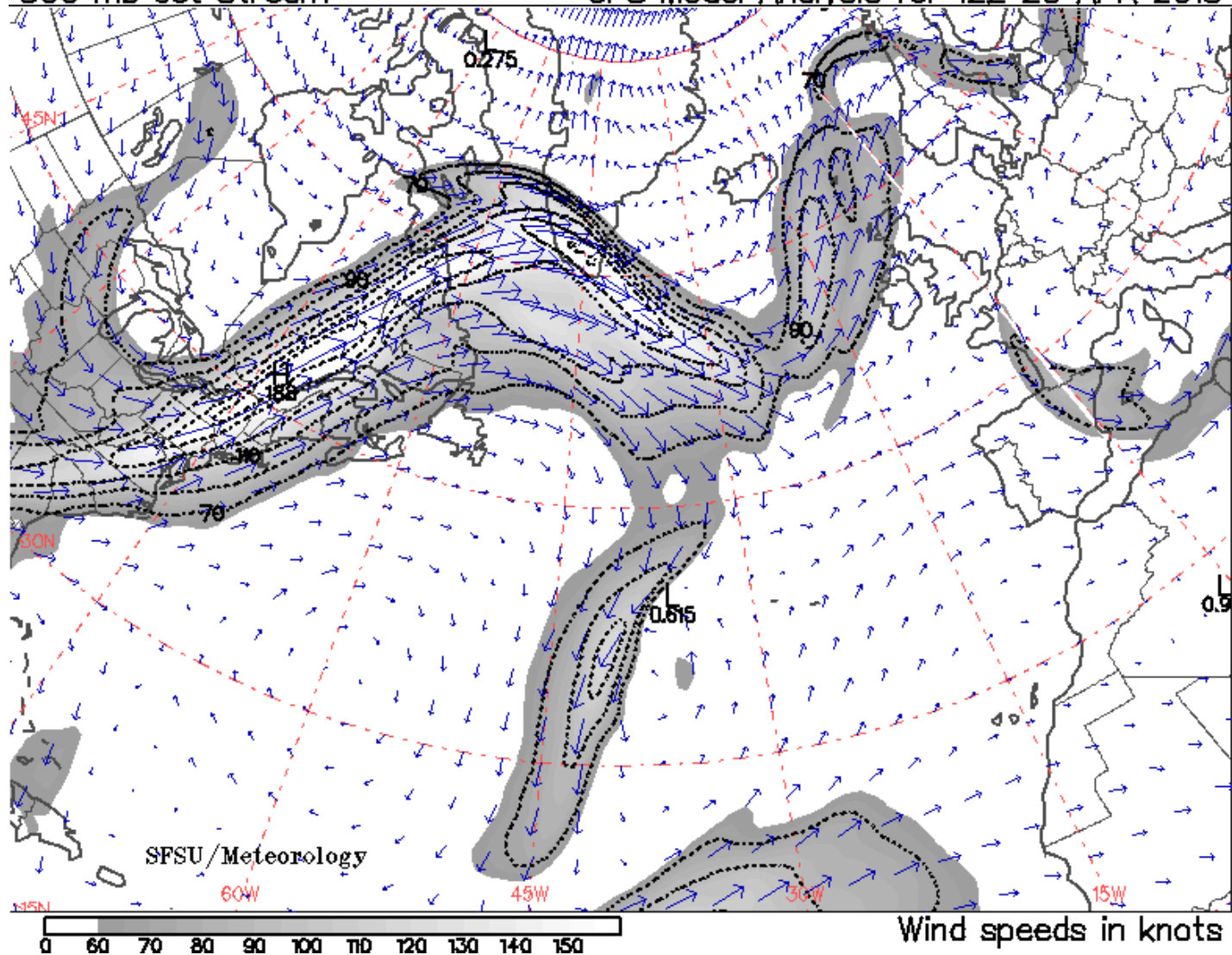
GFS Model Analysis for 12Z 19 APR 2013





300 mb Jet Stream

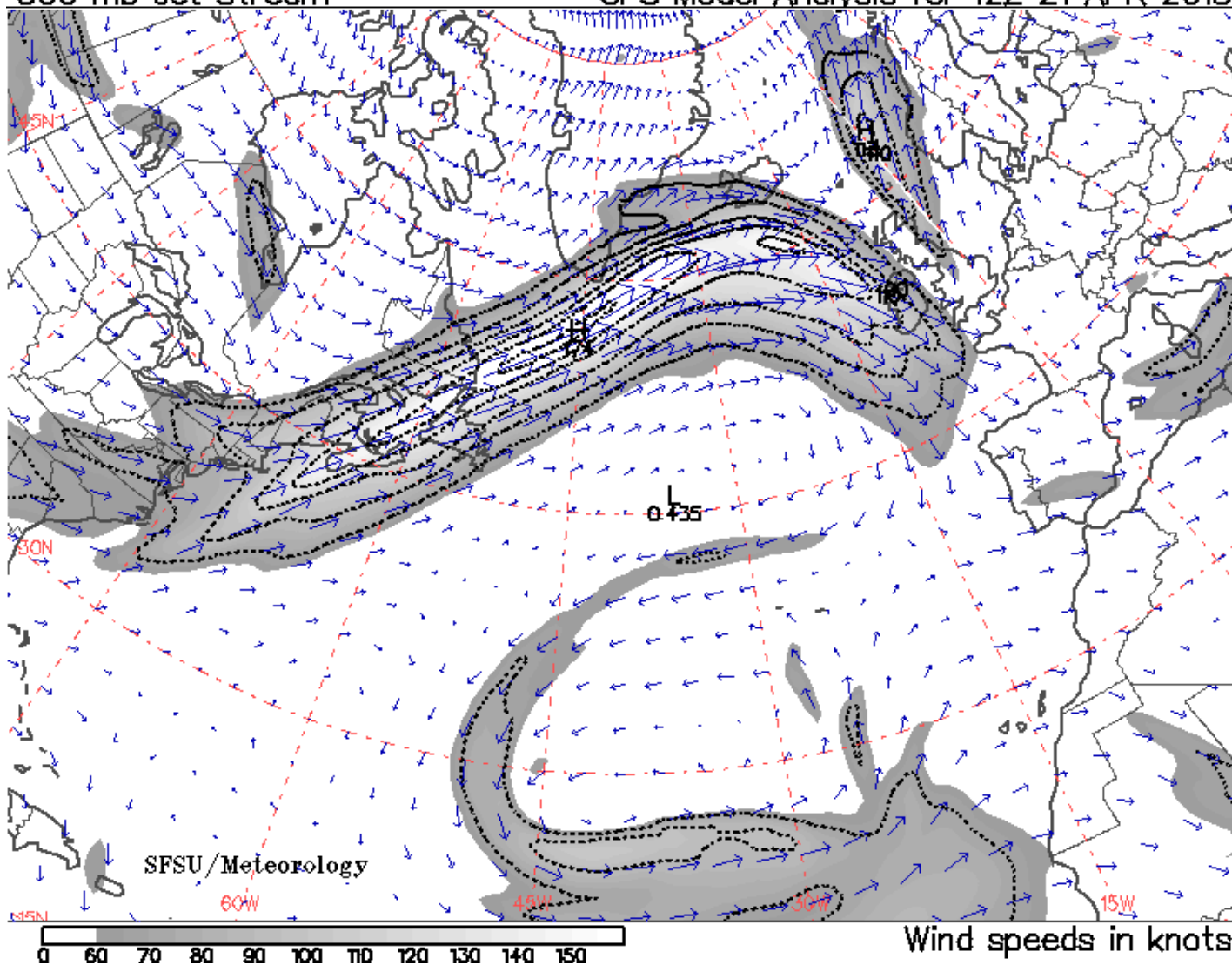
GFS Model Analysis for 12Z 20 APR 2013





300 mb Jet Stream

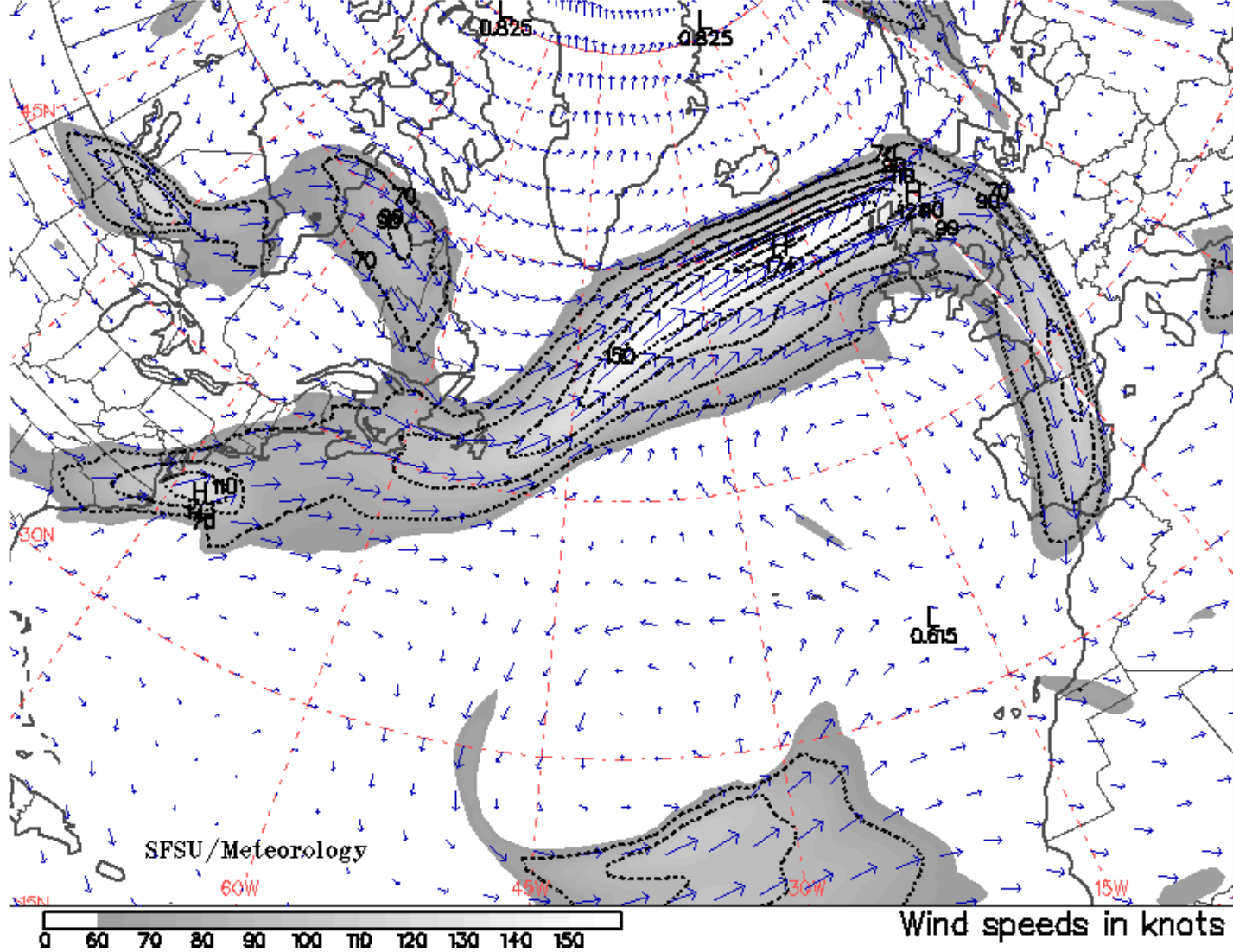
GFS Model Analysis for 12Z 21 APR 2013





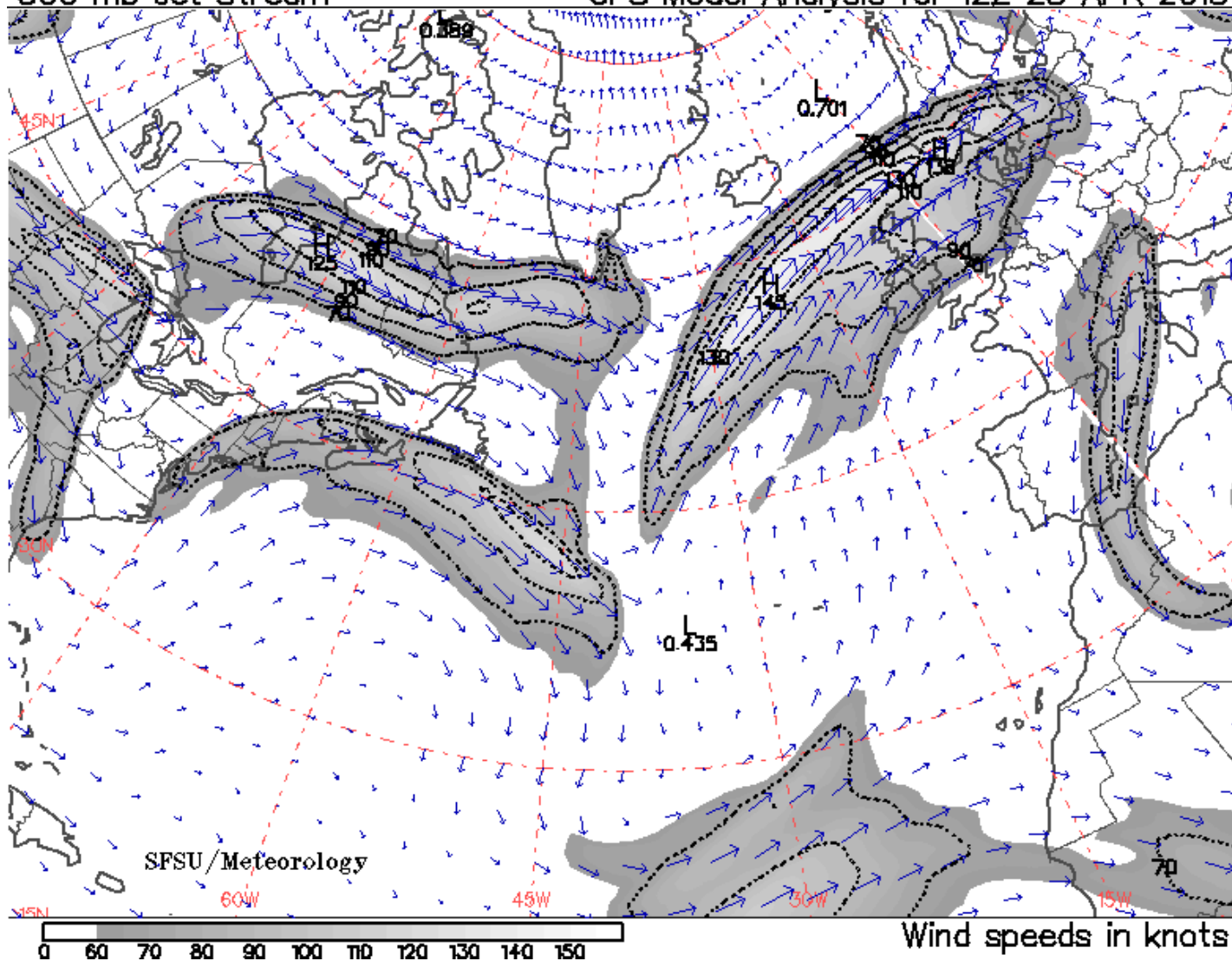
300 mb Jet Stream

GFS Model Analysis for 12Z 22 APR 2013





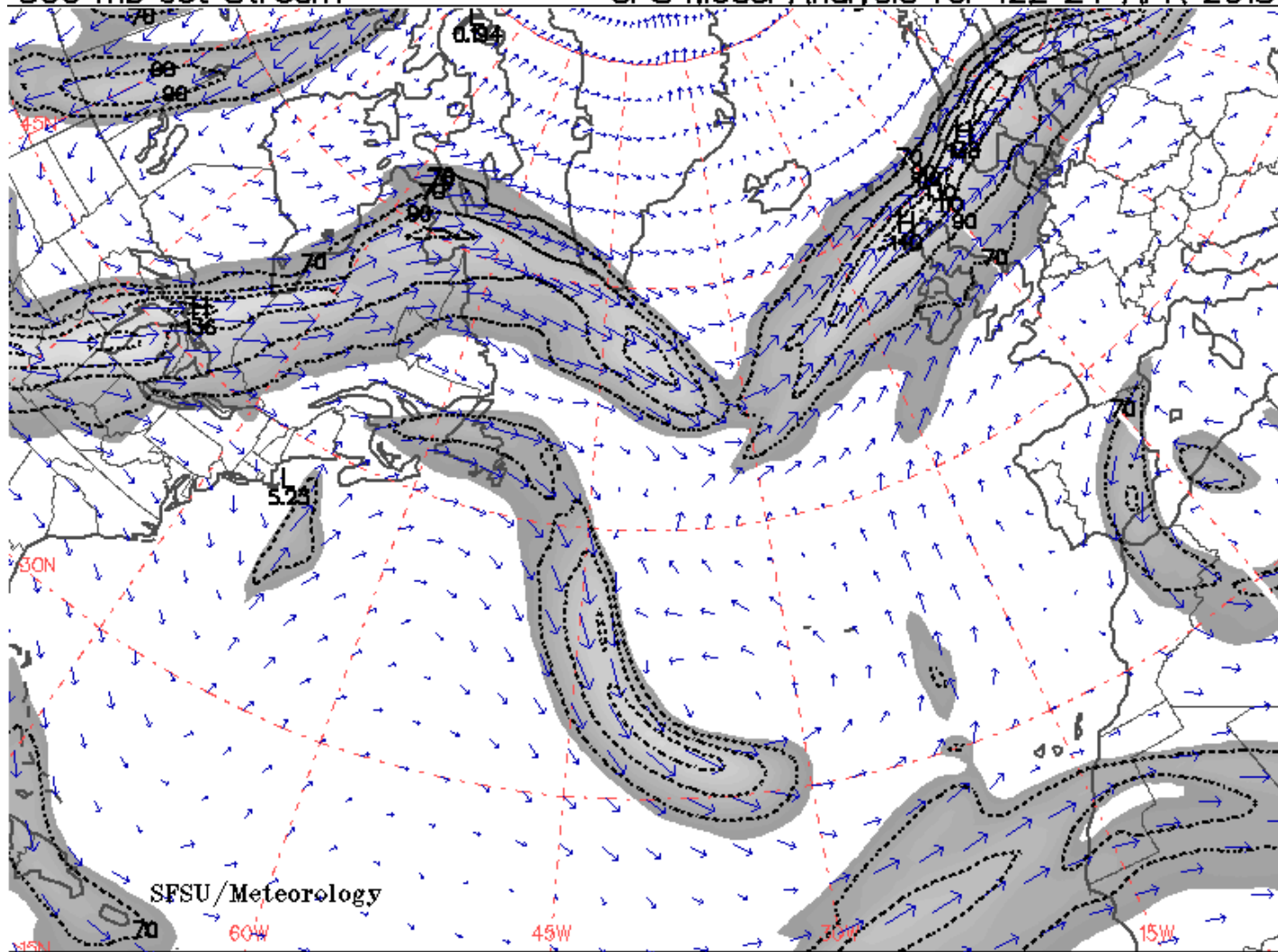
GFS Model Analysis for 12Z 23 APR 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 24 APR 2013



