

BRASIL

**DEPARTAMENTO DE CONTROLE DO ESPAÇO AÉREO
DIVISÃO DE GERENCIAMENTO DE NAVEGAÇÃO AÉREA
AV GENERAL JUSTO, 160 – 2º ANDAR
20021-130 – RIO DE JANEIRO – RJ**

AIC

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TEL.: (21)2101- 6277

TEL: (5521) 21016848

AFTN: SBRJGYC

FAX: (21) 21016198

SEVERE WEATHER AVOIDANCE PLAN (SWAP)

Period of Validity: from 01 DEC 2020 to 31 DEC 2021

1 PRELIMINARY ARRANGEMENTS

1.1PURPOSE

The purpose of this Aeronautical Information Circular (AIC) is to inform the updates upon the actions related to the activation Severe Weather Avoidance Plan (SWAP).

1.2SCOPE

The provisions set forth in this AIC shall apply to all ATC facilities, aircraft operators and the CGNA. 1

1.3CONCEPTS

SWAP ADVISORY

SWAP Activation Alert Message, issued by CGNA, through collaborative decision-making between CIMAER, COT-CDM, involved FMCs and representatives of the airlines, disseminated through the CGNA Operational Portal and the ITOP Portal (IATA's Tactical Operations Portal).

Note: In case of events with a greater impact, to be defined in the CGNA / CIMAER operational documentation, which typically have a long duration or involve several airports, a specific videoconference may be held with the airline's CCOs.

SWAP ACTIVATION

Message issued by CGNA, through collaborative decision-making between CIMAER, COT-CDM, involved FMCs and representatives of the airlines, after the issuance of an ADVISORY SWAP message, which determines the rerouting of the departure and/or arrival Guarulhos airport flows, aiming to minimize the workload of the ATCO (control position), avoid inefficient tactical deviations and guarantee an orderly traffic management in adverse weather scenarios.

SEVERE WEATHER CONDITIONS

For the purposes of this plan, Severe Weather Conditions are those related to the convective cells observed or predicted in meteorological systems or in local convective systems with a diameter or greater elliptical axis equal to or greater than 40 NM, with a top level equal to or greater than 30,000 feet, in which values equal to or greater than 35 dBZ are observed in reflectivity parameters, or Level 3 or higher, in parameters of Vertically Integrad Liquid (VIL), when observed in meteorological radar images.

SWAP DEACTIVATION

Message issued by CGNA, through collaborative decision-making between CIMAER, COT-CDM, FMCs and airline representatives, after the issuance of a SWAP ACTIVATION message, which ends the rerouting of departure and/or arrival GRU flows.

SWAP REGULATED ELEMENT

Fix, Waypoint or Radio Navigation Aid that must be monitored for the purpose of SWAP implementation, in order to identify the impact caused by the presence of a severe weather convective system.

ATFM MEASURES

Procedures adopted to maximize the use of declared capacities and/or adjust the air traffic flow in a given portion of airspace, along a given route or on a given aerodrome, in order to avoid imbalance.

SEVERE WEATHER AVOIDANCE PLAN (SWAP)

Plan previously approved in order to mitigate the severe weather effects upon traffic flows at en route airspace or TMA, minimizing disruptions on ATC provisions, contributing to the preservation of safety and ordering the flow of aircraft in congested airspaces.

SWAP REROUTING

ATFM Measure in which a predetermined route, collaboratively defined amongst CGNA, ATC facilities and Airlines, differs from its original plan, aiming at deviating from areas affected by severe weather.

1.4 ABREVIATURAS

ATC - Air Traffic Control

ATCO - Air Traffic Controller

ATFM – Air Traffic Flow Management

CCO – Airlines` Operations Control Center

CIMAER – Aeronautical Meteorology Integrated Center

CGNA – Air Navigation Management Center

COT-CDM - Collaborative Decision Making and Tactical Operations Center

DCC – Decision and Coordination Cell

EOBT - Estimated Off-Block Time

FMC – Flow Management Cell

FPL – Flight Plan

ITOP – IATA’s Tactical Operations Portal

PLN - Flight Plan

SAGITARIO - Advanced Air Traffic Information Management and Operational Interest Report System

STSC - Severe Convective Weather System

SWAP – *Severe Weather Avoidance Plan*

TMA – Terminal Control Area

TWR – Aerodrome Control Tower

2INTRODUÇÃO

2.1 The Severe Weather Avoidance Plan (SWAP) aims at orienting at a strategic level the actions taken at the tactical level in operational scenarios in which severe weather condition is taking place and it entails the necessity to avoid a certain airspace maintaining the minimum level of operational efficiency to the airspace.

