



Flight Level Adherence Days 29-30 September 2010

Guidance and Information

Version 1.0 - 30 June 2010

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Version history

Version	Date of issue	publication reason
1.0	30 th June 2010	1 st edition

1. Purpose of this document

Over the last years the need to address the impact of deviations from submitted flight plans and from ATFCM measures (e.g. CTOT) on network has been raised repeatedly. In early 2009, EUROCONTROL, on request from ANSPs, launched the “Flight Plan & ATFCM Adherence Campaign” as a short-term performance improvement initiative in the context of DMEAN and the Flight Efficiency Plan. The approach, which included distribution of awareness material and presentations at EUROCONTROL and Stakeholder events, is steered and supported by the Operations Coordination Group (OCG) and Directors Operations (DOP).

After one year of awareness campaign and 2 local flight level adherence trials, an Adherence Task Force (membership incl. ACI, IATA, IACA, IFATCA, ECA, EUFALDA) started preparing for Adherence Days. After 2 Task Force meetings, a proposal was defined for Flight Level Adherence Days, which was presented to OCG/11 (9 June 2010) for approval. OCG/11 confirmed its support for the adherence campaign activities, agreed to the Task Force recommendations for the Flight Level Adherence days, and requested this Guidance & Information to be developed & distributed to facilitate the adherence days.

This Guidance & Information is intended to provide adequate information to all Stakeholders involved, particularly ANSPs and Aircraft Operators, to prepare for successful Adherence Days and to ensure the trial objectives are met, including effective reporting of trial findings. **This material may be updated based on further preparation and comments received.** More specific material for particular Stakeholders is expected to be developed. Additional information, e.g. FAQs, will be made available on a dedicated web site (www.adherencedays.eu or www.eurocontrol.int/adherence).

This Guidance & Information includes **templates to be duly completed and returned by the respective deadlines** to adherencedays@eurocontrol.int in order to:

- evaluate status of preparedness as input to a go/no go decision process;
- facilitate the compilation of information as input to the post Adherence Days report.

Checklist

Your input is requested on	
Section 6 – Publication of NOTAM	p. 8
Section 7 – Temporary Operating Instructions	p. 9
Section 9 - Reporting	p. 11

Corresponding Annexes are on pages 15, 16 and 18

Please return to adherencedays@eurocontrol.int

2. Introduction

The Flight Plan & ATFCM Adherence campaign is an initiative of DMEAN and the CFMU, on behalf of ANSPs who require a more consistent delivery across the network in order to optimise available capacity and to reduce periods of over delivery and overloads. AO's have indicated their support in light of flight predictability and performance, and for the benefit of performance of the network.

Daily across Europe, regulations are put in place to protect ATC from receiving more traffic than the controller can handle safely. However, more aircraft than planned regularly enter these protected sectors, exceeding their capacities by more than 10%, which is considered as an ATFCM "over-delivery". Additionally, ATC report overloads where the lack of adherence to the planned Flight Level is cited as a contributory factor during periods of regulation and non regulation.

Contributing Factors

- Vertical deviation: not flying at the requested flight level (RFL)
- Time shift: departing outside EOBT/CTOT tolerances
- Horizontal deviation of the planned trajectory.

In the long-term the campaign will improve capacity planning in general and predictability by increasing the accuracy of flight information, providing conditions for optimising capacity i.e. reducing delay. Better Flight Plan adherence is an essential step towards SESAR Business Trajectories.

Flight Level Adherence Days

After one year of awareness campaign, and local trials by ANSPs, there is now agreement for an ECAC-wide **Flight Level Adherence trial on 29-30 September 2010**. This is an important step to consider the benefits & issues for the next actions to improve network performance. The trial will require Airlines to fly at the Requested Flight Level (RFL) contained within field 15 of the filed ICAO Flight Plan.

3. Objectives Flight Level Adherence Days

Main Objectives

- Measure the effect of adherence to the Flight Planned (FPL) and ATFCM measures
- Determine benefits arising from more accurate RFL with regard to improved predictability, reduced overloads/over deliveries, and overall network performance.

Additional Objectives

- Measure and report on EOBT/CTOT performance as an adjunct to the post-trial report.
- Provide input to the next step of the flight adherence campaign.

4. Scope

Flight level adherence across Europe (ECAC Member States) from 29 September 2010 00:00 UTC until 30 September 2010 23:59 UTC

- ATC and pilots to adhere to the planned cruising level for any portion of the route to be flown, as filed in item 15 of the ICAO flight plan
- Pilots and ATC should not request/allocate an alternative level except in the event of an emergency, weather avoidance or to achieve separation.