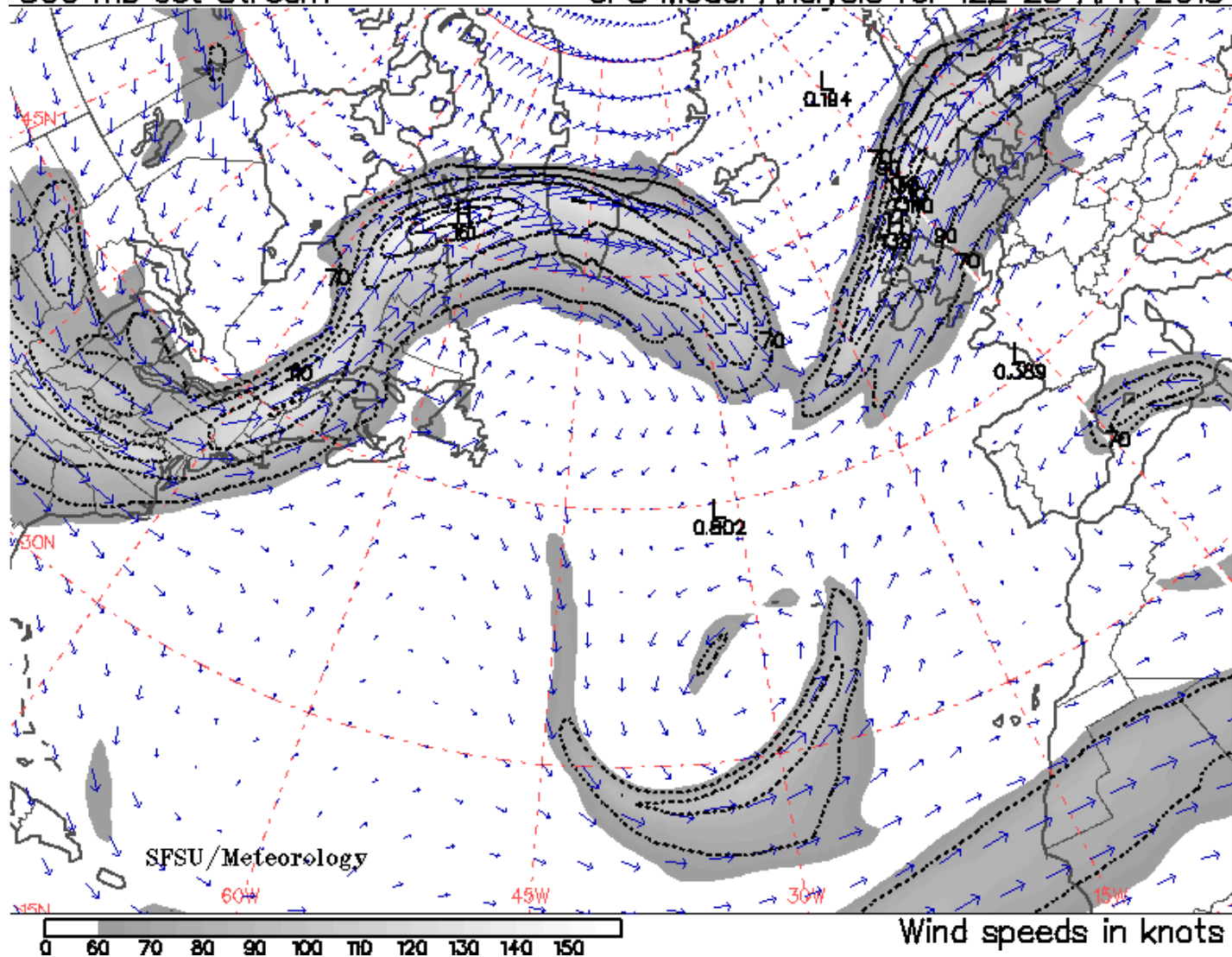
0 60 70 80 90 100 110 120 130 140 150

Wind speeds in knots



300 mb Jet Stream

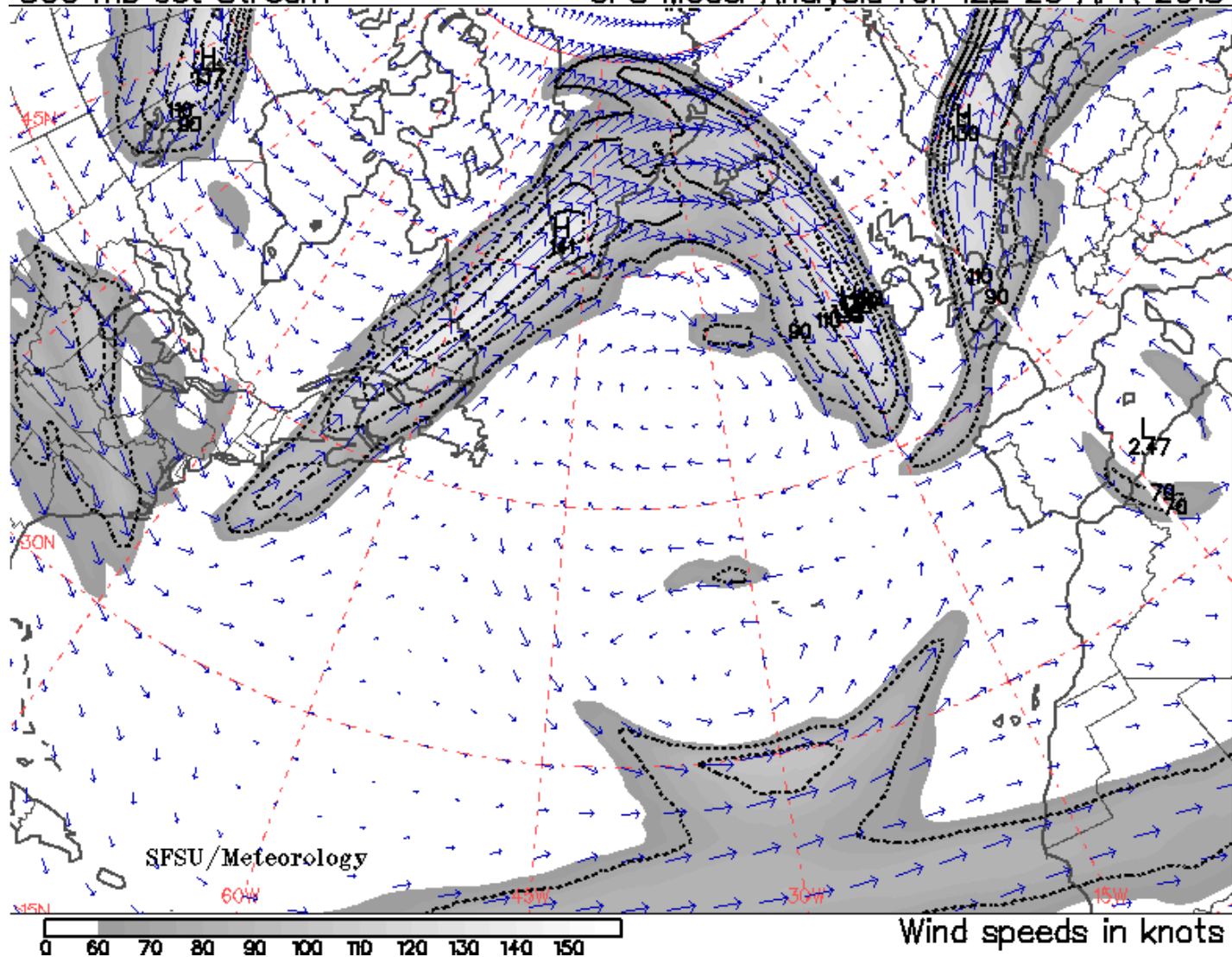
GFS Model Analysis for 12Z 25 APR 2013





300 mb Jet Stream

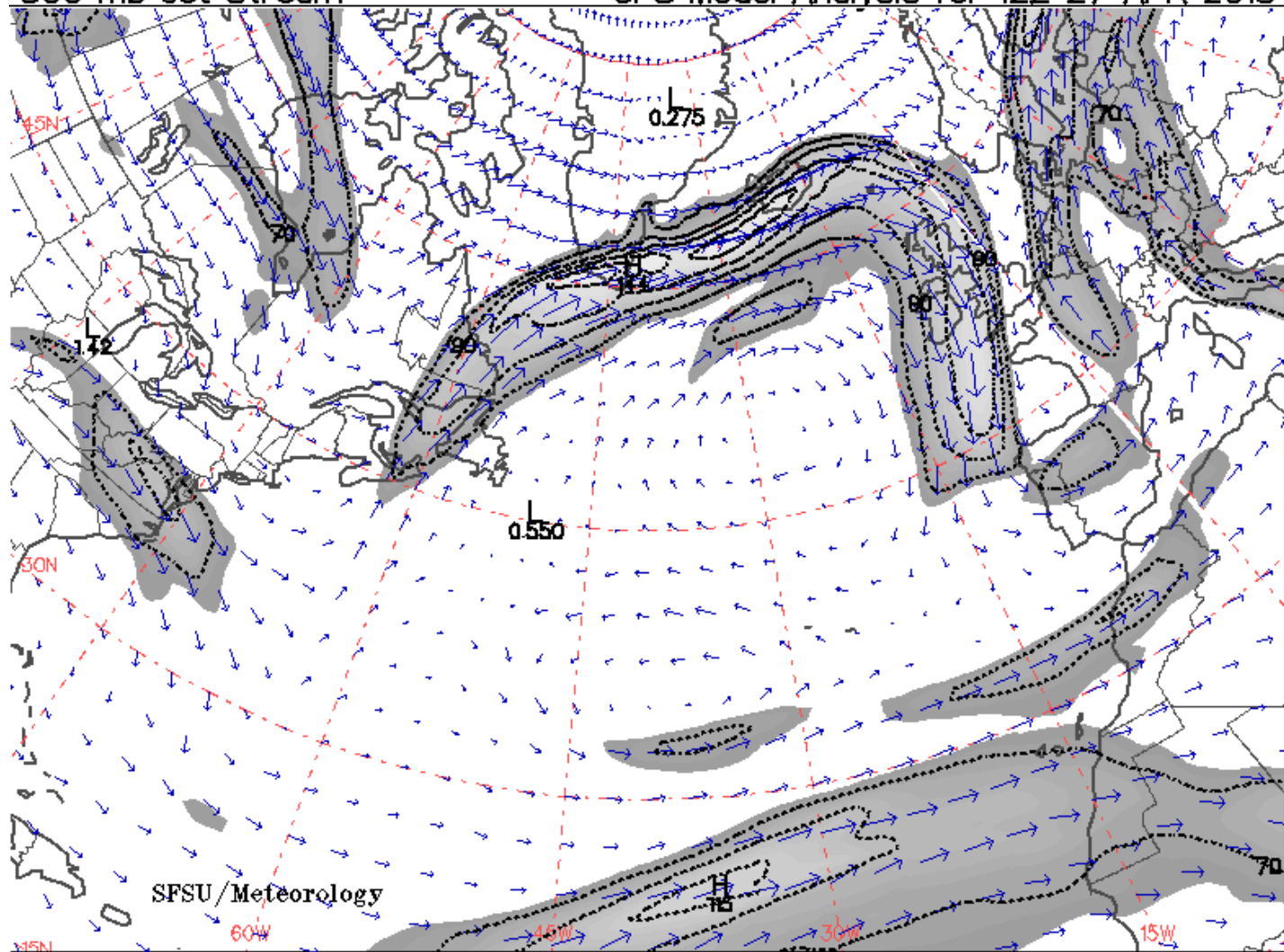
GFS Model Analysis for 12Z 26 APR 2013



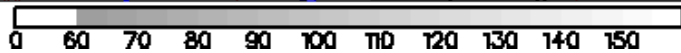


300 mb Jet Stream

GFS Model Analysis for 12Z 27 APR 2013



SFSU/Meteorology

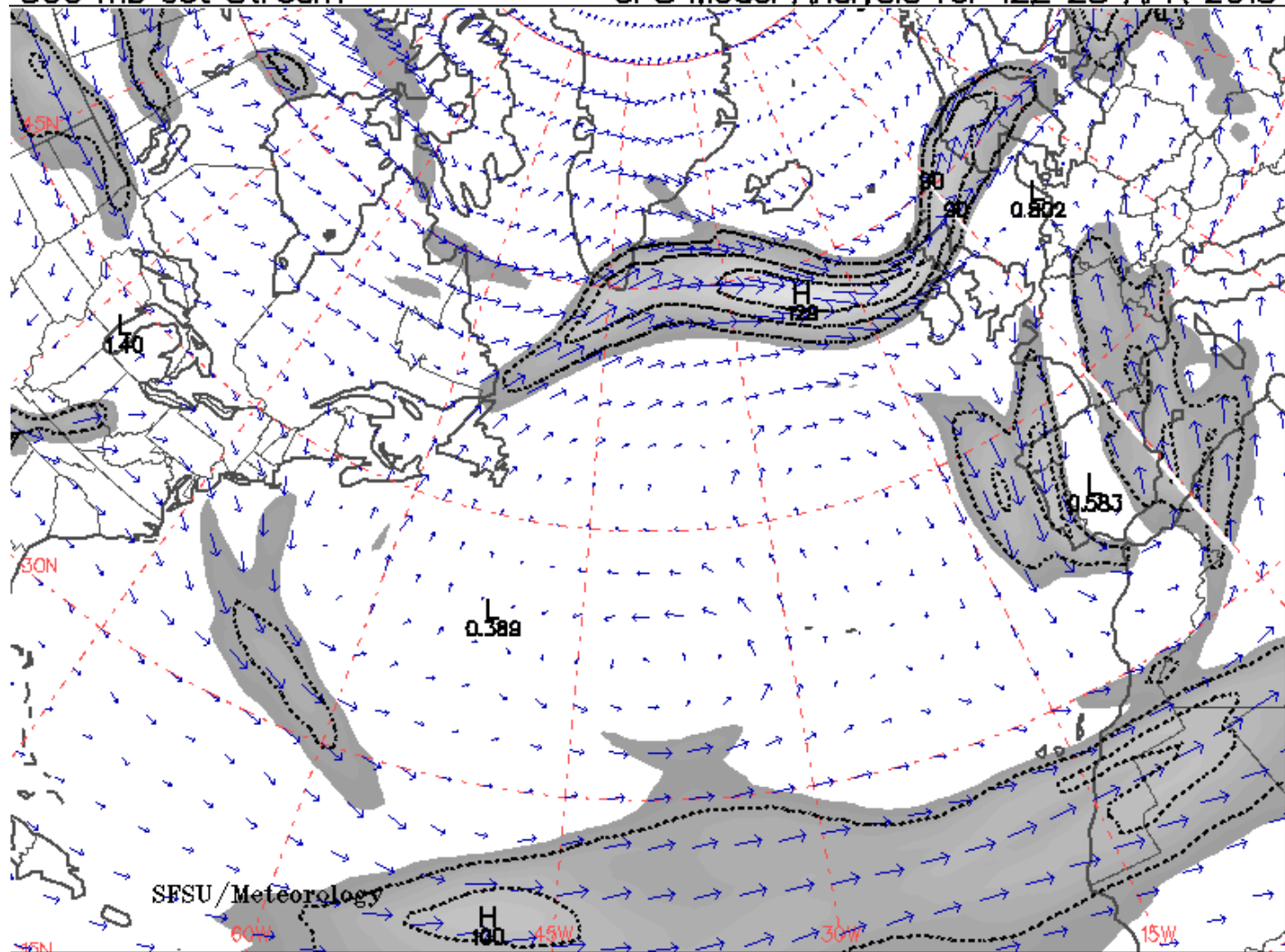


Wind speeds in knots



300 mb Jet Stream

GFS Model Analysis for 12Z 28 APR 2013



SFSU/Meteorology

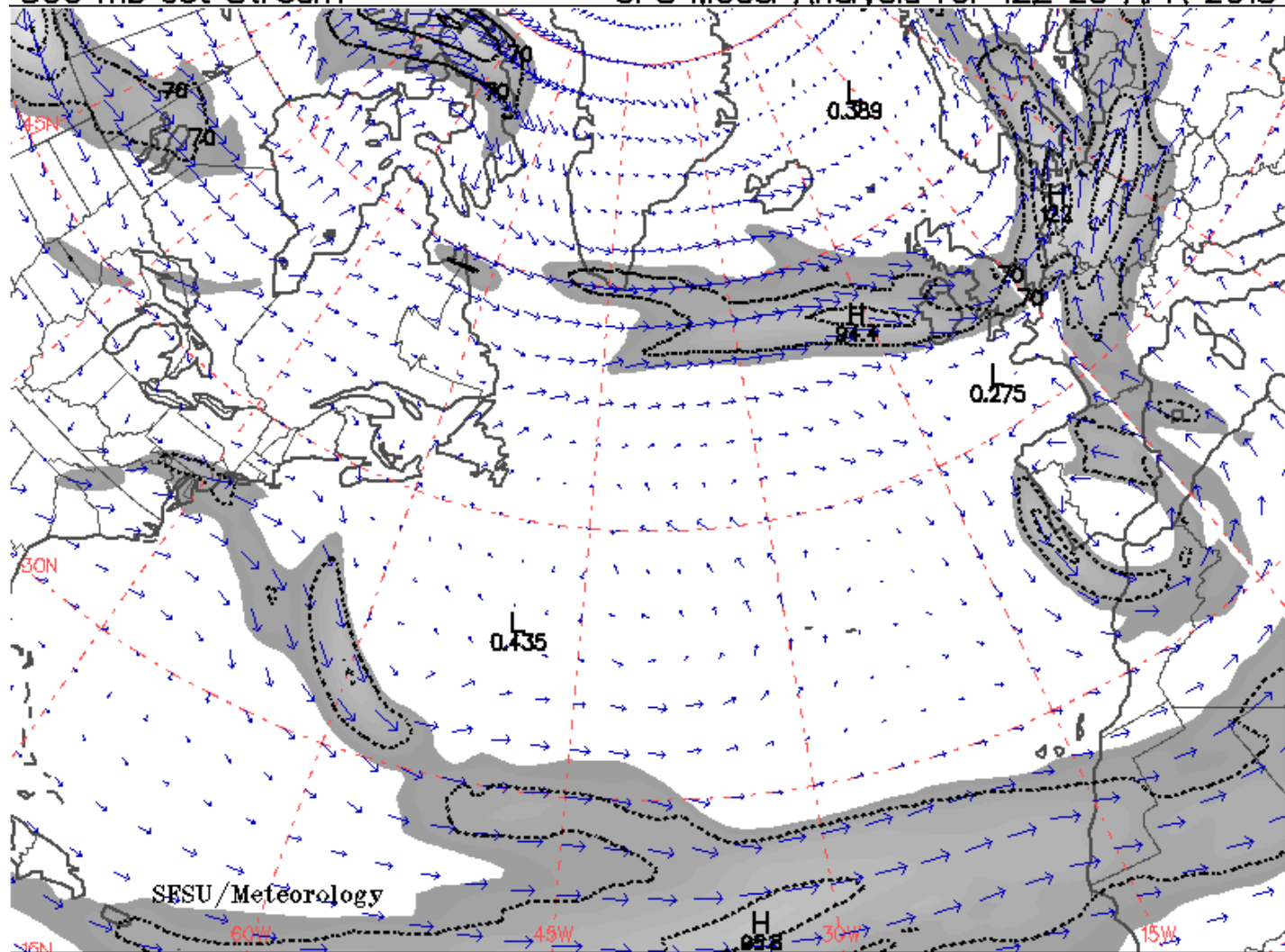
0 60 70 80 90 100 110 120 130 140 150

Wind speeds in knots



300 mb Jet Stream

GFS Model Analysis for 12Z 29 APR 2013



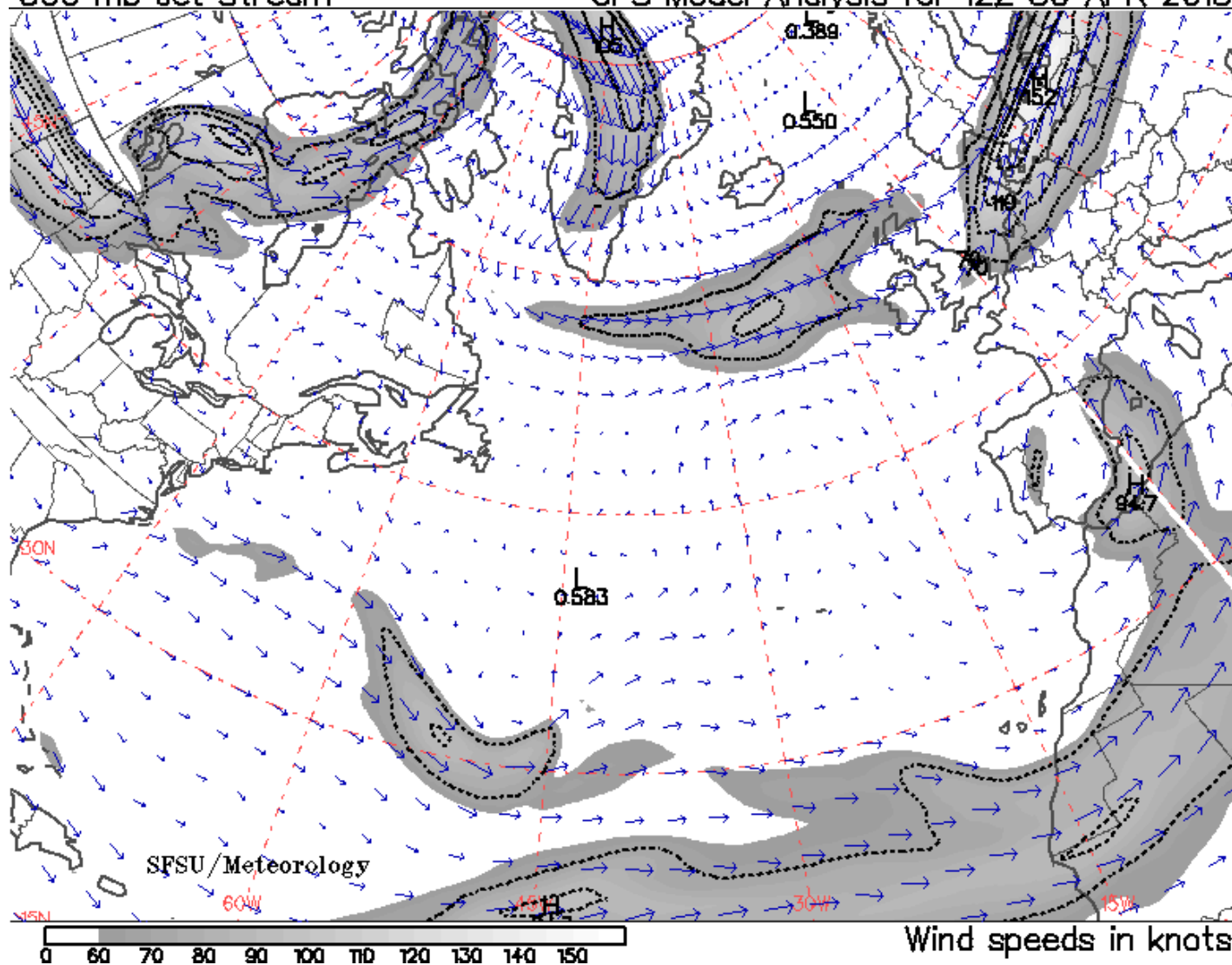
0 60 70 80 90 100 110 120 130 140 150

