

# Background for Discussion of Forecasts Used for Events Similar to 5-15-2018

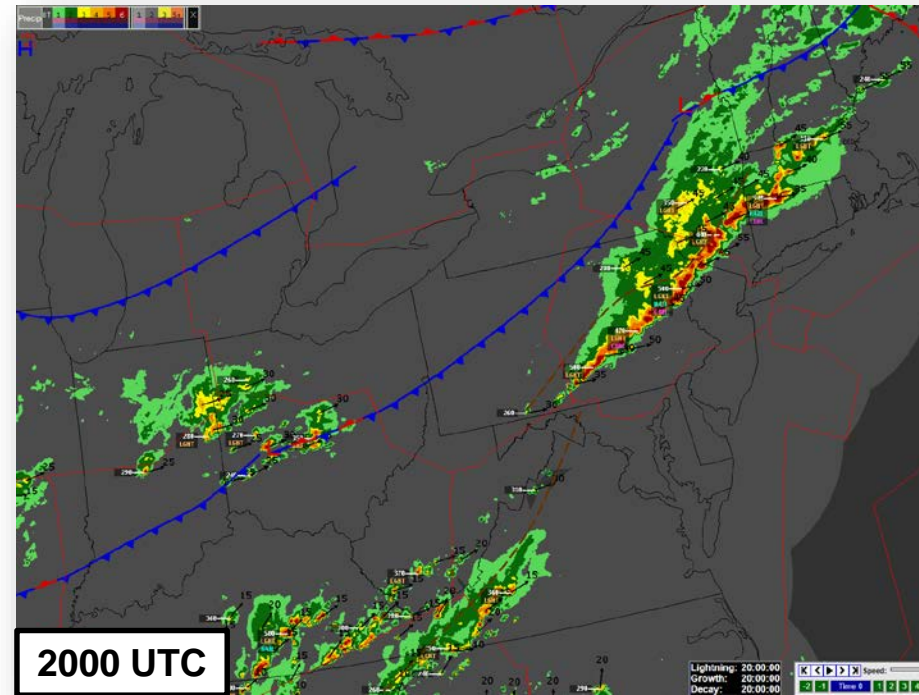
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- Airlines raised concerns about use of TMI (AFPs, GS, and rerouting on this event
- Case was suggested as a good starting point for Lincoln R & D on TMI usage analysis using “serious gaming” techniques
- Many interesting forecasting elements
  - Well defined, well forecast squall line to northwest
  - Much less organized convection in regions for routing to avoid squall line
  - Arrival recovery at New York airports



# 15 May 2018: Summary

- Low C & V in the NE in the morning drove rolling GS's early
- AFP's discussed from the very first SPT with high confidence in convective forecast from SCC NAM
- AFPs to west and south of NY all issued by 15z
- Heavy impacts on all N90 departures by 21z as squall line impacted airports...holding on all fixes for arrivals



## NAS AERO-Northeast

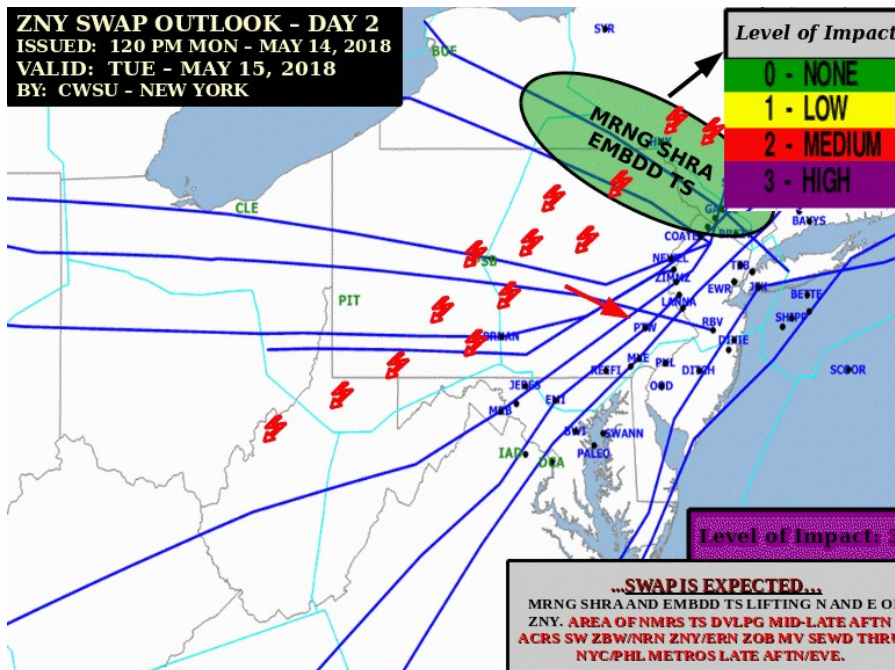
Operations	Delay Count	Departure Cancellations	Arrival Cancellations	Airborne Holding(min)	Diversions	Completion Rate(%)
7248	845	723	695	6142	111	83.94

