

REGIONAL FOCUS

**Décimo Séptima Reunión de
Autoridades de Aviación Civil de la
Región Sudamericana (RAAC/17)**

**Avances de la iniciativa CANSO ATFM
Data Exchange Network for the
Americas - CADENA 2016 - 2022**

Santiago de Chile, Abril 2023

CANSO ATFM Data Exchange Network for the Americas - CADENA



Purpose and Objectives of CADENA

- Exchange operational information
 - CADENA members are working to implement data exchange through FAA's SWIM network
 - Airlines, airports, and other aviation stakeholders will be able to access such data in the near future
- Promote common situational awareness
- Enhance operational safety
- Improve operational efficiency

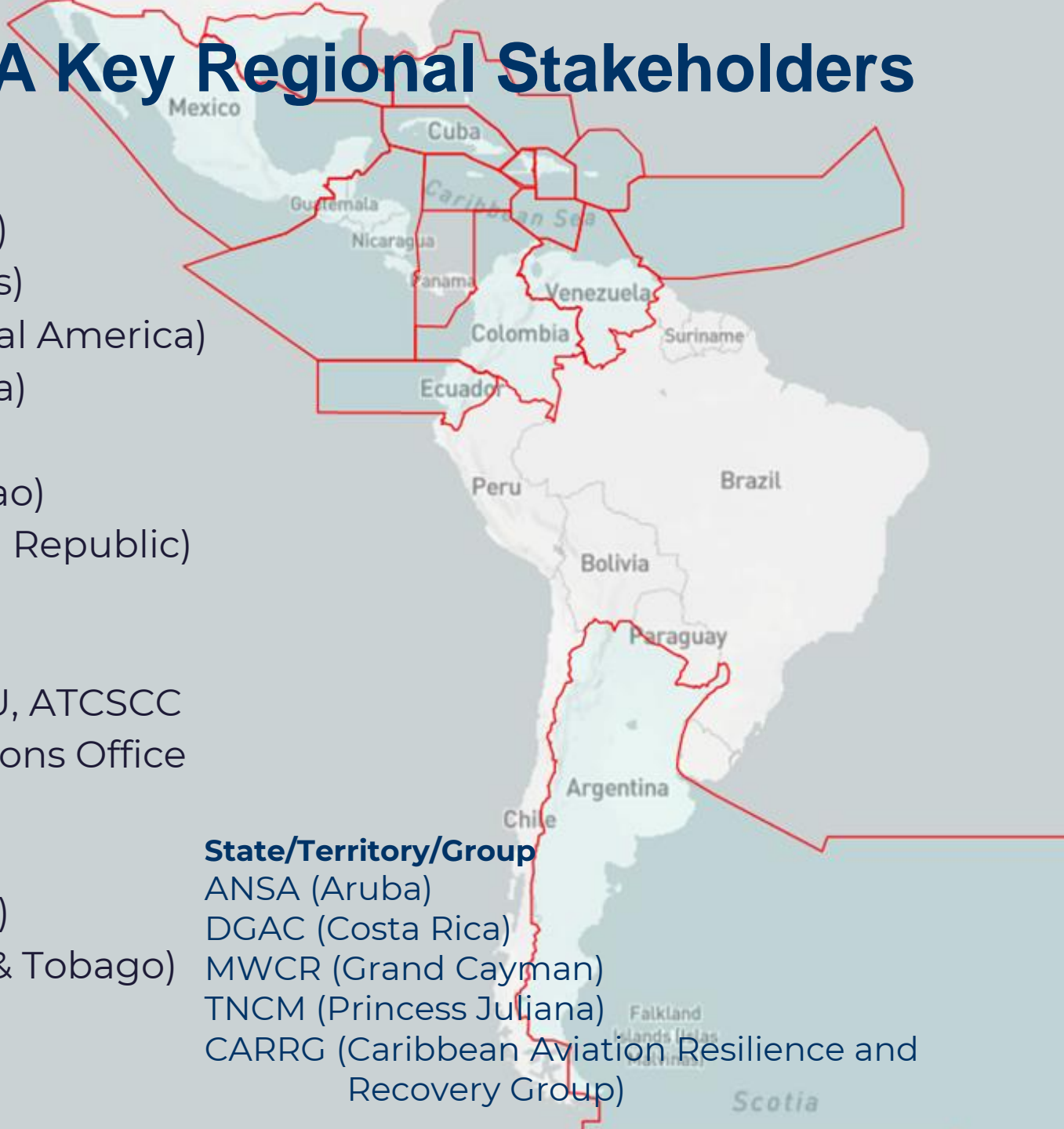
CADENA Key Regional Stakeholders

ANSPs

- EANA (Argentina)
- BANSA (Bahamas)
- COCESNA (Central America)
- UAEAC (Colombia)
- ECNA (Cuba)
- DC-ANSP (Curacao)
- IDAC (Dominican Republic)
- DGAC (Ecuador)
- FAA (USA)
 - ZMA, SJU, ZHU, ATCSCC
 - Space Operations Office
- OFNAC (Haiti)
- JCAA (Jamaica)
- SENEAM (Mexico)
- TTCAA (Trinidad & Tobago)
- INAC (Venezuela)

State/Territory/Group

- ANSA (Aruba)
- DGAC (Costa Rica)
- MWCR (Grand Cayman)
- TNCM (Princess Juliana)
- CARRG (Caribbean Aviation Resilience and Recovery Group)



FMUs Around the Region



IDAC



EANA



SMART-SENEAM



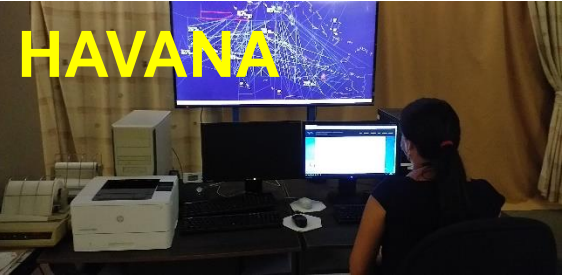
CENAMER



CGNA



PIARCO



HAVANA



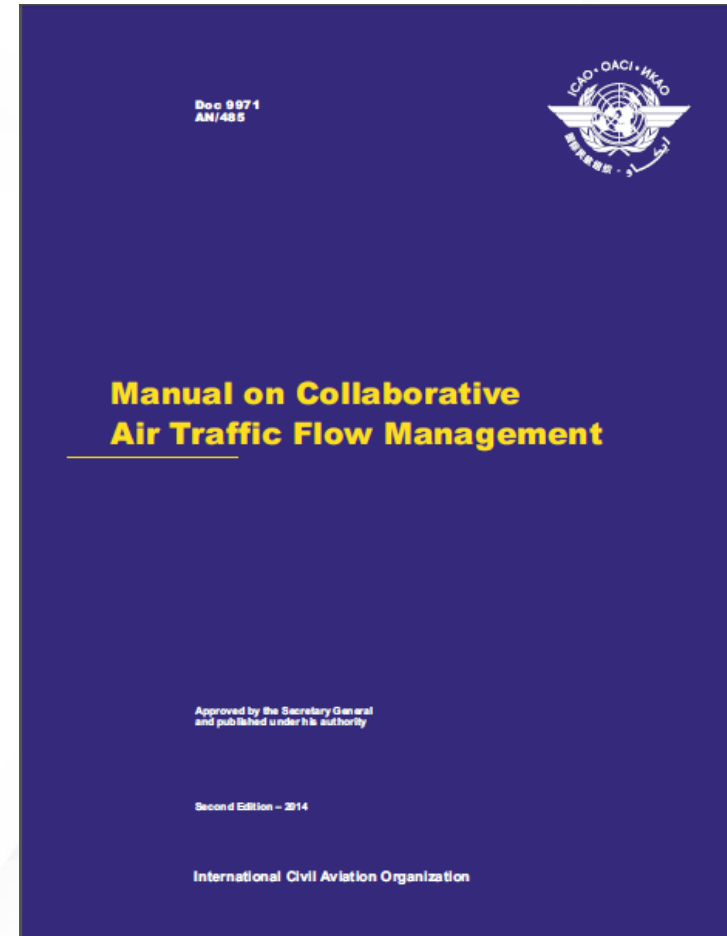
BOGOTA



JCAA

In Concert with ICAO

- CAR/SAM ATFM CONOPS
- ICAO DOC 9971
- CADENA is designed to implement the processes and procedures from DOC 9971



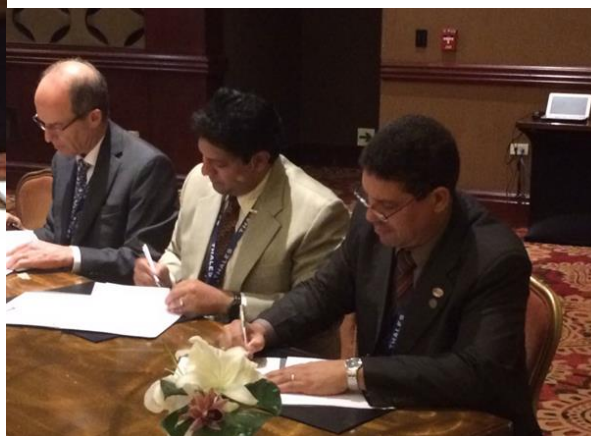
History of Collaboration

- Aug 2016: 1st CADENA meeting in Havana
- Oct 2016: 2nd CADENA meeting in Buenos Aires
 - CADENA Members trained and practiced the weekly operational planning web conference
- Dec 6, 2016: CADENA member CEOs/COOs signed the historic “CADENA Member ANSP Air Traffic Management and Collaborative Decision-Making Letter of Agreement”
- Dec 3, 2020: CADENA the LAC3 signed a first regional Letter of Agreement to coordinate the exchange of information with the FAA ATO Space Operations office and facilitate the safe and efficient movement of space launch and recovery operations between and through participating ANSP FIRs.

Dec 6, 2016: CADENA member CEOs/COOs signed the historic “*CADENA Member ANSP Air Traffic Management and Collaborative Decision Making Letter of Agreement*”

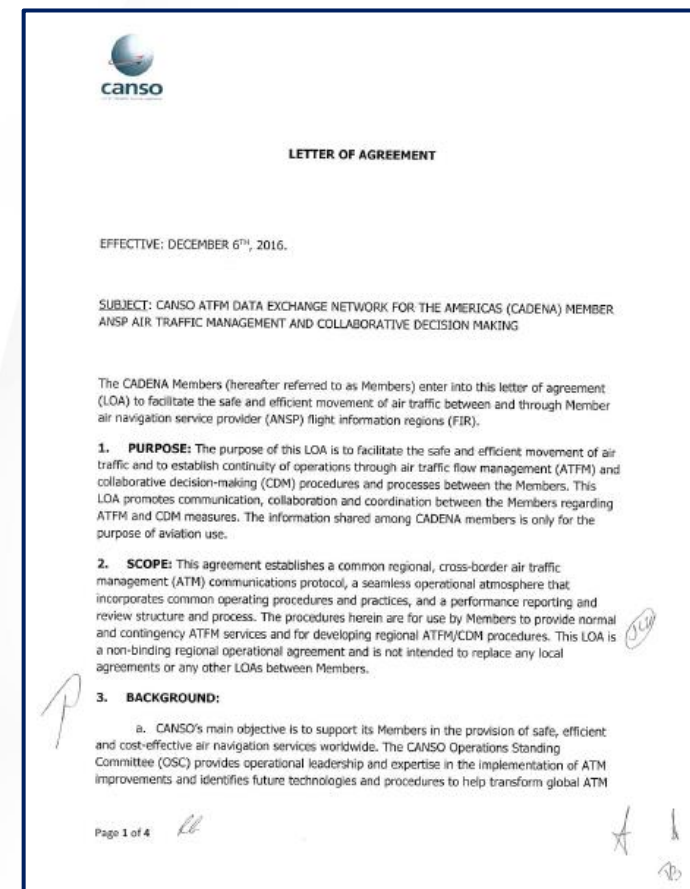


SENEAM, FAA, EANA, DC-ANSP

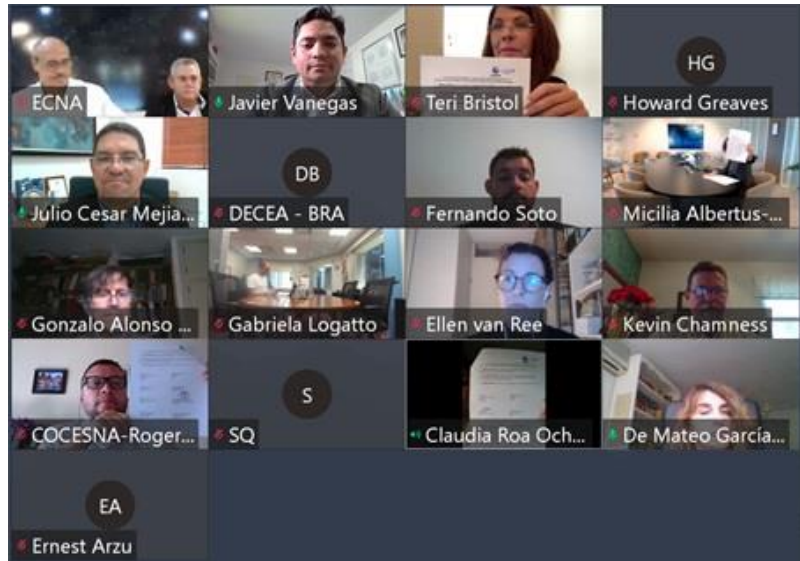


COCESNA, TTCAA, IDAC

“This Letter of Agreement promotes communication, collaboration and coordination between the Members regarding ATFM and CDM measures.”



