



# Airspace Technology Demonstration 2 (ATD-2)

Understand and Process ATC Restrictions in the National Airspace System

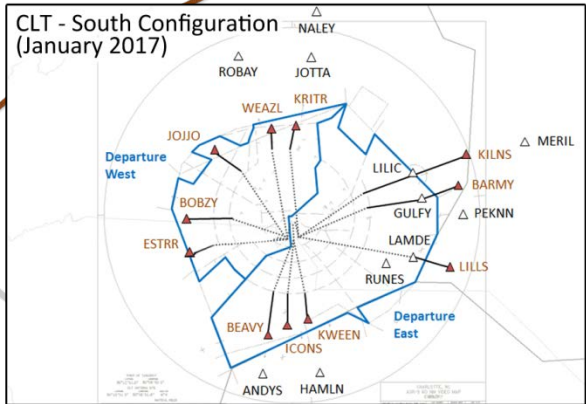
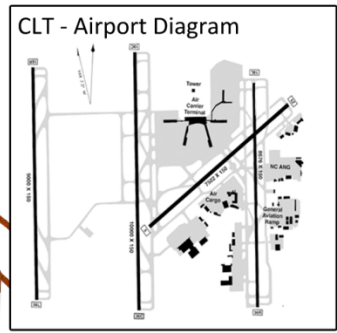
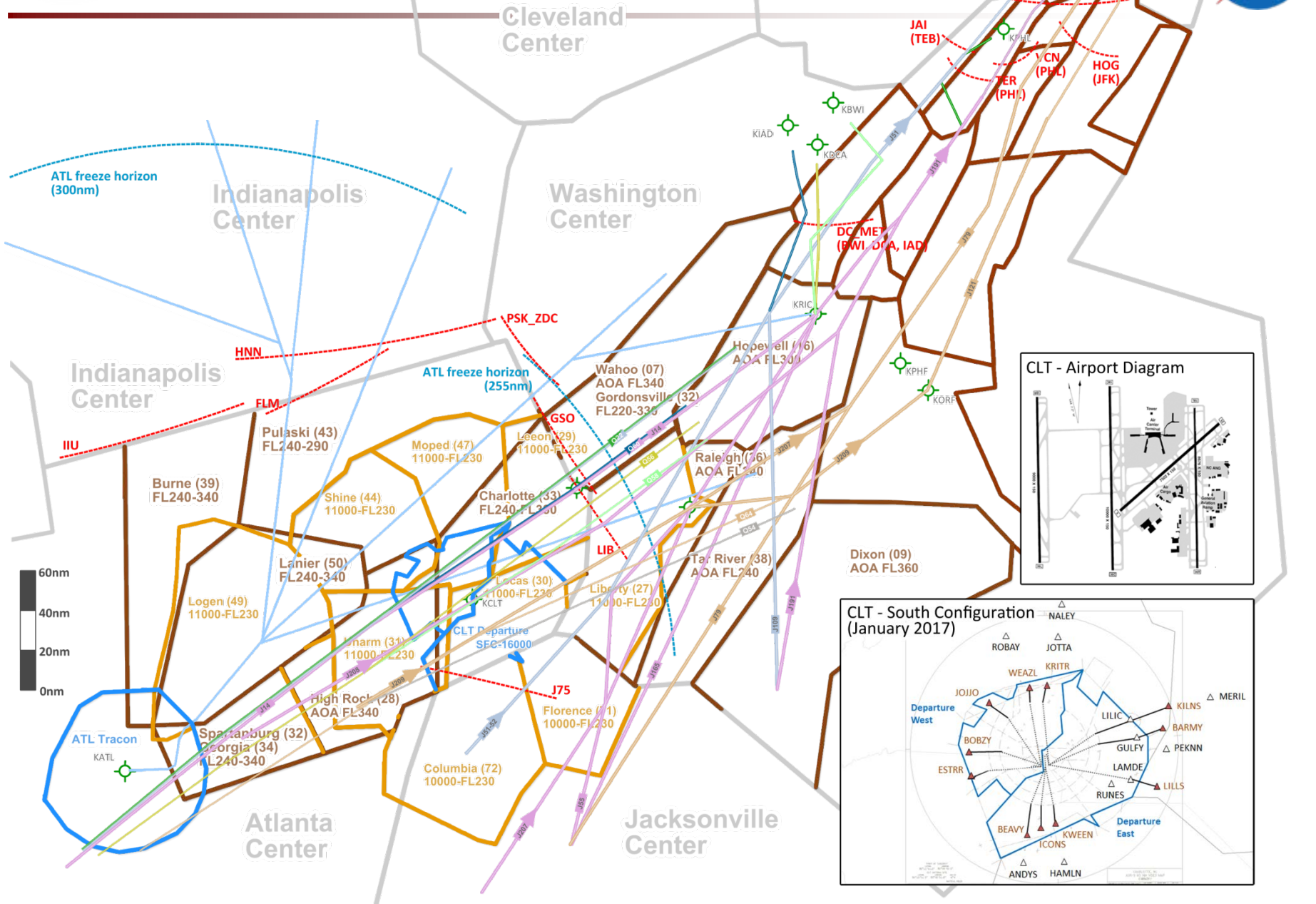
September 4, 2019

Bob Staudenmeier



# Airspace of Operations

New York  
Center





Misc

RSTN

MRSTN

Delay

RWY

Sum

EQ

**Log**

MyEntry

SISO

Count

ICE

INFO

MA

PIREP

SUA

SWAP

Telcon

Pending

Request Type:  Initiate  Modify  Cancel  Delete

Entry Time:

Clear on Submit

Type: 
MT:

Aircraft Type:

All  Jet  Prop  Other:

Requesting: 
Providing (>):

Start Time: 
End Time: 
Causal Factor...:

Restriction:

En Route  Departure  Arrival

Altitude:

Speed:

Airport (>): 
Qualifier ():

Via (>): 
Exclusions:

Location (>): 
 Severe Weather Reroute

Justification/Remarks:

ATCSCC Remarks/Critique:

Send To... ESIS:

Pos:

Fac:

Coordination Complete

Reminder (Z):

Entry #:

Submit
Spelling
Clear
Save As

TPCOPS

Pending: 5 / 1

3



1015      ZDC/CP      LGA Arivl via RBV 15 Mit      NN  
1100-0200, VOL:Arrival Demand  
N90:ZDC, RSTN: APVD 1013/DCC:NE/JM - LNK: LGA - ESIS:



1038      ZDC/CP      LGA EnRte via J14,Q60 30 Mit JETS AS ONE RTE, FEA\_ZTL      NN  
1200-1500, VOL:Volume  
ZDC:ZTL, RSTN: APVD 1037/DCC:NE/JM - LNK: LGA - ESIS:  
CP,Bay2,Bay5



1411 GI E2 ATTN FLM/CIC/SCTRS/TWRS. APREQ JETS/PROPS TO THE FOLLOWING  
DESTINATIONS XXX XXXX-XXXXZ WITH ZDC... IDAC TWRS CALL FOR RELEASE  
TMU

# CLT APREQ LGA



NTML: ZDC ADMN 19 Aug 2019 2047

Options Edit View Tools Information Print Reports Link Search Help

**Benjamin Dengler** Request Type:  Initiate  Modify  Cancel  Delete  
Entry Time: 2045  Clear on Submit

Type: APREQ:

Aircraft Type:  
 All  Jet  Prop  Other:

Requesting: ZDC  
Providing (>): ZTLC/LT  
Start Time: 1130 End Time: 0130 Causal Factor...: TM Initiatives:MIT:VOL

Restriction:  
 En Route  Departure  Arrival

Altitude:   
Speed:   
Qualifier (>): NONE  
Exclusions:   
 Severe Weather Reroute