# NORTHEAST DEPARTURE PLAN

5-15-18

Expecting a High Impact SWAP event for the NE. Thunderstorms forecast in ZBW/ZNY/ZDC/ZOB/ZID throughout the day. Prior to 20z, the NY West & North gates will be impacted, and after 20z, the EAST & South gates can expect impact resulting in CDRs & Offloads. As storms pass to the NE of N90, the Int'l Departure gates may also be impacted. Extended Terminal GSs may be possible as storms pass through the region.

Impact Area	Timing	Triggers	Mitigation Strategies
N90 departure gates / airways	Prior to 20z	Impact from TSTMs, MIT in excess of 30 minutes	Reduce / limit 1st Tier internal departures to allow N90 to run unencumbered. Dedicate specific airway for N90 offloads. Implement ESCAPE routes Required & AZEZU if available. Activate NY or a NE Hotline to increase coordination.
N90 East Int'l Dept Gates	After 20z	TSTMs impacting Eastbound Depts	Develop Offload route strategy with ZBW to access NATOT routes.



**Prior Day Expectation for 5-15-2018**

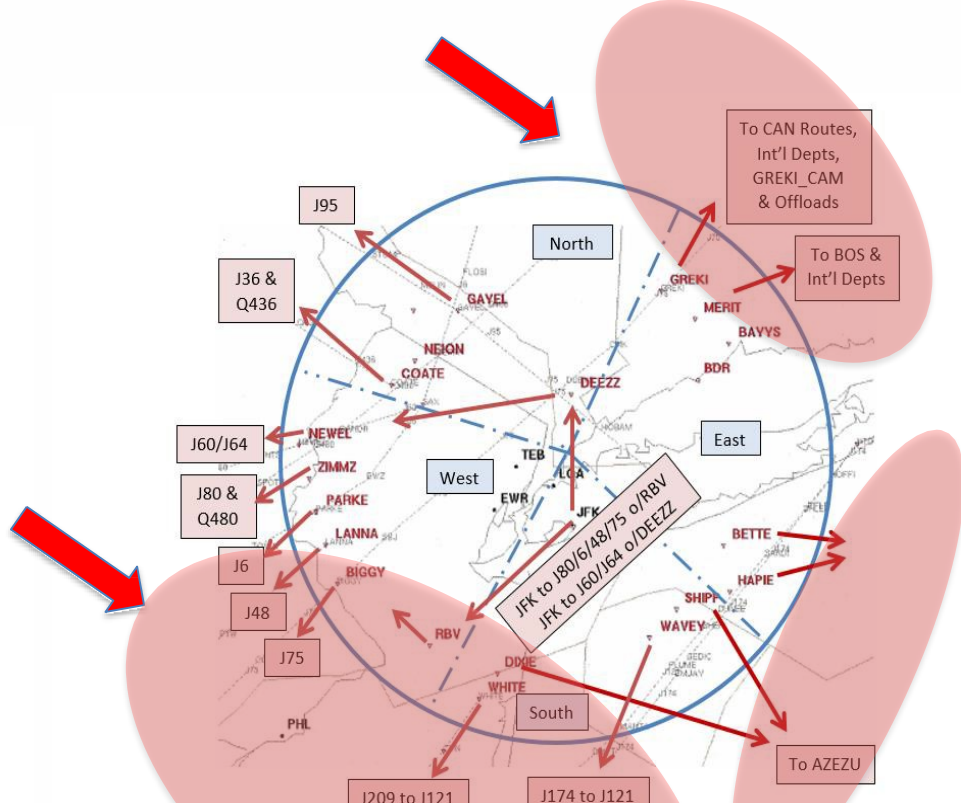
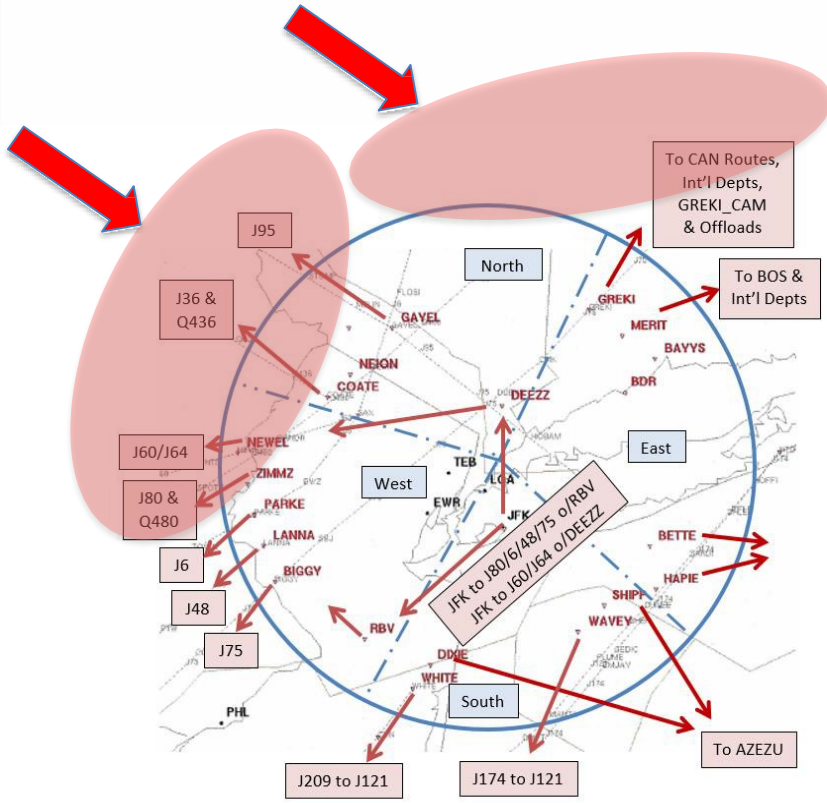