Wind speeds in knots



300 mb Jet Stream

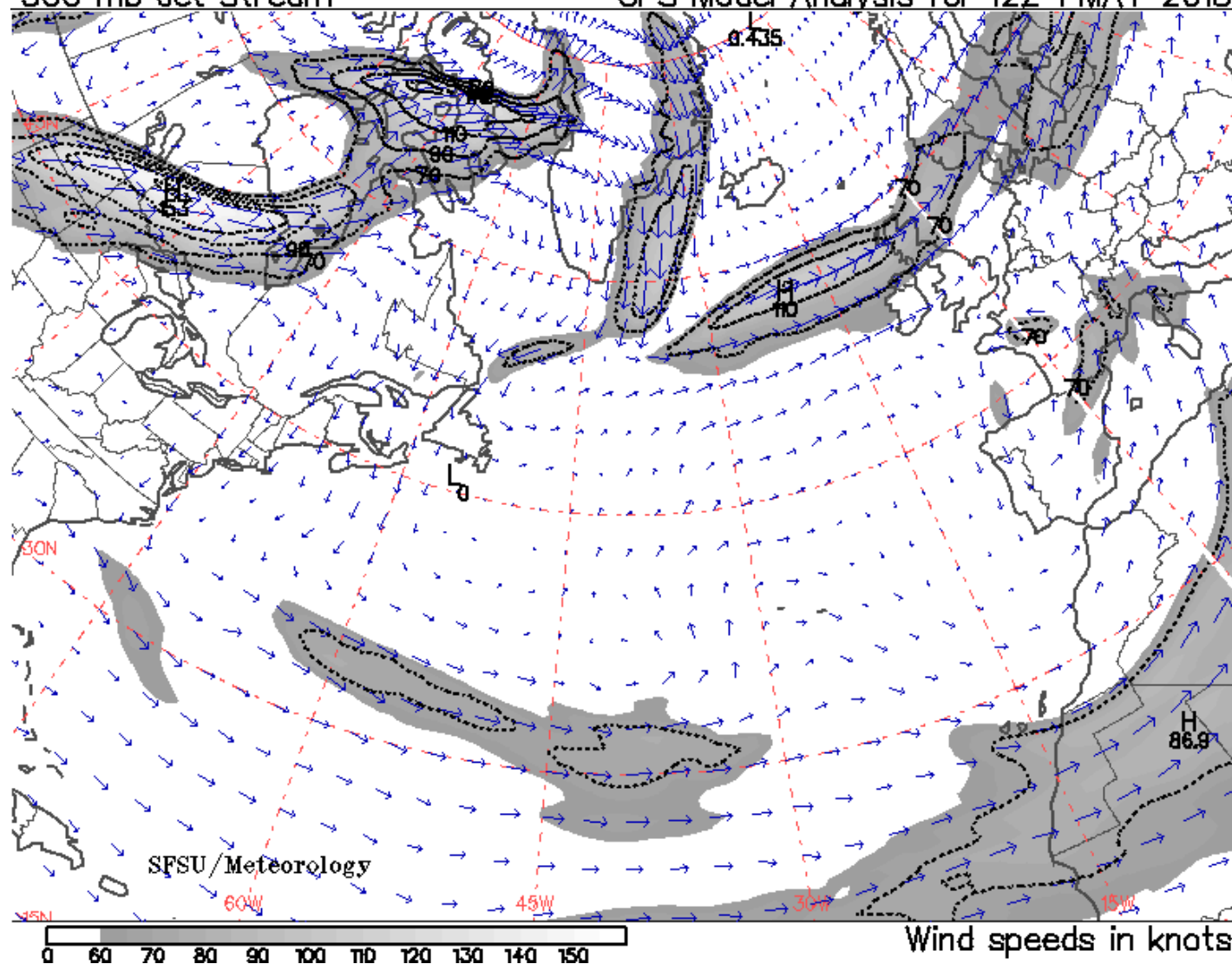
GFS Model Analysis for 12Z 30 APR 2013





300 mb Jet Stream

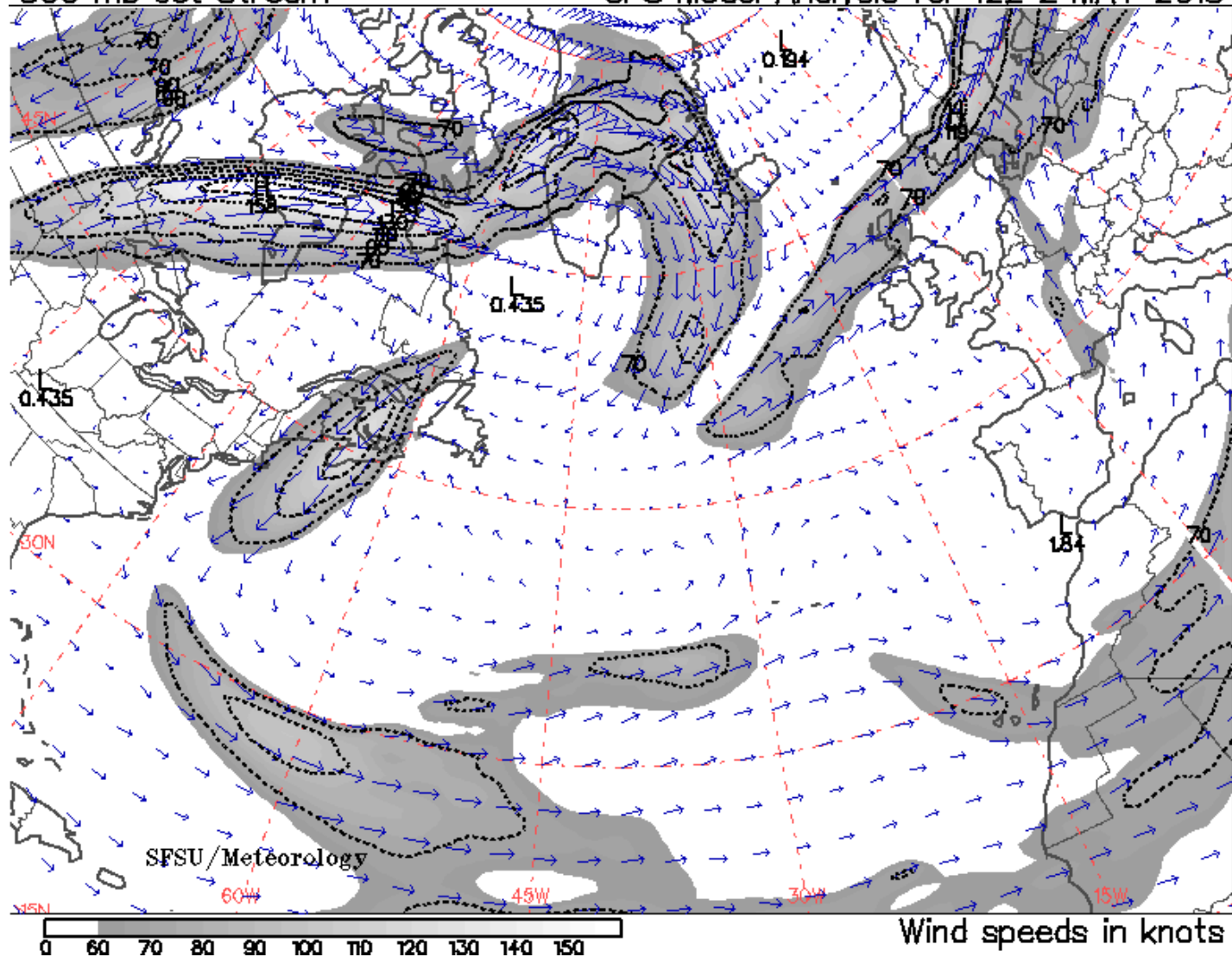
GFS Model Analysis for 12Z 1 MAY 2013





300 mb Jet Stream

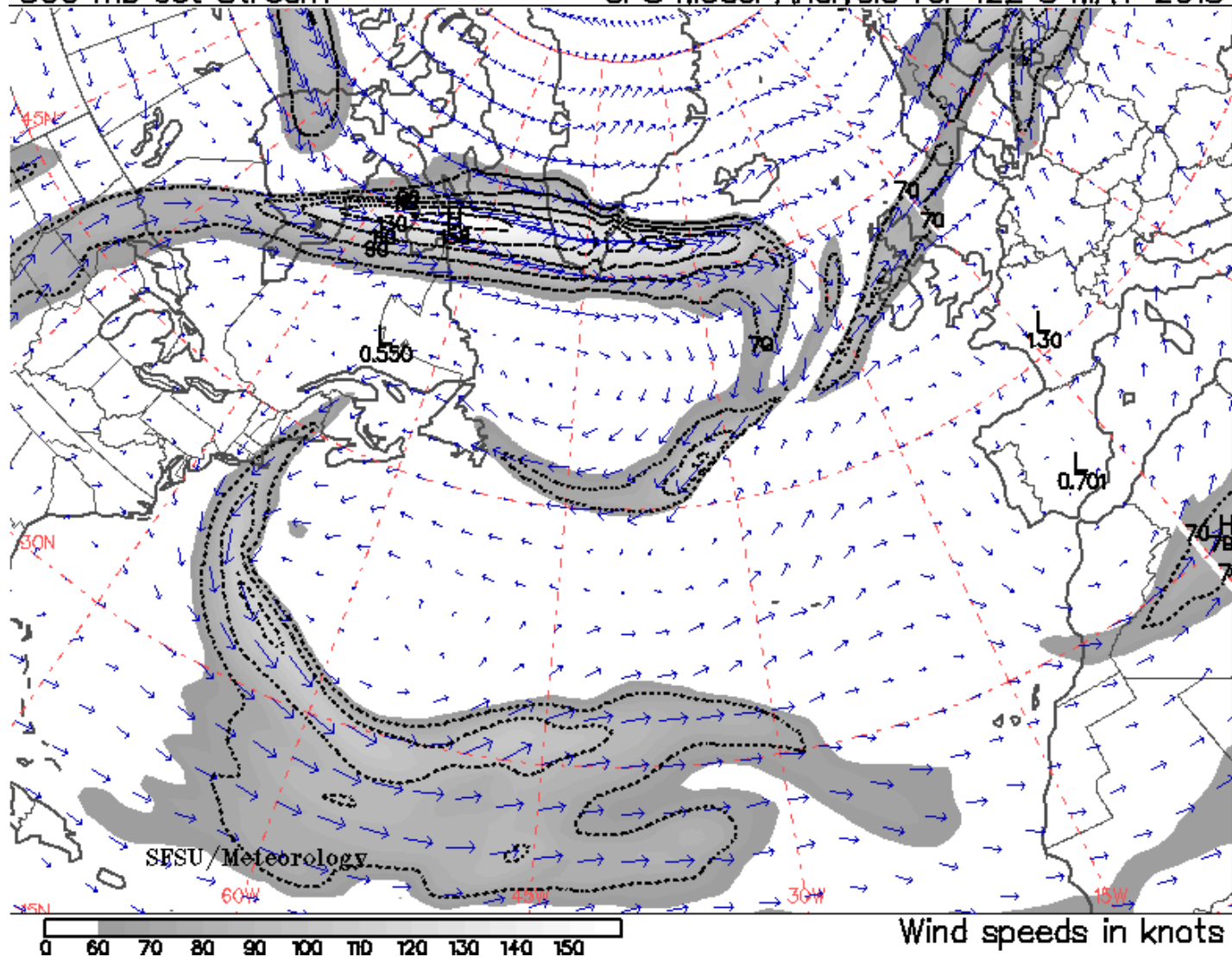
GFS Model Analysis for 12Z 2 MAY 2013





300 mb Jet Stream

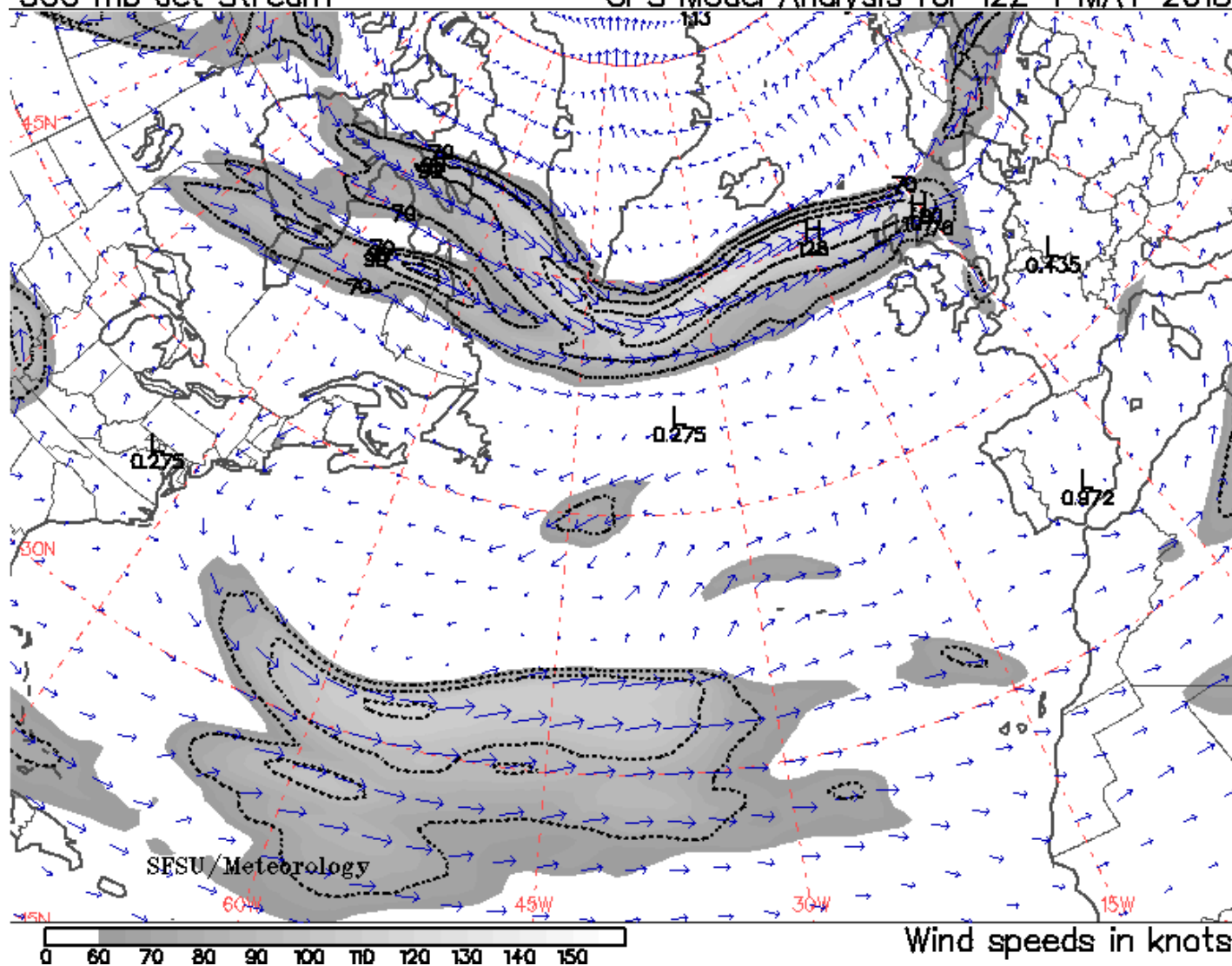
GFS Model Analysis for 12Z 3 MAY 2013





300 mb Jet Stream

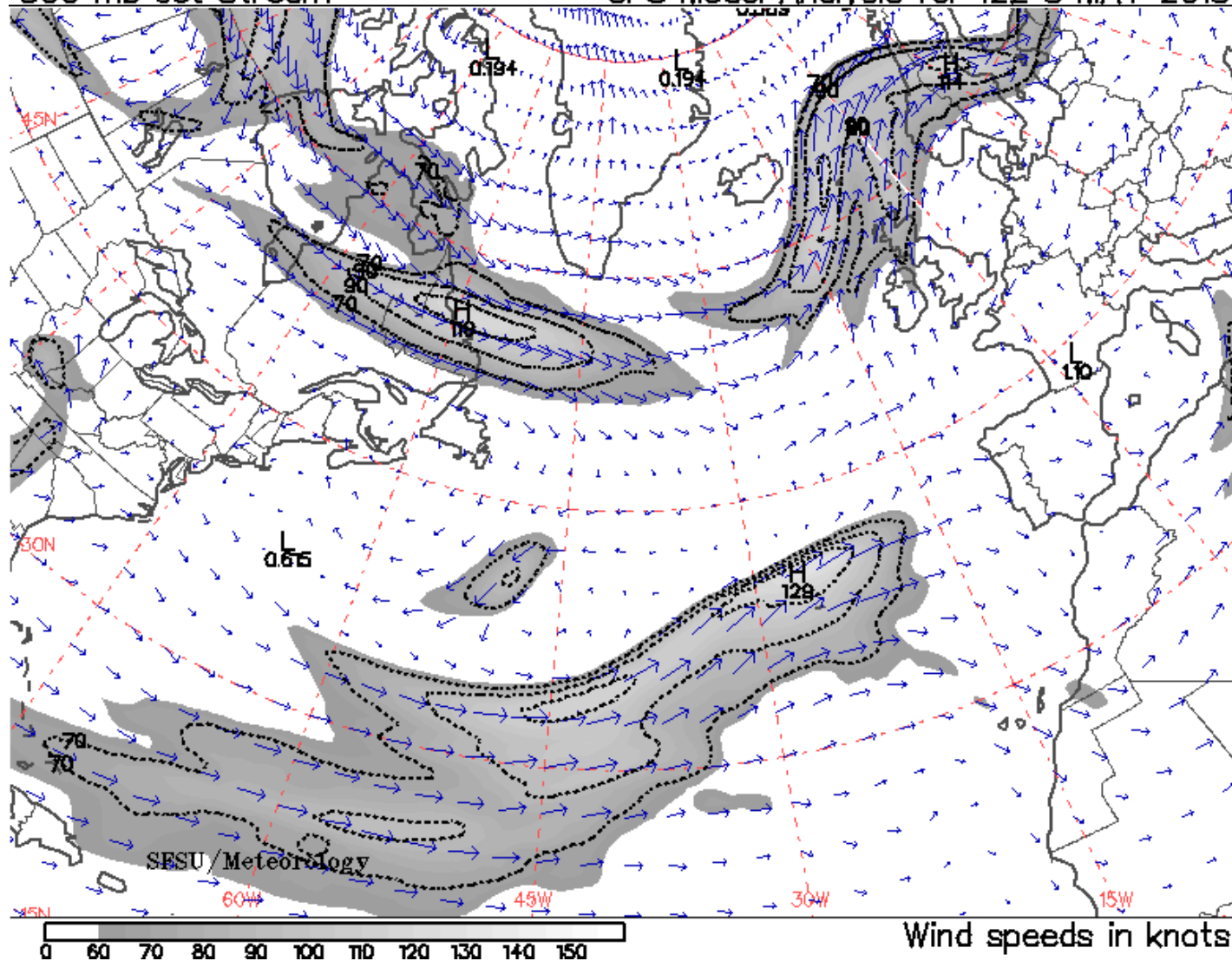
GFS Model Analysis for 12Z 4 MAY 2013





300 mb Jet Stream

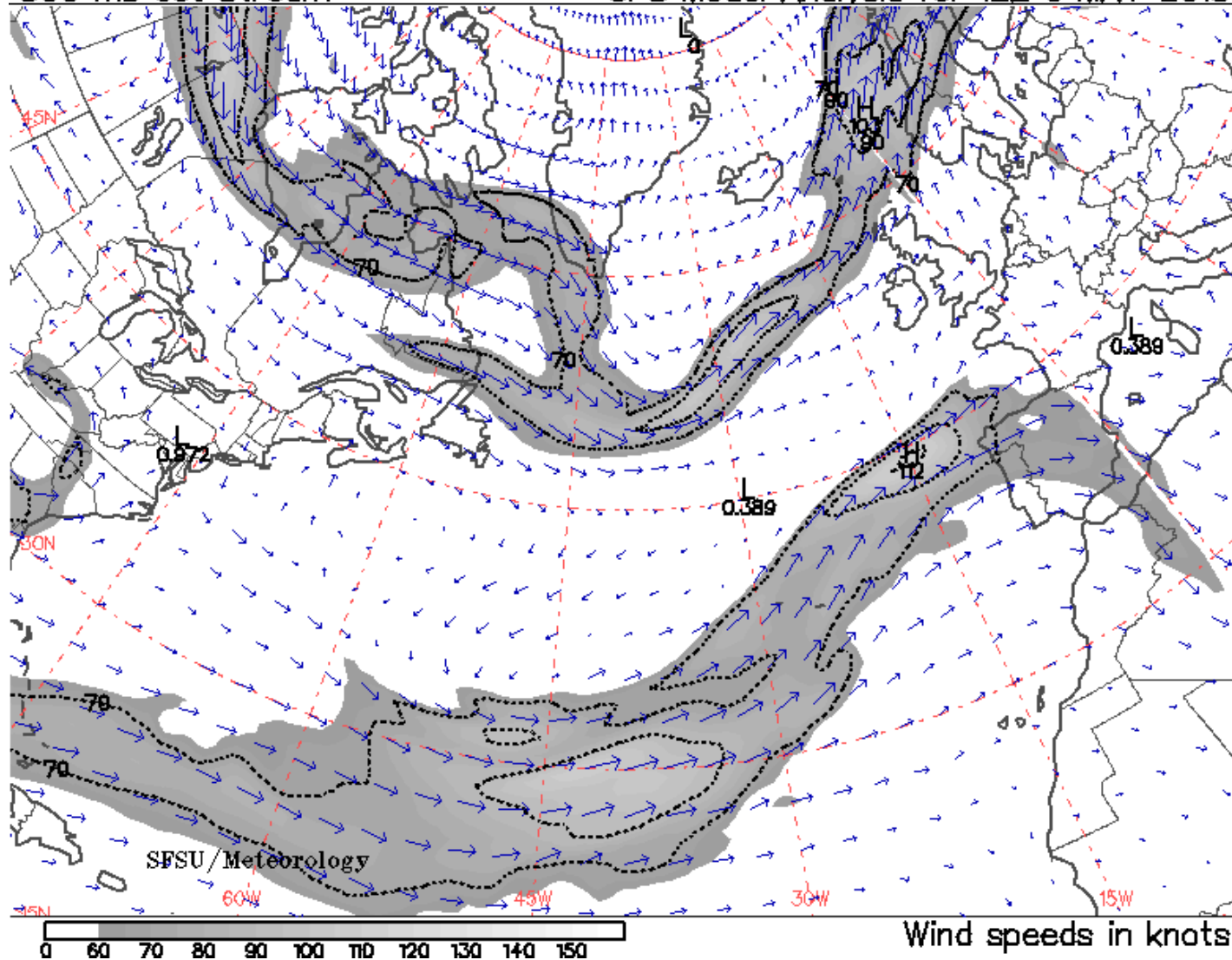
GFS Model Analysis for 12Z 5 MAY 2013





300 mb Jet Stream

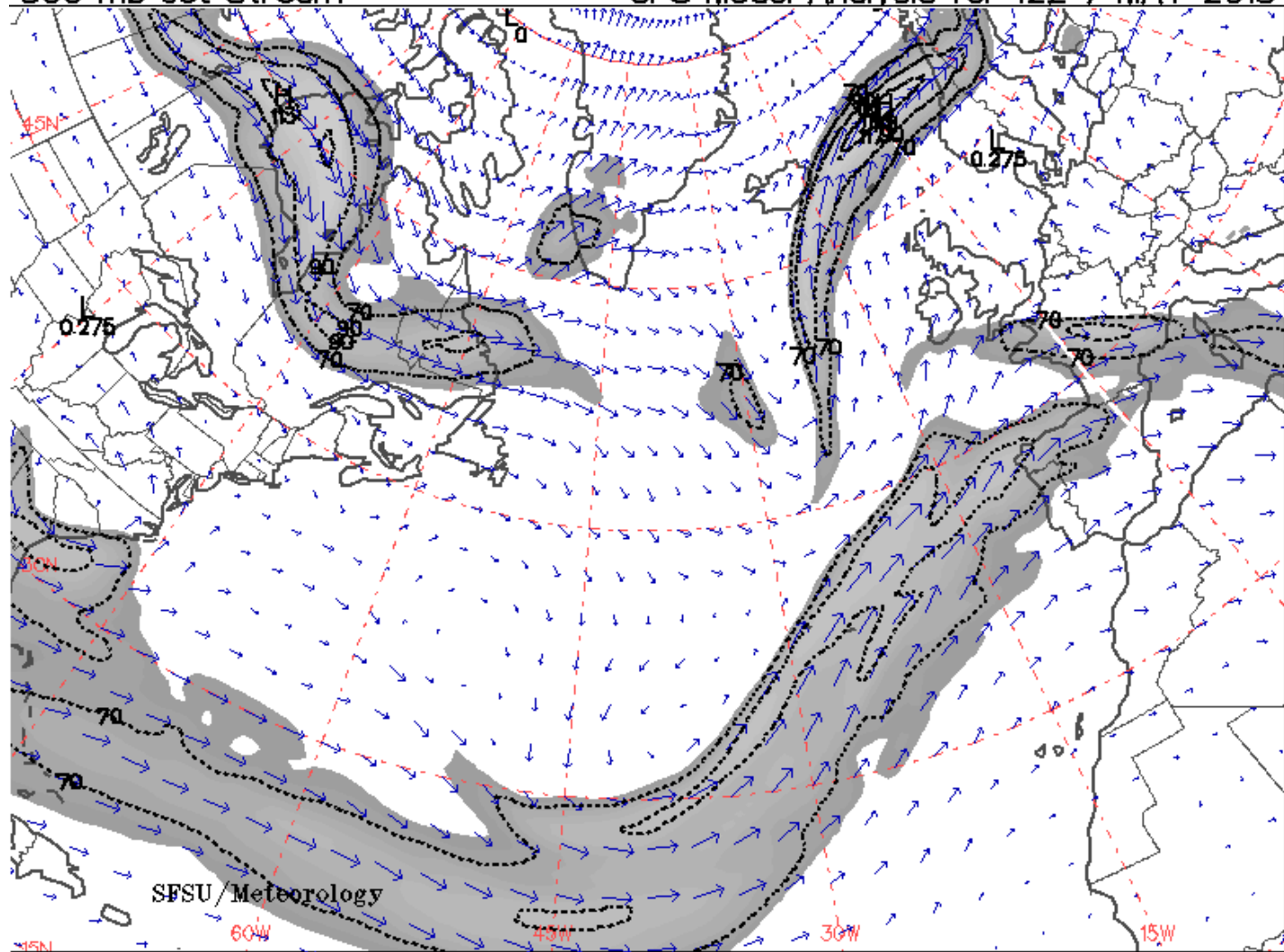
GFS Model Analysis for 12Z 6 MAY 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 7 MAY 2013