3. SWAP ADVISORY, ACTIVATION AND DEACTIVATION PROCESS

3.1 Based on the more detailed assessment of severe weather by FMC in the airspace operations under its responsibility, the CGNA should, in coordination with the airlines and the involved FMCs, issue the ADVISORY SWAP message, with the greatest possible anticipation, depending on the possibilities of an adequate weather forecast and the characteristics of the prevailing convective system (local or frontal).

3.2 The SWAP ADVISORY message will be issued, preferably, at least 2 hours in advance of the estimated activation time and disseminated through the CGNA Operational Portal and the IATA ITOP message. For severe convective weather situations associated with local convective weather (known in Meteorology as “Air Mass Thunderstorms”), SWAP notices are not expected more than 3 hours in advance, given that the variability in the temporal and spatial evolution of such systems hinder an earlier assertive weather forecast. The purpose of the SWAP ADVISORY message is to allow for proper planning by aircraft operators, which should include additional fueling, if necessary

3.3 The SWAP will be activated by the FMC and CGNA, in coordination with the airlines, as soon as the severe weather is confirmed, by observing deviations in the affected control sectors.

NOTE: In cases where the time necessary to coordinate with CGNA and the airlines, through the operational position located at CGNA, may cause operational losses, the initial SWAP actions will be applied immediately by the involved FMC, as previously coordinated in operational briefings and specific conference calls. In this case, the FMCs must inform the CGNA as soon as possible, coordinating the necessary actions to continue the execution of the plan.

3.4 The requirements for preparing and sending the Advisory, Activation and Deactivation SWAP messages are:

3.4.1 SWAP Advisory Message:

- a) Forecast of severe weather conditions in a SWAP regulated element, with a probability equal to or greater than a value to be determined in the appropriate CIMAER operational documentation; and
- b) Forecast of significant air traffic demand in the regulated SWAP element, at the time scheduled for the occurrence of severe weather conditions, which represents a percentage of the available capacity provided for in the relevant operational documentation of the CGNA/FMC/ATC Facility.

3.4.2 SWAP Activation Message:

- a) Confirmation of severe weather conditions nearby or impacting the SWAP regulated element.

Note: Information from aircraft evolving in the vicinity of the impacted SWAP regulated element may be used to confirm the characteristics of severe weather conditions, if the meteorological tools are not enough.

- b) The application of ATFM measures other than rerouting is not enough to order the air traffic flow in the affected element.
- c) A more efficient tactical diversion scheme in the vicinity of the impacted SWAP regulated element cannot be used, due to the magnitude of adverse weather conditions.

3.4.3 SWAP Deactivation Message:

- a) Confirmation of the dissipation of severe weather conditions nearby or impacting the regulated SWAP element.

Note: Information from aircraft evolving in the vicinity of the regulated SWAP element can be used to confirm the dissipation of severe weather conditions, if the meteorological tools are not enough.

- b) The application of ATFM measures other than rerouting is enough to order the flow of air traffic in the affected element.
- c) A more efficient tactical diversion scheme in the vicinity of the regulated SWAP element can be used, due to the reduction in the magnitude of adverse weather conditions.

3.5 SWAP Message Validity Period

- a) Advisory Message: Period when the weather forecast indicates that the SWAP Regulated Element may be impacted.
- b) Activation Message: Period between SWAP activation and the forecast of dissipation of adverse weather conditions.
- c) Deactivation Message: Immediate Application.

3.6 The modification of the FPL of the affected aircraft will be carried out by the involved FMC, according to the process provided for in the relevant operational documentation, and as previously coordinated within the DCC, using the alternative SWAP routes contained in the Advisory and Activation SWAP Messages.

3.7 Alternative routes available in Brazilian airspace are available on AISWEB at the following internet address: <https://aisweb.decea.gov.br/?i=espaco-aereo&p=playbook>.

4 FINAL ARRANGEMENTS

4.1 The criteria and procedures established in this AIC do not allow involved pilots or facilities to deviate from the other current rules.

4.2 This AIC enters into force on 01 DEC 2020 revoking on this date, AIC A20/19, of 15 DEC 2019.

4.3 Cases not envisaged will be sorted out by the Chief of the Operational Subdepartment of the Airspace Control.