Note: *It is not the aim to hinder operational tactical decisions but rather to decrease the high number of deviations from the level in the flight plan to reduce the impact on possible downstream sector overloads and to improve network performance. At the same time, a certain degree of margin for both airborne crews and ATC has to be taken into account.*

Measurement of EOBT/CTOT accuracy by EUROCONTROL

- EUROCONTROL will measure EOBT/CTOT accuracy during the 2 days. ANSPs are invited to increase diligence in this matter to support the analysis.

Definition of level adherence

Adherence to the planned cruising level for any portion of the route to be flown, as filed in item 15 of the ICAO flight plan message.

Note: *There will certainly be specific locally differing situations which may impact the execution of the adherence procedures. These specific conditions will be addressed on the adherence website e.g. through FAQs (www.adherencedays.com).*

5. Roles

ANSPs

ANSPs should ensure that the appropriate manager has advised ACCs of the FL adherence days.

- Brief staff on the trial objectives prior to the Adherence Days
- Issue Temporary Operating Instructions (see Annex 3 - p.18)
- Publish NOTAM (see p.8)
- Ensure Adherence Day feedback is provided to EUROCONTROL (see Proformas in Annexes 1 and 2 – p.15-17)
- Provide a report following the trial with any available statistics

ATCOs

To deliver flights across the network at the Requested Flight levels contained in field 15 of the ICAO flight plan.

Tactical Controllers should avoid:

- Requesting a RFL on first contact with pilot
- Offering or giving a flight level not in the Flight Plan, with the exception of the following conditions:
 - Emergency
 - Weather avoidance
 - To achieve separation / reduce workload
 - Flight entering an area where procedural control is applied

Note: Out of area traffic (OOA) originating from non-ECAC ACC should in principle adhere to the requested FL filed in the ICAO flight plan. However, aircraft entering should not be requested to change their actual flight level to the one filed in the FPL, unless it affects the capacity in the downstream sectors.

Aircraft Operators

To ensure all involved airline staff are aware of the FL adherence days:

- Ensure Pilots are aware of FL adherence days and ATC actions in respect of the RFL
- Ensure flight planners are aware of ATC intent to only allocate cruising levels filed in the flight plan.
- Provide post Adherence Day feedback to EUROCONTROL in support to the reporting process.

Flight Plan Originators

The flight plan is the only source of information used to determine the traffic demand. To ensure that this demand is predicted accurately it is essential that flight plan information is precise and adhered to. The accuracy of the flight plan data is therefore essential in ensuring a clear picture of demand is determined thus allowing ATC to optimise capacity and avoid overloads.

Flight Plan originators should :

- Inform the crew about the 'Flight Level Adherence' days
- Ensure that the flight contains the operational intentions of the flight.
- Inform the pilot about restrictions and/or limitations along the route
- Update the flight plan for modification, even last minute changes

Pilots

To fly the cruising level contained within the filed ICAO flight Plan submitted to ATC and not request other levels from ATC, except for overriding operational reasons such as avoiding weather or emergencies.

To provide post Adherence Day feedback to EUROCONTROL in support to the reporting process.

EUROCONTROL

EUROCONTROL has initiated the campaign on behalf of the ANSPs and is coordinating the adherence days. In preparation of the event information material has been made available to explain the importance of adherence. The material is available to all aviation professional involved via the dedicated website www.eurocontrol.int/adherence.

CFMU to:

- publish an AIM including the operational details and goals of the operational trial.
- provide briefings to CFMU operational staff in IFPS and Flow Management.
- conduct a post-OPS analysis of the event
- publish an Adherence Days report.

6. Publication of NOTAM / AIM

EUROCONTROL will publish an AIM early July and 2 days before the beginning of the trial. See the text below. ANSPs are invited to do the same by means of a NOTAM to be published in an equivalent timeframe.

AIM *(draft 30 June 2010)*

On 9 June 2010 the EUROCONTROL and ANSPs Operations Coordination Group (OCG) approved two days of Flight Level Adherence on **29 and 30 September 2010, across ECAC states. The requirement would be for ATC to allocate only cruising levels contained in the ICAO Flight Plan and for Pilots not to request a change in cruising level not contained within the filed ICAO Flight Plan. Only in specific operational** circumstances such as weather, emergencies etc, or for ATC separation purposes should an alternative flight level be offered or flown. The purpose of the exercise is to reduce over-deliveries in ATC sectors, to improve overall network data consistency, accuracy and traffic prediction, to identifying other benefits and any operational issues for **ANSPs and Aircraft Operators**. Example ATC Instruction will be issued by all ACCs in the ECAC region. Airline Operators, Flight Plan providers, Pilot and Air Traffic associations have been consulted. Further information is available on the Eurocontrol website www.eurocontrol.int/adherence.