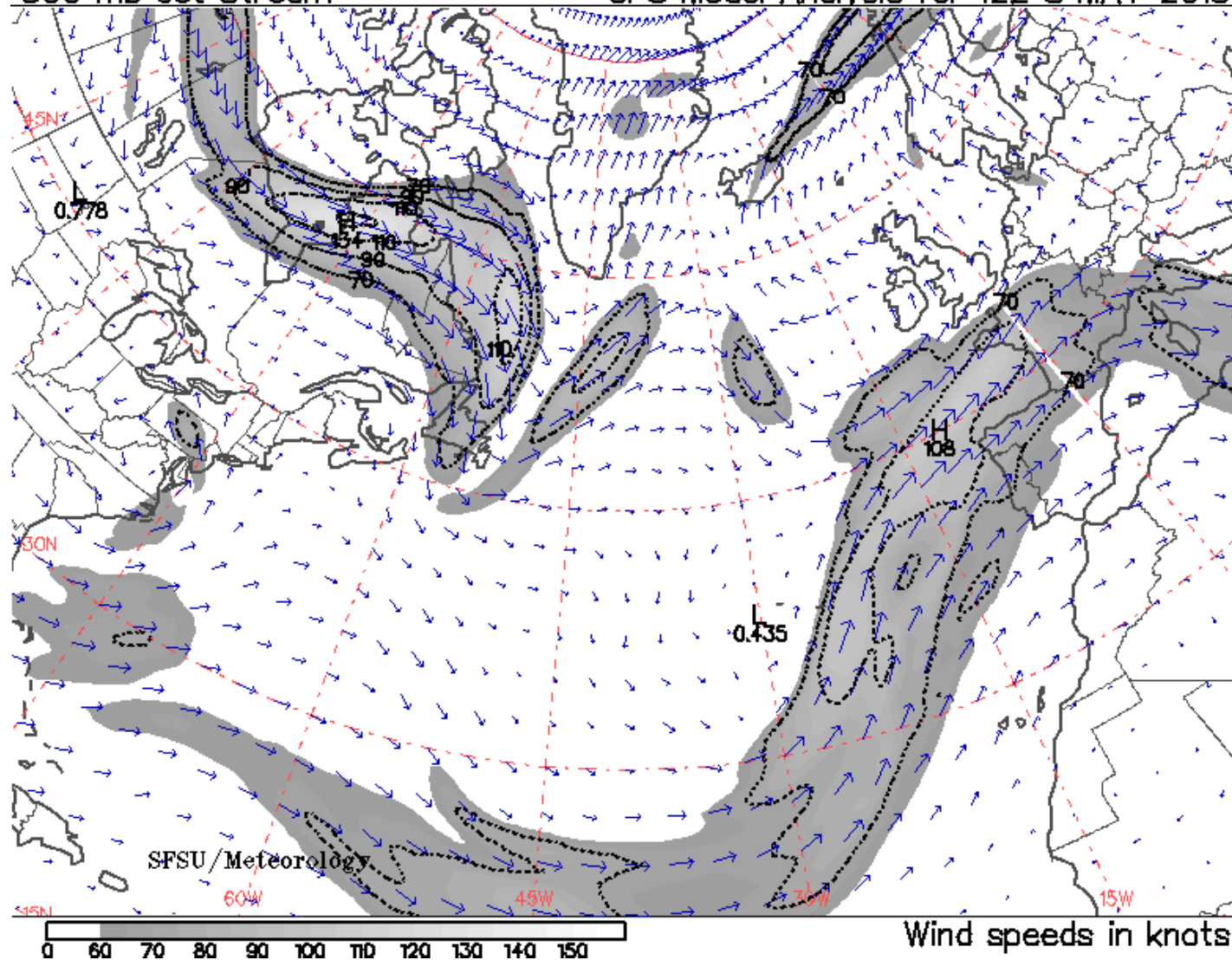
0 60 70 80 90 100 110 120 130 140 150

Wind speeds in knots



300 mb Jet Stream

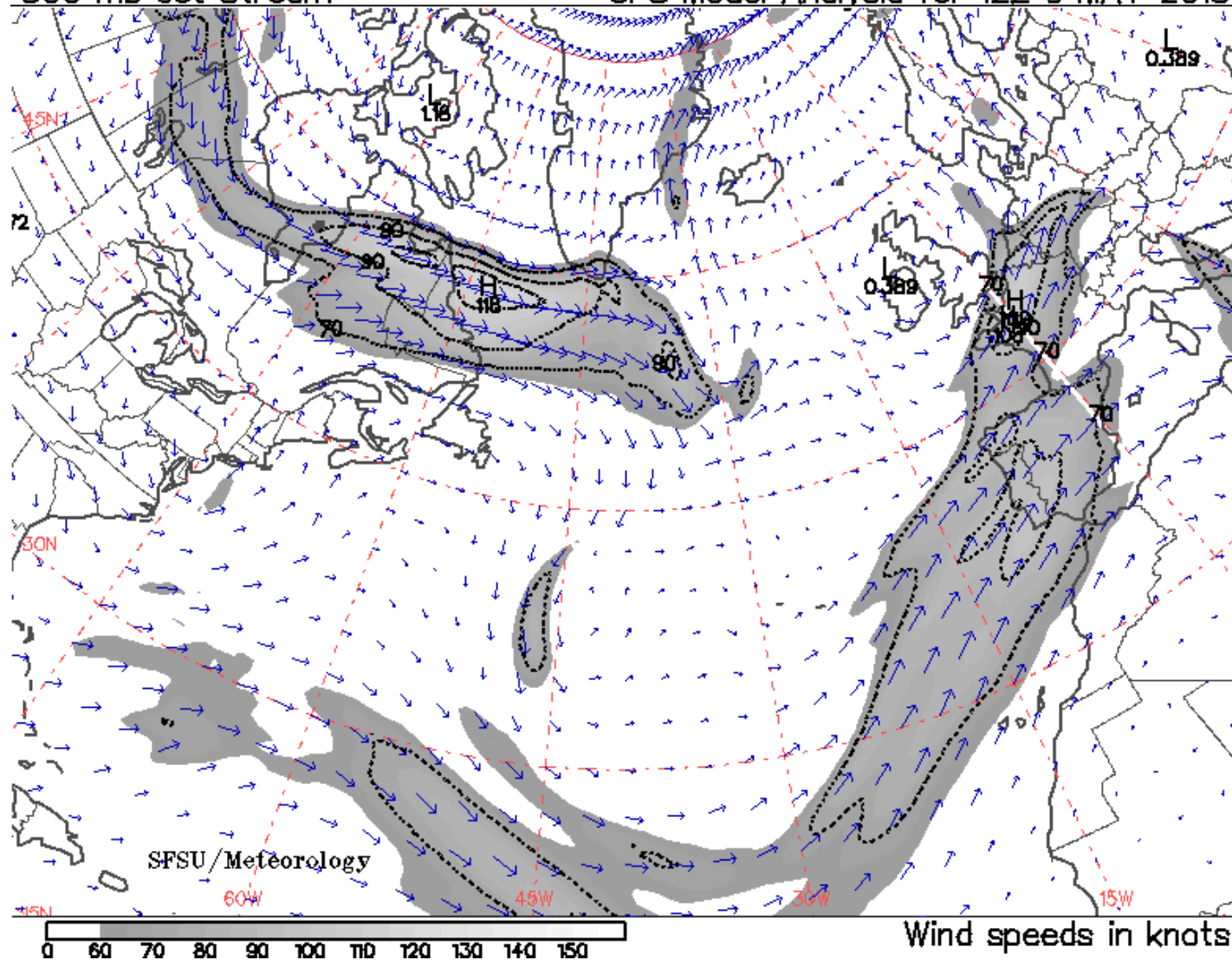
GFS Model Analysis for 12Z 8 MAY 2013





300 mb Jet Stream

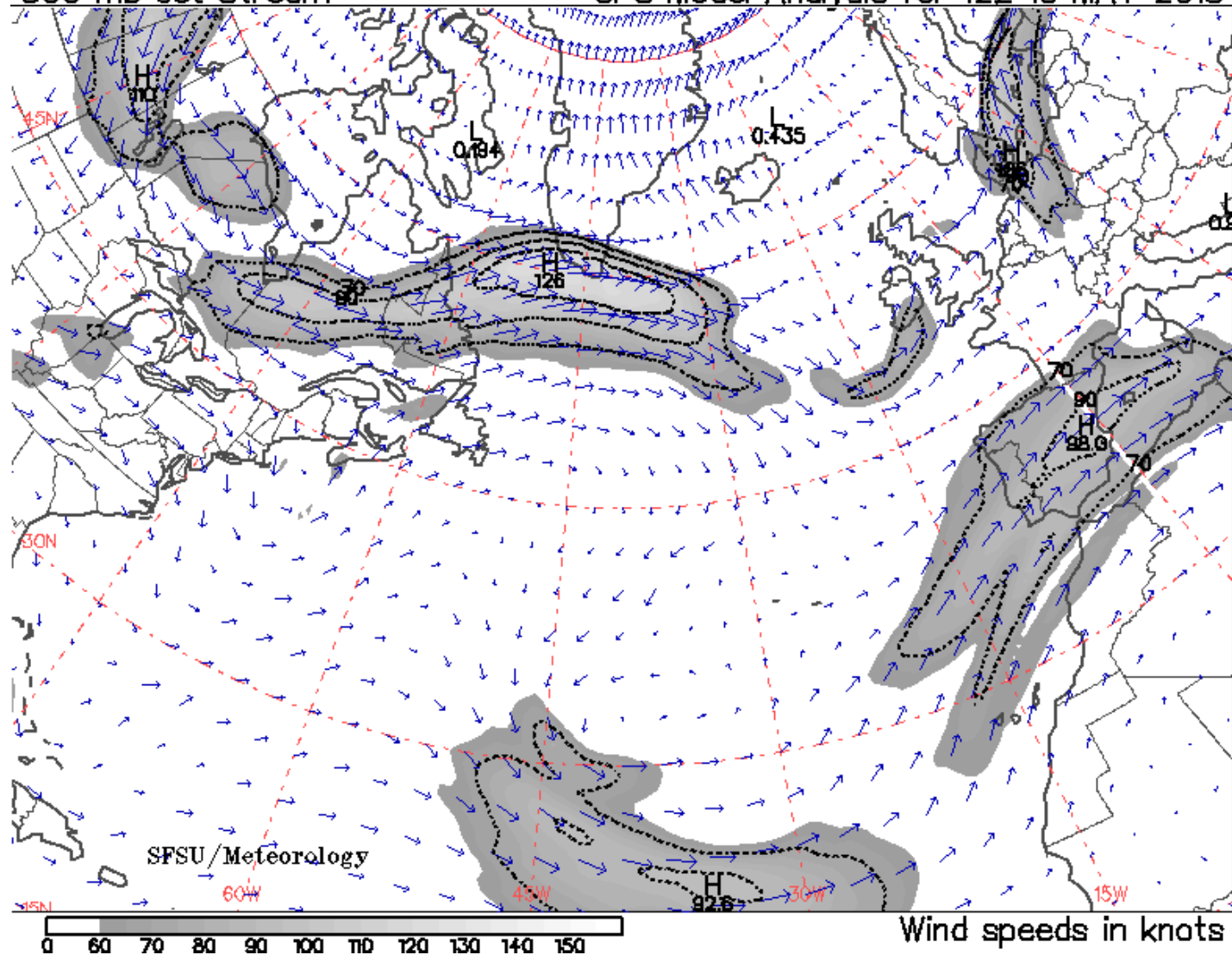
GFS Model Analysis for 12Z 9 MAY 2013





300 mb Jet Stream

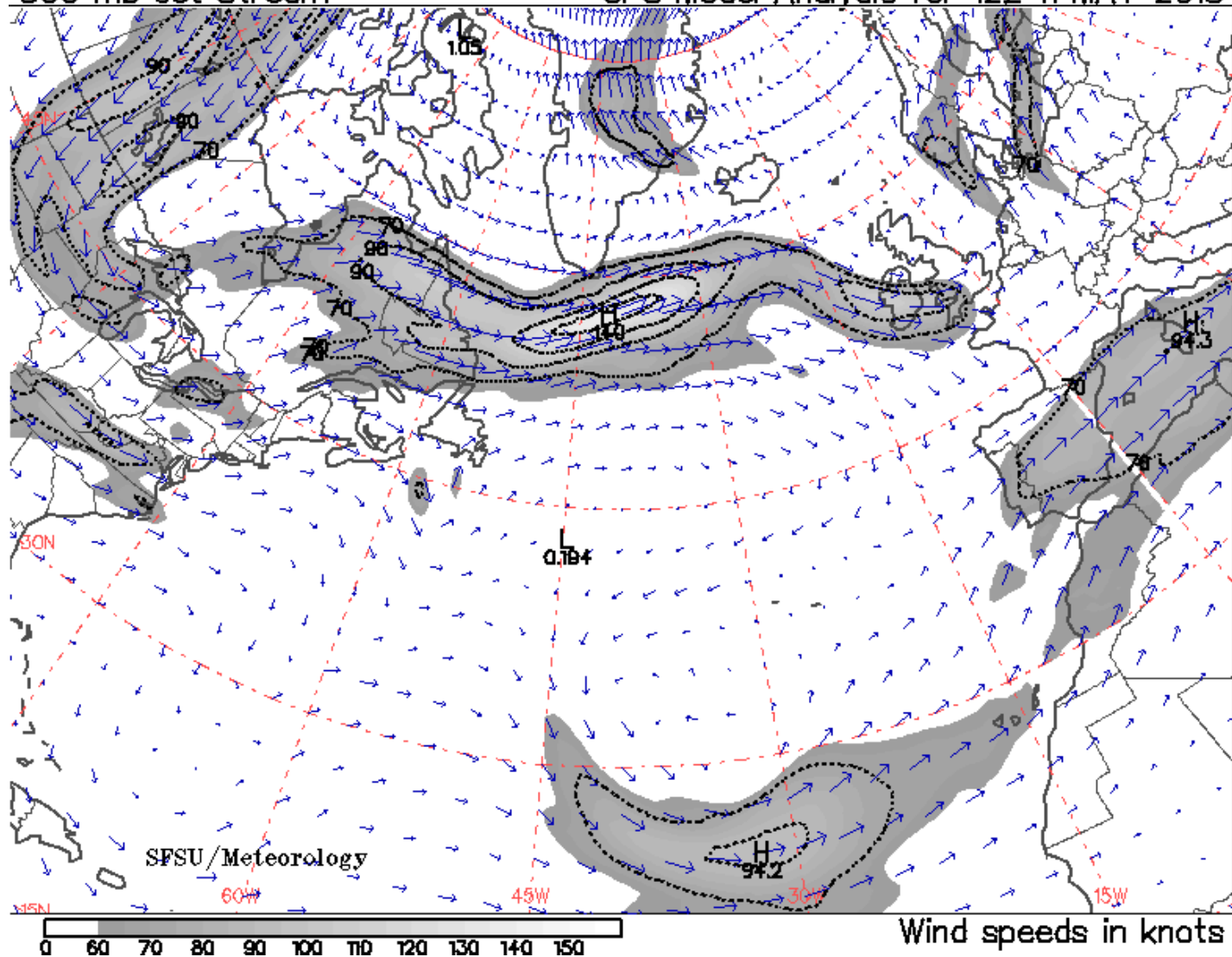
GFS Model Analysis for 12Z 10 MAY 2013





300 mb Jet Stream

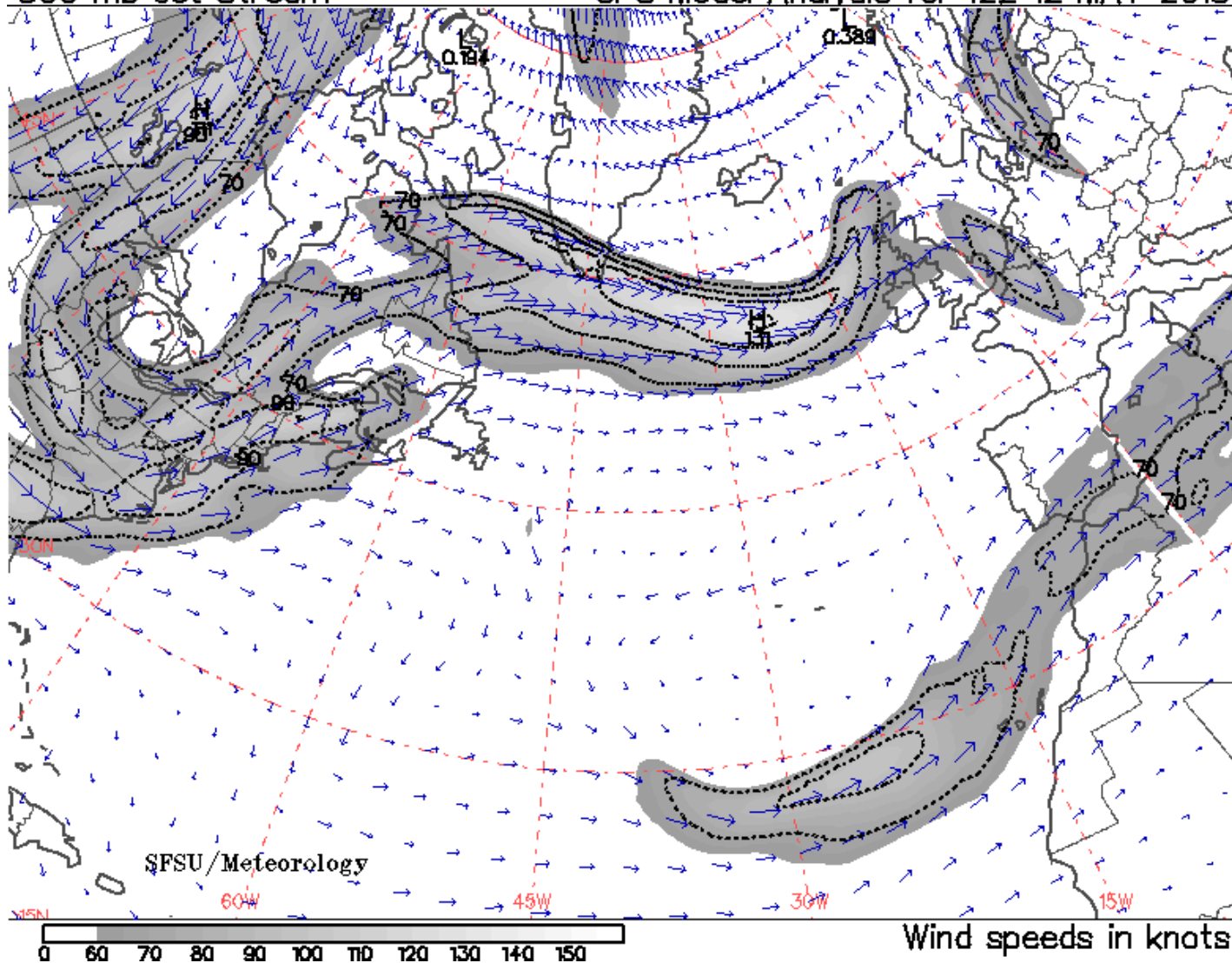
GFS Model Analysis for 12Z 11 MAY 2013





300 mb Jet Stream

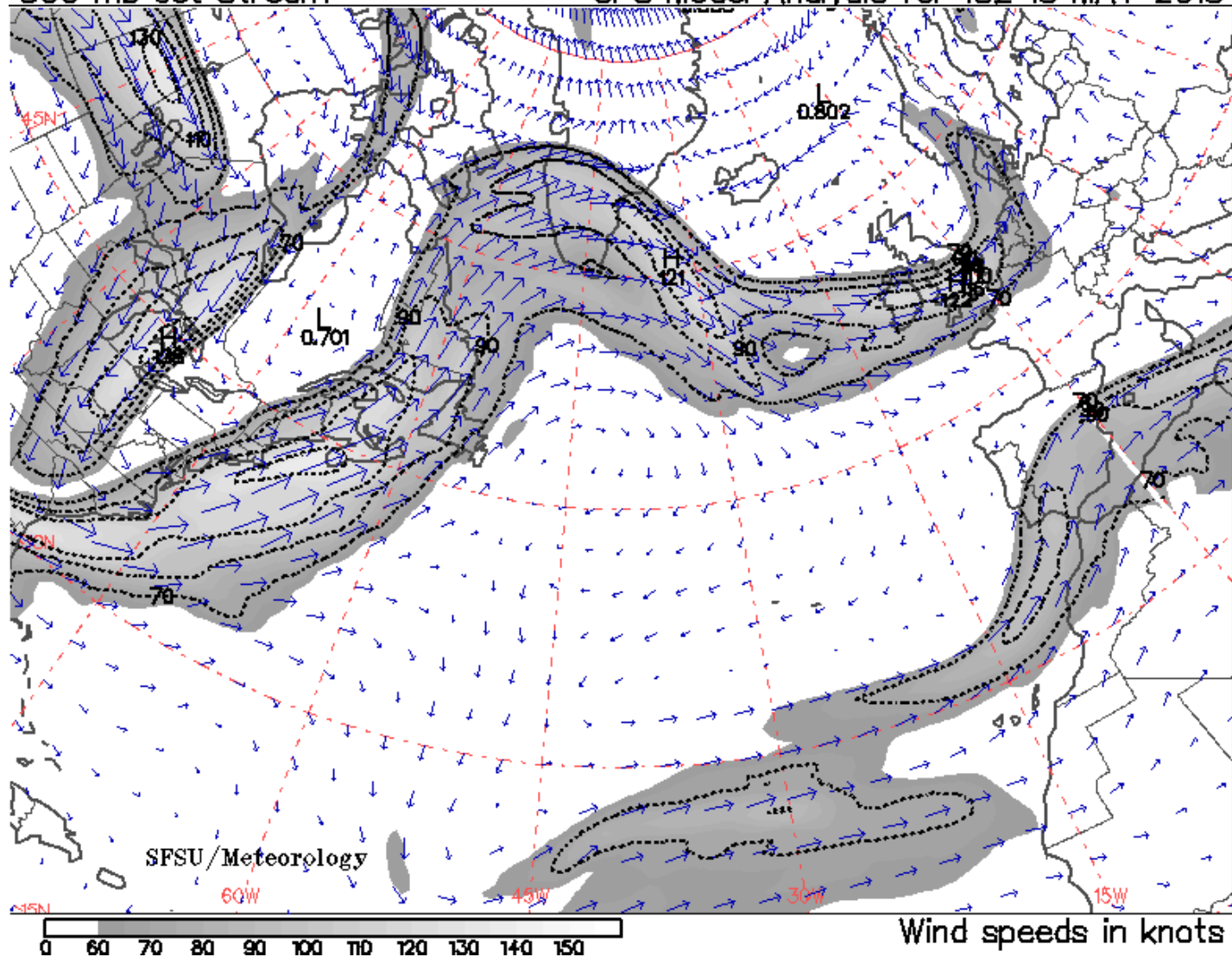
GFS Model Analysis for 12Z 12 MAY 2013





300 mb Jet Stream

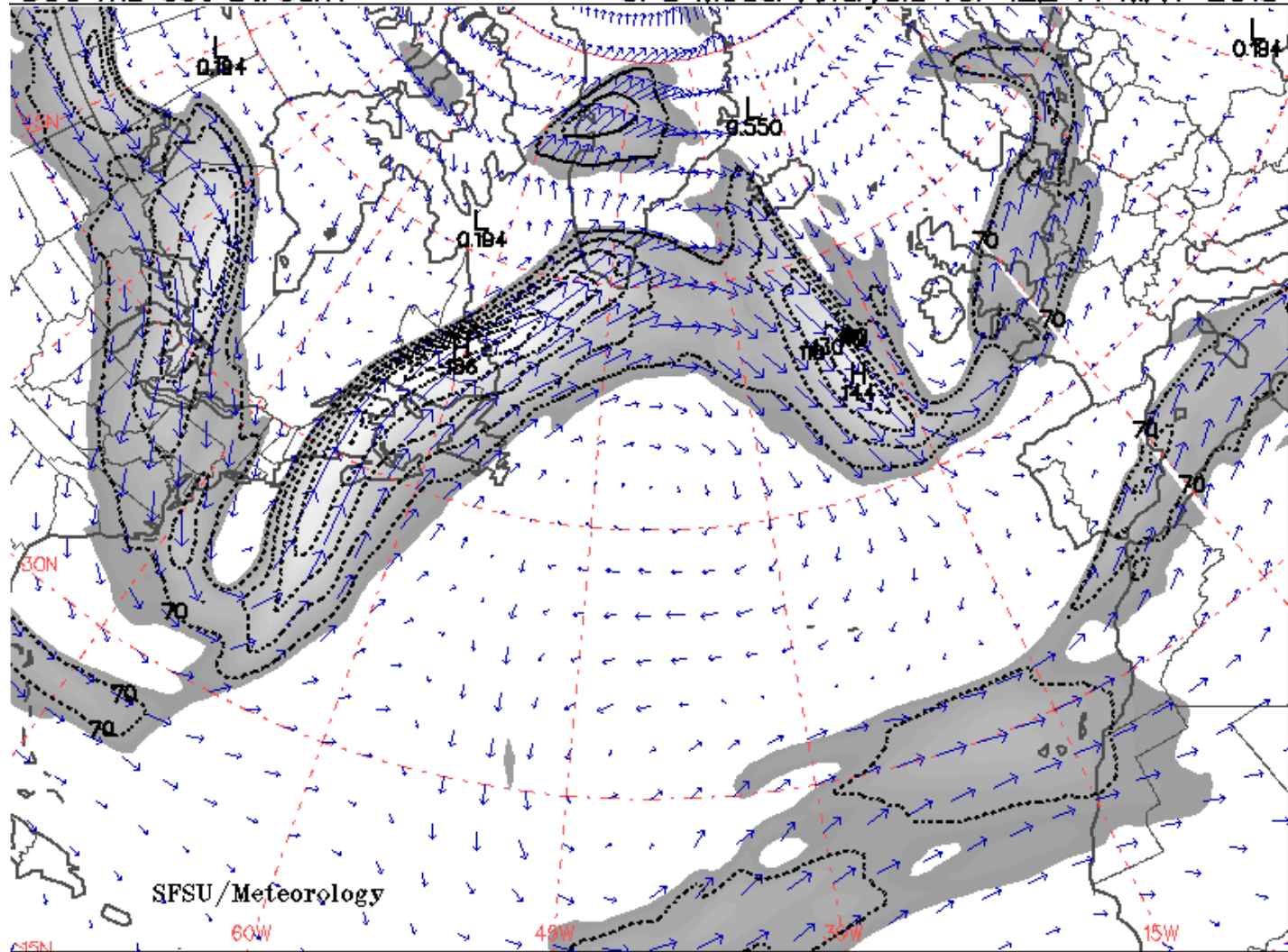
GFS Model Analysis for 18Z 13 MAY 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 14 MAY 2013

