TAF Improvements and New Initiatives

Presentation Outline

- 3-hour TAF Amendments/30-Hour TAFs
- Categorical Amendment Criteria
- Impact Writing for TAFs/QC in AvnFPS
- Use of VCTS/CB in TAFs
- New Initiatives
- Additional ASB Updates

3-hour TAF Amendments

3-hour TAF Amendments

- 29 WFOs (Nationally) who have OEP TAF site(s)
- 20 WFOs issuing 3-hour TAF Amendments
- 9 WFOs remaining…

- ***Over half way there!***
- ***Implementation date of June 30, 2010***

Airports with 3-Hour TAF Amendments

- KATL Atlanta Intl
- KBOS Boston Logan Intl
- KBWI Baltimore-Washington Intl
- KCLE Cleveland Hopkins Intl
- KCLT Charlotte Douglas Intl
- KCVG Covington/Cincinnati
- KDCA Washington National
- KDEN Denver Intl
- KDFW Dallas/Fort Worth Intl
- KDTW Detroit
- KEWR Newark Liberty Intl
- KFLL Fort Lauderdale
- KIAD Washington Dulles Intl
- KIAH Houston – George Bush Intl
- KJFK John F. Kennedy Intl
- KLAS Las Vegas McCarran Intl
- KLAX Los Angeles Intl
- KLGA New York LaGuardia
- KMCO Orlando Intl
- KMDW Chicago Midway
- KMEM Memphis Intl
- KMIA Miami Intl
- KMSP Minneapolis-St Paul Intl
- KORD Chicago-O'Hare Intl
- KPDX Portland Intl
- KPHL Philadelphia Intl
- KPHX Phoenix Sky Harbor Intl
- KPIT Pittsburgh Intl
- KSAN San Diego Intl
- KSEA Seattle-Tacoma Intl
- KSFO San Francisco Intl
- KSLC Salt Lake City Intl
- KSTL Lambert-St Louis Intl
- KTPA Tampa Intl – WFO Tampa
- PHNL Honolulu Intl – WFO Honolulu

Airports with TAFs Covering 30-Hours

- KATL Atlanta Intl
- KAUS Austin
- KBDL Bradley Intl
- KBOS Logan Intl
- KBWI Baltimore-Washington Intl
- KCLE Cleveland Hopkins Intl
- KCVG Covington/Cincinnati
- KDEN Denver Intl
- KDFW Dallas/Fort Worth Intl
- KDTW Detroit
- KEWR Newark Liberty Intl
- PGUM Guam
- KIAD Washington Dulles Intl
- KIAH Houston – George Bush Intl
- KIND Indianapolis Intl
- KJFK John F. Kennedy Intl
- KLAX Los Angeles Intl
- KMKE General Mitchell Intl
- KMSP Minneapolis-St Paul Intl
- KOAK Oakland Intl
- KONT Ontario Intl
- KORD Chicago-O'Hare Intl
- KPHL Philadelphia Intl
- KPIT Pittsburgh Intl
- KSAN San Diego Intl
- KSDF Louisville Intl
- KSAT San Antonio
- KSEA Seattle-Tacoma Intl
- KSFO San Francisco Intl
- KSLC Salt Lake City Intl
- KSTL Lambert-St Louis Intl
- KSWF Stewart Intl
- PANC Anchorage Intl
- PHNL Honolulu Intl
- PAFA Fairbanks Intl

Categorical Amendment Criteria

Methodology

- Employs the following important concepts:
  - Tailors Ceiling and Visibility to meet specific **airport requirements**
  - Groups Ceiling and Visibility together into **categories** to match FAA Regulations
  - TEMPO groups checked immediately against METARS to notify forecasters of resulting customer impacts