Dec 3, 2020: CADENA the LAC3 signed a first regional Letter of Agreement to coordinate the exchange of information with the FAA ATO Space Operations office



“The LoA promotes communication, collaboration, and coordination between the participating ANSPs and ATO Space Ops, with information shared among participating CADENA ANSPs and stakeholders for the purpose of enhancing aviation safety”



LETTER OF AGREEMENT

EFFECTIVE: DECEMBER 3, 2020

SUBJECT: CANSO ATFM DATA EXCHANGE NETWORK FOR THE AMERICAS (CADENA) SPACE LAUNCH AND RECOVERY PROTOCOLS

The participating CADENA Air Navigation Service Providers (ANSPs) and the Federal Aviation Administration (FAA) Air Traffic Organization (ATO) Space Operations office (ATO Space Ops) enter into this Letter of Agreement (LOA) to facilitate the safe and efficient movement of space launch and recovery between and through participating ANSP flight information regions (FIRs).

1. PURPOSE: The purpose of this LOA is to facilitate the safe and efficient movement of space launch and recovery operations between and through participating ANSP FIRs. This LOA promotes communication, collaboration, and coordination between the participating ANSPs and ATO Space Ops regarding space launch and recovery operations. The information shared among participating CADENA participating ANSPs and stakeholders is for the sole purpose of aviation safety.

2. SCOPE: This agreement establishes a common regional, cross-border air traffic management (ATM) communications protocol, a seamless operational atmosphere that incorporates common operating procedures and practices, and a performance reporting and review structure and process. The operations described herein are for use by participating CADENA ANSPs and ATO Space Ops to provide space launch and recovery information. This LOA is a non-binding regional operational agreement and is not intended to replace any local agreements or any other LOAs between participating ANSPs.

CANSO and CGH Technologies, Inc. partner to provide ANSPs with new platform for enhancing air traffic management

CANSO and CGH Technologies, Inc virtual signing



Cindy Troutman
President CGH Technologies, Inc

Simon Hocquard
CANSO Director General

The new platform, **CADENCE** (CANSO ATFM Data Exchange Network for Cooperative Excellence)

The agreement secures the provision of a purpose-built collaborative software platform based on the successful regional initiative **CADENA**

CADENA is now a global platform called CADENCE

History of CADENA RIG Meetings



- Aug 2016: 1st CADENA Meeting in Havana, Cuba
- Oct 2016: 2nd CADENA Meeting in Buenos Aires, Argentina
- Dec 2016: CADENA Ops Planning Web Conference (Dec 16, 2016 – “Live”)
- Jan 2017: Stakeholder participation in the CADENA Ops Planning Web Conference began
- Feb 2017: 3rd CADENA Meeting and Industry Day in Curaçao
- Jun 2017: 4th CADENA Meeting in Kingston, Jamaica
- Oct 2017: 5th CADENA Meeting in Rio de Janeiro, Brazil
- Jul 2018: 6th CADENA Meeting in Atlanta, GA
- Jan 2019: 7th CADENA Meeting in Santo Domingo, Dominican Republic
- July 2019: 8th CADENA Meeting in Miami, FL
- Mar 2020: 9th CADENA Meeting in Miami, FL
- Sep 2020: 10th CADENA Meeting (Virtual); Mar 2021: 11th CADENA Meeting (Virtual)
- Sep 2021: 12th CADENA Meeting (Virtual); Aug 2022: 13th CADENA Meeting in Miami, FL

CADENA Implementation Roadmap



Accomplishments to-date:

- Caribbean Region CDM Letter of Agreement (LOA)
- CADENA Space Launch and Recovery LOA
- CADENA Operational Information System (OIS)
- Operational Web Conferences (Twice-Weekly)
- Hurricane Web Conferences
- Regular CADENA leadership team meetings
- Shared best practices
- TTCAA: First international data provider to connect to FAA SWIM
- CADENA ATFM/CDM Procedures Manual
- CADENA CDM Web Conferences

CADENA Procedures Manual

ANSP Contingency Form

CADENA LoA FMU to FMU



Civil Air Navigation Service Organisation Air Traffic Flow Management Data Exchange Network for the Americas

CADENA Air Traffic Flow Management and
Collaborative Decision Making Procedures Manual

October 31, 2019
Version 5



ANSP CONTINGENCY FORM

Impacted Facility / Sector: _____

REF #: _____

Type of Contingency

Communication Facility Surveillance Staffing Other

Detail

[Click here to enter text.](#)

Traffic Management measures

Miles-in-trail (MIT) Minutes-in-trail (MINIT) Re-routing
 Fix Balancing Level Capping Tunnelling
 Airborne Holding Ground Delay Program (GDP) Ground Stop (GS)
 Airspace Flow Program (AFP)

Detail

[Click here to enter text.](#)

FIRs Affected

TTZP TJSZ SVZM TNCF MDCS
 MTEG KZMA KZWY KZHU MUFH
 MKJK MMFR MHCC MPZL SKEC
 SKED SARR SACF SAEF SAVF
 ____ ____

Start Time

[Click here to enter text.](#)

End Time

[Click here to enter text.](#)

Addendum to the Letter of Agreement

SUBJECT: AIR TRAFFIC FLOW MANAGEMENT (ATFM) COLLABORATION

1. PURPOSE

The purpose of this addendum is to facilitate the safe and efficient movement of air traffic and establish continuity of operations through Air Traffic Flow Management (ATFM) and Collaborative Decision Making (CDM) procedures between the ANSP1 FMU1 located in (city/country), and the ANSP1 FMU2 located in (city/country). This addendum will promote coordination and collaboration between FMU1 and FMU2 regarding Traffic Management Measures (TMMs) and the routing of aircraft in and out of the ANSP1 FIR and the ANSP2 FIR. FMU1 and FMU2 will be the primary points of contact for coordinating TMMs and operations between ANSP1's ACC and ANSP2's ACC.

2. SCOPE

This addendum establishes ATFM/CDM procedures and communications protocol that promote a seamless operational atmosphere which incorporates operational procedures and practices. The procedures outlined herein are to be used by the FMU1 and the FMU2 to assist in providing ATFM services.

This addendum is not intended to replace any local agreements or any other LOAs between the ANSP1's ACC and ANSP2's ACC.

3. BACKGROUND

Traffic Flow Management continues to evolve as new procedures and technologies are developed. As such, it is possible that FMU1 TMMs may include and affect departures from ANSP2's airports and ANSP2's airspaces. Likewise, FMU2 TMMs may include and affect departures from ANSP1's airports and ANSP1's airspaces.

ANSP1 and ANSP2 have established Air Traffic Services (ATS) operational agreements creating cross-border communications and a seamless operational atmosphere. This addendum incorporates FMU1's and FMU2's operational procedures and practices.

4. COORDINATION PROCEDURES

4.1. Communication Systems

The means of communication to be used for pre-tactical and tactical ATFM coordination shall be those listed in the main LOA as well as:

- Dedicated commercial telephone numbers for ATFM coordination (commercial telephone numbers are shown in the annex to this addendum);
- Web-based capabilities; and
- Any other means of communication available.

CADENA Benefits - Observed by IATA

- ATFM coordination has moved from single ANSP perspective to a regional perspective allowing improved coordination.
- CADENA initiative utilizes CDM, allowing the entire aviation community to participate and provide input to the strategic planning. This provides operators a forum to inform of deviation in the number of operations for planning purposes.
- Reduction in surprise to operators allowing for improved operational performance.
- Early detection of constraints and identification of real alternatives routes and trajectories.
- Awareness of special events including VIP movements and expected impact to the day's operations.



Regional Operations Plan

↓ FAA San Juan: 19/Nov/2022 14:20	
Anticipated Demand Information	HIGH
TMM Planned	NOT AFFECTING INTERNATIONAL FACILITIES.
Urgent Advisory	NONE
Weather	NO SIGNIFICANT WEATHER
Volcanic Ash	NONE
Constraints	NONE
Special Events	NONE
Equipment Outages	NONE
Other	NONE
↓ ECNA Cuba: 19/Nov/2022 13:53	
Anticipated Demand Information	HIGH
TMM Planned	-20 MIT TRAFFIC DESTINATION MMUN 1430/2200Z. -15 MIT TRAFFIC OVER URSUS DEPARTURES

Communication & Coordination

CADENA OIS Chat room

CADENA WhatsApp Chat (Sample: Hurricane Delta)

The screenshot shows a web browser window with a WhatsApp chat interface. The browser address bar shows <https://www.cadenaois.org/secure/anspmain.jsp>. The chat room is titled "Chat Room" and contains several messages from various airlines and agencies:

- American Airlines** (2019-11-12 13:36:59): Testing from Mick at AAL
- JCAA Deano Ledford Admin** (2019-11-12 13:41:46): Read you load and clear
- DELTA** (2019-11-12 14:06:11): Morning Mick and Deano!
- spirit** (2019-11-12 14:40:04): Morning all from sunny Florida @Spirit
- ECNA** (2019-11-12 15:02:47): GOOD MORNING DEANO, TESTING, FROM ECNA CUBA.
- CADENA HQ Joe Hof** (2019-11-12 15:10:05): Good morning Havana FMU!

At the bottom of the chat room, there is a text input field labeled "post new message" and a "Send" button. The background of the browser shows a sidebar menu with items like "Main", "Host Cal", "Weekly C", "Hurrican", "Master S", "Continge", "LOA", "Reroute", "Contact", "Lessons", and "Archives".

The screenshot shows a WhatsApp chat interface for a group named "CADENA OPS Group". The chat contains several messages:

- A system message: "For our SENEAM colleagues, please see the email I just sent you regarding Delta Airlines' PASA Route Request from KSLC to MMUN"
- A response: "Already answered" (9:29 a.m.)
- A message with flight information: "FF MMLLYNMD MMIDZRZX 071907 MMMXNYX (A5890/20 NOTAMR A5889/20 Q) MMFR/QFALT/IV/NBO/A/000/999/2102N08653W002 A) MMUN B) 2010071907 C) 2010081900 E) AEROPUERTO ABIERTO UNICAMENTE PARA VUELOS VFR)" (3:48 p.m.)
- A message: "So far, MMUN only VFR ops permitted, staff undergoing cleaning and check work to find any damage to airport aids and building, according to Patty." (3:50 p.m.)
- A message: "CUN VOR, SSR and ILS still U/S." (3:51 p.m.)
- A message: "That's correct working on the slides, we'll advise when ready, thank you" (3:54 p.m.)
- A message: "Thank you" (3:55 p.m.)
- A message: "Just tell us what can we do for help, know that you must be very busy." (3:56 p.m.)

CADENA and COVID-19

CADENA COVID-19 Limitations Update is sent to CADENA Participants (ANSPs and Airlines) daily



CADENA Update - Coronavirus Operational Limitations

Updated: August 09, 2022 (1100 UTC)

NOTE: Changes from the previous update are shown in **RED** font

FACILITY	IMPACT	NOTAM / AIC
PIARCO		
	USERS SHOULD CHECK ALL NOTAMS. ALL CDM PARTNERS MAY LOG ON TO HTTPS://CAA.GOV.TT/NOTAM/	
TDCF	A0972/22 –TDCF - FROM 2206011000 TO 2208292359 WITH IMMEDIATE EFFECT, ALL NON SCHEDULED ACFT SEEKING TO TRANSPORT PASSENGERS INTO DOMINICA ARE REQUIRED TO OBTAIN PRIOR APPROVAL FROM THE MINISTER OF NATIONAL SECURITY. SEND REQUEST TO CEO(A)DASPA.DM. PILOTS WHO DO NOT MEET THE NECESSARY REQUIREMENTS WILL NOT BE PERMITTED TO LAND, AS PRESCRIBED BY THE APPROPRIATE AUTHORITY.	A0972/22
TDCF	A0973/22 –TDCF - FROM 2206011000 TO 2208292359 (PART 1 OF 3) PROTOCOLS FOR PERSONS WHO ARE FULLY VACCINATED PRE-ARRIVAL: - THE REQUIREMENTS FOR PRE-ARRIVAL TESTING AND TESTING ON ARRIVAL FOR VACCINATED TRAVELLERS TO DOMINICA AT ALL PORTS OF ENTRY, TO INCLUDE SEAFARERS AND YACHTERS HAS BEEN REMOVED.CHILDREN UNDER 12 WILL ASSUME THE STATUS OF THEIR PARENTS OR GUARDIANS -TRAVELLERS TO DOMINICA WILL NO LONGER BE REQUIRED TO FILL AND SUBMIT THE PRE-TRAVEL FORM ONLINE. - VACCINATED TRAVELLERS MUST PRESENT THEIR PROOF OF VACCINATION TO AIRLINES OR OTHER TRAVEL CARRIER PRIOR TO BOARDING AND PRESENT UPON DISEMBARKATION IN DOMINICA. DISEMBARKATION: - VACCINATED TRAVELLERS MUST PRESENT THEIR PROOF OF VACCINATION UPON DISEMBARKATION IN DOMINICA. ONCE VACCINATION PROOF IS VALIDATED, TRAVELLERS WILL BE FREE TO ENJOY DOMINICA.TESTING ON ARRIVAL FOR SYMPTOMATIC TRAVELLERS WILL REMAIN IN EFFECT. PROTOCOLS FOR PERSONS WHO ARE NOT FULLY VACCINATED OR NOT VACCINATED PRE-ARRIVAL: TRAVELLERS WILL NO LONGER BE REQUIRED TO FILL AND SUBMIT THE PRE-TRAVEL FORM ONLINE.	A0973/22
TDPD	A0967/22 - TDPD – FROM 2206011000 TO 2208292359 - AD OPR HR CHANGED. PRIOR NOTICE IS REQUIRED FOR OPERATIONS OCCURRING BTN 0000 - 0959.	A0967/22
TDPD	A0969/22 – TDPD – FROM 2206011000 TO 2208292359 - WITH IMMEDIATE EFFECT, ALL NON SCHEDULED ACFT SEEKING TO TRANSPORT PASSENGERS INTO DOMINICA ARE REQUIRED TO OBTAIN PRIOR	A0969/22