# NORTHEAST DEPARTURE PLAN

5-15-18

N90 Dept Gate Forecast Impacts Prior to 20z:

N90 Dept Gate Forecast Impacts After 20z:



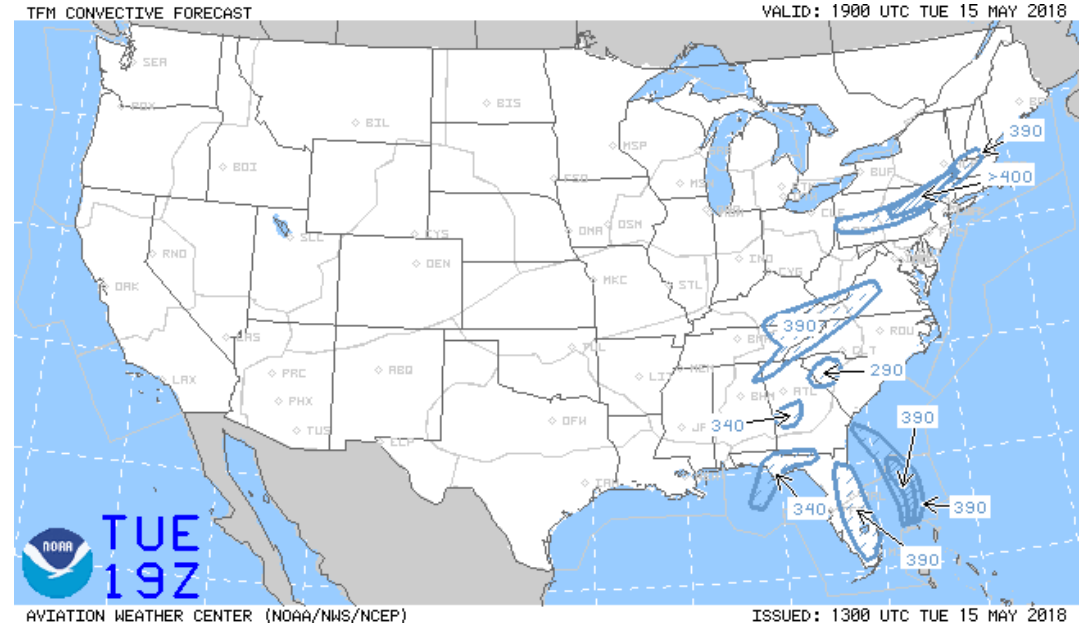
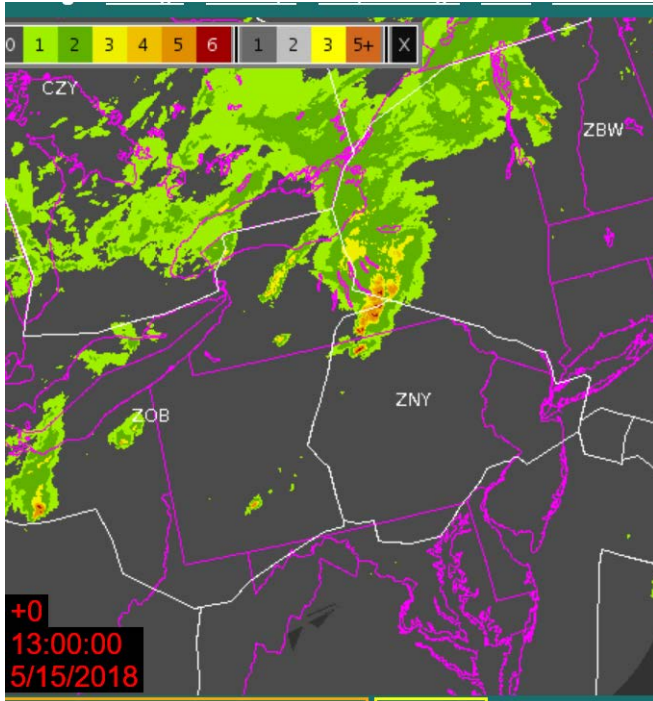
**Prior Day  
Expectation  
for 5-15-2018**