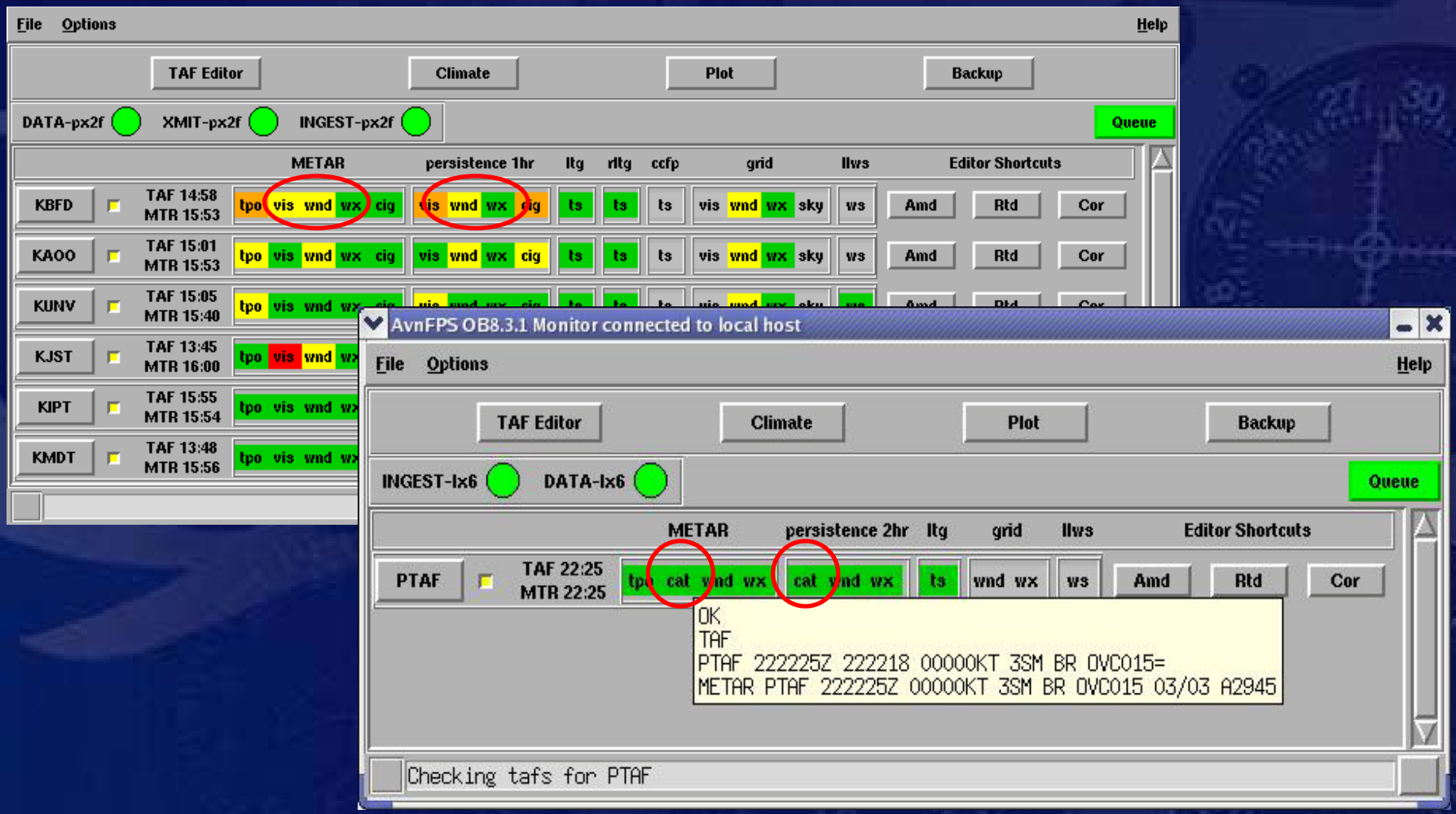
Impacts of Standard Amendment Criteria

- Aviation community receives too many AMDs that do not have an impact on airport operations
- In Addition…
  - TEMPO groups may restrict operations resulting in flight delays and impact the National Airspace System (NAS)

Benefits of Using CAC

- **Better customer service**
  - AMDs based upon specific airport criteria
  - Regulatory needs of the flying community addressed
  - Quicker response to customer needs, including out of category TEMPO groups
- **Forecaster's time maximized**
  - Improved situational awareness
  - Allows focus on sites needing attention
  - AMDs only issued for meaningful thresholds
    - *Fewer amendments (WFO FAI decreased by 23%)*

AvnFPS Differences



Ceiling and visibility are now combined into one “cat” box

CAC and the LMS

Commerce Learning Center

Impact Writing for TAFs

Impact Writing for TAFs

- You can integrate crosswind information into AvnFPS

TAF Impact Writing

wind[n].cross = crosswind for runway #n
wind[n].runway = parallel component to runway #n
wind[n].shift = tail-to-head or head-to-tailwind change from last forecast group (T or F)

- Edit /awips/adapt/avnfps/etc/tafs/KBOS/impact.cfg

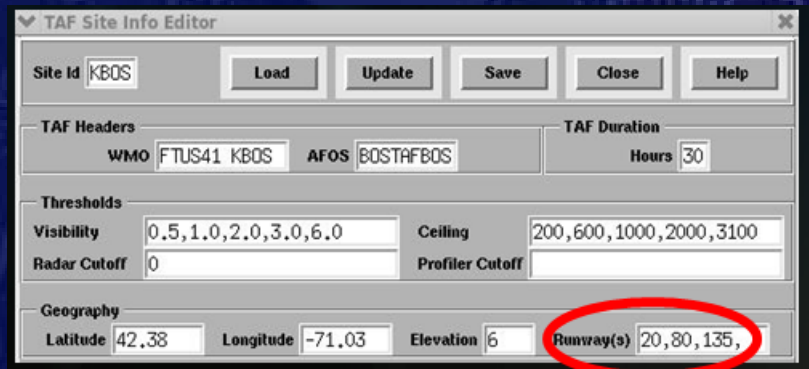
```
[conditions]
items=cond_1,cond_2,cond_3,cond_4
        :
        :

[cond_3]
tag=wshft
level=2
text=significant windshift on 15R/33L
expr=wind[2].shift and wind[2].runway>15

[cond_4]
tag=xw
level=3
text=significant crosswind on 15R/33L
expr=wind[2].cross>15
```

```
TAF
KBOS 181720Z 1818/1924 12015KT P6SM SCT040CB
     FM182100 13020G30KT P6SM VCTS BKN030CB
       TEMPO 1821/1822 1SM +TSRA OVC010CB
     FM182230 25020G40KT 6SM +SHRA OVC020
     FM190100 27020G30KT --- Impact ---
     FM190500 28020G25KT significant windshift on 15R/33L
     FM191200 30010KT P6SM SKC=
```

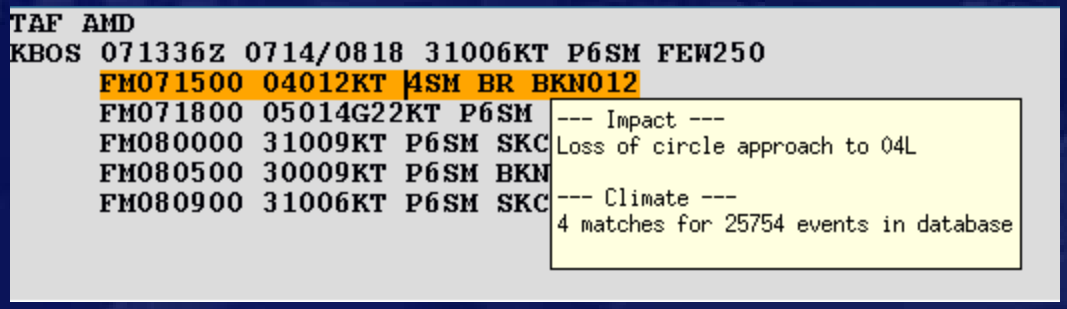
```
TAF AMD
KBOS 141321Z 1413/1518 06015G25KT P6SM SCT015 OVC025
     FM141700 05025G35KT 4SM -RASN BR BKN008 OVC013
       TEMPO 1422/1502 1 --- Impact ---
     FM150200 03015G20K Fuel-Alternate
       TEMPO 1502/1506 1 Significant crosswind on 15R/33L
```