Regional Operations Plan

Information Regional TMM⁰ Active Reroutes⁰ Delays⁰ **Advisories³** Español

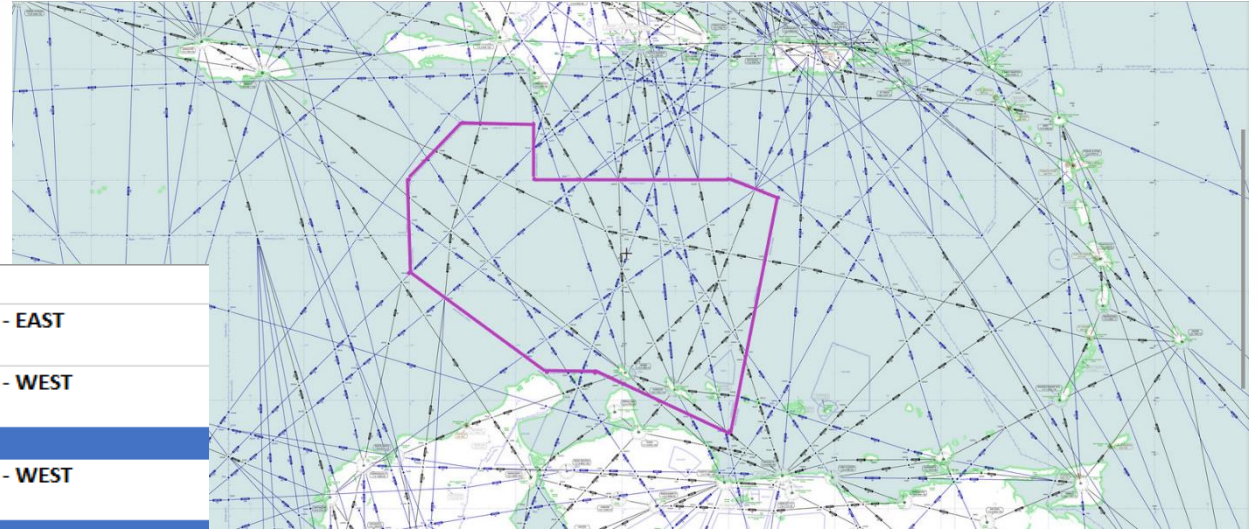
Advisories

Regional Advisories

ID	ANSP / Airline	Type	Start Date	End Date	Summary	Reason	
157	AMERICAN	Urgent	15/MAR/2020 16:00	03/JUN/2020 00:00	FLIGHT CANCELLATIONS	Schedule Suspended to SAM region due Covid-19	Details
190	ECNA	FYI	13/APR/2020 14:47	16/MAY/2020 04:00	(A1292/20 NOTAMR A1164/20	COVID19 LIMITATIONS	Details
191	ECNA	FYI	13/APR/2020 14:48	16/MAY/2020 04:00	A1293/20 NOTAMR A1165/20	COVID 19 LIMITATIONS	Details
200	CADENAHQ	Urgent	27/APR/2020 15:00	28/APR/2020 23:00	CADENA COVID-19 Limitations Update	Changes are shown in red	Details
197	CADENAHQ	FYI	27/APR/2020 19:00	27/MAY/2020 23:00	ICAO NACC COVID-19 Website - Resource	COVID-19 information for situational awareness in the NAM/CAR Regions	Details
192	ECNA	FYI	13/APR/2020 14:48	16/MAY/2020 04:00	A1294/20 NOTAMR A1166/20	COVID 19 LIMITATIONS	Details
193	ECNA	FYI	25/MAR/2020 15:52	30/APR/2020 23:59	A1083/20:A1084/20:A1085/20:A1086/20:A1087/20 NOTAMNS	AD SERVICES	Details
199	DCANSP	Urgent	27/APR/2020 00:00	10/MAY/2020 03:59	Airport HATO Closure	COVID-19 restrictions	Details
202	EANA	FYI	27/APR/2020 16:19	11/MAY/2020 03:00	Restrictions (COVID-19)	UPDATED NOTAMs (A2312/2020 - A2313/2020)	Details

A CANSO Project.

CADENA OIS Planned Airways System Alternative (PASA) Routes



ORIG	DEST	NORTHBOUND	
SBGR	KMIA	... UKBEV UZ26 BSI UZ26 BEL UA555 TRAPP UL454 ILURI A555 COY RTE4 BQN A636 KATOK UA636 PTA L463 JUELE ...	AVOID TNCF - EAST
SBGR	KMIA	... UKBEV UL201 ASTOB UL201 ISVOM UM656 BUVKA UM656 BNS UR640 MLY UL417 LENAX UL795 BEXEN UM347 ZEUSS ...	AVOID TNCF - WEST
SBGR	KATL	... UKBEV UL201 ASTOB UM417 MOTVI UM549 MTU UM782 LONAX UL417 LENAX UL795 BEXEN UM347 ZEUSS Y217 OCTAL Q77 ETORE SHRKS LAIRI ...	AVOID TNCF - WEST
SBGR	KJFK	... UKBEV UL201 ASTOB ABIDE UM782 MTU UQ108 OTAMO UA301 MLY UL417 BORDO B760 ZBV RAMJT AR18 DIW ...	AVOID TNCF - WEST
SBGR	KJFK	... UKBEV UZ26 BSI UL452 ACARI UA312 LEPOD UG449 ANADA G449 DDP G431 ELMUC LAMER L453 PAEPR HOB OH SILLY ...	AVOID TNCF - EAST
SBGR	KJFK	... UKBEV UL201 ASTOB ABIDE UM782 MTU UQ108 OTAMO UA301 MLY UL417 BORDO B760 ZBV RAMJT AR18 DIW ...	AVOID TNCF - WEST
SBGR	KIAH	... SCB UM415 EVNES ABIDE UM782 TAKUX DCT SUVUM UM782 KEHLI ...	AVOID TNCF - WEST
SKBO	KMIA	... KOMBO UW1 PIE UW34 LFA UW8 BRM UW14 BNA DAREK UA561 GND UA324 FOF UA312 ANU G633 COY RTE4 BQN A636 KATOK UA636 ALBBE ...	AVOID TNCF - EAST
SKBO	KMIA	... GIKPU UQ120 PADUD DAGAN UL542 OTAMO UA301 MLY UL417 NEFTU UR625 ENAMO ...	AVOID TNCF - WEST
SKBO	KMIA	... PIE UW34 LFA UW8 BRM PBL MIQ UDIMA MEGIR POS GND UA324 FOF UA312 ANU G633 COY RTE4 BQN A636 KATOK UA636 ALBBE ...	AVOID TNCF - SOUTH AND EAST -

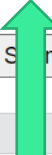
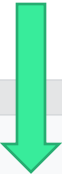
CADENA OIS Planned Airways System Alternative (PASA) Routes

CADENA OIS ECNA Cuba Español Procedures Chat Help Settings Logout

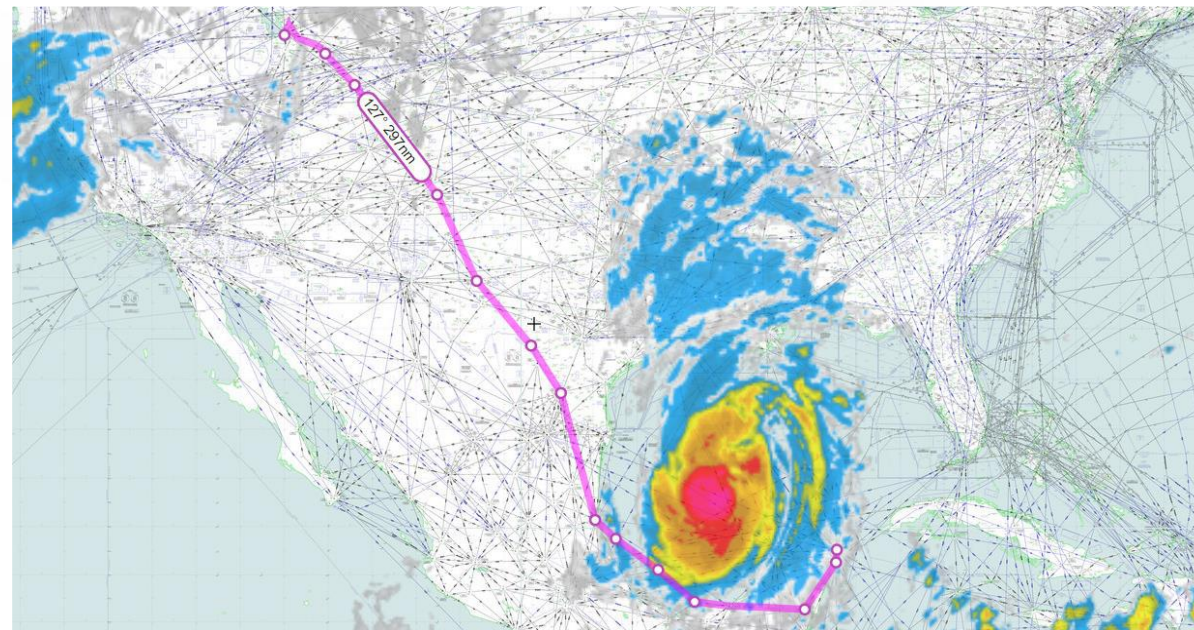
PASA Route Requests

To ANSP(s): Requestor:

Request:



PASA ROUTE REQUEST OCT 7, 2020



PASA ROUTE REQUEST NOV 16, 2020

HURRICANE NORA – 1600 UTC – AUGUST 29, 2021



← → ↻ 🏠 🔒 https://www.cadenaois.org/secure/hurricanewebconf.jsp

CADENA OIS **CAN SO** **CADENA** **CADENA HQ** Español [Chat](#) [? Help](#) [Settings](#) [Logout](#)

Hurricane / Crisis / Contingency / Huracán / Crisis / Contingencia

Drop files here to upload (Max 25Mb)

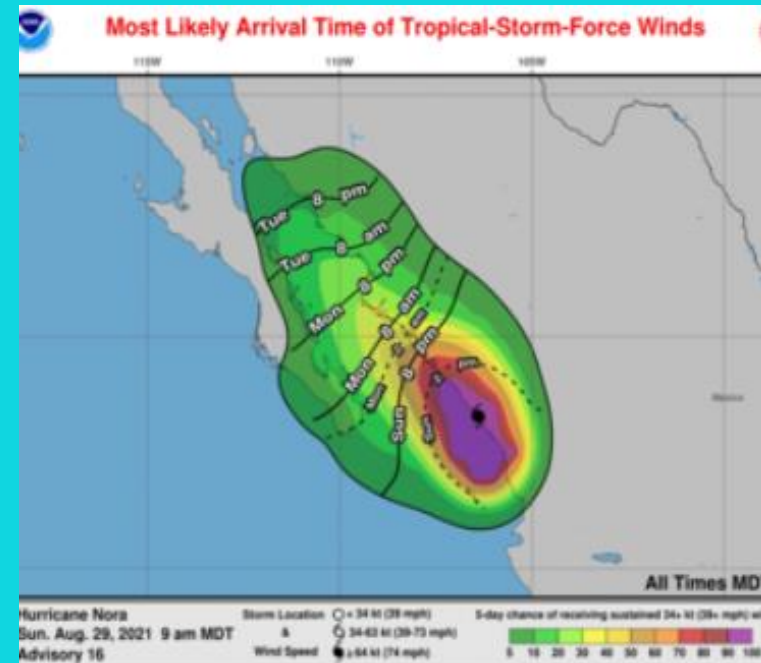
ANSP	Uploaded By	File Name	Upload Time
SENEAM	Ale	HURRICANE NORA 29 AUG 2021_2.pptx	2021/08/29 16:11

A CAN SO Project.

HURRICANE NORA – 1600 UTC – AUGUST 29, 2021



PROJECTED PATH IN YOUR AIRSPACE





PROJECTED IMPACT

DAY 2

STAFFING ISSUES: NONE
EQUIPMENT OUTAGES: NONE

AIRPORT CLOSING: MMZO, MMMZ

MMZO A4797/21 - AP CLSD. 29 AUG 12:46 2021 UNTIL 29
AUG 20:00 2021.

MMMZ A4799/21 - AP CLSD. 29 AUG 15:37 2021 UNTIL 29
AUG 17:37 2021.