Airport (>): LGA  
Via (>): KILNS/EARMY  
Location (>):

Justification/Remarks:   
ATCSCC Remarks/Critique:

Send To... ESIS:  Coordination Complete   
Pos:  Reminder (>):   
Fac:  Entry #:

TPCOPS Pending: 137 / 1



1016 ZDC/CP APREQ: CLT,ZTL to LGA via BARMY,KILNS, PLEASE APREQ WITH ZDC NN  
ESP. THANKS  
1030-0200, VOL:Volume  
ZDC:CLT,ZTL, APREQ: - LNK: LGA,CLT







NTML: DCC TMU01 05 Nov 2008 1936

Options Edit View Tools Information Print Reports Link Search Help

Misc  
RSTN  
MRSTN  
Delay  
RWY  
Sum  
EQ  
Log  
MyEntry  
SISO  
Count  
ICE  
INFO  
MA  
PIREP  
SUA  
SWAP  
Telcon  
Pending

Request Type:  Initiate  Modify  Cancel  Delete

Entry Time: 1936  Clear on Submit

Type:  MIT:

Aircraft Type:  
 All  Jet  Prop  Other:

Requesting:   
 Providing (I):

Start Time:  End Time:

Restriction:  
 En Route  Departure  Arrival

Airport (I):   
 Via (I): WHITE   
 Location (I):

Originator:   
 Approval:  Approve  Disapprove

Causal Factor...

Altitude:   
 Speed:   
 Qualifier (I): NONE   
 Exclusions:   
 Severe Weather Reroute

Justification Remarks:   
 ATCSCC Remarks/Critique:

Send To... ESIS:  Coordination Complete   
 Pos:  Reminder (Z):   
 Fac:  Entry #:

Submit Spelling Clear Save As

TPCOBS Pending: 5 / 1



**ATSCC  
OIS  
SYSTEM**

8/12/2019

**OIS Main Menu**

- ⊕ [NAS Status](#)
- ⊕ [Int'l Status](#)
- ⊕ [East Directory](#)
- ⊕ [West Directory](#)
- ⊕ [Airport Layout](#)
- ⊖ Severe WX
  - [Current Reroutes](#)
  - [Collaborative Foreca](#)
  - [Route Management](#)
- ⊕ OPS Plans
- ⊕ National Playbook
  - [Tier Info](#)
  - [Current Restrictions](#)

## Current Restrictions

This page refreshes every minute. Last updated Mon, 12 Aug 2019 20:55:57 UTC

REQUESTING	PROVIDING	RESTRICTION	START TIME	STOP TIME
ZDC	CLT/ZTL	APREQ CLT,ZTL to DCA via BARMY,KILNS 1200-0200 ZDC:CLT,ZTL	08/12/2019 1200	08/13/2019 0200
ZDC	CLT/ZTL	APREQ CLT,ZTL to EWR via BARMY,KILNS 1000-0200 ZDC:CLT,ZTL	08/12/2019 1000	08/13/2019 0200
ZDC	CLT/ZTL	APREQ CLT,ZTL to JFK via BARMY,KILNS 1000-0200 ZDC:CLT,ZTL	08/12/2019 1000	08/13/2019 0200
ZDC	CLT/ZTL	APREQ CLT,ZTL to LGA via BARMY,KILNS 1000-0200 ZDC:CLT,ZTL	08/12/2019 1000	08/13/2019 0200
ZDC	ZBW	1100-0100 BWI ARRIVALS ENTER ZDC AIRSPACE AOB FL220 FOR MILITARY ACTIVITY ZDC:ZBW	08/12/2019 1100	08/13/2019 0100
ZDC	ZJX	BWI INLAND,ARS 25MIT 2045-0015 ZDC:ZJX	08/12/2019 2045	08/13/2019 0015
ZDC	ZJX	EWR FLO,TUBAS 30MIT JETS AS ONE RTE 1945-2145 ZDC:ZJX	08/12/2019 1945	08/12/2019 2145
ZDC	ZJX	EWR ILM 30MIT JETS 2000-2100 ZDC:ZJX	08/12/2019 2000	08/12/2019 2100
ZDC	ZJX	JFK DIW 35MIT JETS 1930-2200 ZDC:ZJX	08/12/2019 1930	08/12/2019 2200
ZDC	ZJX	LGA FLO,TUBAS 30MIT JETS AS ONE RTE 2000-2100 ZDC:ZJX	08/12/2019 2000	08/12/2019 2100
ZDC	ZNY	WAVEY 15MIT JETS EXCL: ZDC LTFC 2020-2200 ZDC:ZNY	08/12/2019 2020	08/12/2019 2200



citlab13:2 (nexus) - VNC Viewer

TM Actions Create Show Window Taxi List Settings Search Clear

NEW 67 APREQ to ORD 1745-1945 N\_Normal

Runway 18L/36R

Operational STBO Timeline Runway 18C/36C

Map

Operational STBO Arr/Dep = Departure; Destination has APREQ = Yes; Has AOFF = No; Ga

Flight ID	Dest	Dep Fix	Swap	AC Type	Gate	EOBT	AOBT	Flight Status	APREQ Requi..	APREQ	EDCT
RPA3679	ORD	JOJO	WEAZL	E170	A27			Scheduled Out		APRQ	
DAL2133	ATL	BOBZY		B712	A6			Scheduled Out		APRQ	
FFT1028	PHL	KILNS		A320	A28		19/21:15	In Queue		2213	
ENY9802	IFK	BARMY		E135	E5	19/22:00		Cancelled		APRO	