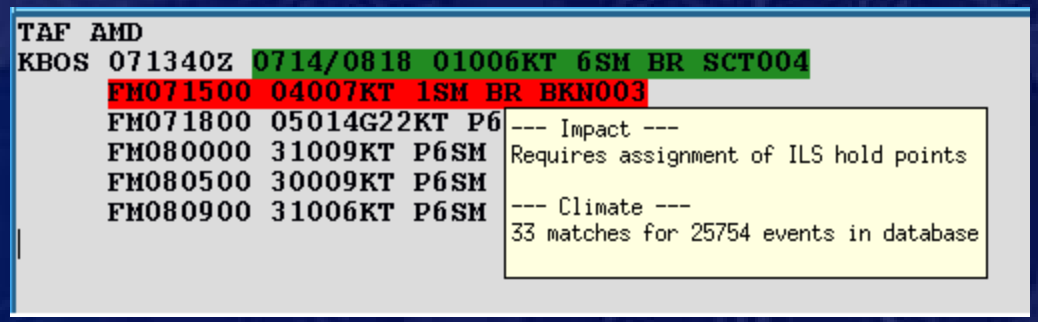


Runway 4R/22L referenced as [0]
Runway 9/27 referenced as [1]
Runway 15R/33L referenced as [2]

Impact Writing for TAFs

- You can also integrate additional cloud heights or visibility thresholds into AvnFPS





Persistence in AvnFPS

- Change the TAF monitoring time in AvnFPS
  - Use 2 hours instead of default 1 hour
  - Allows TAFs to be focused on the 2-6 hour time frame

Use of VCTS/CB in TAFs

Use of VCTS/CB in TAFs

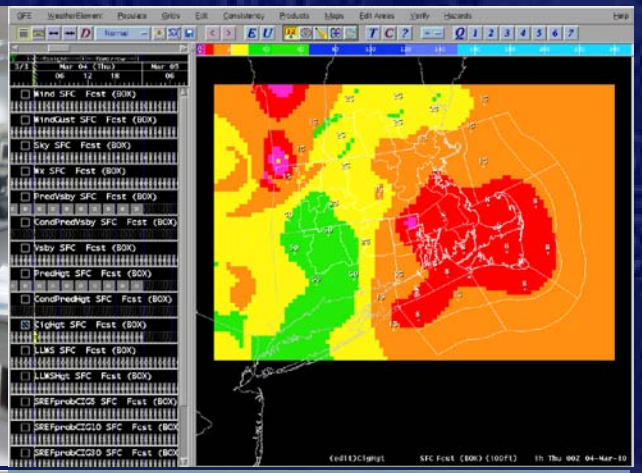
- Vicinity:
  - **Not ICAO compliant**
  - Inconsistent use from WFO to WFO
  - Confusing to customers Internationally and Domestically
  - Being used for instances the TAF was not intended
  - VC and CB can be used inter-changeably now according to 10-813

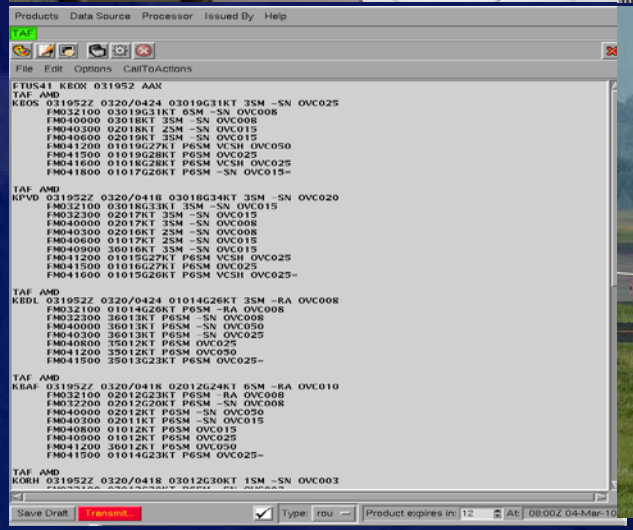
Use of VCTS/CB in TAFs

- **Proposal: Remove VC use in TAFs and use CB**
  - Become ICAO compliant
  - FAA on board
  - Impacts remain the same to customers
  - TAFs can be used for their intended purpose