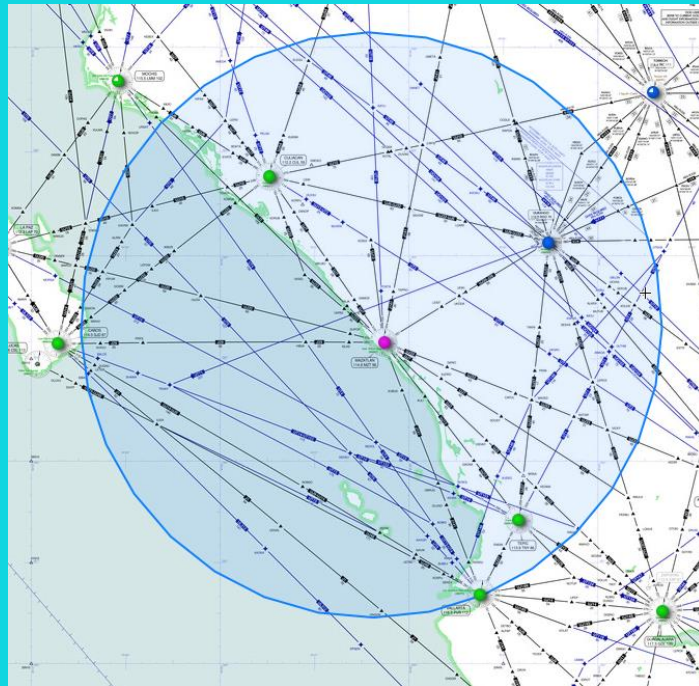
DAY 3-4

STAFFING ISSUES: NONE
EQUIPMENT OUTAGES: NONE



AFFECTED ROUTES

ROUTE CLOSURES



PLANNED TRAFFIC MANAGEMENT MEASURES

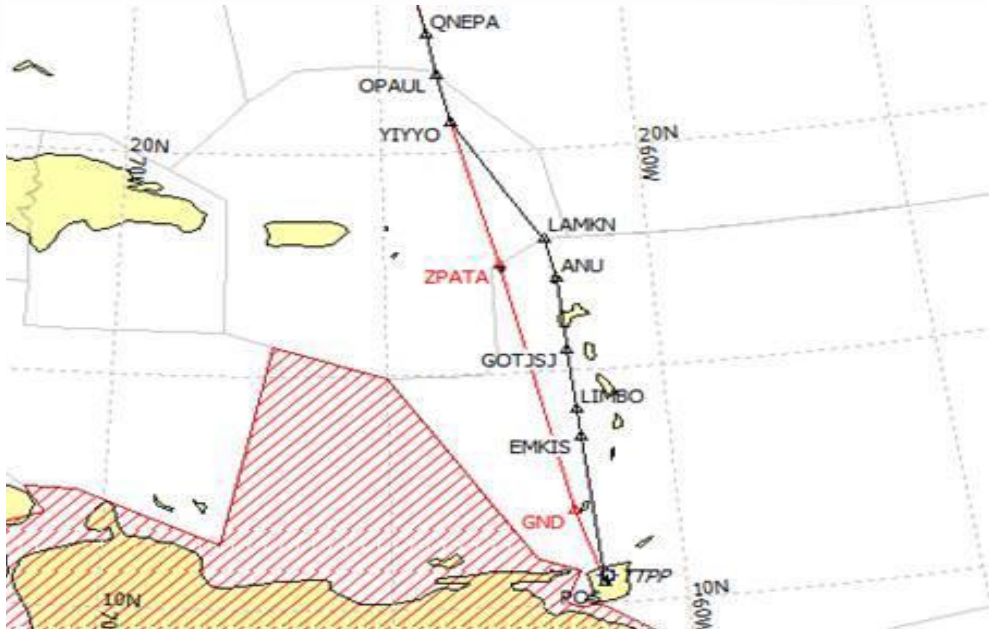
- No TMM's PLANNED FOR NOW



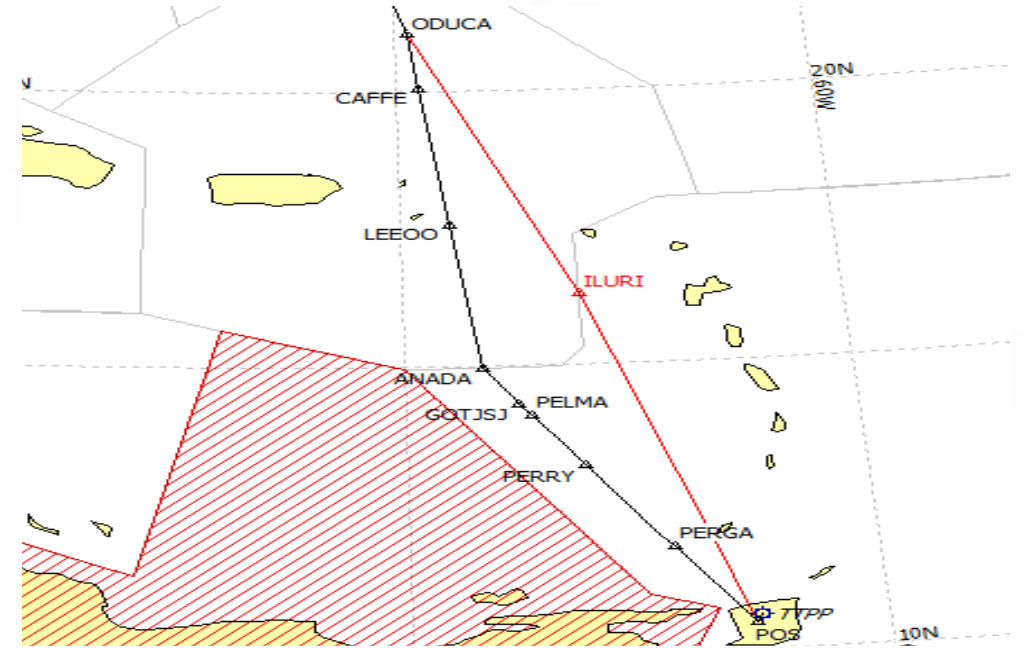
OTHER ISSUES

- NORA IS FORECAST TO BE AT OR NEAR HURRICANE STRENGTH WHILE IT MOVES NEAR THE COASTS OF NAYARIT AND SINALOA.
- HURRICANE WARNINGS FOR PORTIONS OF NAYARIT AND SINALOA.
- HEAVY RAIN IS EXPECTED THE STATES OF COLIMA NORTHWARD TO SOUTHERN SONORA.
- LIFE-THREATENING FLASH FLOODING AND MUDSLIDES ARE EXPECTED.
- NORA MOVE NORTH-NORTHWESTWARD OVER THE GULF OF CALIFORNIA TUESDAY AND WEDNESDAY BRINGING WIND TO PORTIONS OF BAJA CALIFORNIA SUR, NORTHERN SINALOA AND SONORA.

CADENA End to End Routes



GND DCT ZPATA DCT YIYYO –
14NM reduction/2 minutes of savings
B777-200ER – 400LBS
B737-800 – 200LBS



GND DCT ILURI DCT ODUCA –
17NM reduction/2 minutes of savings
B777-200ER -500LBS savings
B737-800 – 200LBS savings

CADENA COVID-19 Vaccine Priority Flight Coordination



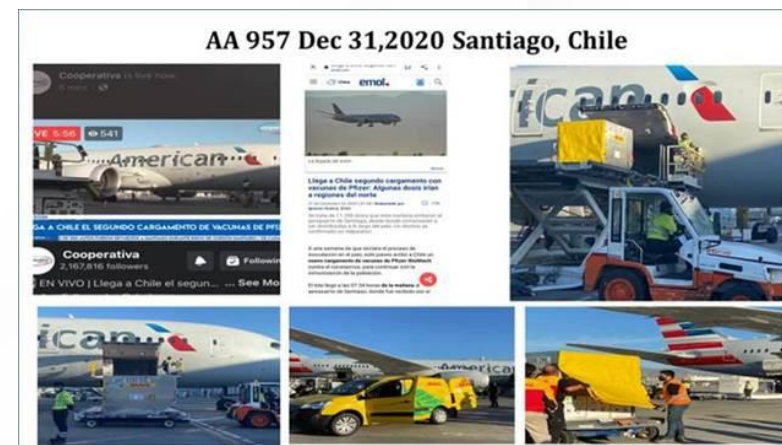
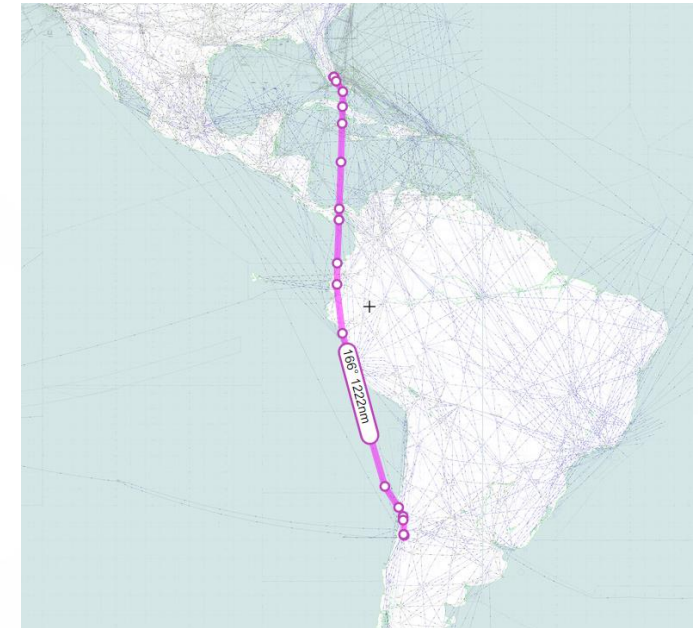
American Airlines activated the CADENA PASA route mechanism requesting a Vaccine Priority flight from Miami to Santiago de Chile. In the hours before the flight's departure, CANSO, the FAA Miami Center, ECNA, Jamaica, Panama, Colombia, Ecuador, Peru, and Chile received information and acknowledged the high priority mission.

The ANSPs coordinated an optimum route through their airspace and notified air traffic controllers and supervisors.

During the flight, the controllers and supervisors made sure the flight received priority handling.

The shipment arrived in SCL on time and successfully delivered to the customer at planeside. With the president of Chile at the airport watching this transfer, the movement had live press coverage.

PASA ROUTE REQUEST DEC 31, 2020



ATFM Daily Plan Link Files



Browser address bar: https://www.cadenois.org/vpublic_adpfiles.jsp

Page Header: **CADENAOIS** | **ADP Files** | Español | ANSP / Airline Login

Left Navigation Menu:

- ATFM Daily Plan
- Information
 - Master Slide Deck
 - ADP Link Files
 - Reroute Repository
 - Airport Capacity
 - Contingency Form
 - Sector Capacity
 - Participant List
 - Acronyms
 - LOA List
- Regional TMM
- Active Reroutes
- Delays
- Advisories
- ANSPs
- Airlines

ANSP	Uploaded By	File Name	Upload Time
CADENAHQ	Joe Hof	CADENA Update - Corona Virus Limitations by ANSP - 08 29 2021 update - 1300 UTC - Full version.docx	29/Aug/2021 11:31
UAEAC	Eduardo Gonzalez	PDA FCMU COL 29082021.pdf	29/Aug/2021 11:18
IDAC	IDAC ATFMCDM	NotamsInForce.pdf	27/Aug/2021 12:25
JCAA	Yannick Francis	AIRAC AIP AMDT 02_21 EFF 07 OCT 21 (1).pdf	26/Aug/2021 12:40
IDAC	IDAC ATFMCDM	NotamsInForce.pdf	26/Aug/2021 10:16
JCAA	Yannick Francis	AIC 22_21 - Extension of Travel Ban.pdf	12/Aug/2021 14:05
EANA	FMU EZE	AIC A26 - SANITARY EMERGENGY - EXTENSION.pdf	12/Aug/2021 11:08
JCAA	Yannick Francis	AIP SUPP 03_21 RE SUSPENSION OF SDVOR DME.pdf	27/Jun/2021 12:42
JCAA	Yannick Francis	AIC A18_2021-Travel Ban Extended - Covid 19.pdf	03/Jun/2021 12:43
JCAA	Yannick Francis	AIRAC AIP AMDT 01_21 EFF 20 MAY 21.pdf	20/May/2021 12:37
JCAA	Yannick Francis	AIC 12_21 Pratt & Whitney Engines not permitted.pdf	20/May/2021 12:32
JCAA	Yannick Francis	AIC A16_2021 - AMENDED COVID 19 TRAVEL PROTOCOLS.pdf	13/May/2021 12:50
JCAA	Yannick Francis	AIC A14_2021 - AMENDED COVID 19 TRAVEL PROTOCOLS.pdf	18/Apr/2021 11:12
JCAA	Yannick Francis	AIC A13_21 EXPANDED TRAVEL BAN -UK & SPECIFIED SOUTH AMERICAN COUNTRIES.pdf	15/Apr/2021 12:39
JCAA	Yannick Francis	AIC A12_2021 - AMENDED COVID 19 TRAVEL PROTOCOLS.pdf	08/Apr/2021 13:10

A CAN SO Project.