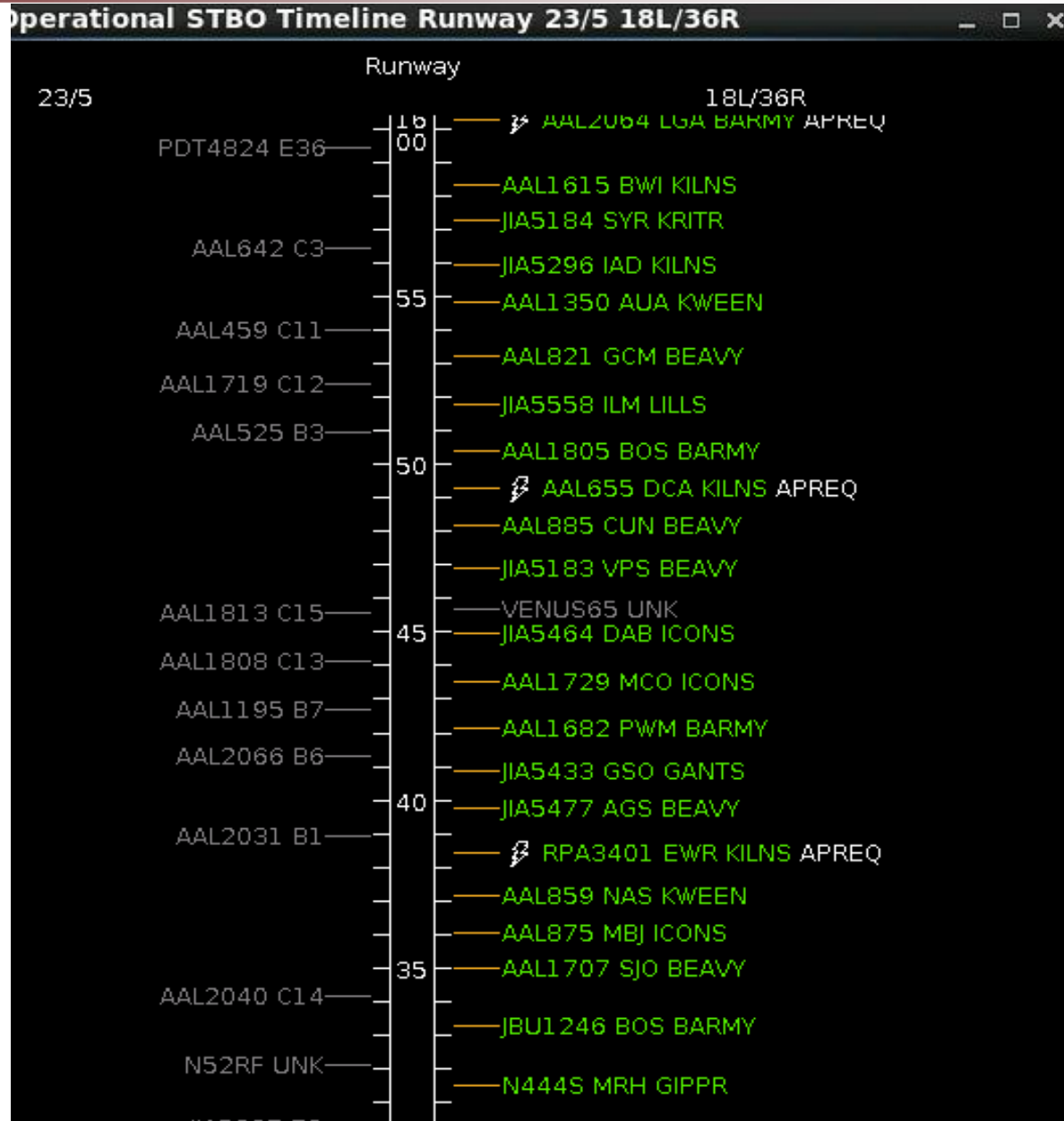
Toolbar

Map

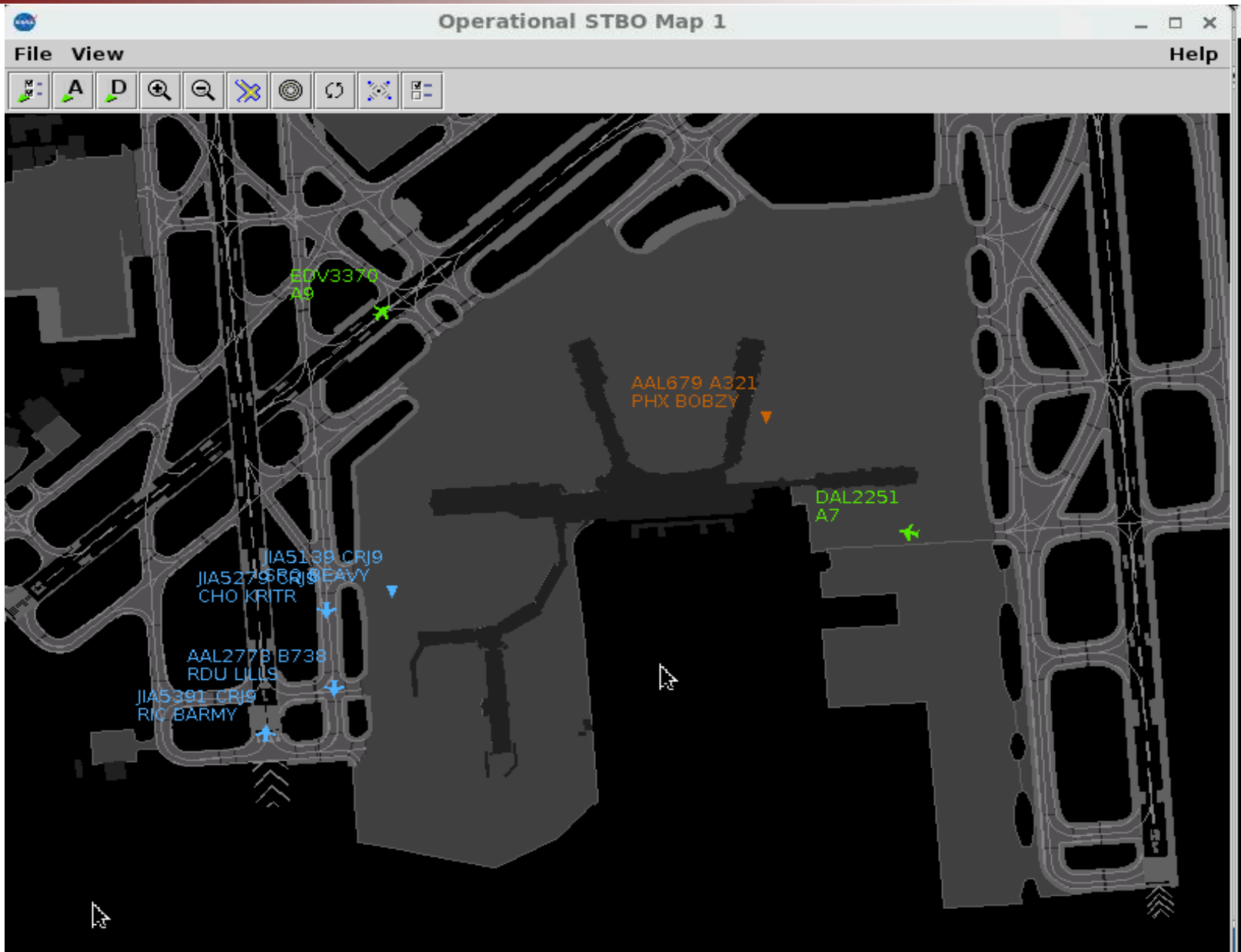
Flight Table

Timeline











Operational STBO Arr/Dep = Departure; Destination has APREQ = Yes; Has AOFF = No; Gate



Search  Clear

Flight ID	Dest	Dep Fix	Swap	AC Type	Gate	EOBT ▲	AOBT	Flight Status	APREQ Requ...	APREQ	EDCT
RPA3401	EWR	KILNS		E170	A13			Scheduled_Out		APRQ	
ASQ5469	LGA	BARMY		CRJ7	A5			Scheduled_Out		APRQ	
AAL655	DCA	KILNS		A319	B2	30/15:29		Scheduled_Out		APRQ	
AAL2064	LGA	BARMY		A320	C19	30/15:34		Scheduled_Out		APRQ	
JIA5545	ATL	BOBZY		CRJ9	E30	30/15:49		Scheduled_Out		APRQ	



Operational STBO Toolbar

TM Actions Create Show Window Settings Delays Search  Clear

NEW 32 TIME BASED METERING 0800 Conv-S\_KR/J/N=18L 18L 18C Ramp

Operational STBO Timeline Runway 23/5 18L/36R

STBO TM Actions
⌵ □ ✕

Runway Utilization

APREQ Schedule

MIT Restrictions

Dep Fix Closures

Runway Closures

Ground Stops

**Add APREQ**

Airport    Jet Route

Airport:  Select

Start Time:  (dd/hhmm)  Start Now

End Time:  (dd/hhmm)  No End Time

Set Constraints
View Constraints

Clear All
Add

**APREQ Schedule**

Airport	Start ▲	End	Source
EWR	28/1200	1/0230	OIS
LGA	28/1200	1/0230	OIS
DCA	28/1230	1/0230	OIS

Remove

Close Window



**NEW 53** APREQ to LGA 0956-0200

55 — JIA5063 GNV BEAVY  
— ✈ AAL2064 LGA BARMY APREQ  
— JIA5184 SYR KILNS  
— JIA5206 LAD KILNS





The screenshot displays the ATD2 software interface. On the left, a list of airports is shown with their respective status indicators and 'Dep...' buttons. On the right, a window titled 'LGA Departure Scheduling' is open, showing configuration options for various airports. The window has three tabs: 'APREQ Mode', 'Approval Mode', and 'Scheduling Mode'. The 'Approval Mode' tab is selected, and a dropdown menu is open over the 'BWI' row, showing options: 'Automatic\*', 'Semi Automatic', and 'Call for Release\*'. The 'Scheduling Mode' tab is also visible, showing 'Accept' buttons for each airport.