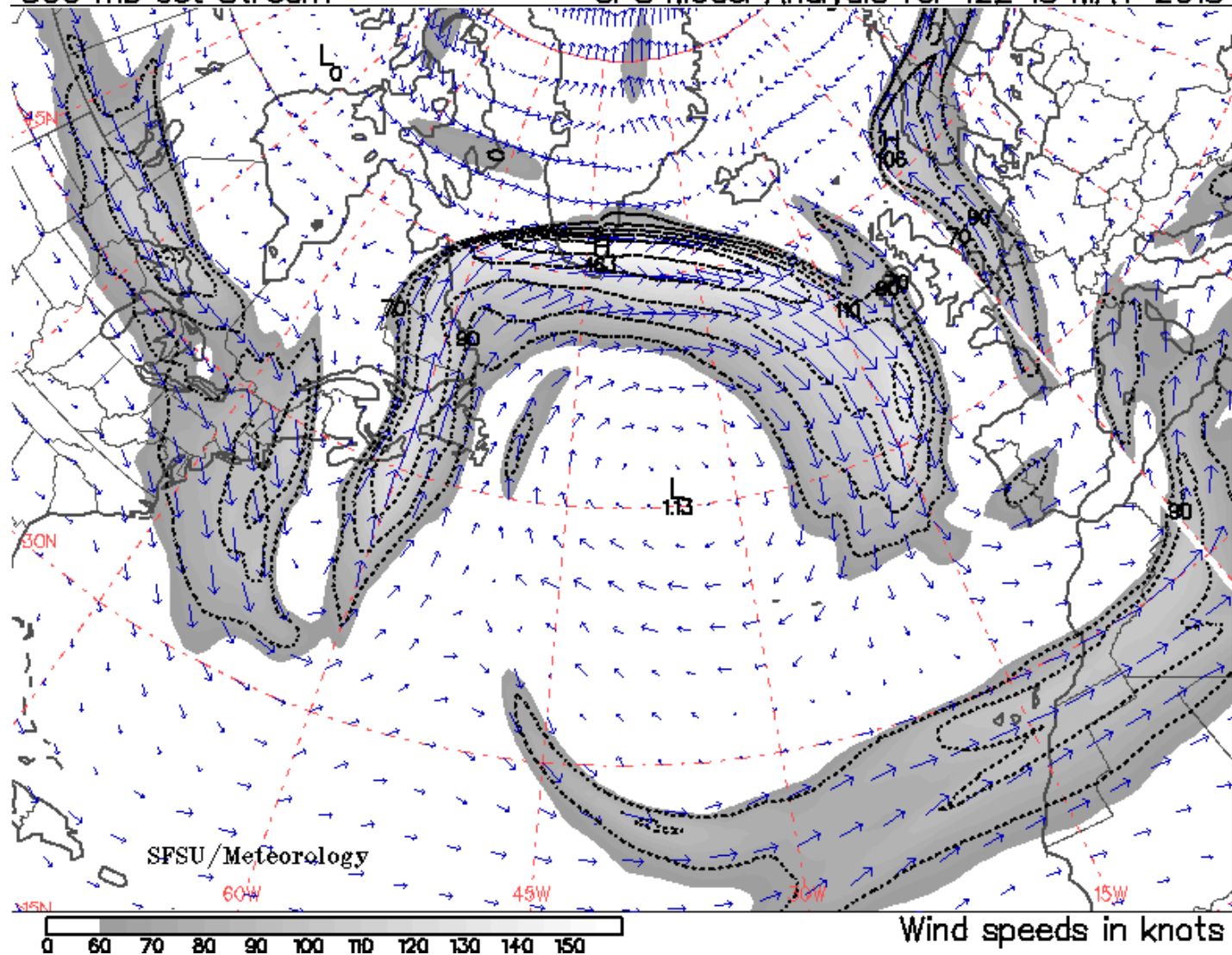


Wind speeds in knots



300 mb Jet Stream

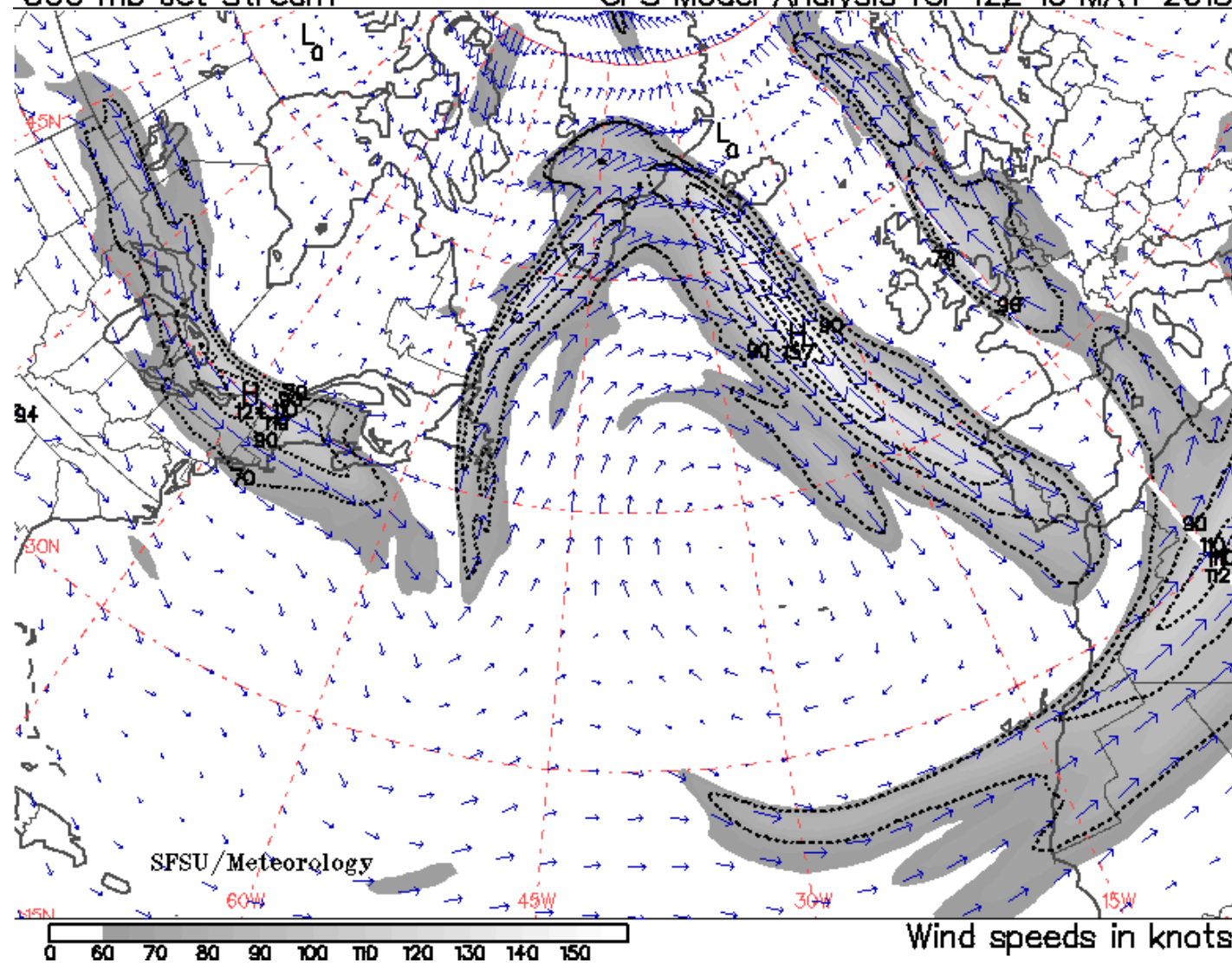
GFS Model Analysis for 12Z 15 MAY 2013





300 mb Jet Stream

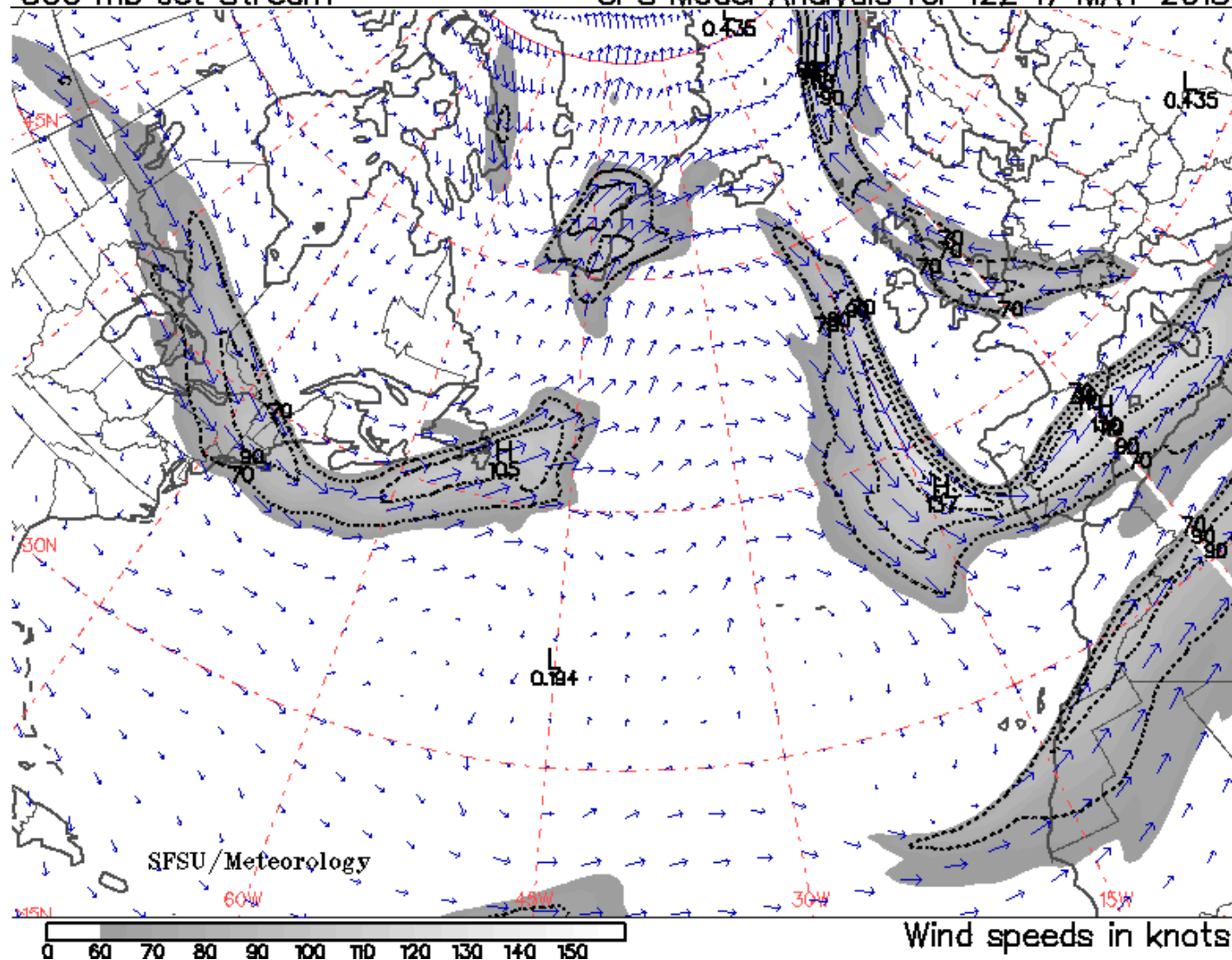
GFS Model Analysis for 12Z 16 MAY 2013





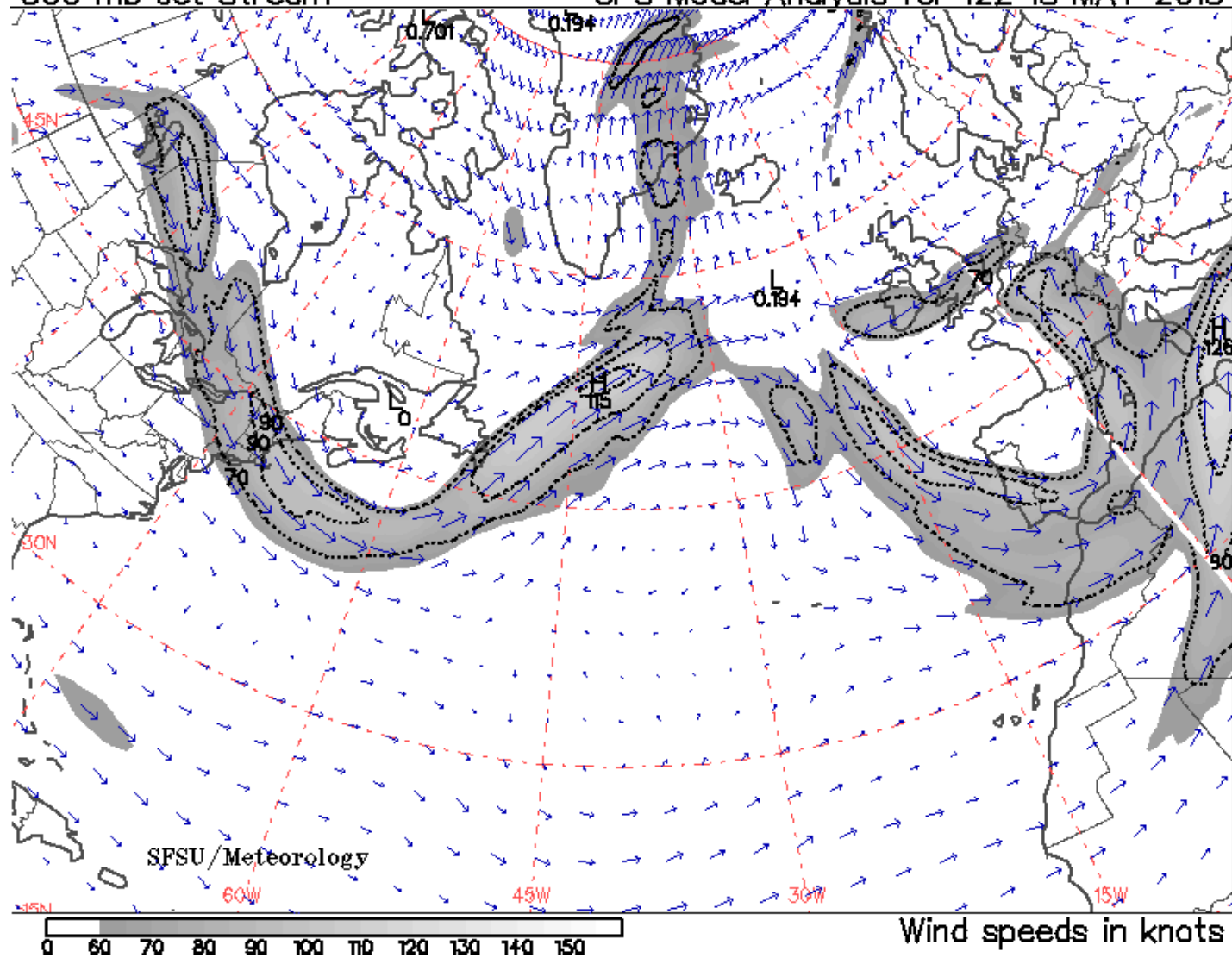
300 mb Jet Stream

GFS Model Analysis for 12Z 17 MAY 2013





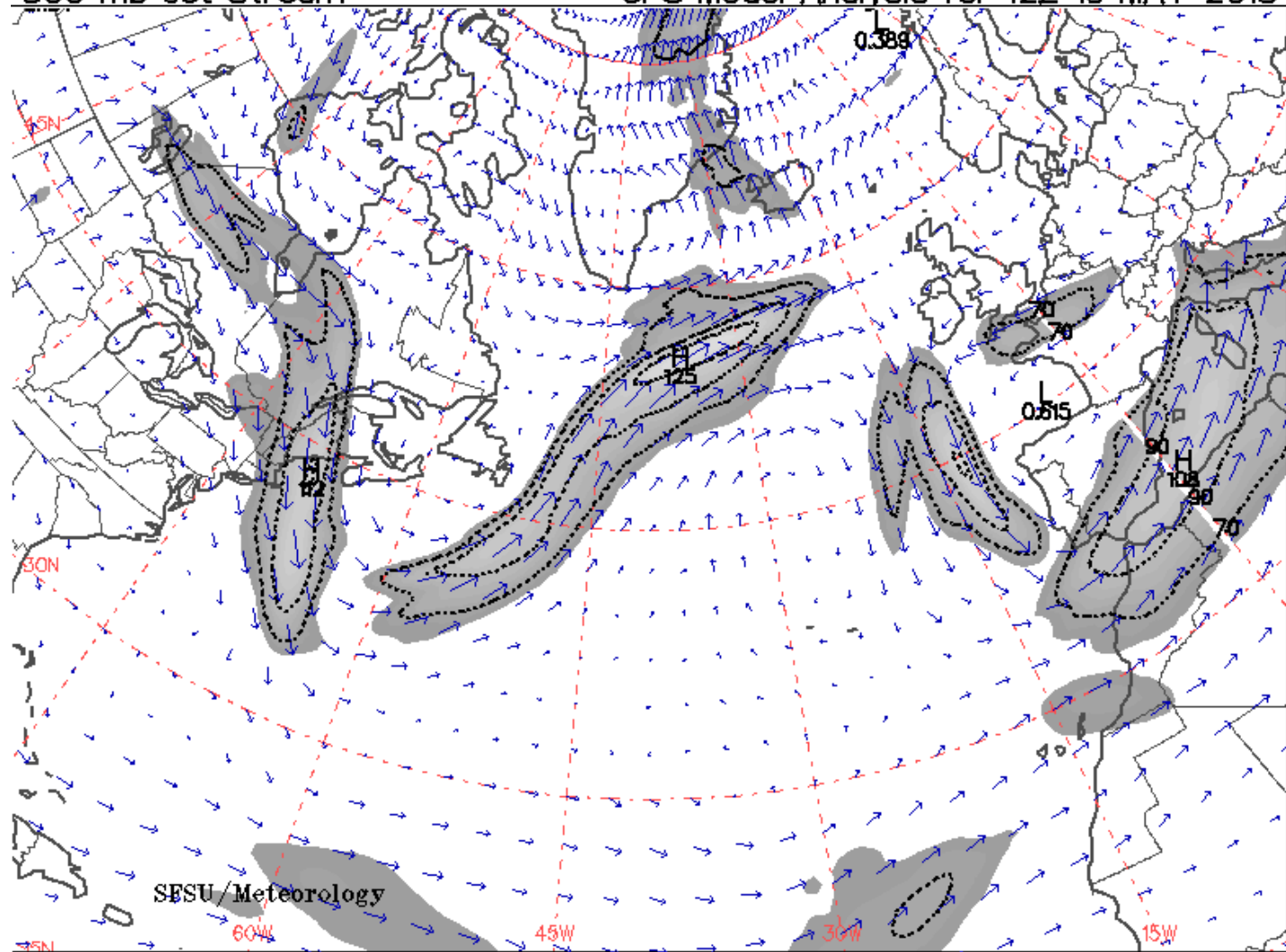
GFS Model Analysis for 12Z 18 MAY 2013





300 mb Jet Stream

GFS Model Analysis for 12Z 19 MAY 2013



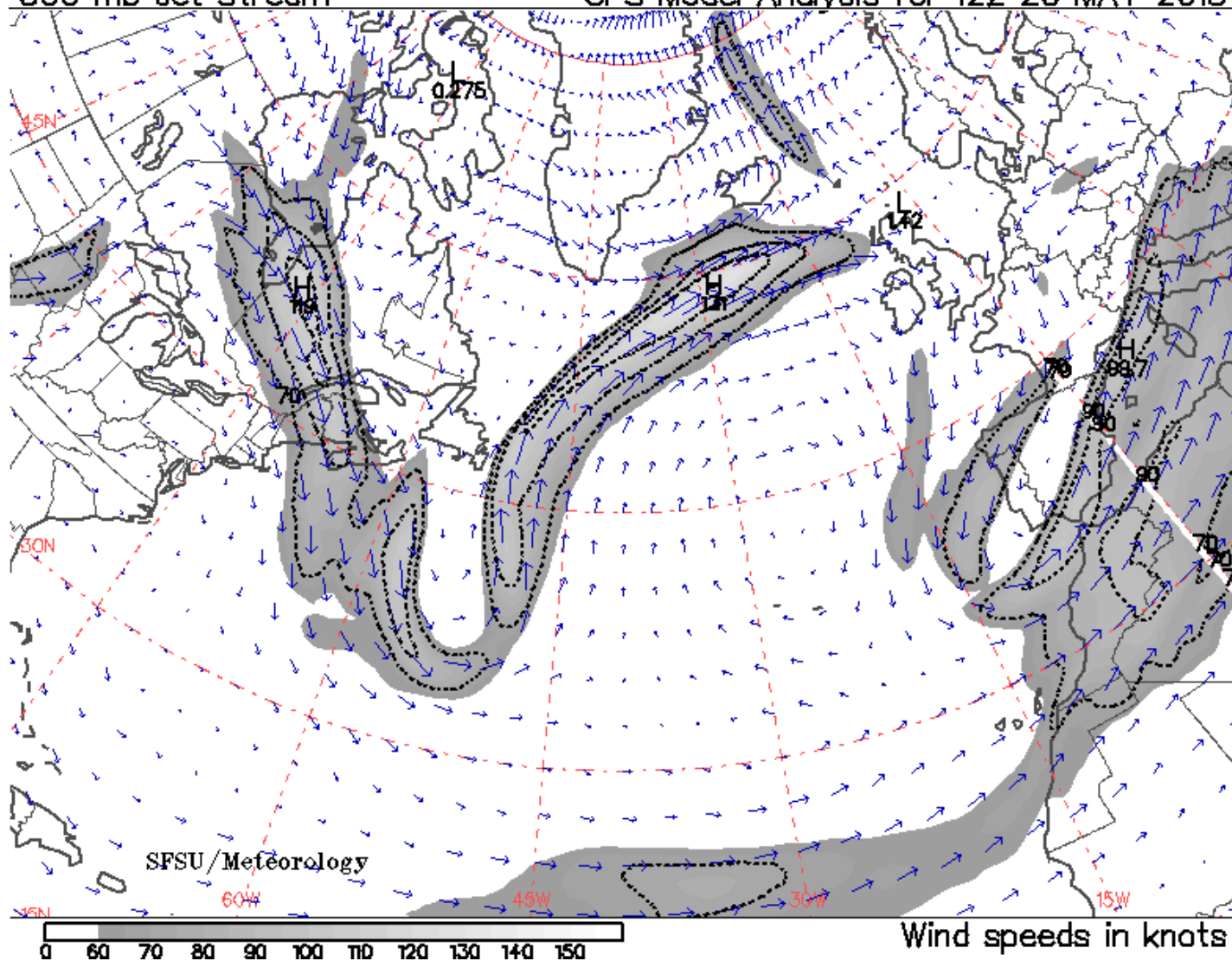
SFSU/Meteorology

Wind speeds in knots



300 mb Jet Stream

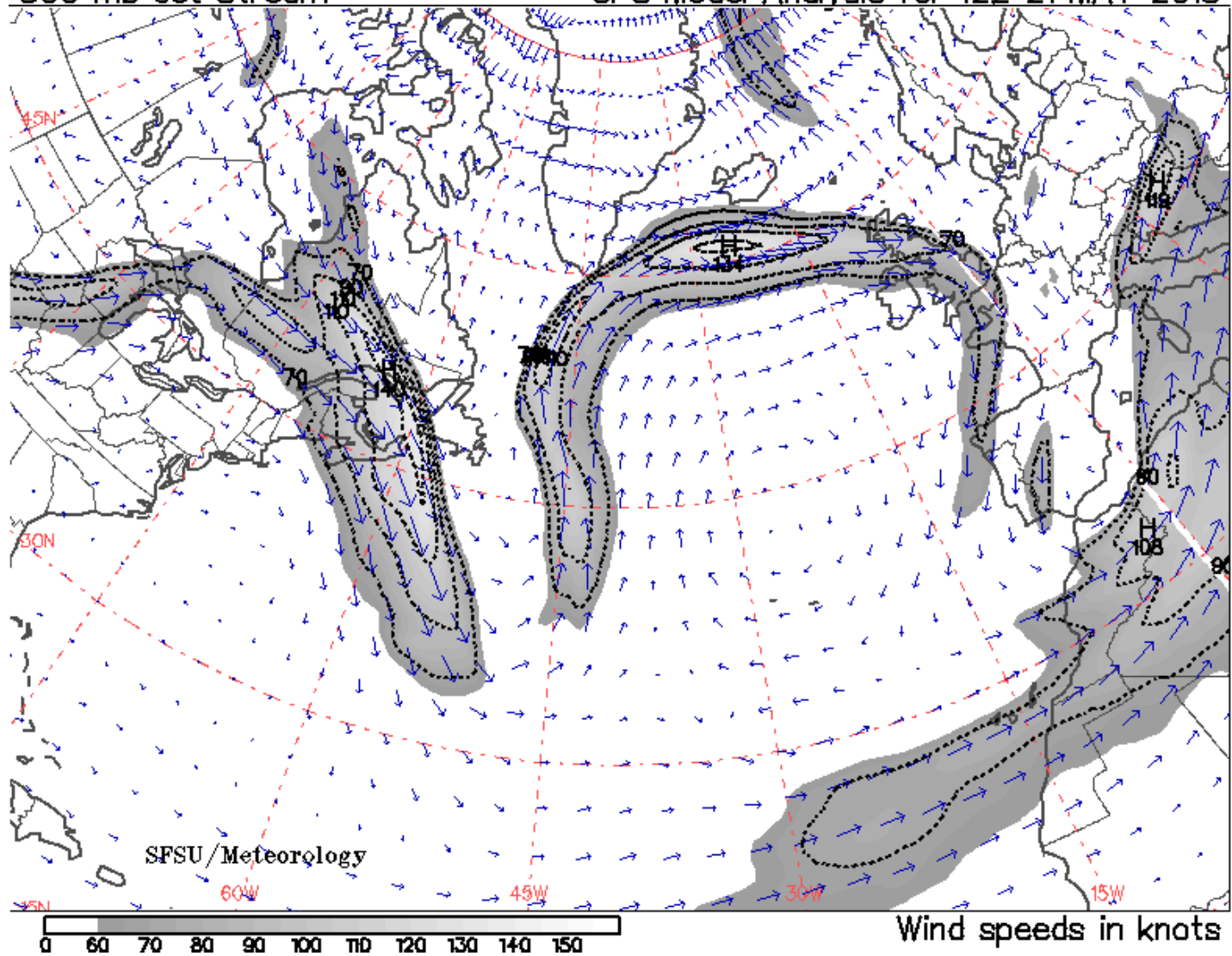
GFS Model Analysis for 12Z 20 MAY 2013





300 mb Jet Stream

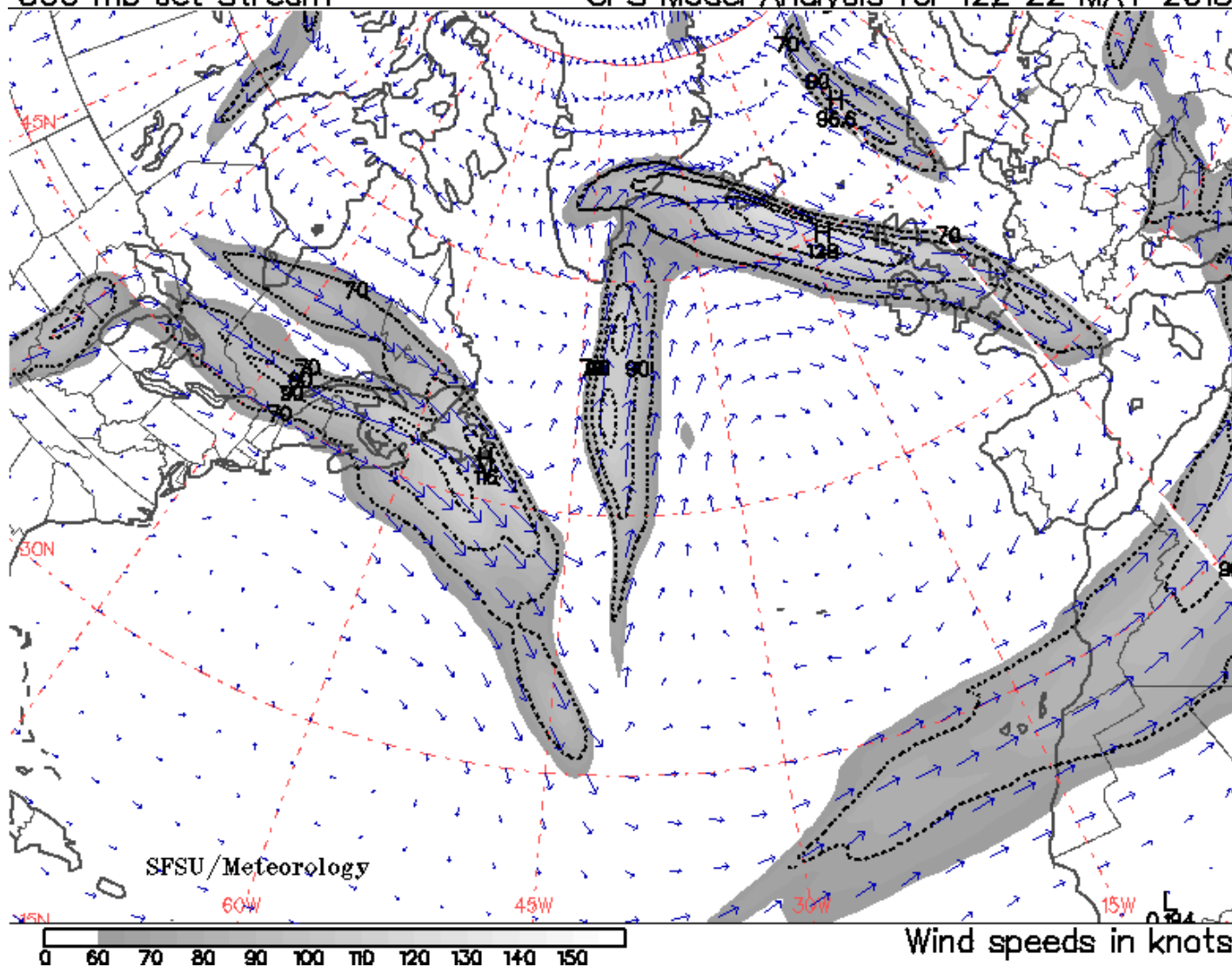
GFS Model Analysis for 12Z 21 MAY 2013





300 mb Jet Stream