Advisories: Urgent / FYI and email push notifications

- CADENAOIS
- ATFM Daily Plan
- Information
- Regional TMM
- Active Reroutes
- Delays
- Advisories
- ANSPs
- Airlines

Advisories

Español

ANSP / Airline Login

Regional Advisories

ID	ANSP / Airline	Type	Start Date	End Date	Summary	Reason	
197	CADENAHQ	FYI	31/OCT/2020 12:00	31/DEC/2021 00:00	ICAO NACC COVID-19 Website - Resource	COVID-19 information for situational awareness in the NAM/CAR Regions	Details
400	CADENAHQ	FYI	28/JUL/2021 12:00	31/JUL/2021 00:00	CADENA COVID-19 Limitations	COVID-19 Restrictions	Details
396	ECNA	FYI	08/JUN/2021 17:51	30/SEP/2021 23:59	A1787/21 NOTAMN	OVERFLY PERMIT REQUIRED	Details
420	EANA	Urgent	28/JUL/2021 18:00	29/JUL/2021 00:00	RESISTENCIA ACC OUTAGE	NOTAM A3992/21	Details
423	EANA	Urgent	28/JUL/2021 18:00	29/JUL/2021 00:00	RESISTENCIA ACC cellphone number and email address	AMHS OUTAGE	Details
421	EANA	Urgent	28/JUL/2021 18:00	29/JUL/2021 00:00	RESISTENCIA ACC OUTAGE	NOTAM A3991/21	Details

EANA Argentina has just submitted a new Urgent Advisory

CADENA [system@cadenaois.org]

To: system@cadenaois.org



Wednesday, July 28, 2021 1:26 PM

Greetings from CADENA:

EANA Argentina has just submitted an Urgent Advisory as shown below.

ANSP/Airline Name: **EANA Argentina**

Type: **Urgent Advisory**

Start Date: **28/Jul/2021 18:00**

End Date: **29/Jul/2021 00:00**

Summary: **RESISTENCIA ACC OUTAGE**

Reason: **NOTAM A3992/21**

Details: **(NOTAM A3992/21) RESISTENCIA ACC SER SURVEILLANCE RADAR NOT PROVIDED IN SECTOR. 28 JUL 13:59 2021 UNTIL 28 JUL 23:59 2021 ESTIMATED. CREATED: 28 JUL 14:03 2021**

CADENA OIS Chat room



CADENA OIS CADENA HQ Español Chat Help Settings Logout

Global Broadcast ⓘ

2021-07-21 17:21:31 UTC
CADENA HQ Joe Hof

2021-07-21 17:22:34 UTC
UNITED gen schnee

Good afternoon to all ! SENEAM's AFTN and internet are out of service. We discovered that SENEAM is receiving your Chat message via email push notification. They cannot respond to your Chat message, but they are receiving the flight plans. Go for it ! Joe

Thank you Joe. We have the chat room open in case any request come

new global broadcast message

ANSP / Airline Communication (Beta) ⓘ

- Aerolíneas Argentina
- AeroMexico
- Air Canada
- American Airlines

Conversations with Volaris

Good afternoon, Volaris Dispatch. Test message

2021-07-21 17:13:09 UTC

CADENA OPS Group

CADENA WhatsApp Chat

071907 MMMXYNYX
(A5890/20 NOTAMR A5889/20
Q) MMFR/QFALT/IV/NBO/A/000/999/2102N08653W002
A) MMUN
B) 2010071907
C) 2010081900
E) AEROPUERTO ABIERTO UNICAMENTE PARA VUELOS VFR) 3:48 p. m.

So far, MMUN only VFR ops permitted, staff undergoing cleaning and check work to find any damage to airport aids and building, according to Patty. 3:50 p. m.

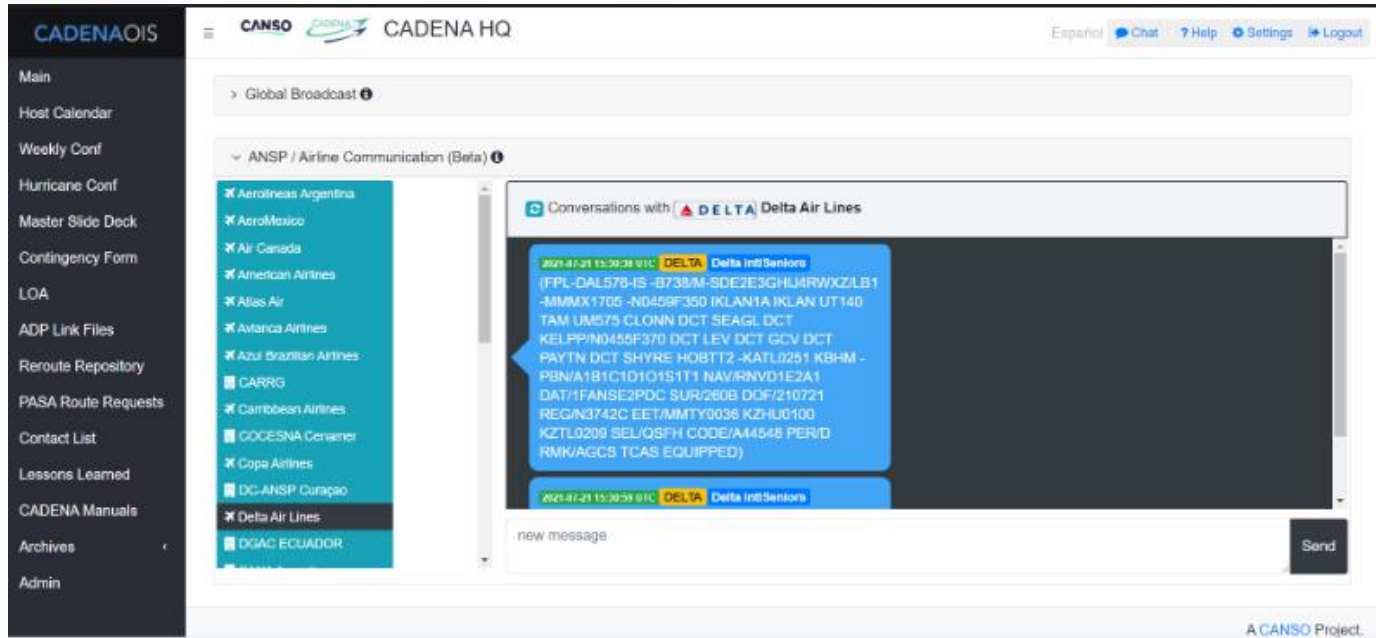
CUN VOR, SSR and ILS still U/S. 3:51 p. m.

That's correct working on the slides, we'll advise when ready, thank you 3:54 p. m.

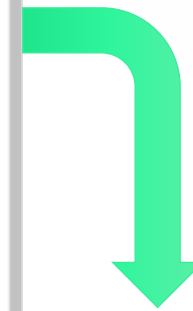
Thank you 3:55 p. m.

Just tell us what can we do for help, know that you must be very busy. 3:56 p. m.

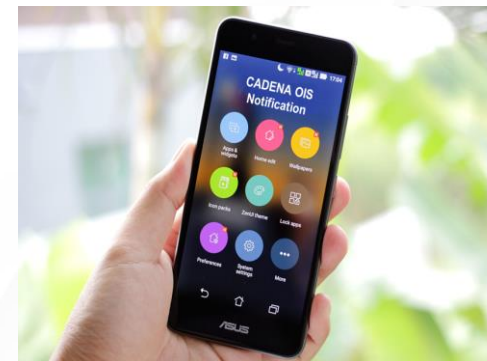
An innovative use of the CADENA OIS



CADENA OIS
Chat between
an airline and
SENEAM



Manual Entry



Avoided unnecessary flight departure delay. Potentially saved missed connections and associated costs for airlines.

Network Failure Situation

July 21-22, 2021: The Caribbean region experienced an AFTN outage and an Internet outage. Airlines were unable to file FPLs with SENEAM.

- Solution: (A) Use phone (traditional) (B) Email (C) Innovative use of the CADENA OIS Chat capability.

DATE	NETWORK FAILURE	TIME UTC
JULY 21	SENEAM IMPLEMENTS 10 LINES, EMAIL, FRECUENCY AND CADENA OIS CHAT-SENEAMs software TO IMPROVE FLIGHT PLAN COORDINATION	14:00
JULY 21	USE A DIFERENT WAY TO CONNECT (SALT LAKE/ATLANTA)SERVER-COCESNA-MERIDA ACC	20:00
JULY 22	STILL IN USE SEVERAL LINES , FRECUENCY, EMAIL AND CADENA OIS CHAT-SENEAMs software	14:00

TEL: (52) 55 5716 6668, 55 5716 6630

ACC	TELEFONO	TELEFONO	TELEFONO	CORREO	Frecuencia
MMEX	555716 6657	5557166 6658	555716 3699	atfmmexico@gmail.com	118.7
MMID	99 9946 3151	99 99460266			
MMTY	81 8369 0883	81 1987 3219			
MMZT	669982 2488				

PASA E2E Route Opt Tests Completed

May 2021: KATL ↔ SPJC

DAL150	ETE	Burn(lbs)	Distance
Baseline	6:18	83900	2858
w- DCTs	6:16	83300	2855
Diff	0:02	600	3
Cost saving/yr		\$92,281/yr	
CO2 saving/yr		222,824kg/yr	
DAL151	ETE	Burn(lbs)	Distance
Baseline	6:35	87017	2916
w- DCTs	6:31	84445	2882
Diff	0:04	2572	34
Cost saving/yr		\$276,669/yr	
CO2 saving/yr		955,172kg/yr	

June 2021: KATL ↔ SBGR

DAL104	ETE	Burn(lbs)	Distance
Baseline	09:23	124,306	4,243
w- DCTs	09:20	123,707	4,223
Difference	00:03	599	20
Cost saving/yr		\$174,285/yr	
CO2 saving/yr		311,434kg/yr	
DAL105	ETE	Burn(lbs)	Distance
Baseline	09:05	121,446	4,197
w- DCTs	09:03	120,940	4,164
Difference	00:03	506	33
Cost saving/yr		\$127,505/yr	
CO2 saving/yr		263,081kg/yr	

The 3rd PASA E2E Route Opt Pilot Test Savings

July 2021: KMIA↔ TTPP

BWA483	ETE	Burn(lbs)	Distance
Baseline	3:31	21210	1478
w- DCTs	3:26	* N/A	1479
Diff	0:05	N/A	-1
Cost saving/yr	\$182,000/yr		
CO2 saving/yr	Unable to calculate		
	* Ground Stop at KMIA		
BWA484	ETE	Burn(lbs)	Distance
Baseline	3:28	21252	1498
w- DCTs	3:25	20860	1496
Diff	0:03	392	2
Cost saving/yr	\$151,580/yr		
CO2 saving/yr	204,522kg/yr		

BWA483 experienced Ground Stop at KMIA and was unable to obtain the fuel saving data by flying a desired route with Direct Routes.

However, the test result was satisfactory for Caribbean Airline and decided to move on to the 90-Day trial.

PASA E2E Route Optimization 90-Day Trials



SECRETARY GENERAL, JUAN CARLOS SALAZAR



Our work is recognized by ICAO

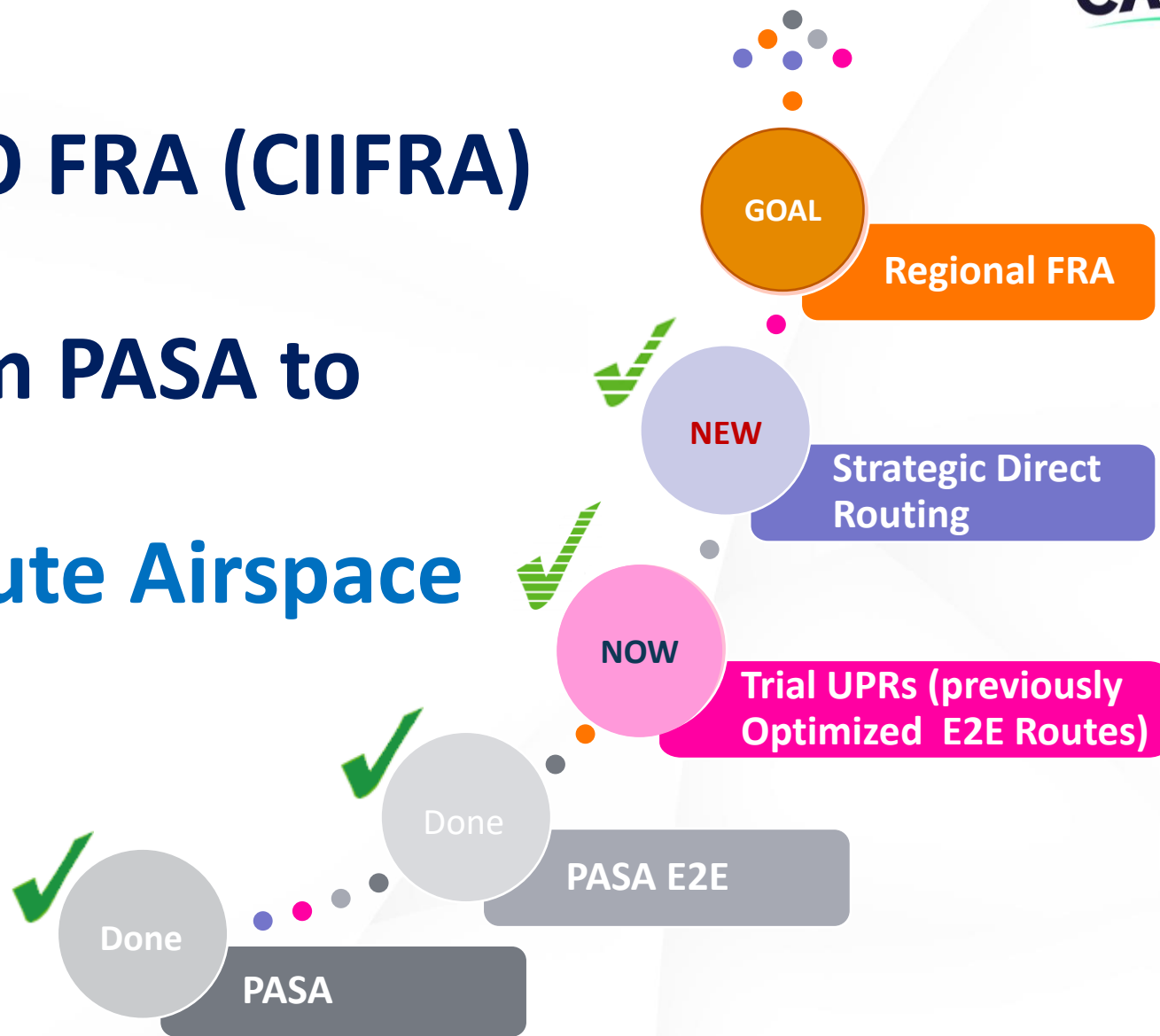
Juan Carlos Salazar, Secretary General of ICAO, thanked CANSO for its global ATFM role and mentioned CADENA by name during his speech at the CANSO Global Leadership Summit 2022 on April 7, 2022.