Deadlines for publication

EUROCONTROL:	AIM, early July and 2 days before
ANSPs:	NOTAM, early August and 2 days before

7. Temporary Operating Instructions

ANSPs shall issue a Temporary Operating Instructions by **27 August 2010**.
Published Temporary Operating Instructions have to be provided to
adherencedays@eurocontrol.int as they form part of the Go/No-Go decision process.

For Temporary Operating Instructions, see **Annex 3**, p. 19.

Deadlines for publication

ANSPs: Temporary Operating Instructions, **27 August 2010**

8. Go/No-Go Decision

Adherence Day Go/No-Go decision items:

- Phase 1:** **09-06-2010;** EUROCONTROL Operations Coordination Group (OCG) agreed to proceed with Flight Level adherence day as proposed.
- Phase 2:** **27-08-2010.** Milestone date for assessing that aviation actors have been sufficiently informed about the adherence day, necessary ATM procedures published, and no major Network issue are known to Eurocontrol which would impact the trial.
- Phase 3:** **02-09-2010.** The 3rd meeting of the Adherence Task Force will review preparation and advise on Go/No Go decision, on the basis of, inter alia:
- Commitment to procedures by all participating ACCs (positive indication)
 - Adequate Buy-in from AOs
 - All AOs sufficiently aware of procedures
 - Adequate Buy-in from Pilots
 - All Pilots sufficiently aware of procedures
 - All FPSPs sufficiently aware of procedures
 - No major events or issues
- Phase 4:** **03-09-2010 to 29-09-2010.** A decision to GO has been made but ANSPS are required to notify EUROCONTROL if any issue would impact application of the adherence procedures or exclude them from participating, in order that post ops analysis and reporting can reflect activity correctly.

9. Results and reporting

ANSPs

ANSPs are requested to provide reports to EUROCONTROL in order to measure results of the adherence operational trial. Examples are provided, but it is essential that adequate information is received by Eurocontrol to properly reflect Adherence Days results. To this end, the example forms may be further improved in light of feedback received on the practicalities involved.

ATC Tactical reports

In Annex 1 Proforma 1 (on p.15) is provided as an example to obtain the required data hourly, per shift or daily.

ACC report

A consolidated report will be required to identify issues for the follow-up. In Annex 2 Proforma 2 (on p.16) is provided to be used by operational managers for feedback to EUROCONTROL. This form will also be made available electronically.

Completed forms should be submitted to EUROCONTROL by **7 October 2010**.

AIRCRAFT OPERATORS AND PILOTS

Specific feedback opportunities via surveys will be made available for pilots and aircraft operators via Internet. Access details to these surveys will be made public by Mid September 2010, in coordination with the associations involved. The feedback should be provided to EUROCONTROL by **7 October 2010**.

EUROCONTROL

The Agency will measure traffic loading at sector level against the filed traffic demand set against the capacity level of the sector.

A report by CFMU will include:

- CTOT adherence
- Proportion of flights above or below the planned entry levels
- Sector entry time adherence
- Proportion of flight above or below the planned entry time
- Percentage of flights previously not planned to enter a sector

Next steps

As a first step, a draft report will be presented to the Adherence Task Force, the DMEAN Implementation Support Group (DISG), the Directors of ATS Operations (DOP) and the Operations Coordination Group (OCG).

Deadlines

EUROCONTROL: Make available Adherence Day feedback forms for AO's and Pilots by **Mid September 2010**

ANSPs/AOs/Pilots: Provide Adherence Day feedback by **7 October 2010**

10. Local trials

ANSPs are invited to perform their own individual Flight Level adherence trials through summer 2010 and are requested to provide results to EUROCONTROL to assist the adherence campaign and preparations for the Flight Level Adherence Days.

Previous local trials

Karlsruhe UAC

The first trial was undertaken by Karlsruhe UAC in the first quarter of 2009 (sectors FFM, NTM & ERL). **Pilots were not explicitly asked to give their “requested flight level”** during a certain period and observations were made with regard to how often pilots made a request on their own initiative for a lower or higher flight level other than the one indicated in the flight plan.

Overall there were 1614 flights in the trial period and some 20% (321 flights) requested an alternative level (7% higher & 13% lower). As a result of the trial, Karlsruhe UAC controllers have been requested not to seek a “requested flight level” for climbing traffic on initial contact.