Probability Of impacts    Possible    Probable    Expected



# Decision Making at 13Z



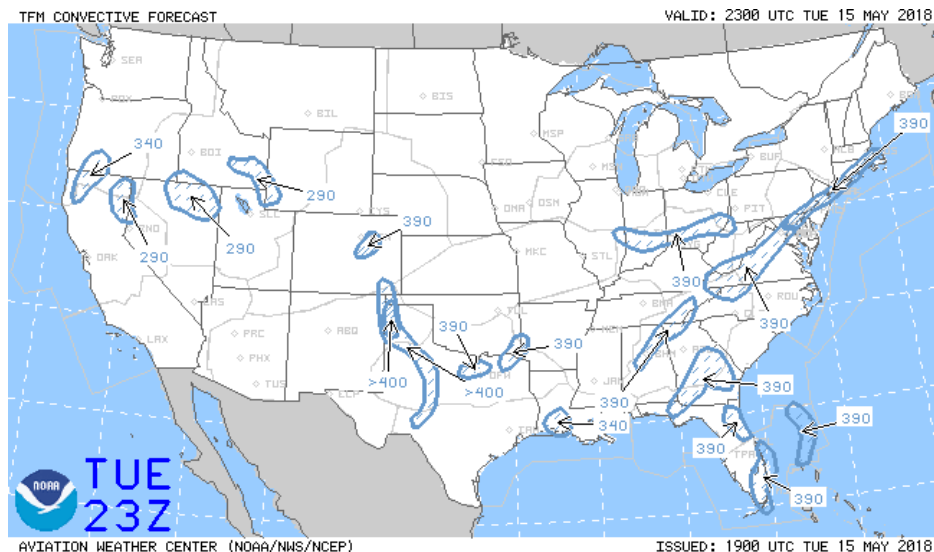
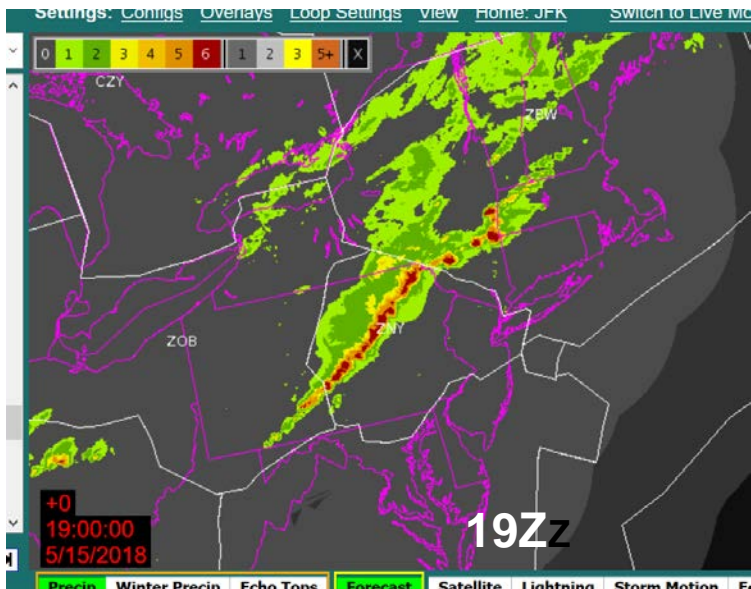
**Key ATM issues to address using convective forecasts:**

- 1. Impact times of squall line on NY airports**
- 2. Availability of airspace west of Washington DC area 13Z-19Z**
- 3. Availability of airspace towards Atlanta**