“CANSO’s global ATFM role is also demonstrating through the training and support it provides to the states and by sharing the experiences and best practices it gained from the implementation of the CADENA, (CANSO) ATFM Data Exchange Network for the Americas.”

CANSO-IATA-ICAO FRA (CIIFRA)

Step-by-Step from PASA to

Regional Free Route Airspace



CANSO – IATA – ICAO Free Route Airspace System (CIFRAS) project

CANSO and IATA agreed on unifying the CANSO CADENA Optimised End to End Routes initiative with IATA's Direct routing implementation for the LAM-CAR region project. The objective of both projects concentrate on the optimisation of routes. By merging the projects, the duplication of efforts will be eliminated, and we will achieve a common goal with more significant results.

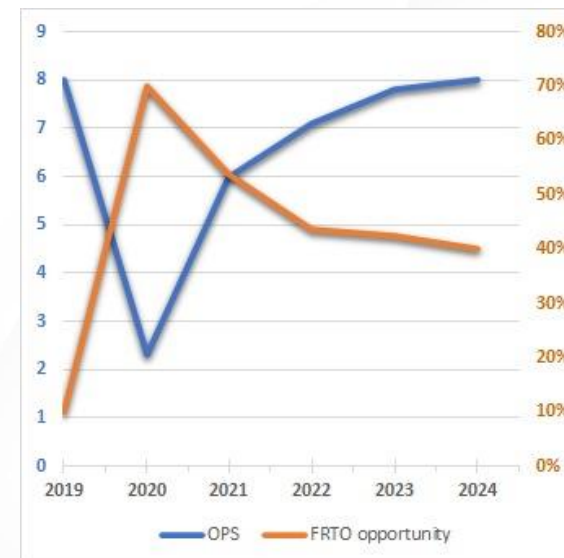
CIFRAS will follow the PASA Optimised End to End route process and include IATA's direct routing data into the FIR capability matrix chart. The Atlanta – Lima – Atlanta route will be the first of three pilot routes planned for the project.

The graph above, indicates the accumulative savings between 2021 to 2024 of only 40 of 1270 city pairs,



Potential benefits 2021-2024

- +68,500,000 LB in fuel saved
- +2'000,000 NM saved
- +4300 Flight hours saved
- +98'000,000 CO₂ Kg saved



CIIFRA Trial UPRs Benefit Data

As of: November 11, 2022

	Baseline Flight Plan Route vs Trial UPRs Reported Data Projected to 1-Year Savings
Savings:	
Flight min	17,291
Fuel (lb)	3,262,155
CO2 (kg)	5,488,764
Cost (\$ USD)	2,807,869

CIIFRA Trial UPRs to reality

Aeronautical Information Circular (AIC) publication

Mexico UPRs in Mexico FIR

TEL: 57-86-55-19 AFS: MMMXYNYX Correo-e: ais_pcr@sct.gob.mx luis.munoz@sct.gob.mx	MÉXICO SECRETARÍA DE COMUNICACIONES Y TRANSPORTES AGENCIA FEDERAL DE AVIACIÓN CIVIL SERVICIOS A LA NAVEGACIÓN EN EL ESPACIO AEREO MEXICANO Avenida 602 Núm. 161 Zona Federal del Aeropuerto Internacional Benito Juárez Alcaldía Venustiano Carranza C. P. 15620 Ciudad de México	AIC SERIE A 12/22 15-DIC-2022
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- 7.4. By working with the Civil Aviation Authorities (CAA), Air Navigation Service Providers (ANSPs) and Airlines, NACC and SAM ICAO offices, and with the support of CAN SO (CADENA) and IATA, it has been possible to facilitate the development of optimized city-pair End-to-End Routes that can be used by dispatchers for filing flight plans so that fuel savings and CO2 reductions can be achieved.
- 7.5. Section 4 below contains routes that may be used by aircraft operators in the preparation of optimized IFR Flight Plans (FPL) between origin and destination airports.
- 7.6. As additional User Preferred Routes opportunities are identified and developed by ICAO NACC Airspace Optimization Task Force, the ICAO SAM Airspace Study and Implementation Group (GESEA), CAN SO (CADENA), and IATA, and approved for use by the CAAs and ANSPs, this AIC will be updated and published in accordance with the applicable Aeronautical Information Regulation and Control (AIRAC) dates.

8. Aircraft Capabilities

- 8.1. In order to file and fly the optimized routes, the following minimum aircraft capabilities are required:

		Flight Plan Entries	
Communication Requirements	PBN Requirements	PBN in field 18	
		PBN/	
Voice comm – VHF, CPDLC as required, to maintain contact over the entire route to be flown	RNAV-5	B1/B2	

9. User Preferred Routes in the Mexico FIR

- 9.1. As pertains to the portion of the routes in the México FIR, the User Preferred Routes below have been coordinated, reviewed, and approved by Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM) and the Agencia Federal de Aviación Civil (AFAC) for use between any city pair.
 - 9.1.1. DEVOE MTY OTEKA KEDMA MMPR
 - 9.1.2. XUDED UT148 OTEKA MTY DEVOE

Peru UPRs in LIMA FIR LIM - MIA

AIP PERÚ
CORPAC S.A. AIC - 1
08 SEP 2022

(51)2301409 / 2301412 TELÉFONO: (51)14141411 / 2301408 DIRECCIÓN TELEGRÁFICA AFTN: SPJCYGYJ e-mail: aisperu@corpac.gob.pe	PERÚ Corporación Peruana de Aeropuertos y Aviación Comercial S.A. ÁREA DE INFORMACIÓN AERONÁUTICA Apartado 680 LIMA 100 - PERÚ	AIC AIC 10/22 08 SEP 2022
LIMA SPIM		

RUTAS PREFERIDAS POR LOS USUARIOS EN LA FIR LIMA

USER PREFERRED ROUTES IN LIMA FIR

1. Objetivo

1.1. El propósito de esta Circular de Información Aeronáutica (AIC) es difundir a todo el personal involucrado en las operaciones aéreas una serie de rutas preferidas por el usuario que pueden ser presentadas en su plan de vuelo y utilizadas por el Control de Tránsito Aéreo en la autorización.

1.2. Por definición, una ruta preferida por el usuario (UPR) es una trayectoria de vuelo única que los operadores de aeronaves pueden planificar y volar en lugar de seguir las rutas de aviación convencionales y predeterminadas publicadas por los proveedores de servicios de navegación aérea.

1.3. El personal responsable de la preparación y presentación de los planes de vuelo (Operadores de aeronaves o Pilotos) es responsable del cumplimiento de las disposiciones de esta AIC.

2. Introducción

2.1. El Plan Global de Navegación Aérea de la OACI (GANP) y la metodología de mejoras por bloques del Sistema de Aviación (ASBU) proporcionan un enfoque flexible y global para que todas las partes interesadas de la aviación avancen en sus habilidades de navegación aérea en función de sus necesidades operativas específicas. ASBU FRTO Bloque 0 Elemento 1 (B0/1, Ruta directa (DCT) establece que las DCT se establecen a nivel nacional y regional y pueden estar disponibles para la planificación de vuelos dentro de las condiciones de uso publicadas. Las DCT deben considerarse una primera reiteración del concepto de operación FRA que permite a los usuarios del espacio aéreo optimizar la planificación del vuelo y del combustible.

1. Purpose

1.1. The purpose of this Aeronautical Information Circular (AIC) is to disseminate to all personnel involved in air operations a series of user preferred routes that may be filed in their flight plan and used by Air Traffic Control in the clearance.

1.2. By definition, a User Preferred Route (UPR) is a unique flight path that aircraft operators can flight plan and fly instead of following the conventional, predetermined aviation routes published by air navigation service providers.

1.3. The personnel responsible for the preparation and presentation of flight plans (Aircraft Operators or Pilots) are responsible for complying with the provisions of this AIC.

2. Introduction

2.1. The ICAO Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBU) methodology provide a flexible, global approach for all aviation stakeholders to advance their Air Navigation capacities based on their specific operational requirements. ASBU FRTO Block 0 Element 1 (B0/1, Direct routing (DCT) states that DCTs are established at national and regional levels and can be made available for flight planning within the published conditions of use. DCTs should be considered an early iteration of the FRA concept of operation that allow airspace users to optimize flight and fuel planning.

Space operations CDM

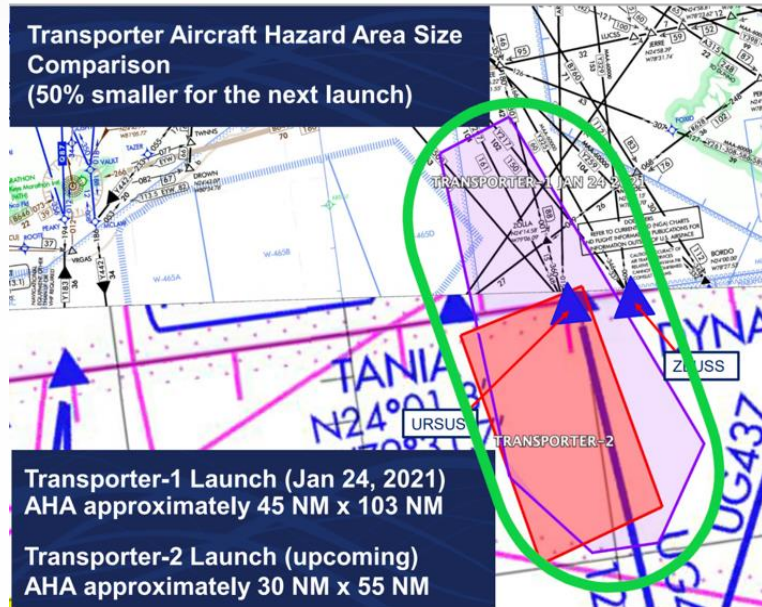


Figure A. Transporter Launch Aircraft Hazard Area (AHA)

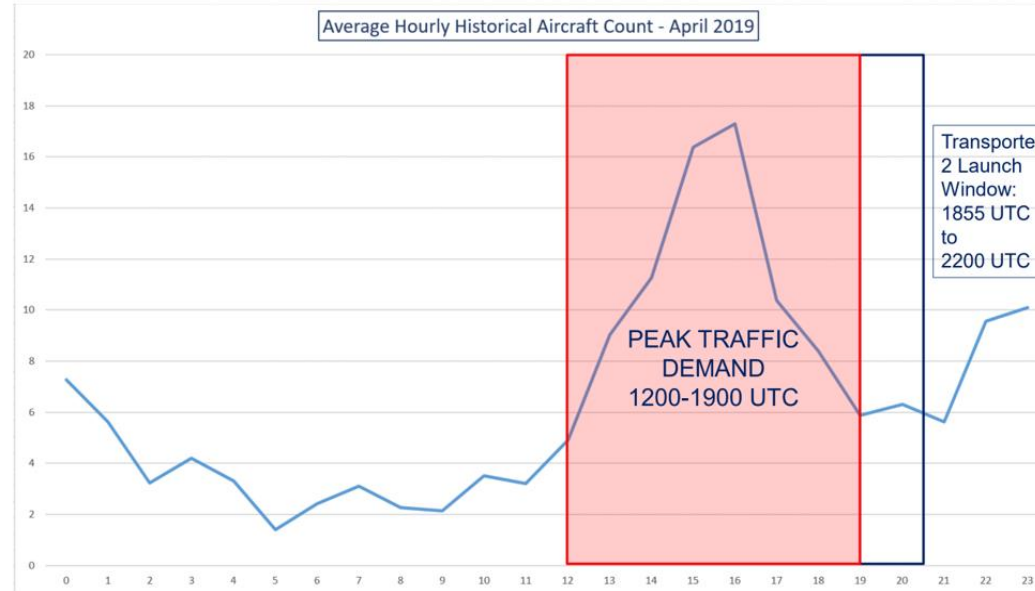


Figure B. Historical Peak Traffic 2019

The Space operations Collaboration Decision Making (CDM) teleconferences reduced the SpaceX polar launch aircraft hazard area (AHA) and active times for Transporter 2. The improvements with relation Transporter 1 mission include a new hazard area 50% smaller, allowing critical airways usage to the east of the hazard area. The active times were also rescheduled to after peak traffic hours of 15-1900 UTC, mitigating impacts to traffic flow.