Maastricht UAC

Maastricht UAC undertook 2 trials in 2009 and one in January 2010 to quantify the amount of vertical profile deviations and to evaluate the impact of adapted phraseology on the deviations. **Basically crews were told during the climb phase which level to expect (based upon the RFL in the FPL).** The first trial showed some 29% of departures were deviating (from the RFL in the FPL) which reduced to 21% with the adoption of the adapted phraseology. The second trial showed some 39% of flights were deviating from the FPL which reduced to 26% with the phraseology change. The third trial was exercised across 3 sectors in January/February 2010. The results still have to be finalized but in two sectors the results were inconclusive (the adapted phraseology appeared to make no difference); however, in the busiest sector the original deviations on the reference day were 33% which reduced to 25% with the use of the adapted phraseology. These latter figures were similar to the results in the second trial. It should be noted, however, that the exercises while showing a significant improvement still demonstrate 1 in 4 flights in the Maastricht sample deviated from the RFL in the FPL.

Impact of RPLs on adherence

An analysis of the Maastricht trials demonstrates that RPLs are more likely to be affected by level non-adherence (39% of climbing traffic) compared to normal FPLs (18% of climbing traffic).

Feedback to EUROCONTROL

Feedback/report from local trials can be sent by email to adherencedays@eurocontrol.int.

11. What is the regulatory context?

Note: the texts below are extracts only from the original publications. The complete documents are accessible on the respective websites.

The Principle of Adherence to Flight Plans stems from ICAO Doc Annex 2 to the Convention on International Civil Aviation/Rules of the Air.

In accordance with Chapter 3, article 3.6.2 “an aircraft shall adhere to the current flight plan or the applicable portion of a current flight plan submitted for a controlled flight unless a request for a change has been made and clearance obtained from the appropriate air traffic control unit, or unless an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate air traffic services unit shall be notified of the action taken and that this action has been taken under the emergency authority.

ICAO Doc 7030/4 (EUR)

“ATC is responsible for departure slot monitoring at departure aerodromes...”

and

“...Aircraft operators shall inform themselves of and adhere to... current ATFM measures (e.g. specific measures applicable on the day in question such as ATFM slot or flight suspension)”.

“Any changes to the EOBT of more than 15 minutes for any IFR flight within the IFPS shall be communicated to the IFPS”.

The CFMU ATFCM User Manual

“ATC may deny start up clearance to a flight unable to meet its CTOT until coordination with the ATFCM units concerned has been effected and a revised CTOT issued.”

The CFMU IFPS User Manual states:

“The ATC Flight Plan Proposal Message (AFP) message shall be submitted to the IFPS by an ATS unit where that unit has new or revised information concerning an aircraft filed as IFR/GAT within the IFPS that is already in flight.”

Link:

http://www.cfm.eurocontrol.int/cfm/public/standard_page/library_handbook_supplements.html

Commission Regulation (EC) No 1033/2006 (Procedures for Flight Plans in the Pre-Flight Phase)

laying down the requirements on procedures for flight plans in the pre-flight phase for the single European sky applies as from 1st January 2009:

“The operator shall ensure that the conditions of acceptance of a flight plan and any necessary changes thereto as notified by IFPS to the originator are incorporated into the planned flight operation and communicated to the pilot.”

and

“The operator shall ensure prior to operation of the flight that the content of the initial flight plan correctly reflects the operational intentions.”

Link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:186:0046:0050:EN:PDF>

Commission Regulation (EC) No 255/2010 (ATFM Implementing Rule)

The Commission Regulation (EU) No 255/2010 of 25 March 2010 lays down common rules on air traffic flow management. Subject matter is defined as follows: “This regulation lays down the requirements for air traffic flow management (hereinafter ATFM) in order to optimize the available capacity of the European air traffic management network (hereinafter EATMN) and enhance ATFM processes”.