Departure Airports	APREQ Mode	Approval Mode	Scheduling Mode
BWI	On	Automatic*	Accept
CLT	On	Semi Automatic	Accept
DCA	On	Call for Release*	Accept
IAD	On	Semi Automatic	Accept
RDU	On	Semi Automatic	Accept
RIC	On	Semi Automatic	Accept



ZDC/CP N90 HOLDING ZDC AT RBV FOR LGA DUE TO WX. Fwd by N90/TMU/RM  
- LNK: LGA

PD14389 685  
DY1007BA 927  
E145A 263

DAL1598GA  
100T 99  
B712 280

ASH6256GA  
120T 121  
CRJ7 266  
LGA

DAL1428  
100T 215  
A320 390  
LGA

IAD

AAL2062  
270 C 270  
A321 384  
LGA

SKW3320  
270T 279  
E75L 442  
LGA

NKS604  
270T 350  
A320 444  
LGA

SWA1890  
390 C 290  
37 529  
LGA

ENY3323  
350 C 255  
E145 517  
LGA

370 C 370  
B738 440  
LGA

V3861  
350 C 350  
39 490  
R

DAL2151  
350 C 350  
A320 317  
LGA

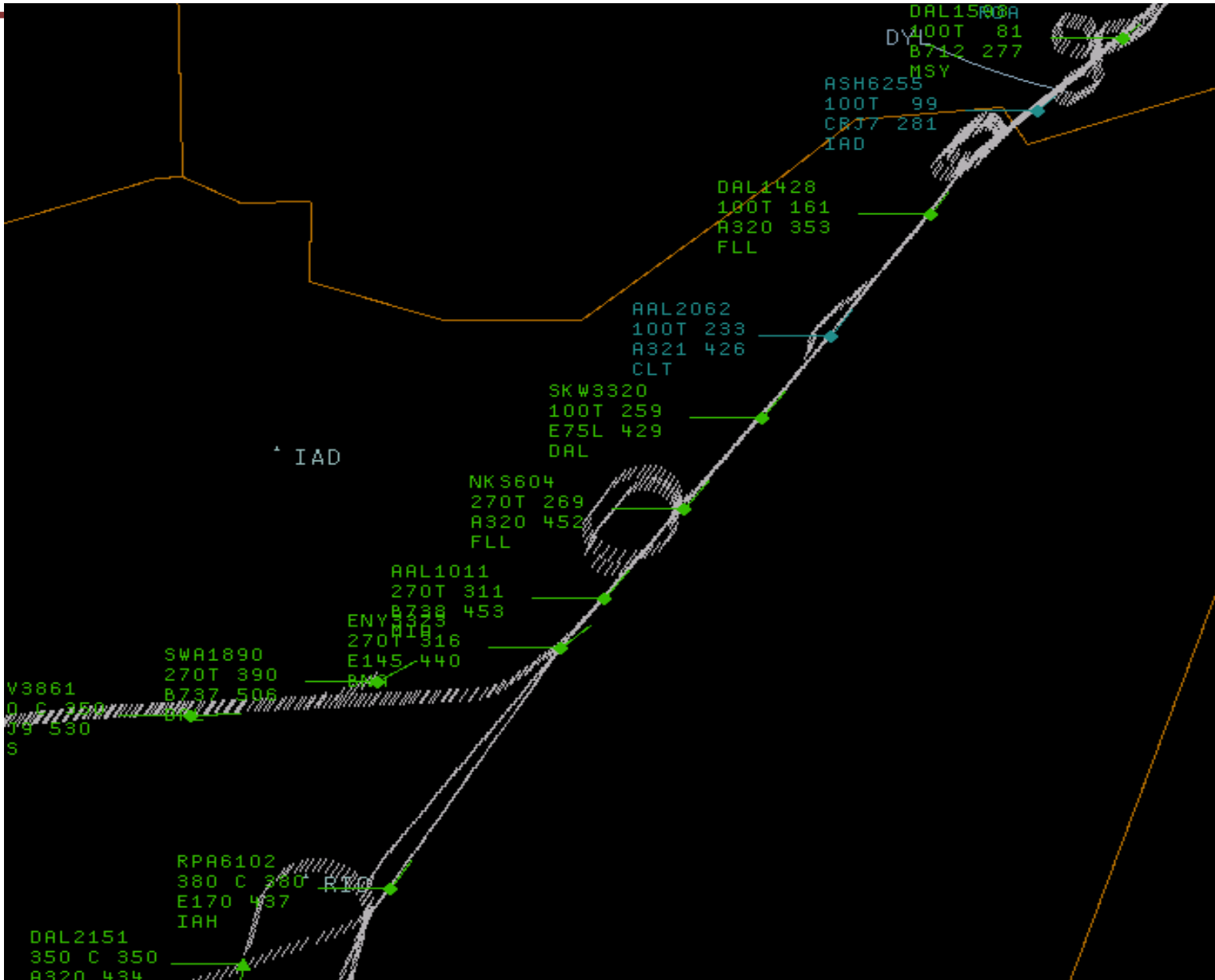
NYC

CIBAC



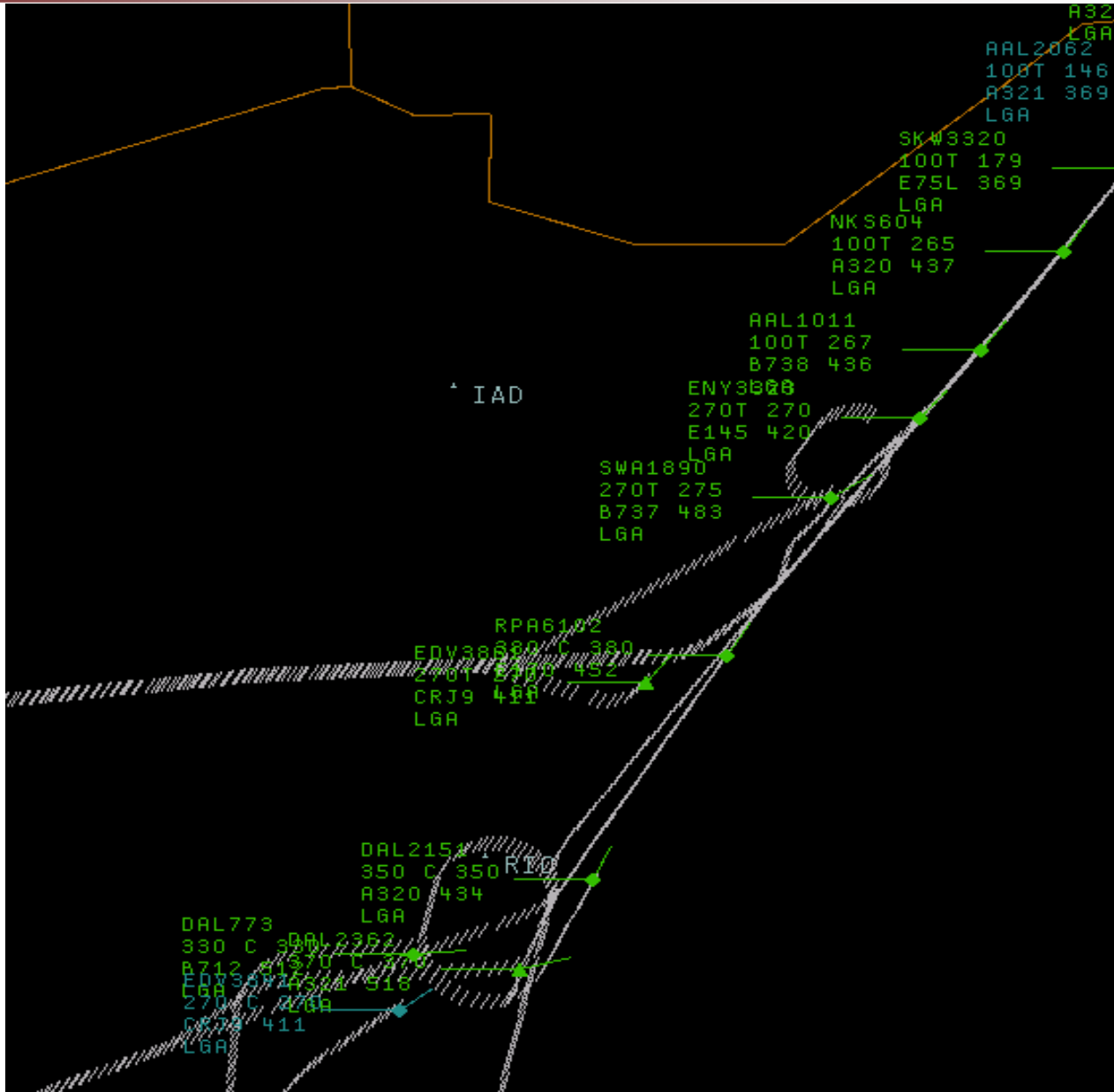
2044 ZDC/CP STOP: ZDC to LGA  
2044-2200, WX:Thunderstorms  
ZDC:ZDC, STOP: - LNK: LGA - ESIS: CP