- Ex: SCT008 BKN025CB
- Ex: TSRA SCT010CB BKN020

Digital Aviation Services





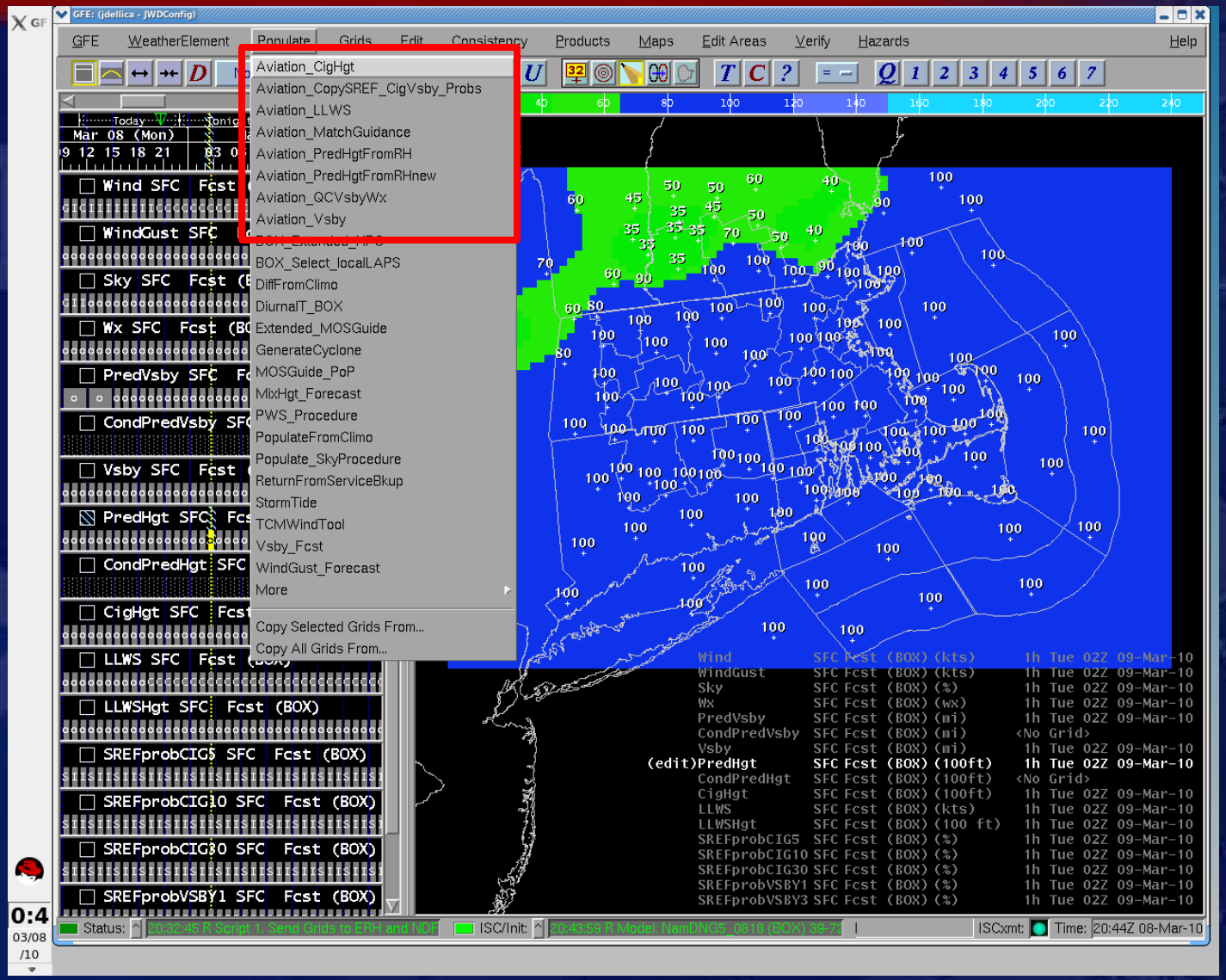
Digital Aviation Services

- ***Why?***
  - There is a demand for this information!

Digital Aviation Services

- ***Why?***
  - On the path to NextGen
    - AWC/CWSU/WFO roles not yet defined, but we can start the process and provide meaningful input
  - Integrate Aviation forecasting into GFE
    - Traditional public, marine, fire weather already there!
    - Increases efficiency of forecast operations
    - Generate TAFs quickly and maintain consistency with other forecast products
    - Capability for additional TAF sites
      - Point and Click?