**For time period 13Z-19Z**



# Decision Making at 19Z



## Key ATM issues to address using convective forecasts:

1. Impact times of squall line on NY airports
2. Availability of airspace west of Washington DC area
3. Planning for NY arrival recovery following squall line passage over NY airports

For time period 21Z-03Z



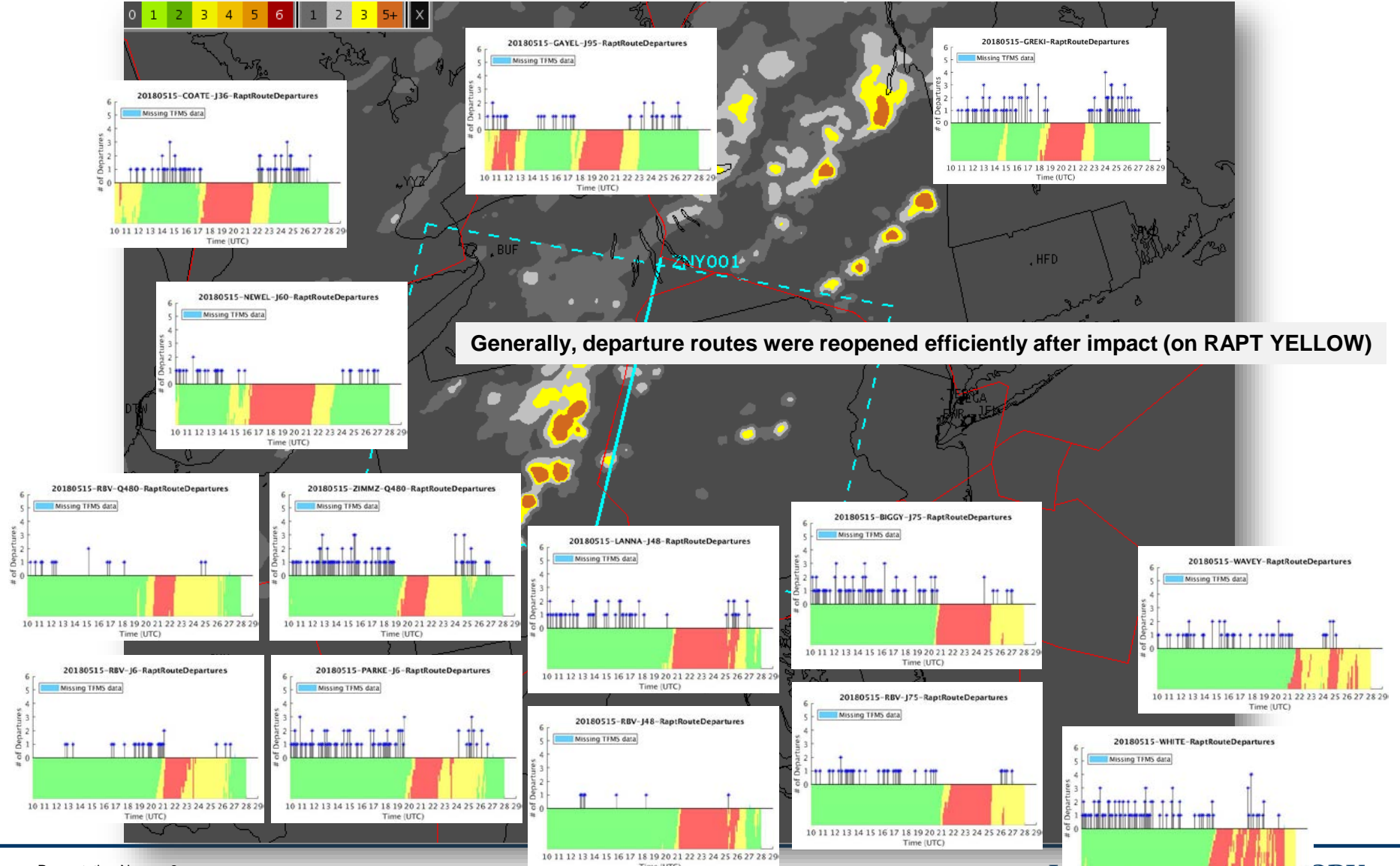
# Post Event Summary

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- **Departures to the west and north from the New York airports achieved a high volume in a timely manner following squall line passage (next slide)**
- **Arrivals into LGA and EWR did not recover as fast as departures --- especially for LGA from 22Z to 01Z**
- **Note: RAPT route availability analysis results should apply to arrival routes near to the various departure routes**



# N90 Departures to North and West Were Reopened Efficiently



Generally, departure routes were reopened efficiently after impact (on RAPT YELLOW)