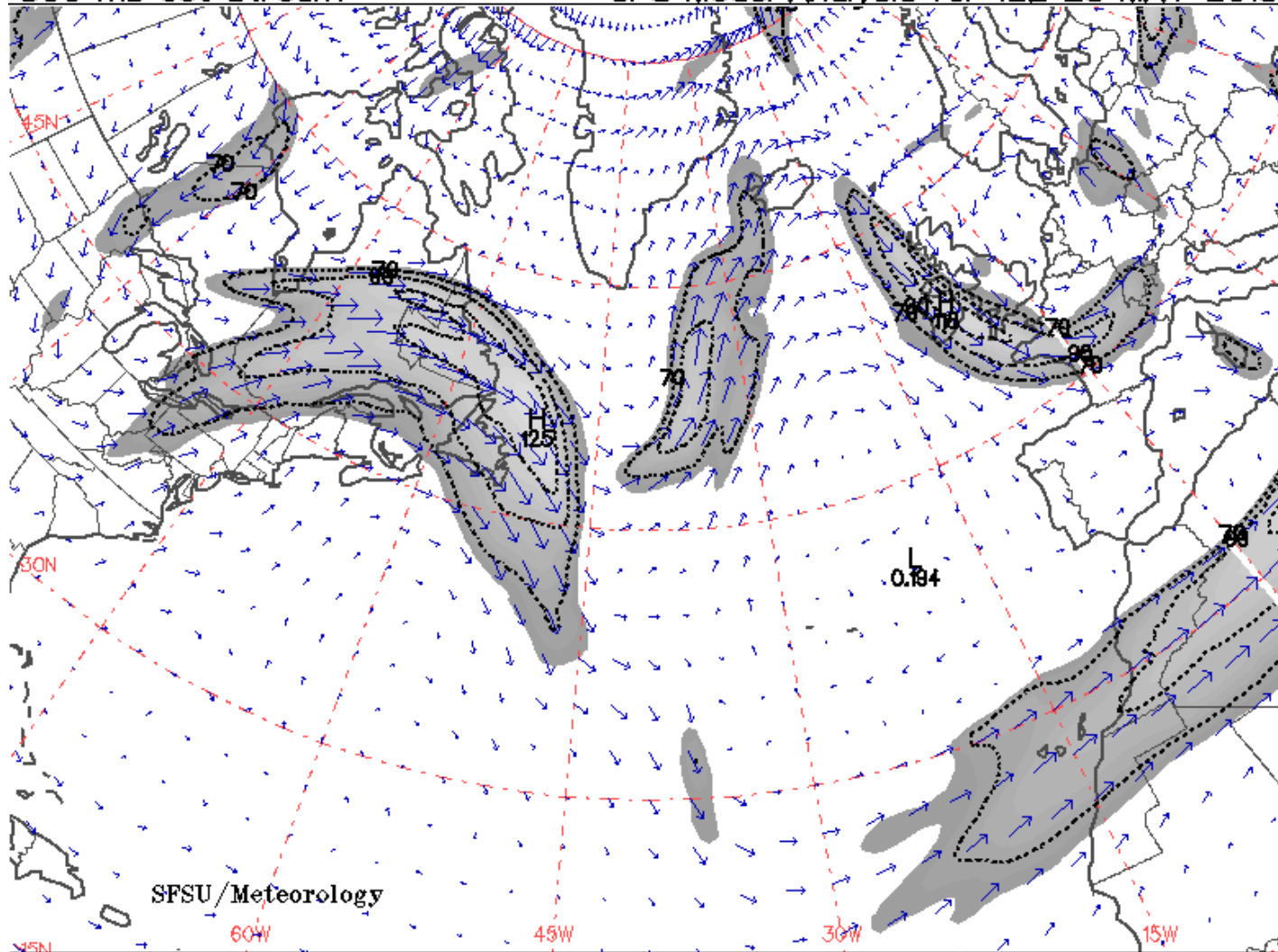
GFS Model Analysis for 12Z 22 MAY 2013



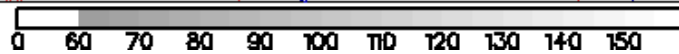


300 mb Jet Stream

GFS Model Analysis for 12Z 23 MAY 2013



SFSU/Meteorology

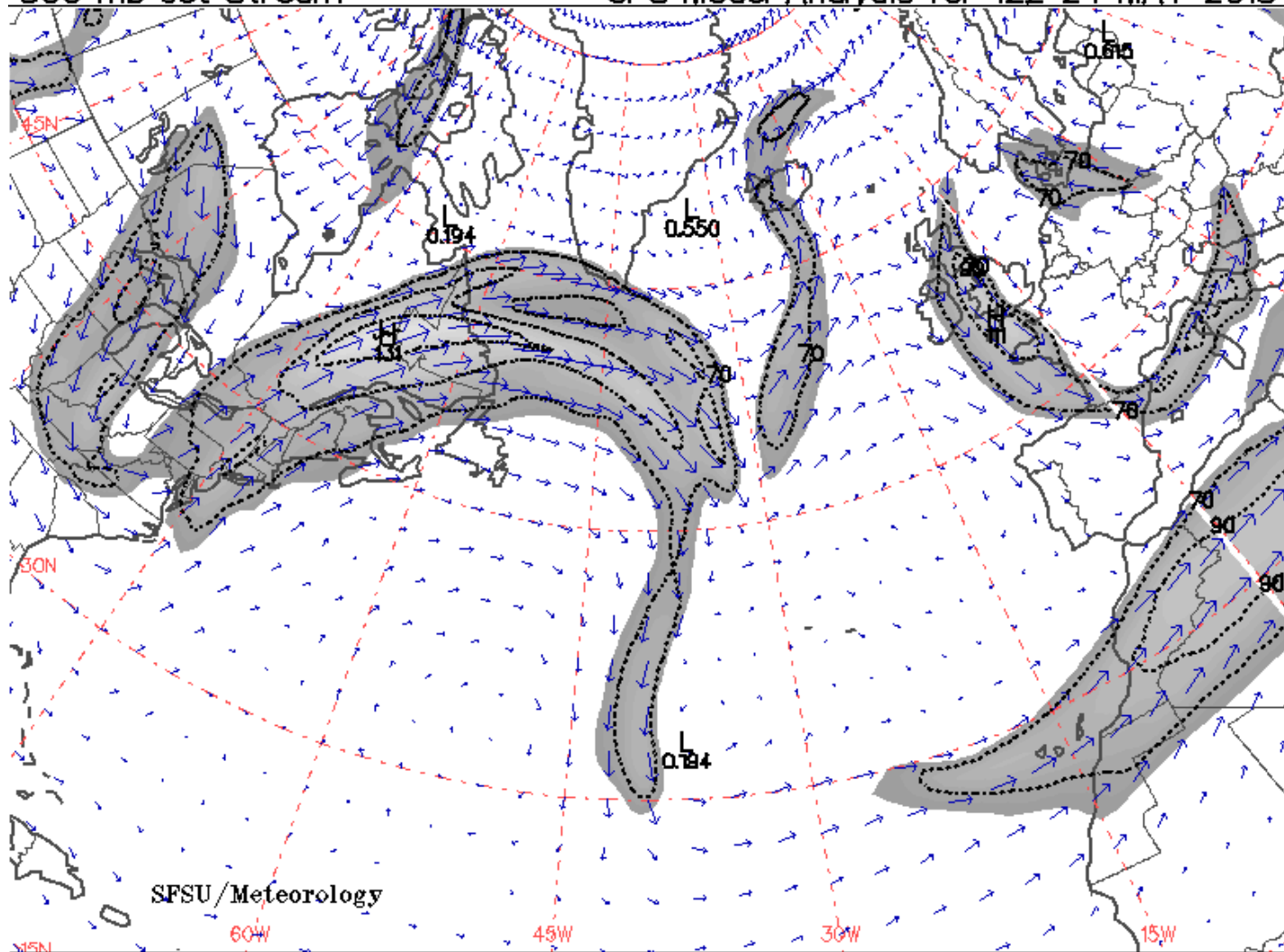


Wind speeds in knots



300 mb Jet Stream

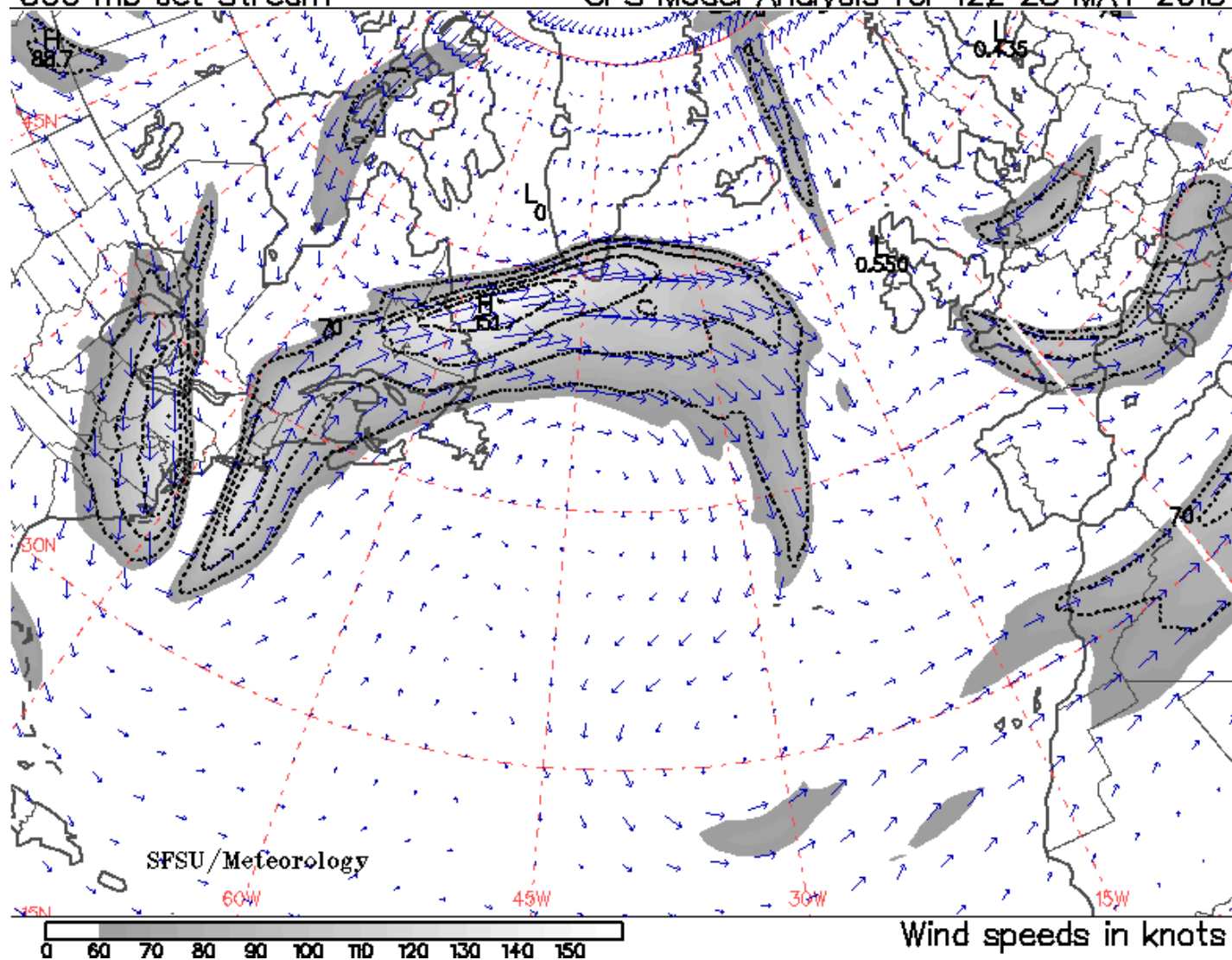
GFS Model Analysis for 12Z 24 MAY 2013



Wind speeds in knots



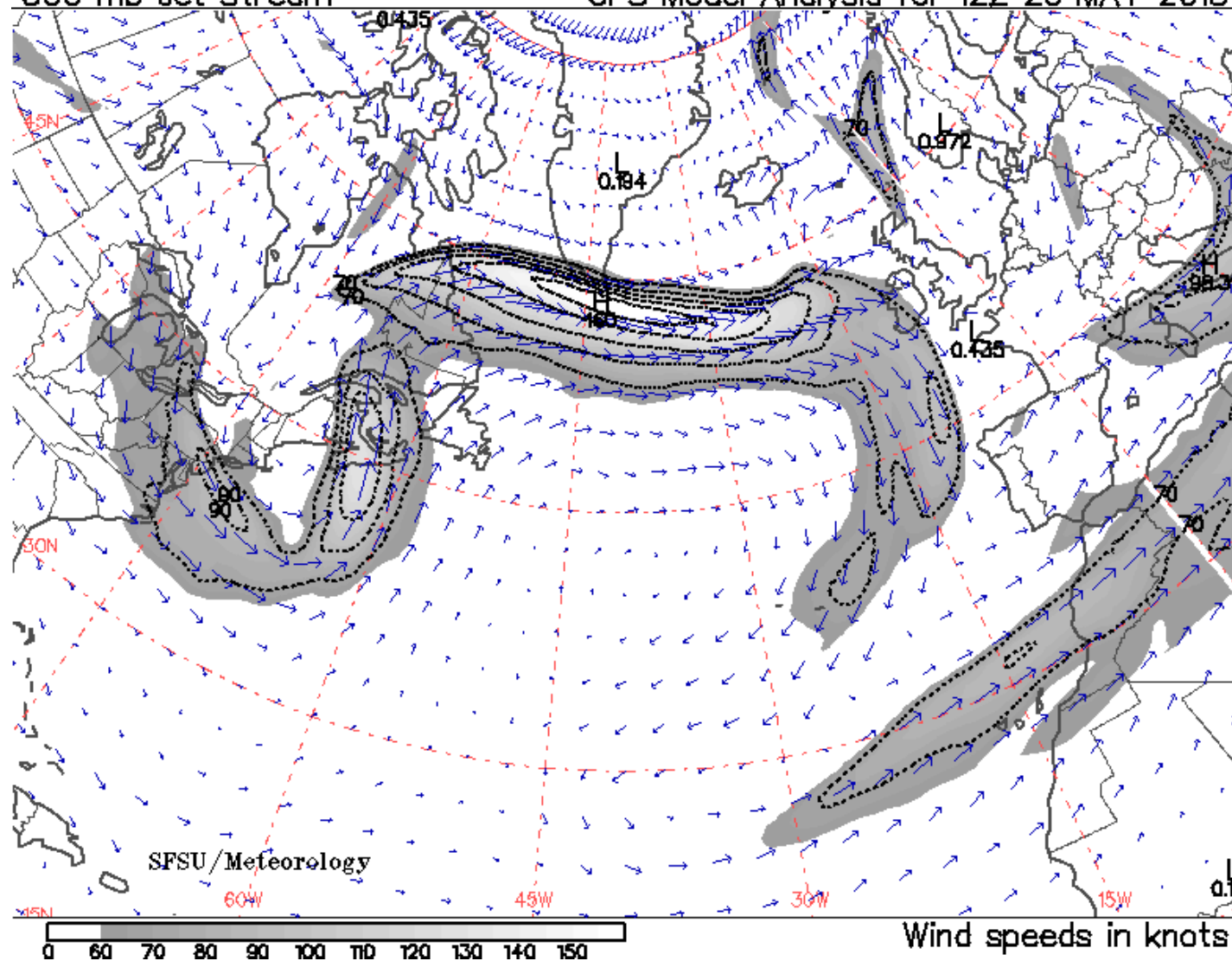
GFS Model Analysis for 12Z 25 MAY 2013





300 mb Jet Stream

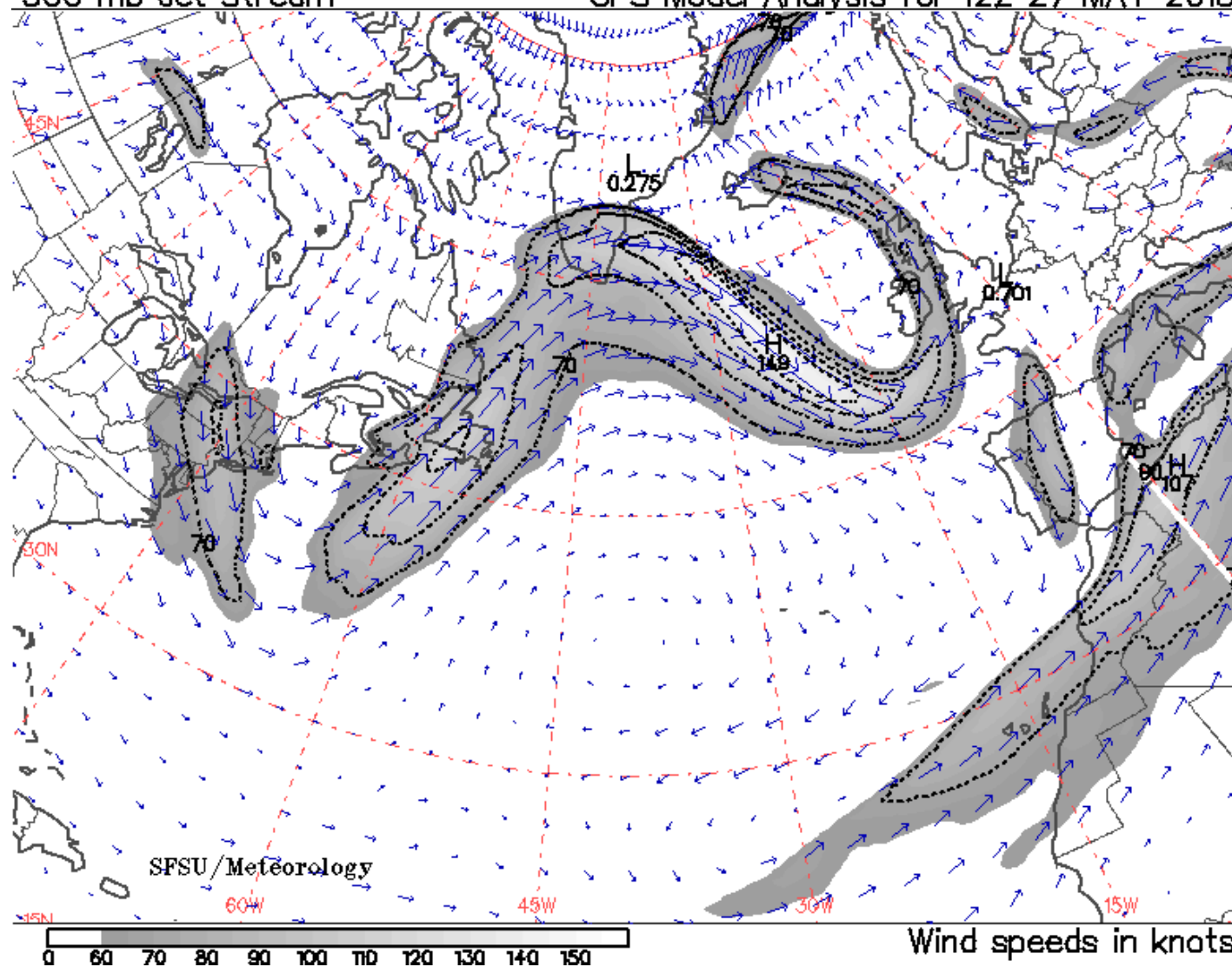
GFS Model Analysis for 12Z 26 MAY 2013





300 mb Jet Stream

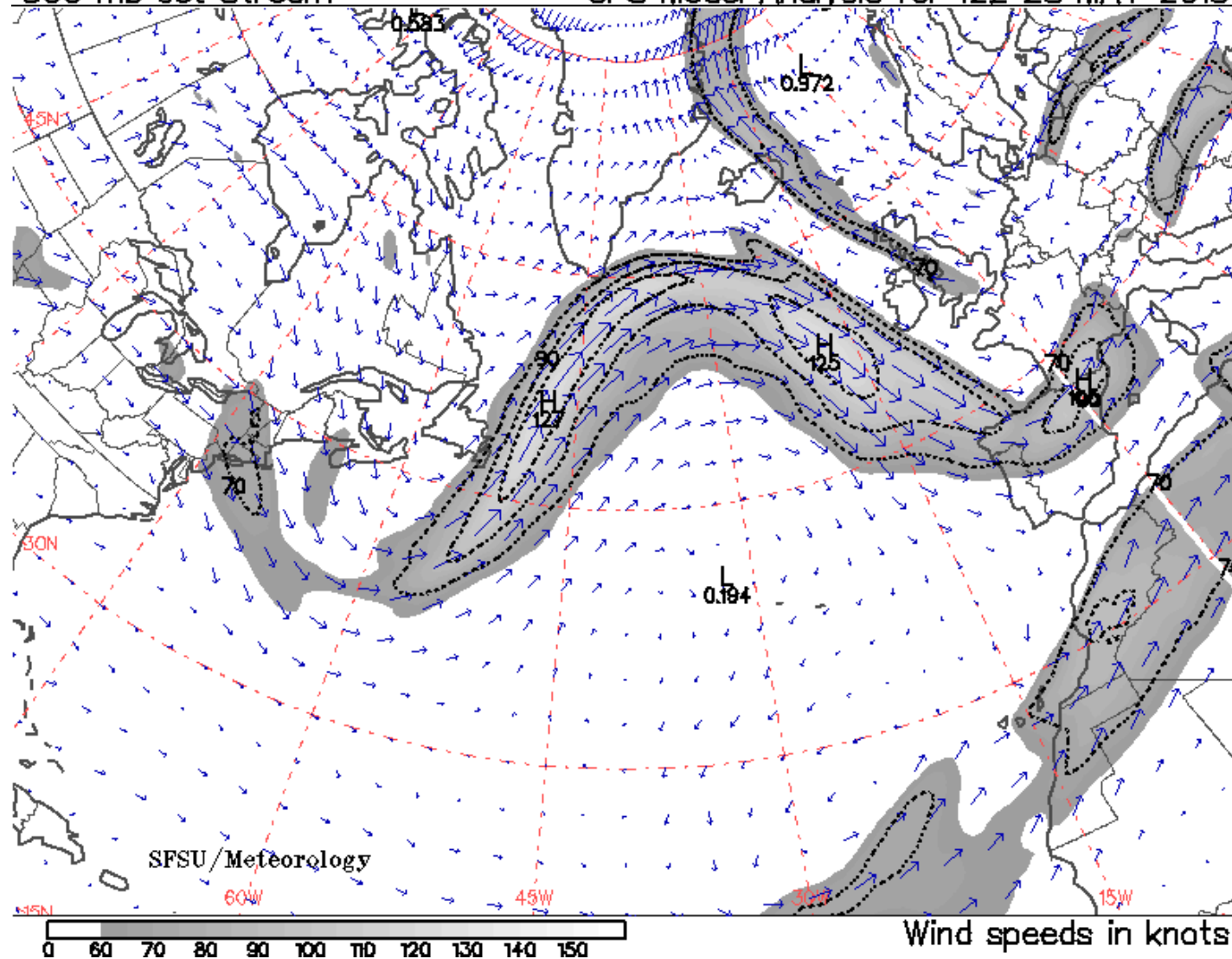
GFS Model Analysis for 12Z 27 MAY 2013





300 mb Jet Stream

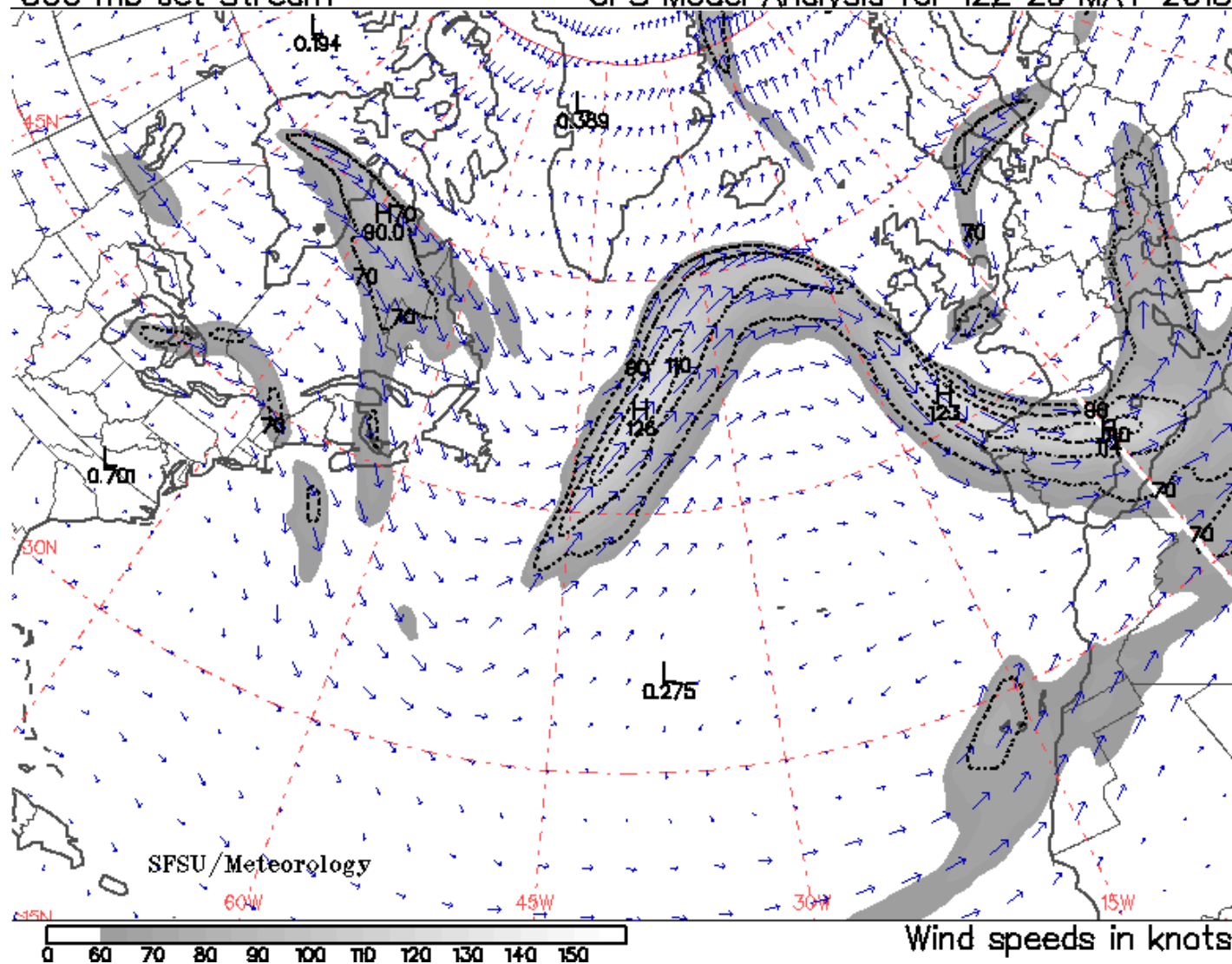
GFS Model Analysis for 12Z 28 MAY 2013

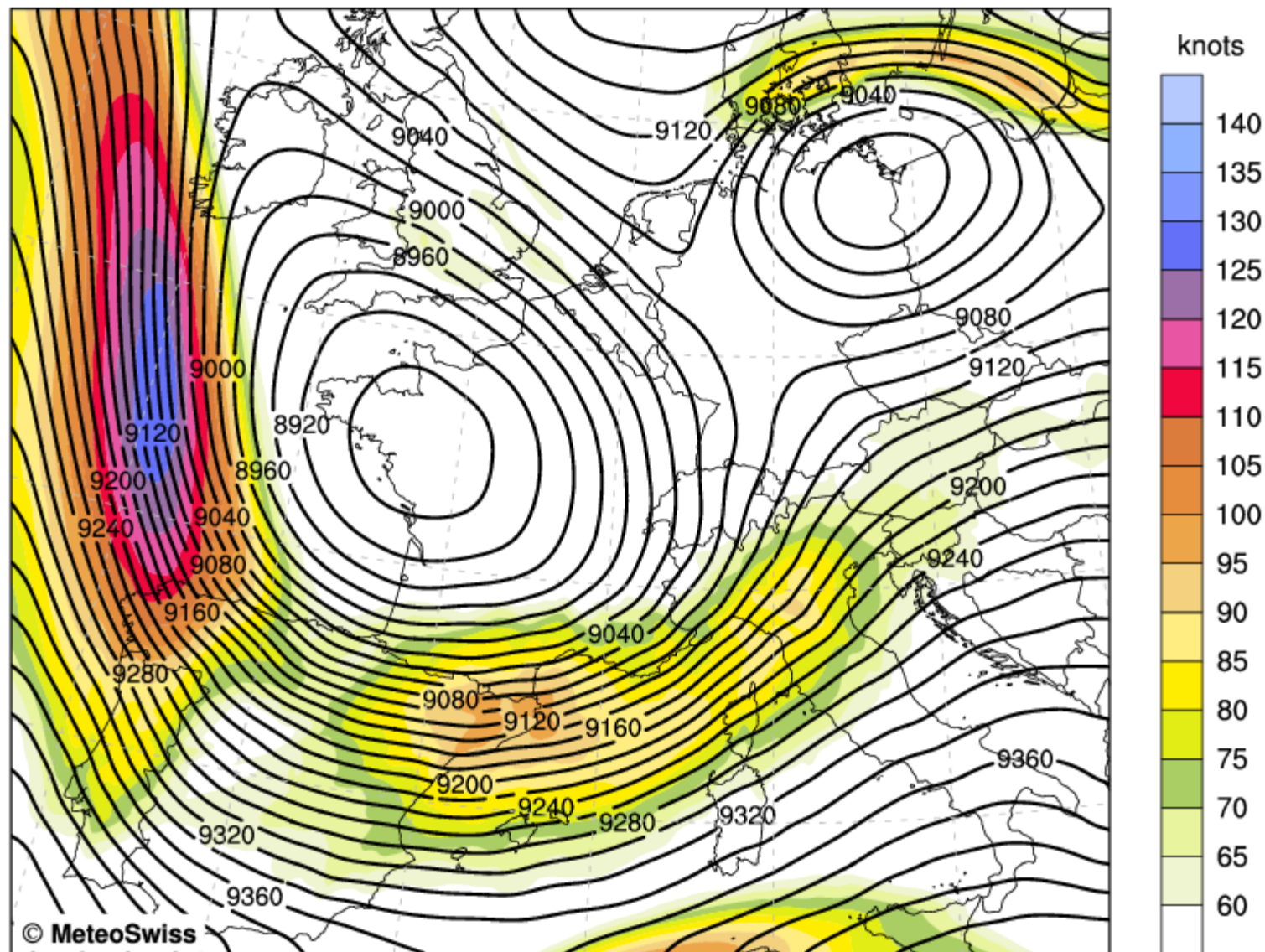