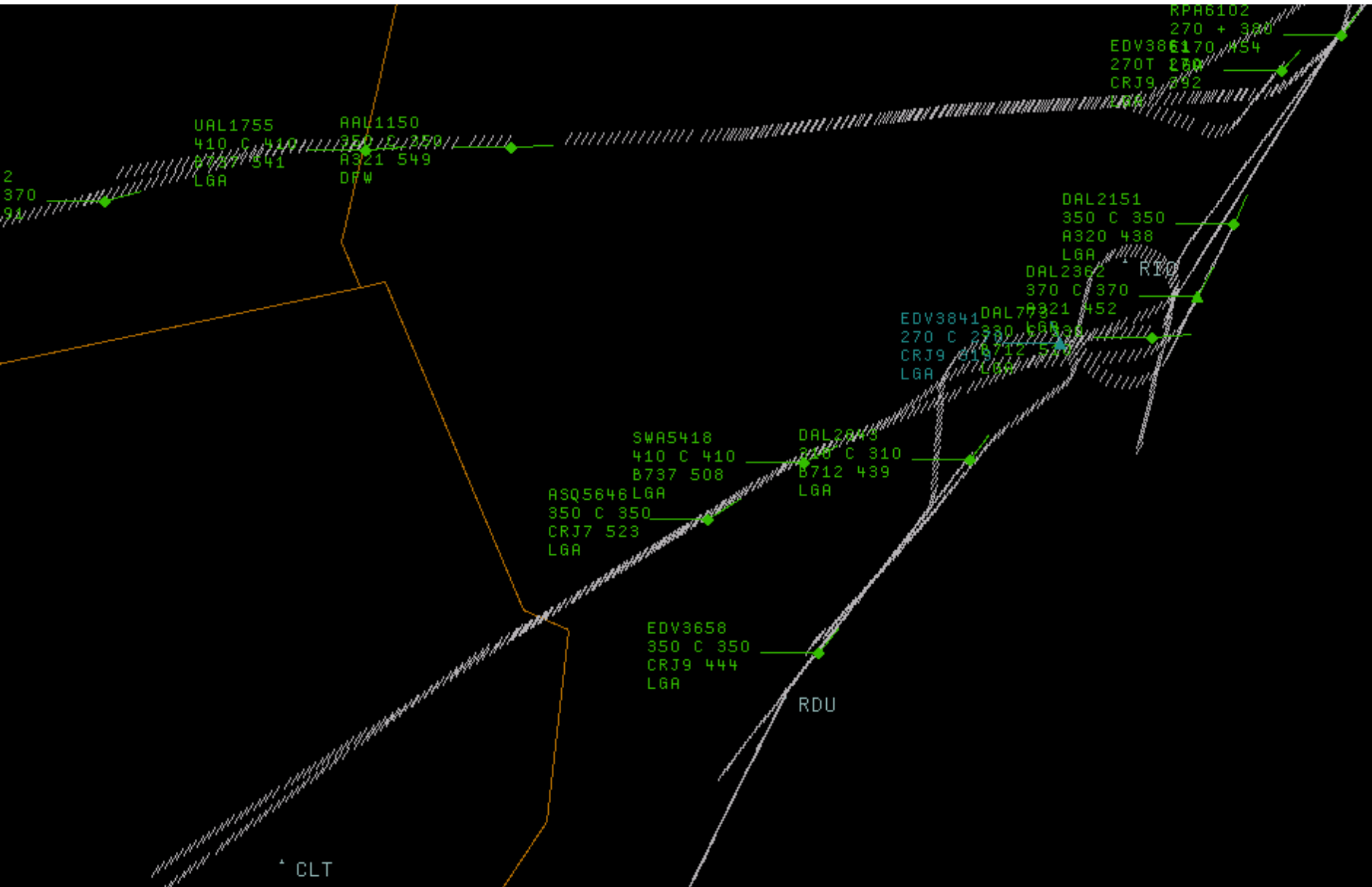
# Holding For LGA



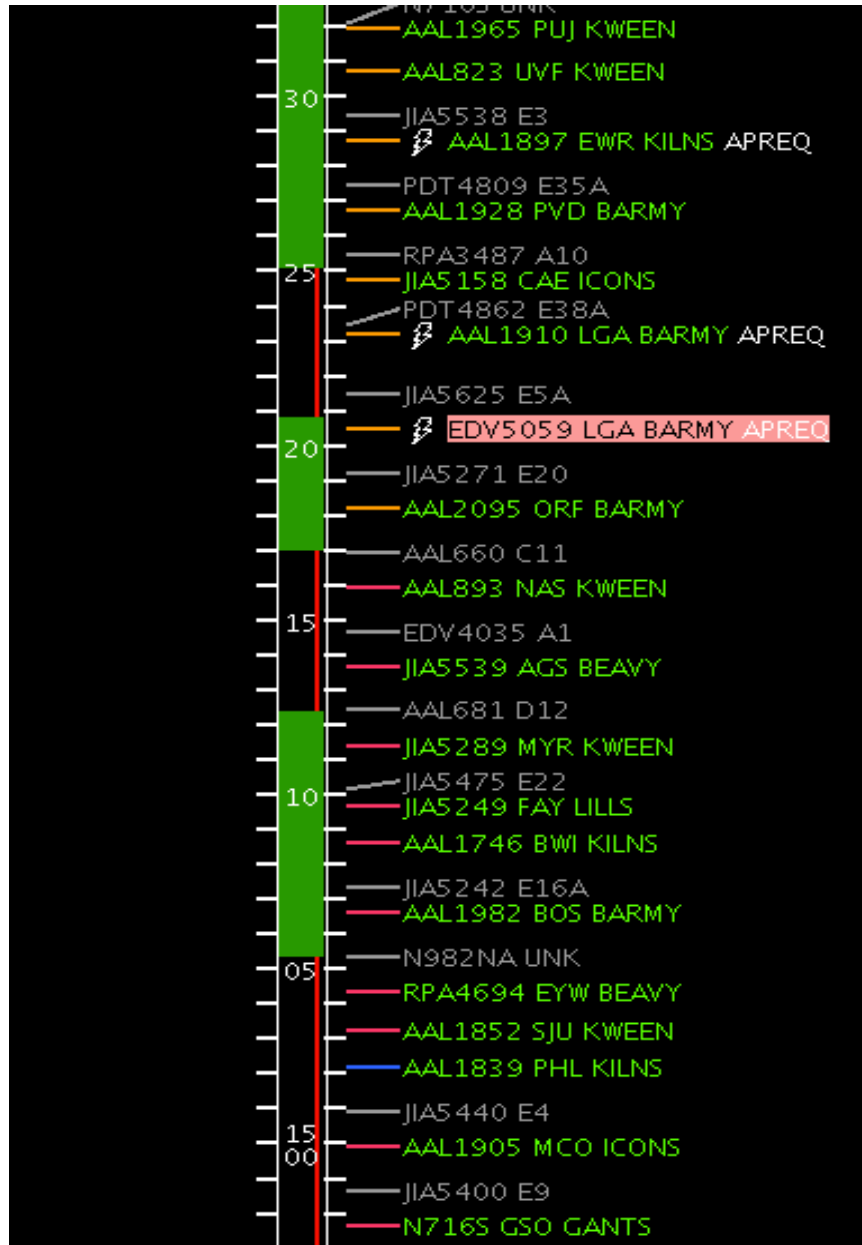


# Out of Holding on N90 Boundary





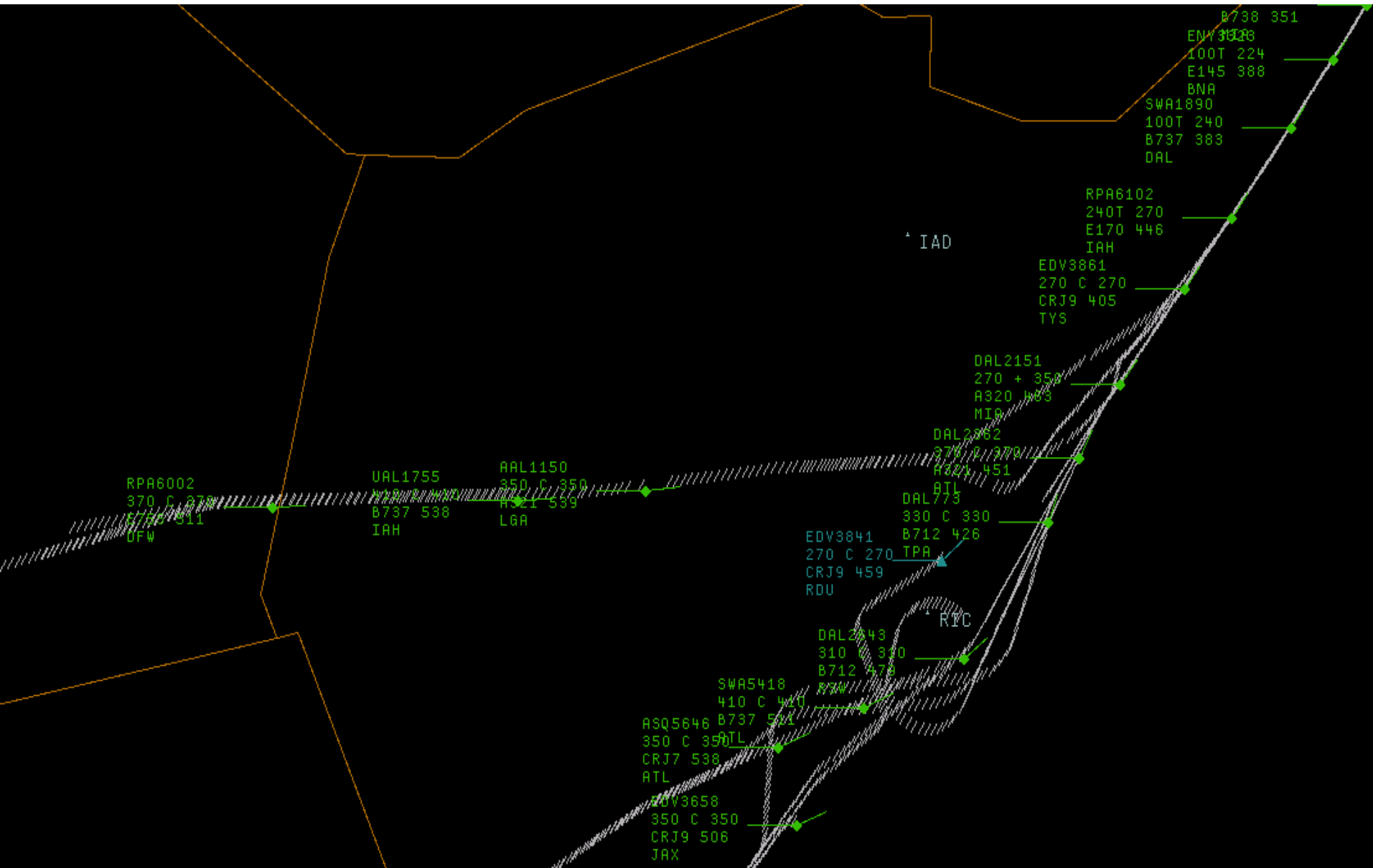
# May Not Get Green Space



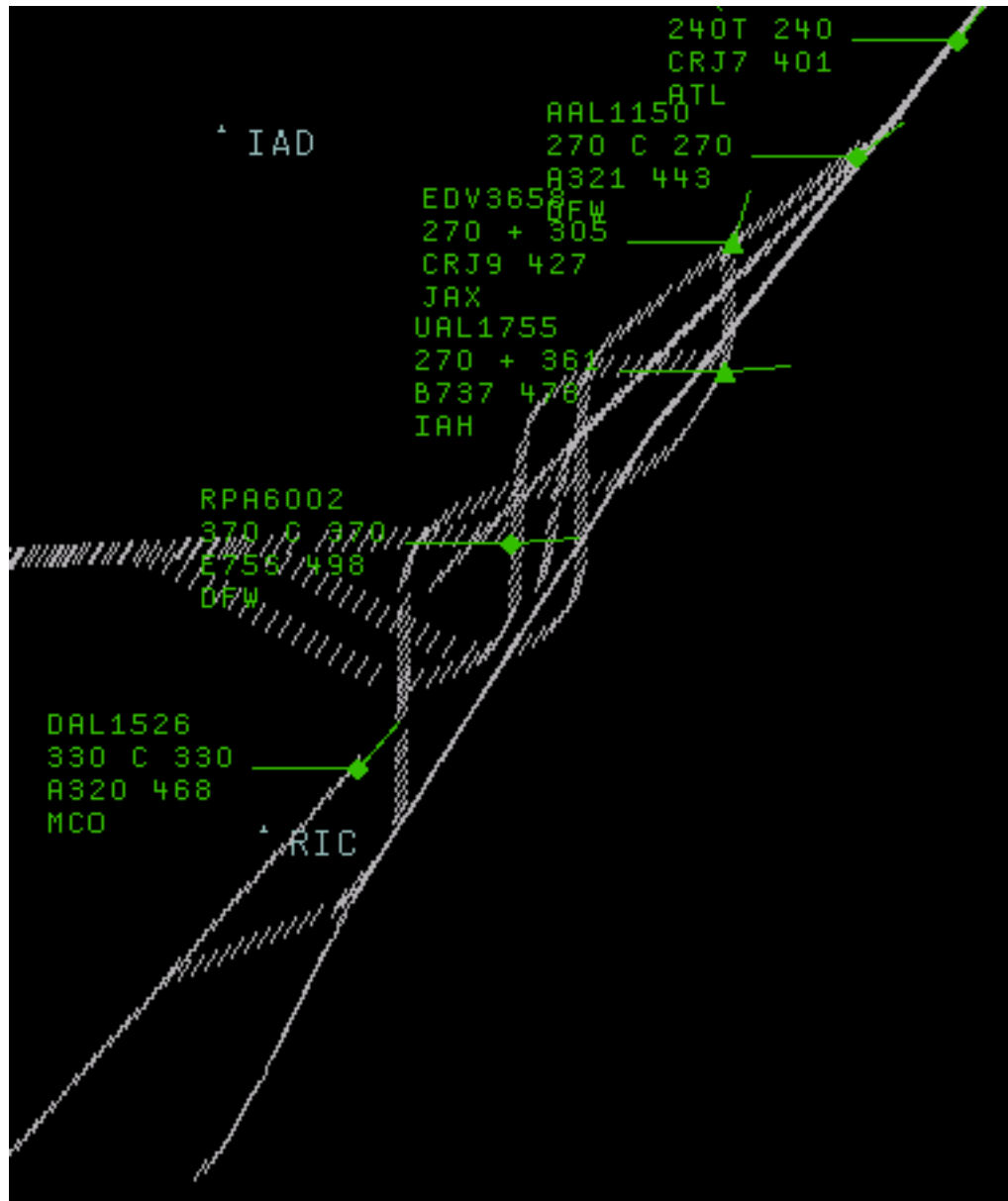


2130 ZDC/CP STOP MODIFIED: LGA 30/2112Z-30/2230Z WEATHER / THUNDERSTORMS  
FAC=(Manual), ZAU ZDC ZMP ZBW ZOB ZJX ZMA ZID ZTL ZNY TOT/MAX  
/AVE DLY=1230,275,205.0 AAR=35/20/20/15/17/20/22/22/22  
RMK:DAL AND THEIR SUBS ONLY DUE TO GATE/TAXI AND WEATHER



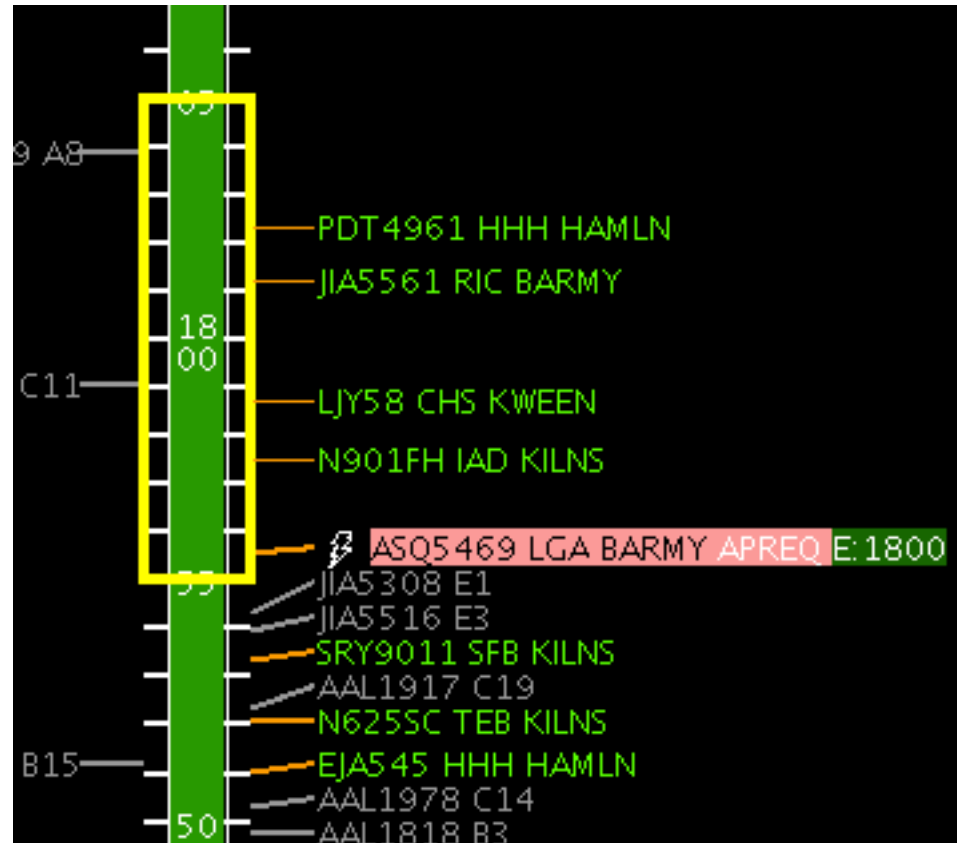








ZDC/CP GDP (UDP) LGA DISTANCE=1450 EXCPT NONE CYHZ CYOW CYUL CYYZ  
CYTZ CYQB  
EVENT=02/2119Z-03/0259Z, CUMULATIVE=02/2119Z-03/0259Z  
WEATHER / THUNDERSTORMS MAX=91 AVG=31.0 AAR=36 PR=36 PF=0  
RMK: ZTL GROUNDSTOP CANCELLED. AIRCRAFT RELEASED ON EDCTS.  