It includes:

- the general obligations of Member States,
- the obligations of Member States concerning the central unit for ATFM
- the general obligations of ATS Units
- the general obligations of operators
- the general obligations of airport managing bodies

Link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:080:0010:0016:EN:PDF>

Annex 1 – Example Tactical ATC feedback form

(page 1/1)

Proforma 1 FL Adherence Tactical Feedback		0000utc 29 th September	2359utc 30 th September
		Tactical ATC Feedback Form Note: This is an example. ACCs should devise their own processes to obtain the required information to be provided to Eurocontrol. This example may be improved based on ANSP comments received, e.g. on the questions and number of questions.	
Ref- Instruction:			
Date of Report:		ACC:	Sector:
From (time):			Sector Characteristic: Low/Medium/High
To (time):			Traffic levels: Low/Medium/High
Total no of Flight entering sector		Number	Comments
How many cruising flights entered sector at the RFL?			
How many cruising profiled flights exited at the RFL?			
How many Pilots requested a climb above/ below RFL & why?			
How many flights were offered a climb above/below RFL & why?			
Did adherence to RFL ease or increase workload?			
How many unplanned aircraft entered the sector?			
Was RFL data easily available to you?		Yes/No	
Did you believe that adhering to RFL reduce flight efficiency and why?		Yes/No	
Did you experience any other operational difficulty related to the adherence days?		Yes/No	

Return to: adherencedays@eurocontrol.int

Annex 2– ACC feedback form

(page 1/2)

Proforma 2 FL Adherence Consolidated ACC report	0000utc 29th September	2359utc 30th September
<p style="color: red; text-align: center;">Consolidated Flight Level Adherence Days reports to be completed by Points of Contact (PoCs) within ACC</p>		
Date of Report:	ACC:	
Total nr of flights handled:		
Were there any issue with controllers understanding the intent of the day?		
Was the RFL in field 15 of flight plan available to tactical controllers ?		
Were there any noticeable difference in level compliance ?		
Were there any change in sustainable capacity above the monitoring value ?		

Annex 2

(Page 2/2)

Were there any issues with Pilots wanting to alter RFL ?

Were there any tactical controller issues relating to adherence to the filed FL ?

Were there any issue with controllers thinking service provision was being inhibited ?

If so: *How was the issue factually determined ?*

Any Other issues

Annex 3

(page 1/2)

Exemplar Temporary Operating Instructions

Trial Flight Level (FL) Adherence and CTOT/EOBT measurement Days, 0000utc 29th September to 2359 30th September 2010.

INTRODUCTION

The trial is being conducted following the reports of ATC sectors overloads, over deliveries and inconsistent traffic data reported by ECAC ANSPs , as a result of non-compliance with the Requested Flight Level (RFL) contained within field 15 of the ICAO Flight Plan.

As ANSPs continue to drive performance to achieve service levels to customers, it becomes increasingly necessary that the ATM network delivers to a planned outcome to avoid compromising ATM unit capacity and workload, along the route of flight.

The desired outcome is one of improved traffic consistency which reduces controller uncertainty and delivers improved conditions for making informed decisions to reduce workload and complexity in advance of ATC sector operations. At the same time the initiative is driving the notion that profile decisions can not be made in isolation and must be considered beyond the range of inter sector coordination.

There will inevitably be some tension between “Flying the Flight Plan” and delivering the tactical flexibility of offering an alternative flight level than in the plan, because either the controller thinks the aircraft can benefit from it or the pilot is requesting it. The initiative suggest that this service value, though laudable, rarely delivers a network benefit either to ATM or flights performance, as many of the ground based flight planning tools deliver the most efficient end to end profile for the flight.,

The ATM Network acknowledges that some discrepancies in Request Flight Level (RFL) data will occur because of ATC FDP constraints and RPL issues, but ANSPs are confident that these issues will not significantly distort the desired outcome of the trial.

The adherence campaigned days have been coordination with National ANSPs providers, IFATCA, Airlines and Pilot associations.

Annex 3 (page 2/2)

Exemplar Temporary Operating Instructions

PROCEDURE

ENROUTE ACCs

ATC Controllers are to clear flights at the REQUESTED Flight Level (RFL) contained in item 15 of the filed ICAO Flight Plan or as presented as the original RFL on Flight Progress strips (electronic or paper) or radar data blocks.

ATC Controllers are to avoid tactically choosing to alter a Requested Flight Level (RFL) except in the event of:

- Emergency
- Weather avoidance
- To achieve late separation/ reduce workload
- Flight entering an area where procedural control is applied
- Coordination of OOA traffic by non ECAC ACC

No new Phraseology is required, but controllers should avoid:

- Requesting a RFL on First contact with flight
- Offering a FL not in the Flight Plan
- Giving a higher FL than in the flight plan, when requested by a Pilot, with the exception of conditions detailed above.

Note: *It is not the aim to hinder operational tactical decisions but rather to decrease the high number of deviations from the level in the flight plan to reduce the impact on possible downstream sector overloads and to improve network performance. At the same time, a certain degree of margin for both airborne crews and ATC has to be taken into account.*