300 mb Jet Stream

GFS Model Analysis for 12Z 29 MAY 2013





wind speed [knots], level = 300 hPa
Geopotential [gpm], level = 300 hPa

Mean: 53.4 Max: 99.3 [knots]
Mean: 9158.3 gpm



Riporto qui un commento alla situazione meteo di questa primavera tratto da “Corriere della Sera” del 25 Maggio 2013

Intervista a Massimiliano Pasqui – Istituto di biometeorologia del CNR

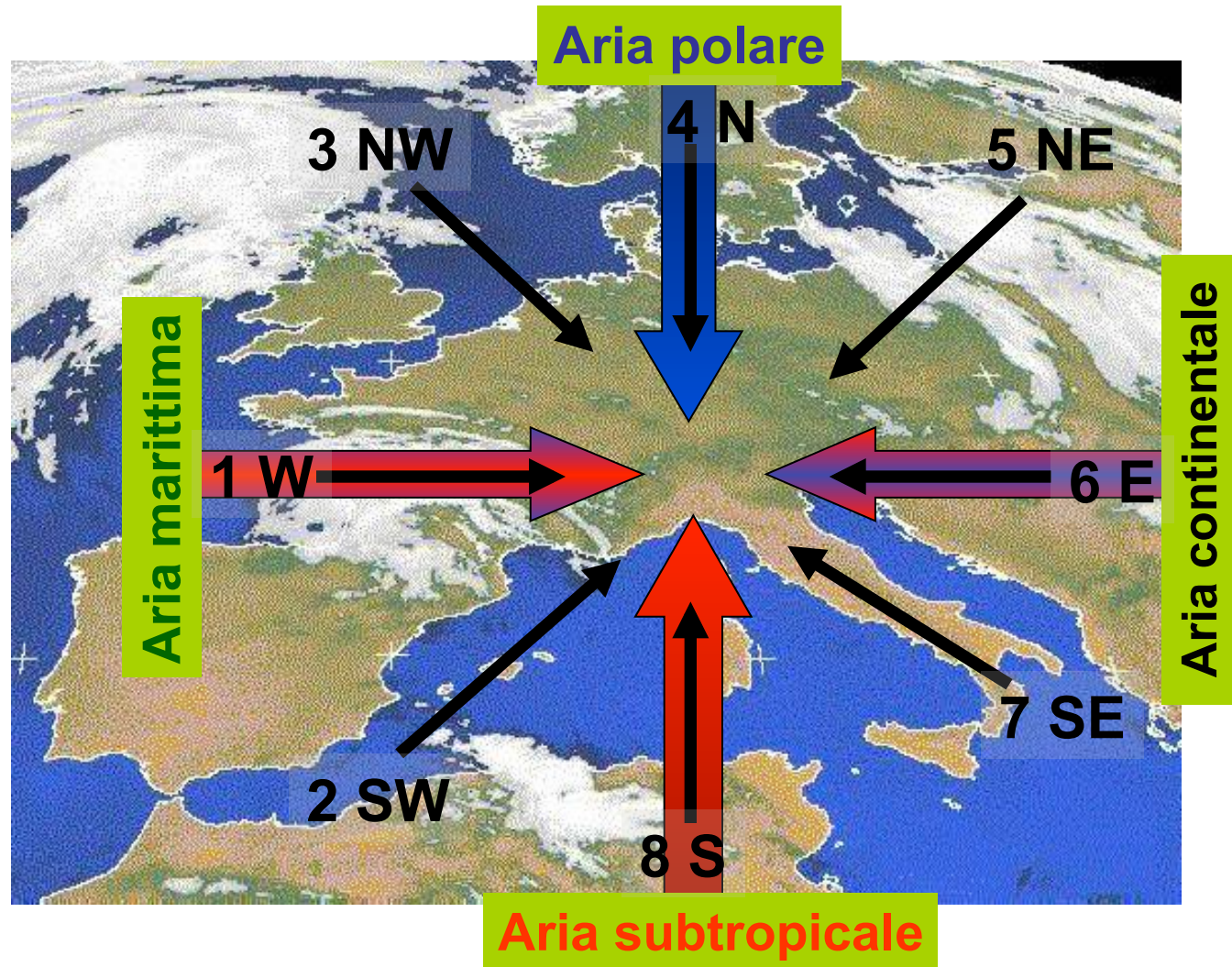
“... Il colpevole è ben identificato: è l'anticiclone delle Azzorre rimasto bloccato sull'Atlantico. Ma non solo. Si è pure deformato diventando da circolare a una ellisse allungata che lambisce latitudini più elevate del solito: invece che arrivare sui 30-40 gradi Nord, giunge addirittura a 50-60 gradi. E allora accade che le correnti che arrivano da ovest quando lo incontrano si separino, aggirandolo, e percorrendo grandi spazi in poco tempo scendendo dal Nord ci portino il freddo e tutto ciò che ne consegue.