ARR 04 DEP 13. ADVZY=133 LGA/ZNY 08/02/2016 - LNK: LGA -  
ESIS:  
CP, Bay1, Bay2, Bay3, Bay4, Bay5, Bay6, Bay7, Bay8, ESP1, ESP2, STMC, SW  
MP, MAC, ADS





1753 ZDC/CP STOP: ZTL via KILNS JETS  
1749-2200, WX:Thunderstorms  
ZDC:ZTL, STOP: APVD 1752/DCC:NE/VI - ESIS: CP,Bay2

1753 ZDC/CP EnRte via BARMY 15 Mit JETS Excluding: NUTZE AOB FL230/  
APREQS  
1750-2200, WX:Thunderstorms  
ZDC:ZTL, RSTN: APVD 1752/DCC:NE/VI - ESIS: CP,Bay2

NTML: ZDC ADMN 19 Aug 2019 2054
\_ □ ×

Options Edit View Tools Information Print Reports Link Search
Help

Count

Delay

EQ

ICE

INFO

MA

Misc

MRSTN

MyEntry

PIREP

RSTN

RWY

SISO

SUA

Sum

SWAP

Telcon

Log

Pending

**Benjamin Dengler**

Request Type:  Initiate  Modify  Cancel  Delete

Entry Time:   Clear on Submit

Type:  MIT:

Aircraft Type:

All  Jet  Prop  Other:

Requesting:

Providing (/):

Start Time:  End Time:

Restriction:

En Route  Departure  Arrival

Airport (/):

Via (/):

Location (/):

Causal Factor...:

Altitude:

Speed:

Qualifier (/):

Exclusions:

Severe Weather Reroute

Justification/Remarks:

ATCSCC Remarks/Critique:

Send To...:

Pos:

Fac:

Coordination Complete

Reminder (/):

Entry #:

TPCOPS
Pending: 138 / 0

40	— JIA5483 E17	— AAL2052 PWM BARMY 15M
	— PDT4826 E35C	— AAL730 H LHR BARMY 15M
	— N285BA UNK	— JIA5424 GSO GANTS
35	— ⚡ AAL1740 LGA BARMY APREQ 15M	— JIA5282 E25
	— JIA5593 MYR KWEEN	— JIA5131 SAV ICONS
	— DCM4096 UNK	— AAL609 MIA ICONS
30	— N692L UNK	— ⚡ EDV3772 LGA BARMY APREQ 15M
	— JIA5575 CAE ICONS	— JIA5145 E15
25	— 📞 AAL869 PHL KILNS APREQ	— AAL1457 B4
	— JIA5387 AGS BEAVY	— AAL1962 D4
	— EDV3775 JFK BARMY 15M	— EJA787 UNK
20	— AAL1723 RIC BARMY 15M	— ASH6166 A11
	— AAL1871 TPA BEAVY	— LXJ456 UNK