Procedures


GFE: (jdellica - JWDConfig)
GFE
WeatherElement
Populate
Grids
Edit
Consistency
Products
Maps
Edit Areas
Verify
Hazards
Help
Aviation_CigHgt
Aviation_CopySREF_CigVsby_Probs
Aviation_LLWS
Aviation_MatchGuidance
Aviation_PredHgtFromRH
Aviation_PredHgtFromRHnew
Aviation_QCVsbyWx
Aviation_Vsby
BOX_Select_localLAPS
DiffFromClimo
DiurnalT_BOX
Extended_MOSGuide
GenerateCyclone
MOSGuide_PoP
MixHgt_Forecast
PWS_Procedure
PopulateFromClimo
Populate_SkyProcedure
ReturnFromServiceBkup
StormTide
TCMWindTool
Vsby_Fcst
WindGust_Forecast
More
Copy Selected Grids From...
Copy All Grids From...
Mar 08 (Mon)
Wind SFC Fcst
WindGust SFC
Sky SFC Fcst
Wx SFC Fcst
PredVsby SFC
CondPredVsby SFC
Vsby SFC Fcst
PredHgt SFC
CondPredHgt SFC
CigHgt SFC Fcst
LLWS SFC Fcst
LLWSHgt SFC Fcst (BOX)
SREFprobCIG5 SFC Fcst (BOX)
SREFprobCIG10 SFC Fcst (BOX)
SREFprobCIG30 SFC Fcst (BOX)
SREFprobVSBY1 SFC Fcst (BOX)
Wind SFC Fcst (BOX) (kts) 1h Tue 02Z 09-Mar-10
WindGust SFC Fcst (BOX) (kts) 1h Tue 02Z 09-Mar-10
Sky SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
Wx SFC Fcst (BOX) (wx) 1h Tue 02Z 09-Mar-10
PredVsby SFC Fcst (BOX) (mi) 1h Tue 02Z 09-Mar-10
CondPredVsby SFC Fcst (BOX) (mi) <No Grid>
Vsby SFC Fcst (BOX) (mi) 1h Tue 02Z 09-Mar-10
(edit)PredHgt SFC Fcst (BOX) (100ft) 1h Tue 02Z 09-Mar-10
CondPredHgt SFC Fcst (BOX) (100ft) <No Grid>
CigHgt SFC Fcst (BOX) (100ft) 1h Tue 02Z 09-Mar-10
LLWS SFC Fcst (BOX) (kts) 1h Tue 02Z 09-Mar-10
LLWSHgt SFC Fcst (BOX) (100 ft) 1h Tue 02Z 09-Mar-10
SREFprobCIG5 SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
SREFprobCIG10 SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
SREFprobCIG30 SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
SREFprobVSBY1 SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
SREFprobVSBY3 SFC Fcst (BOX) (%) 1h Tue 02Z 09-Mar-10
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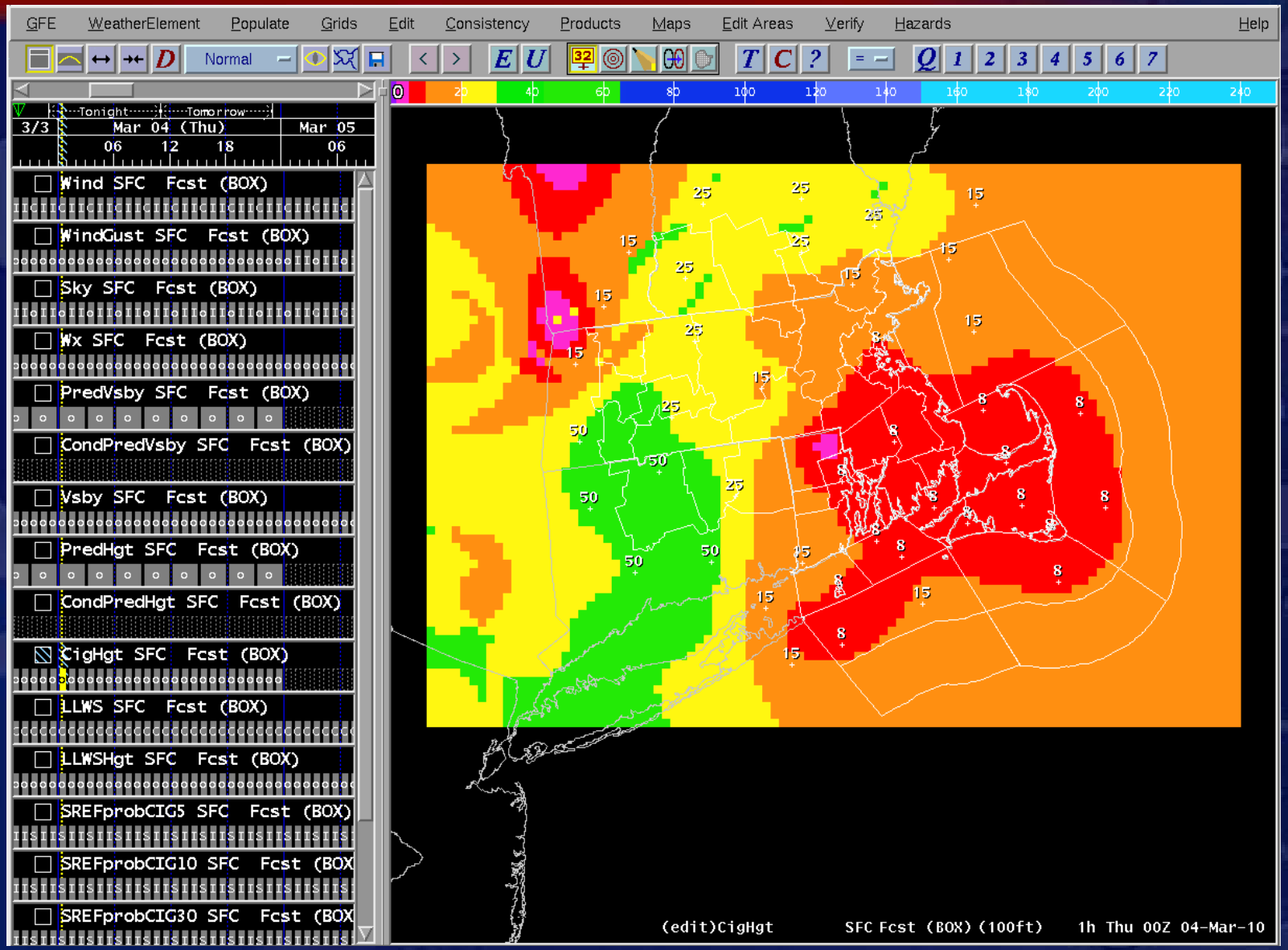
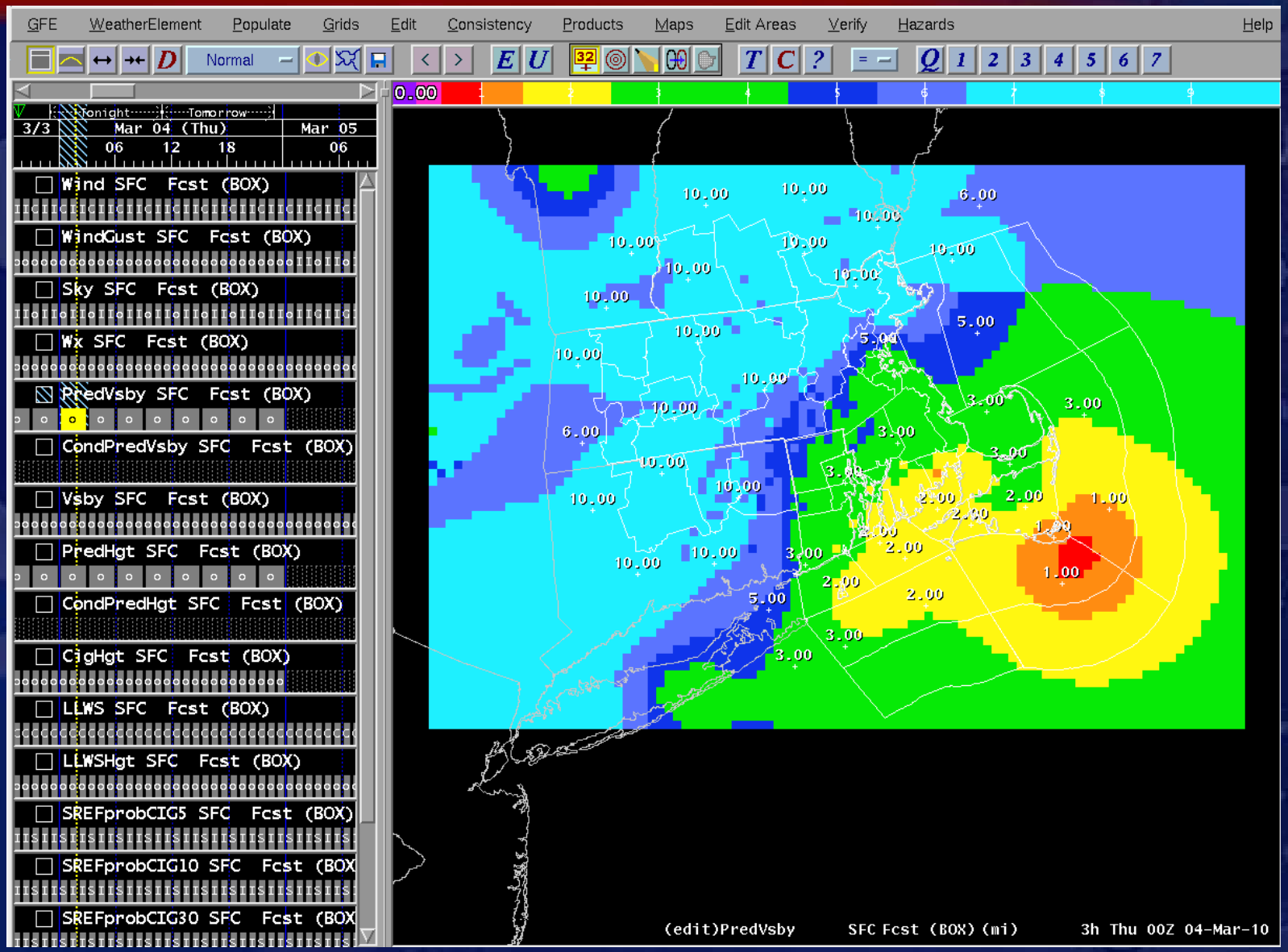
ISC/Init:
ISCxmt:
Time: 20:44Z 08-Mar-10
0:4
03/08
/10