OIS BENEFITS – Operational Examples

Qualitative Benefits - understood intuitively

- **More information sharing, better decisions**
- **Better coordination, better decisions**
- **Better decisions, more benefits**



Quantitative (monetary - \$USD) Benefits

- UAL - Hurricane Maria Recovery Operation Case Study – \$1.0M-\$5.4M
- JBU - Return Home from Hurricane Maria Case Study – \$182.0K
- AAL - Jamaica Loss of Radar Surveillance Case Study – \$225.0K
- CPA - Jamaica Loss of Radar Surveillance Case Study – \$175.5K
- UAL - Colombia Loss of Satellite Comm Case Study – \$192.0K
- DAL - PASA optimization pilot test (ATL-LIM) - \$368.9K/yr, 1,118,000kg of CO2
- VOI – Filed FPLs via CADENA OIS while AFTN outage - \$690.8K

Numbers in this briefing should not be interpreted literally; **however, the savings achieved by stakeholders are real !.**

ANSP Information Shared on the Web Conference

- Staffing situation
- Equipment outages
- Terminal weather conditions
- Terminal constraints
- Route closures
- Space launch / recovery information
- Anticipated traffic management measures
- Anticipated air traffic demand

Web Conference Attendance

- Required
 - All participating CADENA Flow Management Units (FMUs)
 - Any Traffic Management Area (TMA) or control tower that may have a significant constraint will be requested to attend
- Optional
 - Airlines and other aircraft operators, airport authorities, military organisations, and other aviation stakeholders

Web Conference HOST and BACKUP

- HOST
 - Rotates weekly among the CADENA Flow Management Units that volunteer
 - Currently: TTCAA, IDAC, OFNAC, JCAA, COCESNA, EANA
 - The HOST Calendar is maintained on the CADENA OIS
- BACKUP
 - Each week, in accordance with the HOST calendar, one Flow Management Unit is designated as BACKUP in case the HOST has technical or other difficulties

- IDAC and EANA Flow Management Units
 - Every 90 days, the administrative duties rotate between IDAC FMU and EANA FMU to distribute the:
 - Weekly reminder, and
 - Weekly HOST slide deck
- CADENA Contact List
 - IDAC FMU and EANA FMU also maintain the CADENA Operational Email Contact List

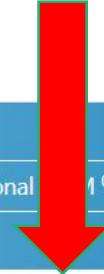
Stakeholder Responsibilities

- Please do
 - Listen carefully
 - Participate tactfully
 - Mute microphone when not speaking
 - Ask questions when appropriate
 - Contribute pertinent operational information
 - Brief your organisation on the OP
 - Monitor effectiveness of traffic management measures
- Please don't
 - Discuss single flight concerns

The CADENA Operational Plan

- Establishes the process, structure, and responsibilities for developing, managing, and implementing a pre-tactical plan for air traffic operations in the participating CADENA FIRs
- The Regional Operations Plan (ROP) is a collaboratively developed plan derived by the CADENA team and associated stakeholders
- The ROP is contained on the CADENA Operational Information System (OIS)

ANSPs ATFM DAILY PLAN



Regional Operations Plan

↓ TTCAA Trinidad & Tobago: 21/Nov/2022 13:00

Anticipated Demand Information MEDIUM

TMM Planned NONE

Urgent Advisory NONE

Weather DEVIATIONS THROUGHOUT TTZP CONTINENTAL AIRSPACE & TTPP APS

Volcanic Ash NONE

Constraints A2143/22 NOTAMN Q)
TTZP/QMRLC/IV/NBO/A/000/999/1616N06132W005 A) TFFR B)
2211220230 C) 2211221030 E) DUE TO WIP, RWY 12/30 CLSD
TO ALL TRAFFIC EXCEPT STATE HELICOPTERS) (A2136/22
NOTAMN Q)
TTZP/QMRLC/IV/NBO/A/000/999/1436N06100W005 A) TFFF B)
2211220300 C) 2211241000 D) DLY: 0300-1000 E) RWY 10/28
CLOSED DUE TO WIP)(A2121/22 NOTAMN Q)
TTZP/QPFCA/IV/NBO/AE/000/245/1616N06132W050 A) TFFR B)
2211171100 C) 2211202300 D) DAILY 1100 - 2300 E) DUE TO
STAFF SHORTAGE, FLOW CONTROL PROC ACT FOR ALL TFC
ENTERING TFFR TMA. SAR. MEDEVAC. TRANSATLANTIC AND



REGIONAL FOCUS

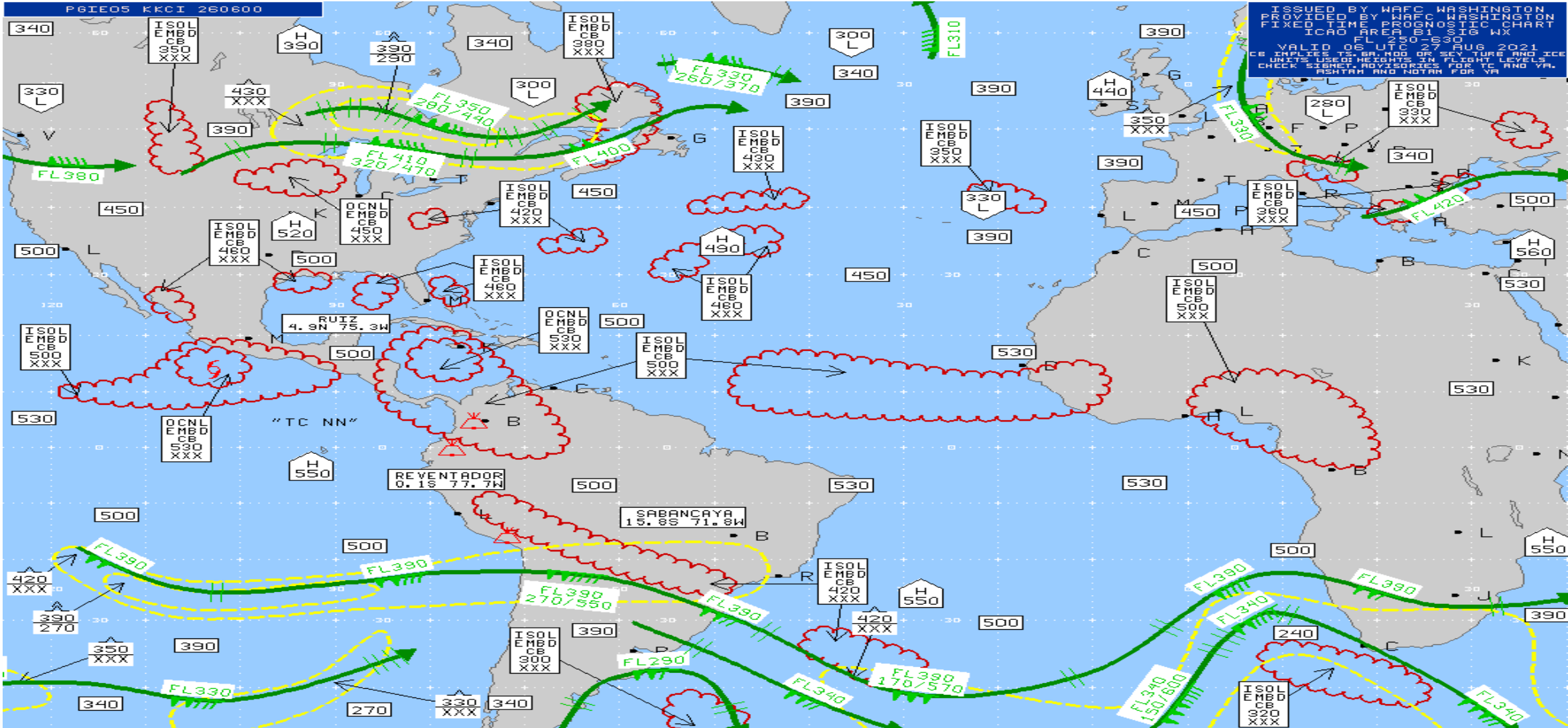
CADENA Operations Planning Web Conference

THURSDAY, JULY 26, 2021

1400 UTC

CADENA

WEATHER OVERVIEW



CADENA

EANA
NAVEGACIÓN
AÉREA
ARGENTINA



EANA Argentina – August 26th, 2021

STAFFING	SIGNIFICANT TERMINAL ENROUTE WEATHER	ANTICIPATED DEMAND
<p>ADEQUATE STAFF (FOLLOWING HEALTH AND GOVERNMENT ADVICES)</p>	<p>THU:</p> <ul style="list-style-type: none"> ▪ <i>MTW</i> advisory in the northwest. ▪ <i>TURB</i> advisory for north, centre and south areas. ▪ <i>ICE</i> advisory and <i>RASN</i> in the south, on the Patagonia region. ▪ <i>FG</i> in the northeast part of the country. ▪ <i>SHRA</i> in the centre area. <p>SUN: <i>RASN</i> in the south</p> <p>FRI/SAT/MON: NOSIG</p>	<p>LOW THE WHOLE WEEKEND</p>



SOURCE: [National Weather Service \(NWS\)](#)

EANA Argentina – August 26th, 2021

<ul style="list-style-type: none"> ✓ EQUIPMENT OUTAGES ✓ SIGNIFICANT NOTAMS ✓ CONSTRAINTS ✓ SPECIAL EVENTS 	<p>PLANNED TMMs</p>
<p>SAEZ:</p> <ul style="list-style-type: none"> • RWY 17/35 CLSD WIP MAINT 26 1300-2100 (NOTAM A4442/2021) • RWY 11/29 CLSD WIP MAINT 27 AND 28 1640-1940 (NOTAM A4441/2021) <p>SABE:</p> <ul style="list-style-type: none"> • RWY 13/31 CLSD WIP MAINT 31 0400-0700 (NOTAM A4005/2021) • RWY 13/31 CLSD WIP MAINT 02, 07, 09, 14, 16, 21, 23, 28 AND 30 0400-0700 (NOTAM A4359/2021) 	<p>NO PLANNED TMMs</p>

EANA Argentina – August 26th, 2021

COVID – 19 Situation

FIR/TMA/ Airport	NOTAM No.
SAEF SACF SAMF SAVF SARR	NO CHANGES FROM LAST WEEK AIC A 26 / 2021 <i>(Uploaded on the CADENA OIS)</i>

CADENA



CENTRE SPATIAL GUYANAIS

Port spatial de l'Europe
Europe's Spaceport



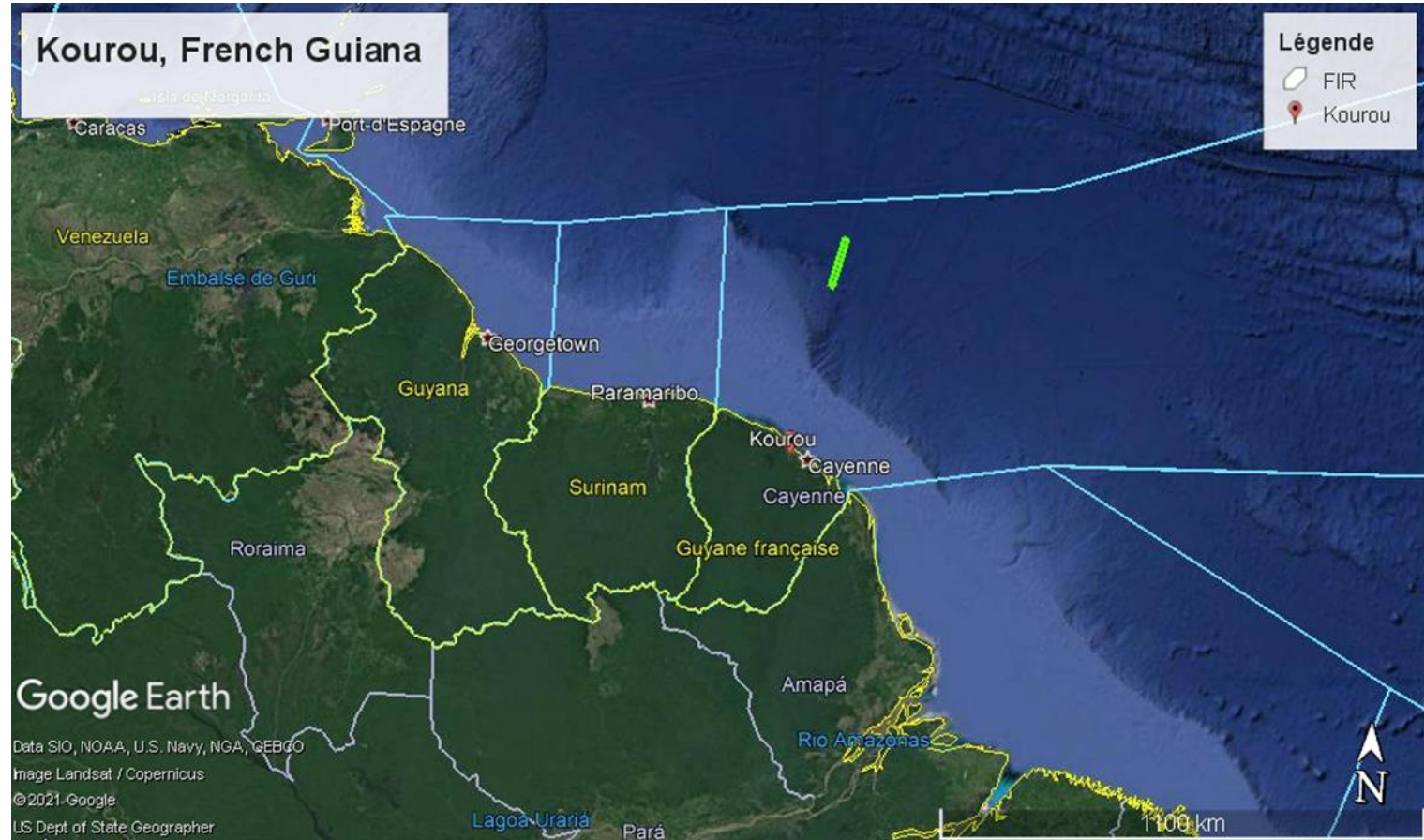
Department of Flight Safety

• 12/08/2021



• Upcoming Launch

- French Guiana Space Center (CSG), FRENCH GUIANA
 - VEGA VV19 Flight – Pléiades Neo 4 + rideshares
- August 17, 0147 UTC, Instantaneous Launch Window