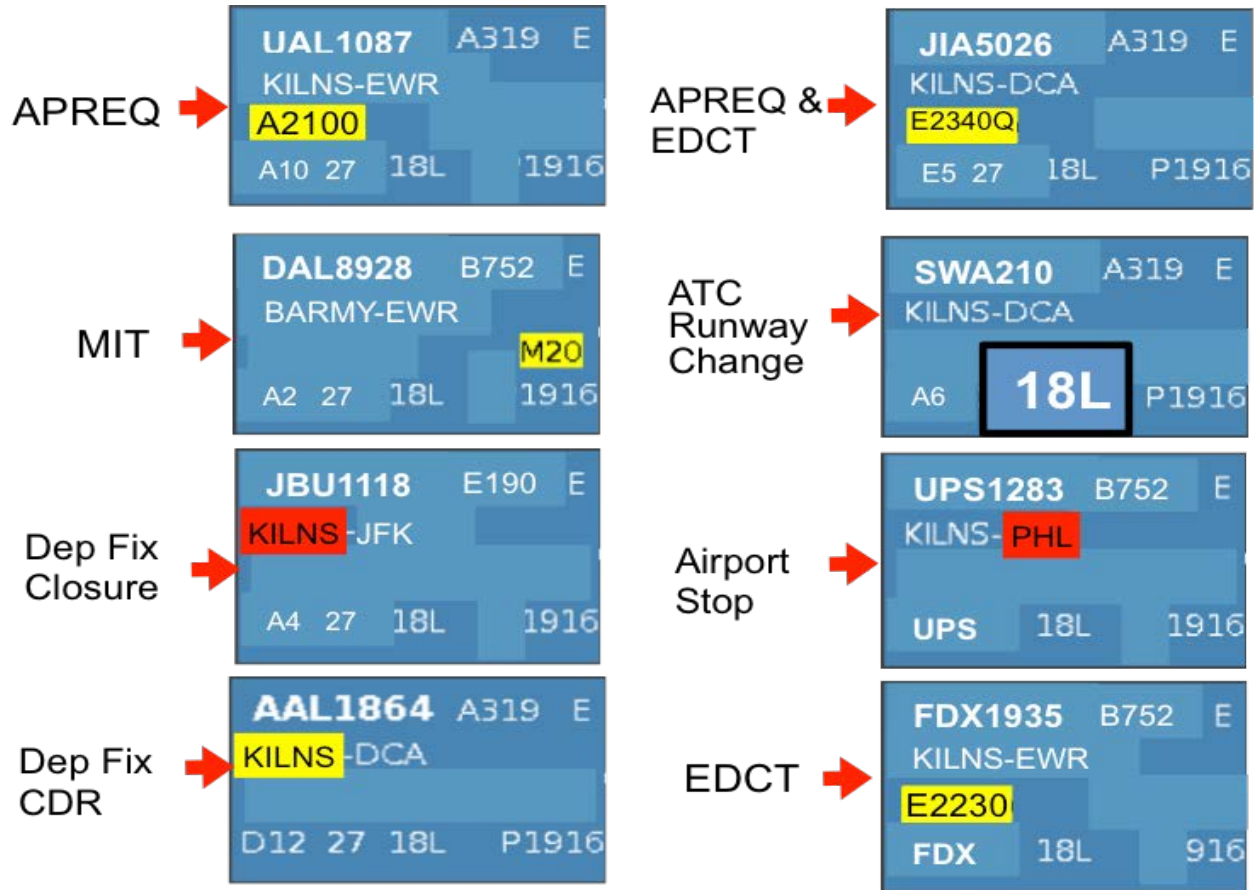


# KILNS Swapping to BARMY



—	JJA5575 CAE ICONS
—	JJA5483 E17
—	EDV3772 LGA BARMY APREQ 15M
—	EJA787 UNK
—	AAL869 PHL KILNS->BARMY APREQ 15M
—	AAL1962 D4
—	JJA5387 AGS BEAVY
—	ASH6166 A11
—	EDV3775 JFK BARMY 15M
—	LXJ456 UNK
—	AAL1723 RIC BARMY 15M
—	JJA5145 E15
—	AAL1871 TPA BEAVY
—	AAL1457 B4
—	PDT4795 ROA GANTS
—	AAL1998 JAX ICONS
—	AAL1663 C19
—	AAL2043 ORF BARMY 15M
—	AAL1703 C7
—	AAL1861 RDU LILLS
—	SRY1191 UNK
—	JJA5377 CHS KWEEN
—	PDT4952 FLO LILLS
—	AAL1750 DCA KILNS->BARMY APREQ 15M
—	AAL1066 D5







Manager Mode - RampManager

Reset View   Rotate View

Reported	Event Type	Description	Event Start	Event End	Details
8/15/19 2023	SMP	36R AFFIRMED	8/15/19 2024	8/15/19 2114	Flight Count: 22 Avg Gate Hold: 6 Ma...
8/15/19 2020	TMI	PHL STOP	8/15/19 2003	8/15/19 2130	TFM/ZDC:
8/15/19 2005	SMP	36R COMPLETED	8/15/19 1834	8/15/19 1904	Expired
8/15/19 1959	TMI	DTW STOP	8/15/19 1858	8/15/19 1959	Cancelled
8/15/19 1944	TMI	APREQ to DFW	8/15/19 1944	8/15/19 2045	USER:
8/15/19 1941	TMI	IAD STOP	8/15/19 1941	8/15/19 2045	USER:
8/15/19 1936	Fix	JOJJO 15MIT	8/15/19 1936	8/15/19 2145	USER:
8/15/19 1936	Fix	WEAZL 15MIT	8/15/19 1936	8/15/19 2145	USER:
8/15/19 1918	TMI	APREQ to IAD	8/15/19 1800	8/15/19 2100	USER:
8/15/19 1918	TMI	APREQ to IAD	8/15/19 1845	8/15/19 1918	Cancelled
8/15/19 1916	TMI	IAD STOP	8/15/19 1830	8/15/19 1916	Cancelled
8/15/19 1912	TMI	DCA STOP	8/15/19 1851	8/15/19 2030	TFM/ZDC:
8/15/19 1900	Fix	BUCKL 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	TREAL 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	ANDYS 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	HAMLN 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	BEAVY 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	ICONS 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1900	Fix	KWEEN 20MIT	8/15/19 1245	8/15/19 1900	Cancelled
8/15/19 1853	TMI	DHL GDP	8/15/19 2000	8/16/19 0050	TFM/ZDC:



- ATD-2 and Advanced Electronic Flight Strips (AEFS) began two-way real-time data sharing at CLT on 9/20/2018. This is going well!
- AEFS sends information from controllers back to ATD-2, which shares this on the TTP SWIM feed

AAL2068												B/ RMY3		KCLT BARMY3 RDU J55 HPW												1836		18L		LC			
▶ A321/L												P1820		BA		J191 PXT KORRY4 KLGA																	
049												350		KLGA		C8																	
Priority	EMRG	ONR	V	MA	H/S	RTN	APREQ	SWAP	STOP	NoCLR	NoDP	FRC	PTT	FR	Pen	Eraser	Clear																
EOBT 1820			TOBT 1828			AOBT 1830			TMAT 1836			AMAT 1830			ETD 1833																		

Parking Gate

APREQ indicator

APREQ release time in block 16

TMAT in block 11

ATD-2 Times: EOBT, TOBT, AOBT, TMAT, AMAT, ETD (TTOT)

- As controllers make updates, you get them on TTP SWIM!





- Questions?