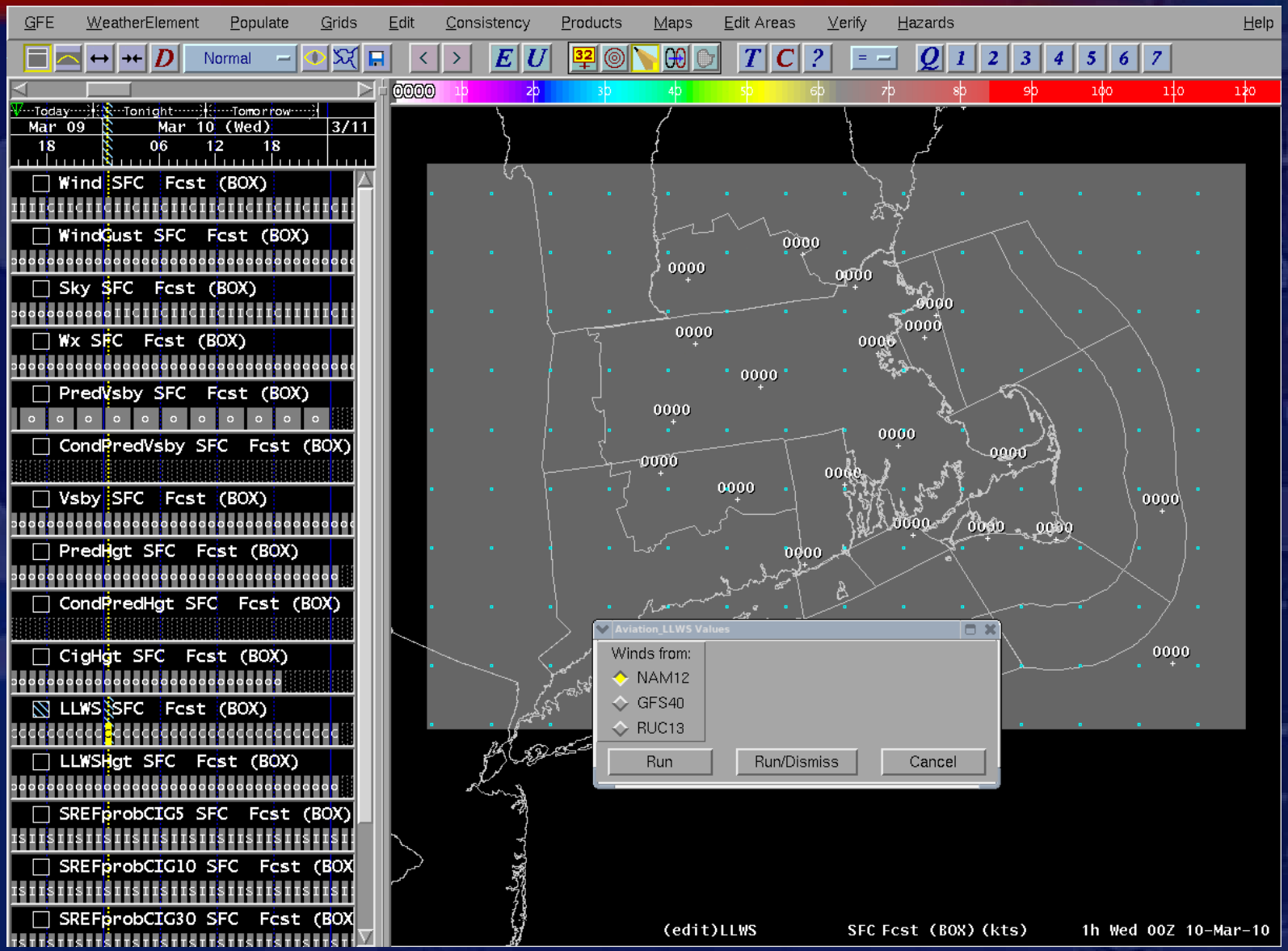
Ceiling Height Grid



Visibility Grid



Low Level Wind Shear



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