Ma perché si è deformato ad ellisse l'anticiclone? Le cause sono diverse.

Una riguarda il vortice polare che dopo averci dato grattacapi nei mesi scorsi estendendosi troppo a Sud ora ritirandosi nella sua area naturale sul Polo Nord ha favorito l'allungarsi verso l'alto dell'ellisse. L'altro elemento intervenuto influenzando la situazione è il monzone indiano che in questi giorni è entrato in attività creando un contrasto atmosferico efficace per danneggiare la primavera.

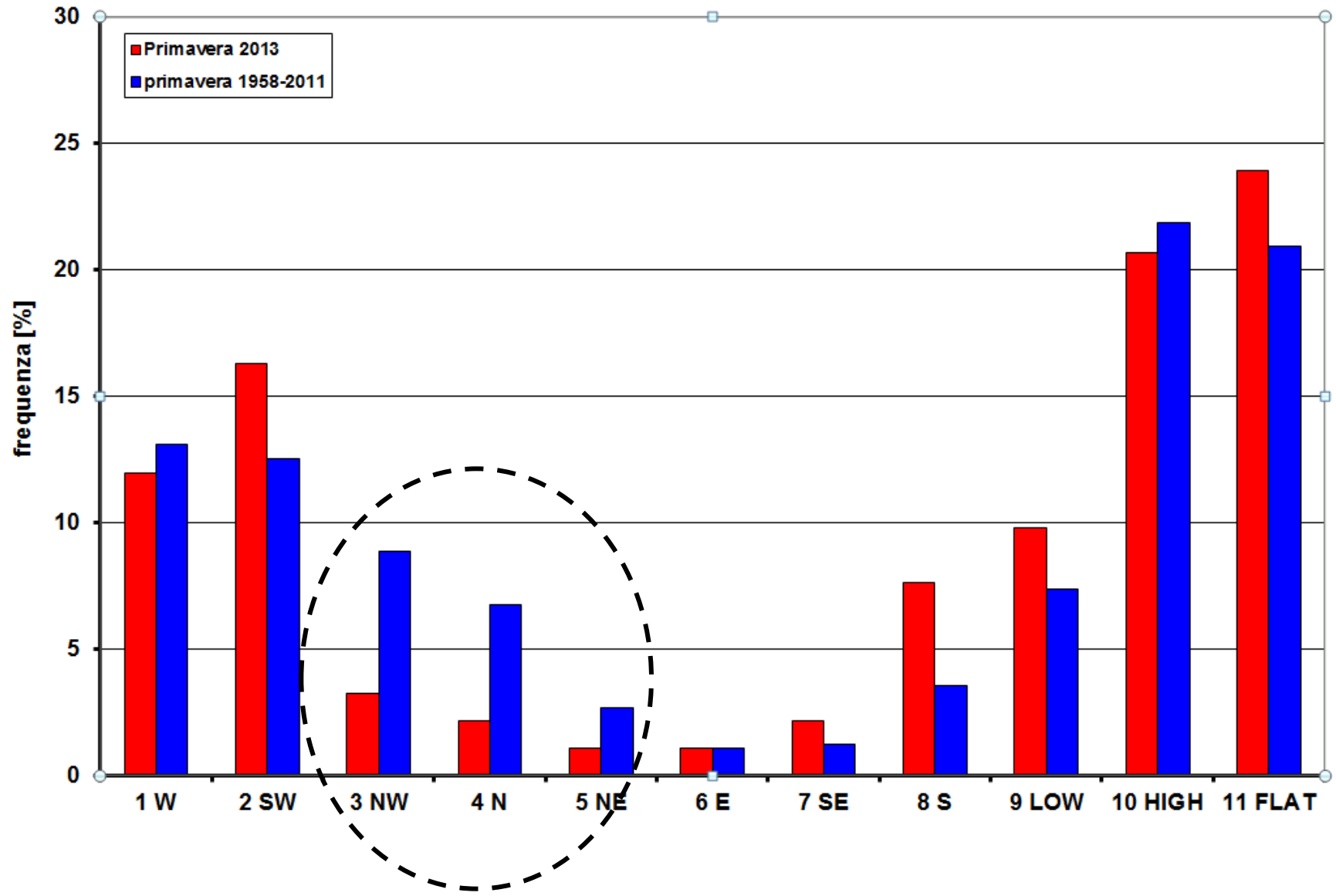


Masse d'aria diverse, tempo diverso, situazioni diverse



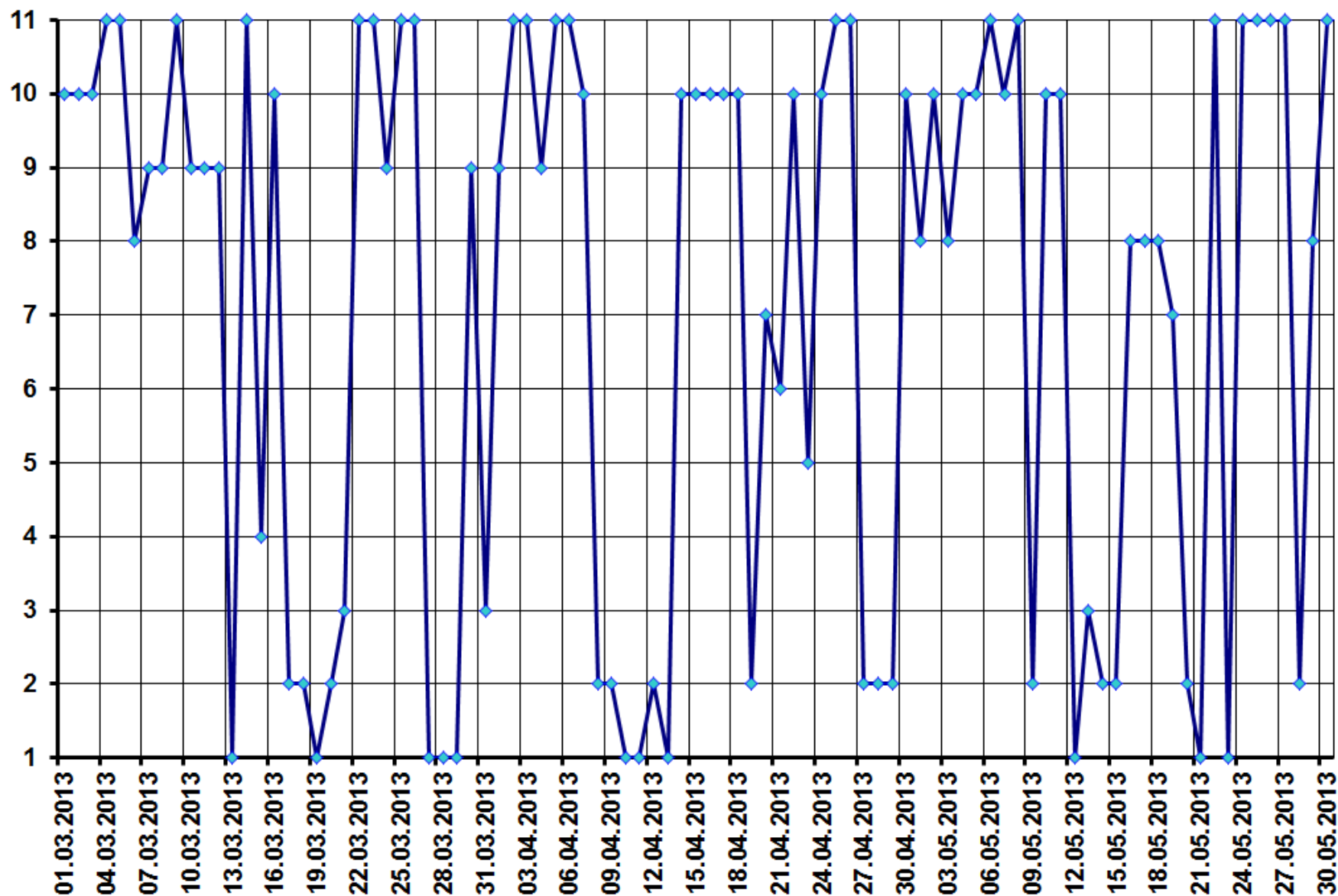


La distribuzione delle situazioni





Sequenza delle situazioni





L. Silvanti