Declaration notification

<i>Dangerous Zone</i>	<i>Zone Boundaries</i>	<i>Day Activation</i>	<i>Time Activation</i>	<i>Impacted FIR</i>
SOR 4 (FORBIDDEN)	REFERENCE	15 August 2021 - 09:00 UTC to 27 August 2021 - 02:18 UTC	Continuously	S000
SOD1 & SOD2	REFERENCE	17 August 2021 to 27 August 2021	Each day From 00:47 UTC to 02:18 UTC	S000
ZA/VV19 P80 Falling Area	0801N05205W 0854N05151W 0853N05146W 0800N05200W	17 August 2021 to 27 August 2021	Each day From 00:47 UTC to 02:18 UTC	S000
ZB/VV19 Z23 + Fairing Falling Area	1840N05252W 1840N05238W 1659N05237W 1659N05250W	17 August 2021 to 27 August 2021	Each day From 00:47 UTC to 02:18 UTC	TTZP KZWY
ZC/VV19 Z9 Falling Area	8012N16920E 8238N13128W 8207N13243W 7948N17126E	17 August 2021 to 27 August 2021	Each day From 01:56 UTC to 03:13 UTC	CZEG PAZA UHMM
ZD/VV19 AVUM Falling Area	3038S08727E 1457S09049E 1504S09131E 3046S08814E	17 August 2021 to 27 August 2021	Each day From 03:57 UTC to 05:14 UTC	YMMM

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 **THE PIARCO FIR** 



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Piarco – August 12, 2021

STAFFING	SIGNIFICANT TERMINAL / ENROUTE WEATHER	ANTICIPATED DEMAND
Adequate	<p style="text-align: center;">TPP AND TCP <u>THURSDAY 12</u></p> <p style="text-align: center;">Fair to partly cloudy, hazy and, at times, breezy with occasional showers and the low chance of isolated thunderstorm mainly during the afternoon. Nighttime will be mostly fair despite the isolated shower.</p> <p style="text-align: center;"><u>FRIDAY 13</u></p> <p style="text-align: center;">Partly cloudy to cloudy; Occasional showers; Medium to high chance of thunderstorms during afternoon, evening and nighttime.</p> <p style="text-align: center;"><u>SATURDAY 14</u></p> <p style="text-align: center;">Mostly cloudy; Rainy periods; Possible isolated morning thunderstorms.</p> <p style="text-align: right;"><i>SOURCE: TTMS</i></p> <p style="text-align: center;">WEATHER UPDATES WILL BE POSTED DAILY ON THE CADENA OIS</p>	<ul style="list-style-type: none"> • Low to Medium

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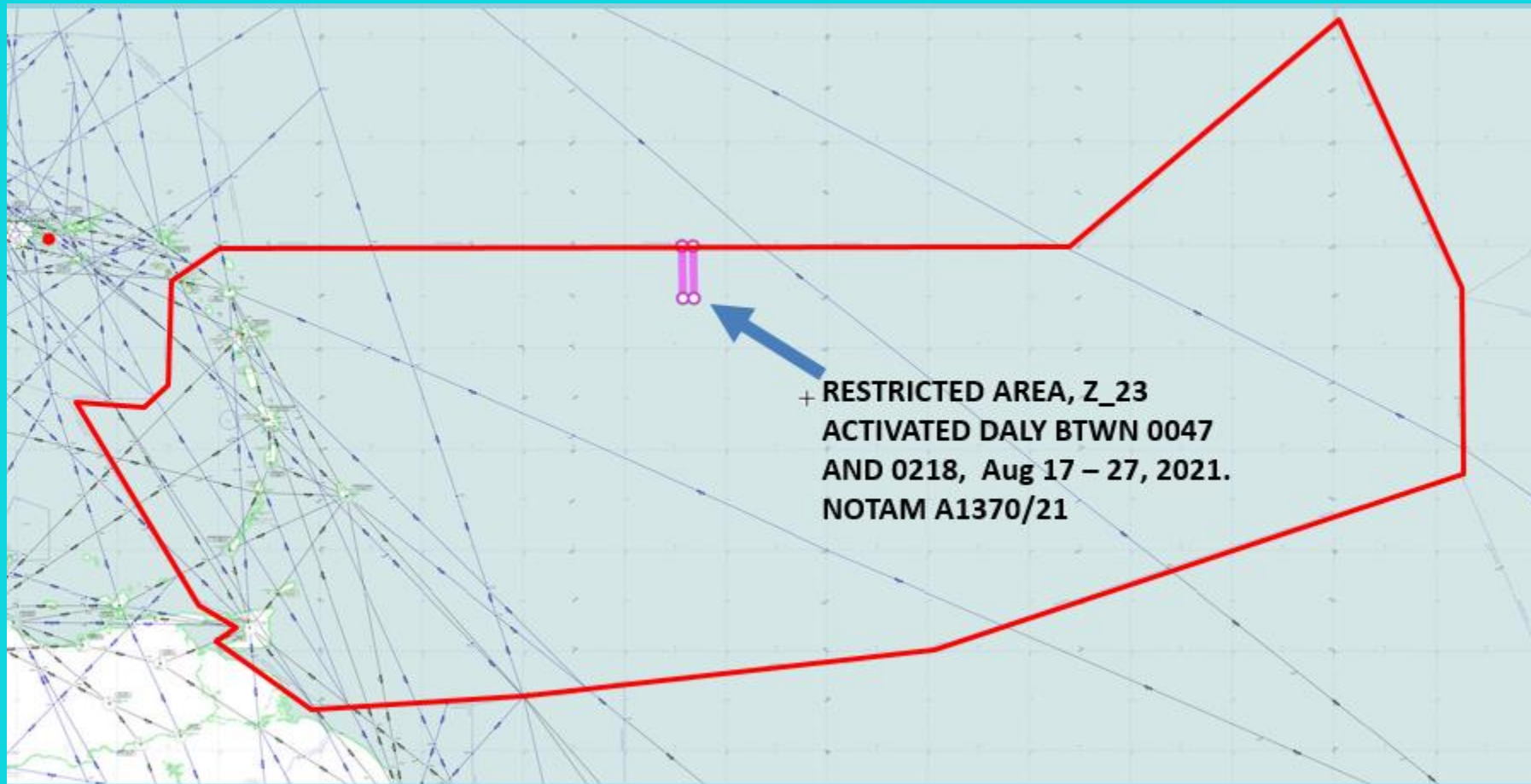
Piarco – August 12, 2021

<ul style="list-style-type: none">✓ EQUIPMENT OUTAGES✓ SIGNIFICANT NOTAMS✓ CONSTRAINTS✓ SPECIAL EVENTS	PLANNED TMMs
<p style="text-align: center;">TTZP</p> <p>NOTAM A1370/21 - TEMPORARY RESTRICTED AREA Z23 ACTIVATED DAILY BTWN 0047 – 0218 UTC, AUG 17 – 27, 2021, DUE TO FAIRING FALLING AREA OF VEGA LAUNCH VV19. AREA BOUNDED BY COORDINATES: 1800N05251W 1800N05238W 1659N05237W 1659N05250W 1800N05251W (Graphic on following Slide.)</p> <p style="text-align: center;">TVSC – NOTAM A1320 NDB "CAI" 302KHZ U/S)</p>	NONE

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Piarco – August 12, 2021

TEMPORARY RESTRICTED AREA Z23



COVID – 19 Update - Changes from last week in **Red** font

FIR/TMA/ Airport	NOTAM No.
TTZP	A1243/21, A1244/21
TGPY	A1293/21
TLPC	A1136/21, A1072/21, A1059/21
TLPL	A1135/21, A1104/21, A1058/21, A1045/21
TFFF	A1360/21
TFFR	A1351/21
TVSA	A1326/21, A1247/21, A1246/21
TAPA	A1325/21
TKPK	A1214/21, A1035/21, A1026/21, A1025/21
TKPN	A1024/21

ATO Space Operations Office



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	<p>FAA Space Operations Office David J Hurley Air Traffic Control Center</p>
<p>UPCOMING LAUNCH EVENT</p>	<p>LAUNCH SITE – Van Horn, TX</p>
<p><u>Van Horn, Texas</u></p> <p>Blue Origin, NS-17 AUGUST 26, 1230 - 2030 UTC</p> <p>Backup Dates: AUGUST 27-29, 1230 – 2030 UTC</p>	 <p><u>Area A</u> 17 NM Radius 3126N 10443W</p>

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UPCOMING EVENT

LAUNCH SITE *Pacific Spaceport Complex Alaska (PSCA), Kodiak Island, Alaska.*

Pacific Spaceport Complex Alaska (PSCA), Kodiak Island, Alaska.

- ASTRA P132**, Pacific Spaceport Complex Alaska (PSCA), August 27, 2100 to 0000 UTC.

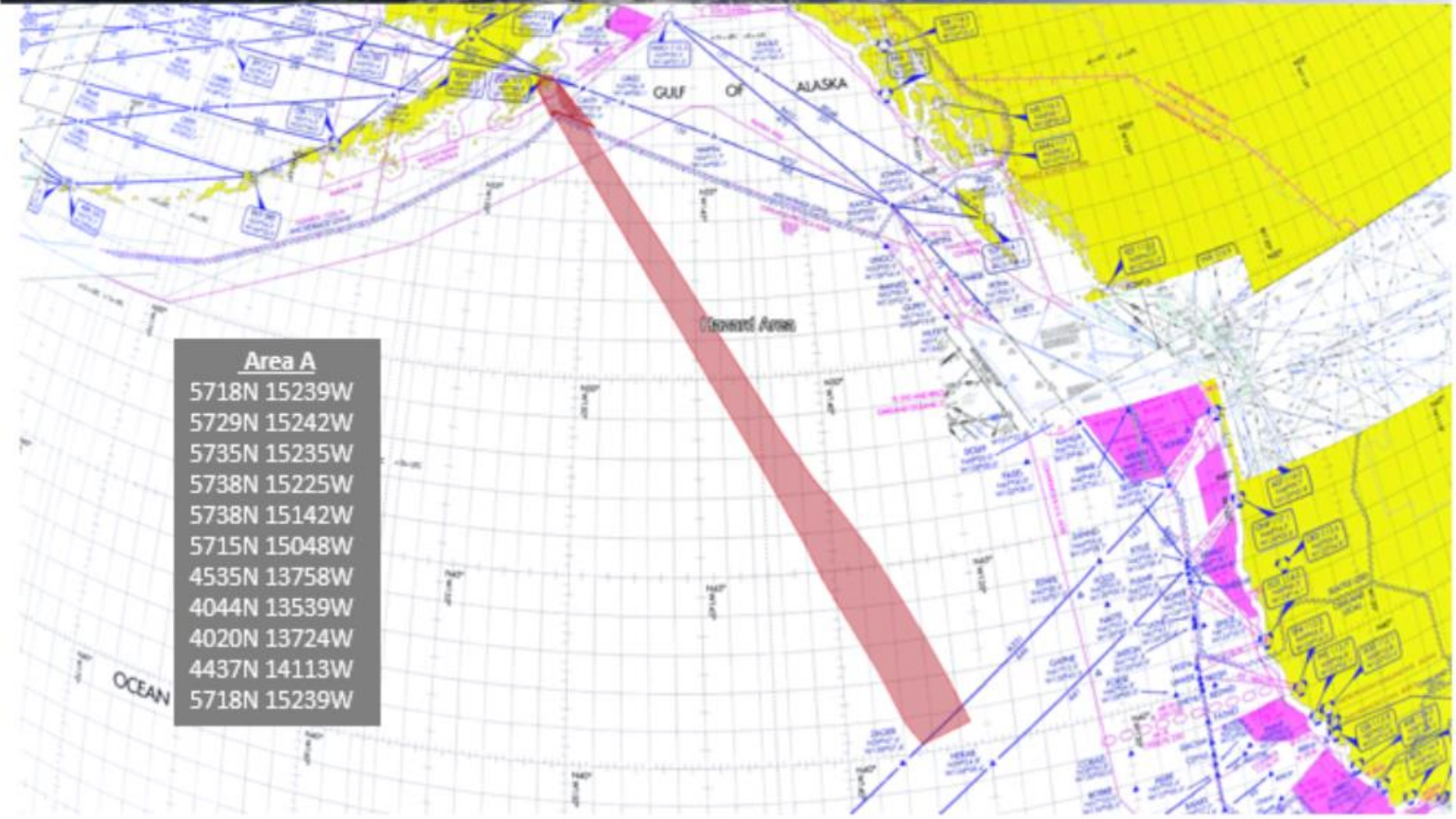
Back-up dates August 28th – September 3rd ,
September 7th – September 11th ,
2100 - 0000 UTC.





FAA Space Operations Office

David J Hurley Air Traffic Control Center



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Stakeholder comments / questions

Airlines
IATA
ALTA
ACI



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Any additional comments or questions?





QUESTIONS AND ANSWERS



THANK YOU

CANSO

SHAPING OUR FUTURE SKIES