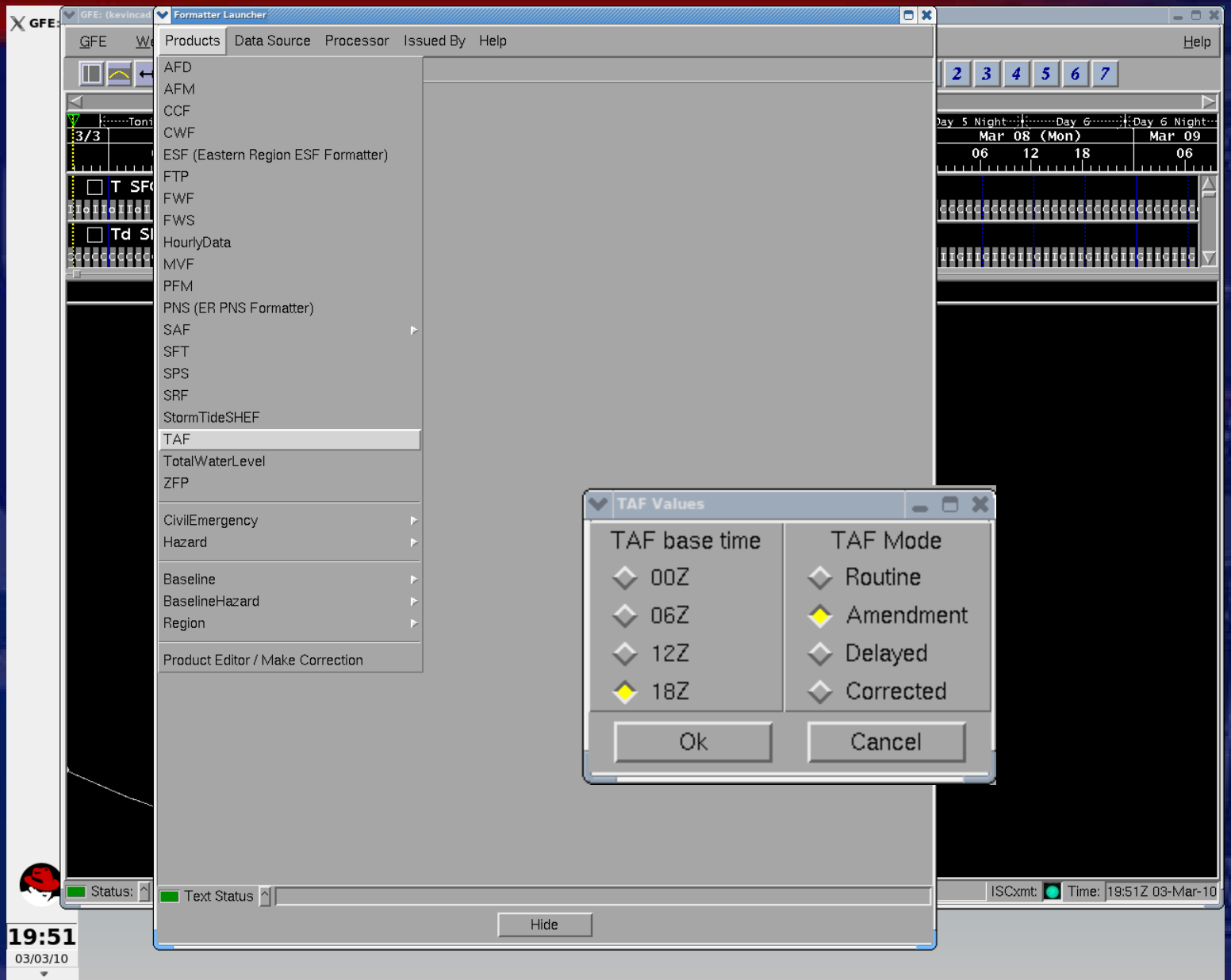

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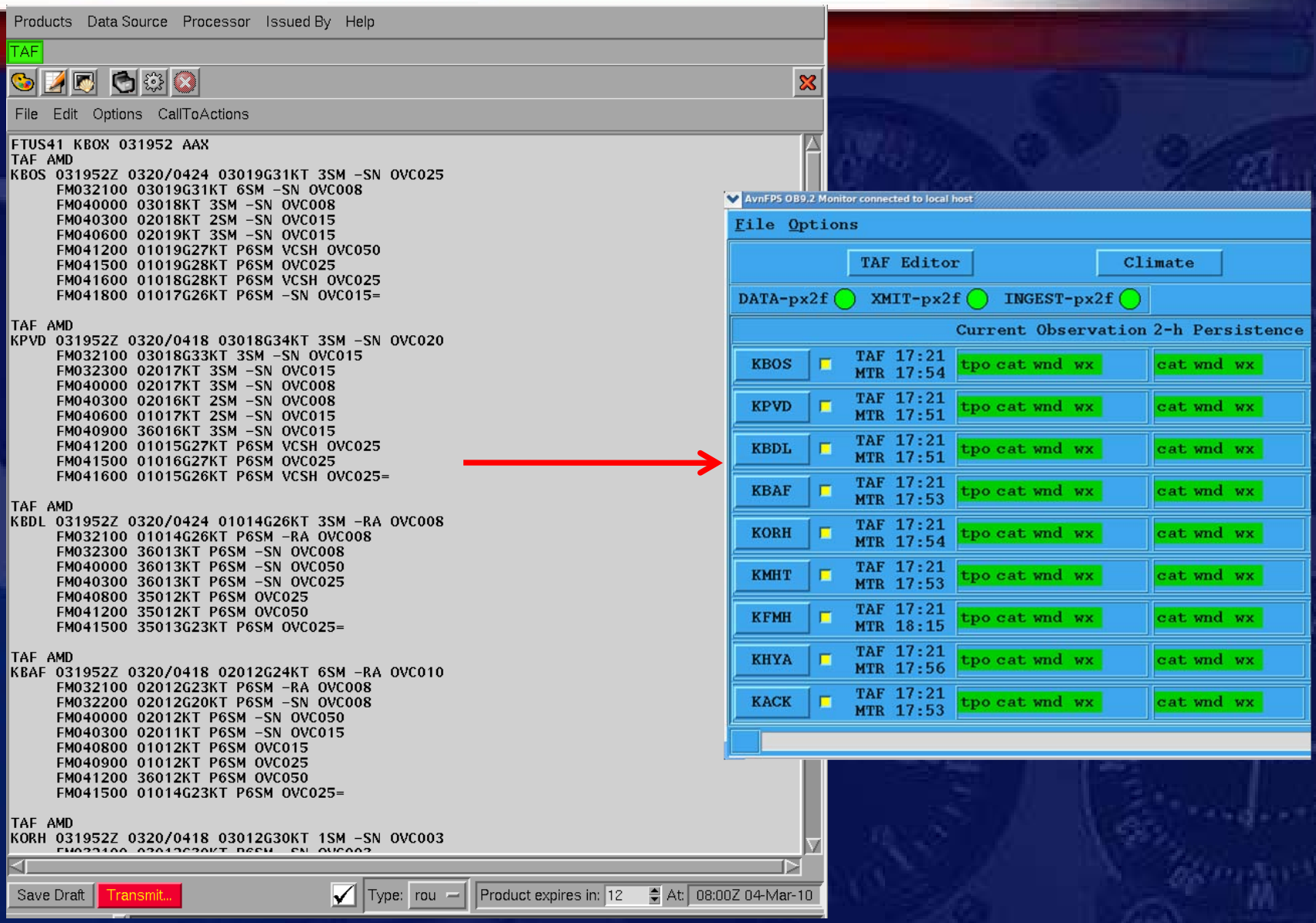
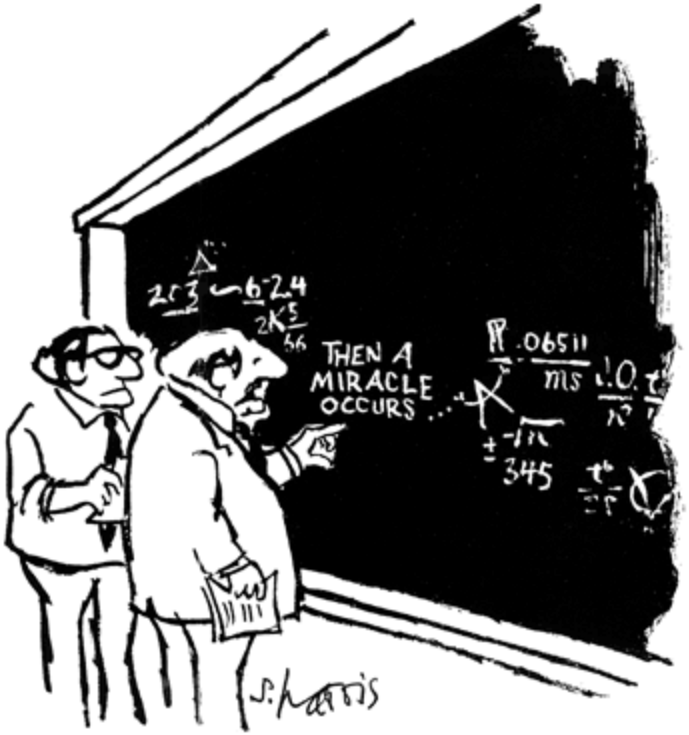


Verification



"I think you should be more explicit here in step two."

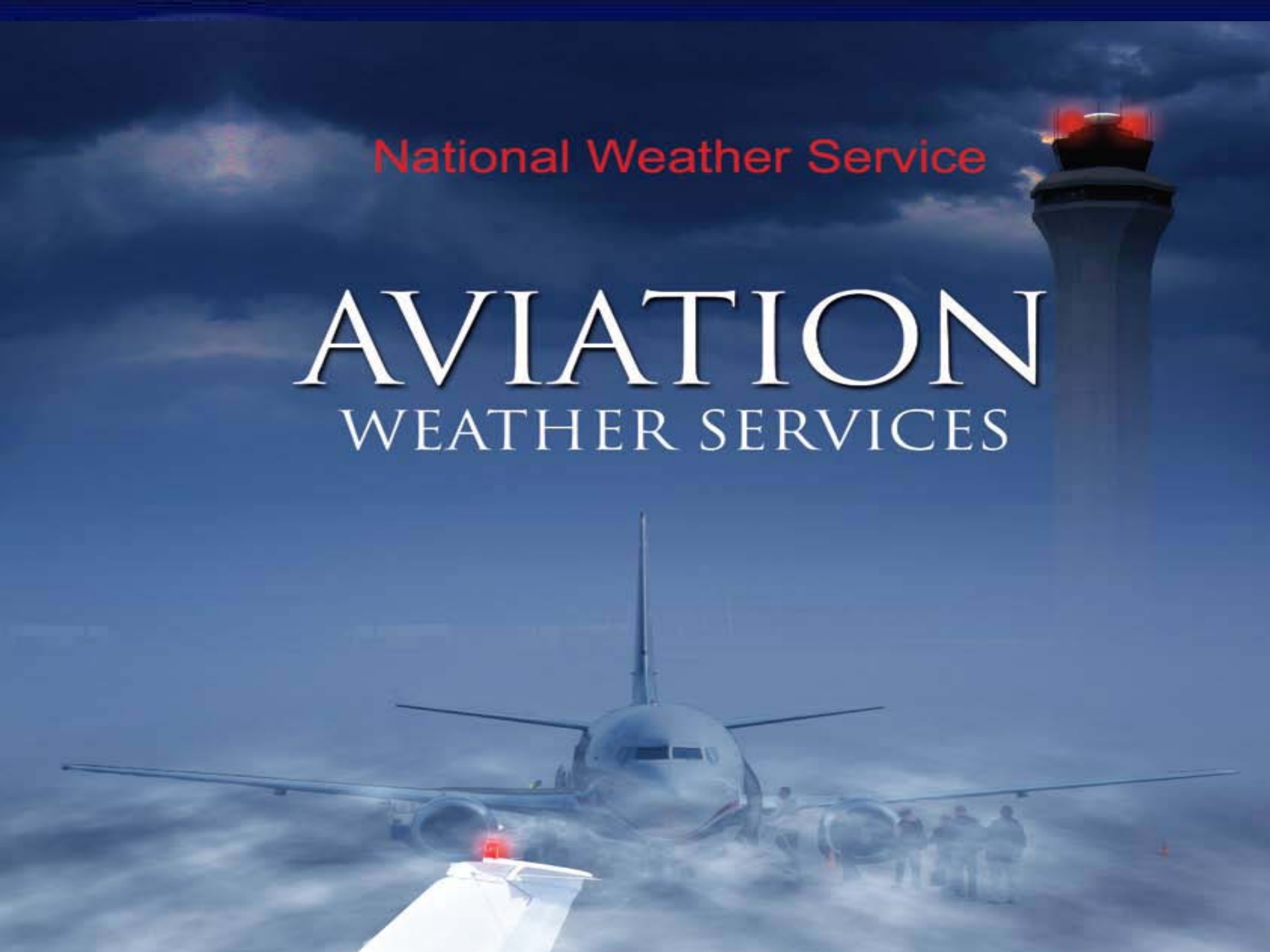
Additional Updates

Additional Updates

- New 1’’ Hail Criteria and Aviation
- CWSU WIPs Webpage
  - https://ocwws.weather.gov/cwsu/index.shtml
- NextGen Public Website
  - www.weather.gov/nextgen
- National Aviation Brochure
  - www.weather.gov/aviaiton
- AWIPS II

New 1’’ Hail Criteria and Aviation

- **Is the Aviation Community Impacted?**
- Products Aviation Community Concerned About… with “Potentially” Impacts
  - Aviation Watch Notification (SAW)
    - Issued for 1/2’’ hail and greater
  - Convective SIGMET
    - Issued based on FAA regulations
  - Airport Weather Warnings
    - Locally driven criteria (small hail and greater)


National Weather Service
AVIATION
WEATHER SERVICES

NWS 10-813 Update

Thanks for Your Time!