



| ICAO

# INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



**TENTH MEETING OF ASIA PACIFIC PERFORMANCE BASED NAVIGATION  
IMPLEMENTATION COORDINATION GROUP (PBNICG/10)  
19-21 April 2023, Bangkok**

**Established on RNP AR(EoR)**

---

**Vijay Kumar Mishra**

Regional Officer, PBN, ICAO APAC RSO Beijing

Email - [vkmishra@icao.int](mailto:vkmishra@icao.int)

# Established on RNP AR(EoR)

## ICAO Documents for EoR



Doc 9643

Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument Runways (SOIR)

Second Edition, 2020



Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION



Doc 8168

PROCEDURES FOR AIR NAVIGATION SERVICES

Aircraft Operations

Volume II – Construction of Visual and Instrument Flight Procedures  
Seventh Edition, 2020



This edition incorporates all amendments approved by the Council prior to 19 May 2020 and supersedes on 5 November 2020, all previous editions of Doc 8168, Volume II.

INTERNATIONAL CIVIL AVIATION ORGANIZATION



Doc 4444

PROCEDURES FOR AIR NAVIGATION SERVICES

Air Traffic Management

Sixteenth Edition, 2016



This edition supersedes, on 15 November 2016, all previous editions of Doc 4444.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

### Reference –

ICAO Doc 9643(SOIR), Chapter 2, para 2.2.5 Appendix A & B

ICAO Doc 8168 Vol-II, I-4-10-2

ICAO Doc 4444 para 6.7.3.5



# Established on RNP AR(EoR)

- Established on RNP AR APCH is a procedure for simultaneous parallel independent approach that takes advantage of benefits of RNP AR.
- The operation considers aircraft stabilized on an RNP AR APCH to be similarly established to aircraft flying an ILS for the purpose of simultaneous parallel approach separation.
- Vertical separation is not required between an aircraft “Established” on a RNP AR APCH after a nominated point, on a qualified RNP AR approach procedure and an aircraft established on the approach course or track to an adjacent parallel runway.

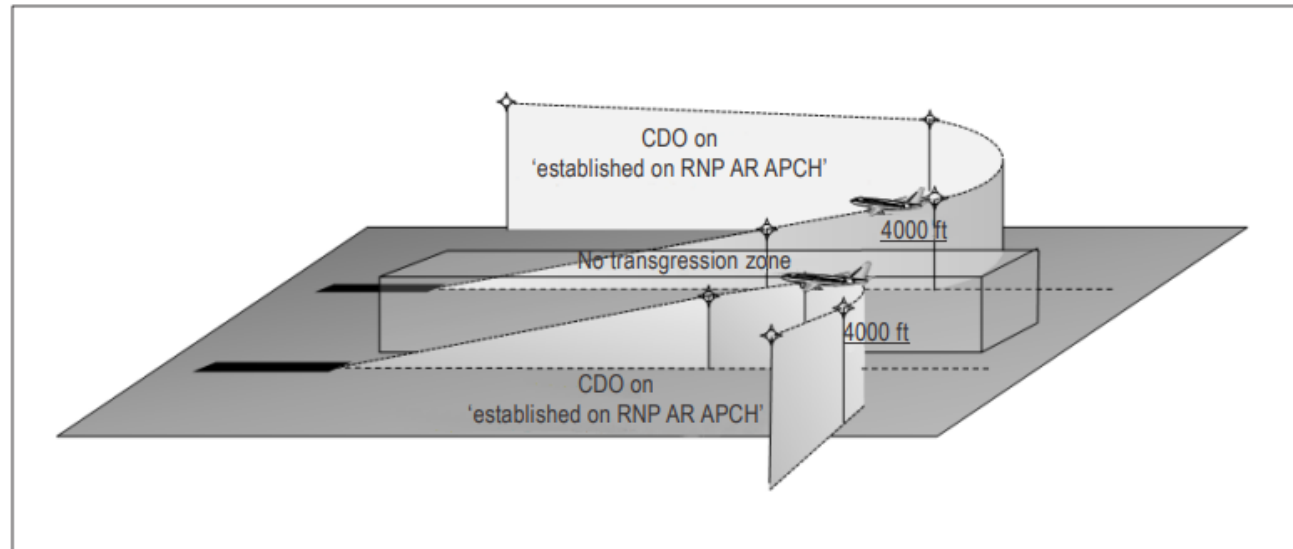


Figure A-1. Lateral separation provided by RNP AR procedures during simultaneous operations

# Established on RNP AR(EoR)

- This procedure provides an alternate means to separate aircraft during the turn to final approach phase of simultaneous independent parallel approach operations. Other requirements for simultaneous independent parallel approaches will continue to apply, including the monitoring requirements.

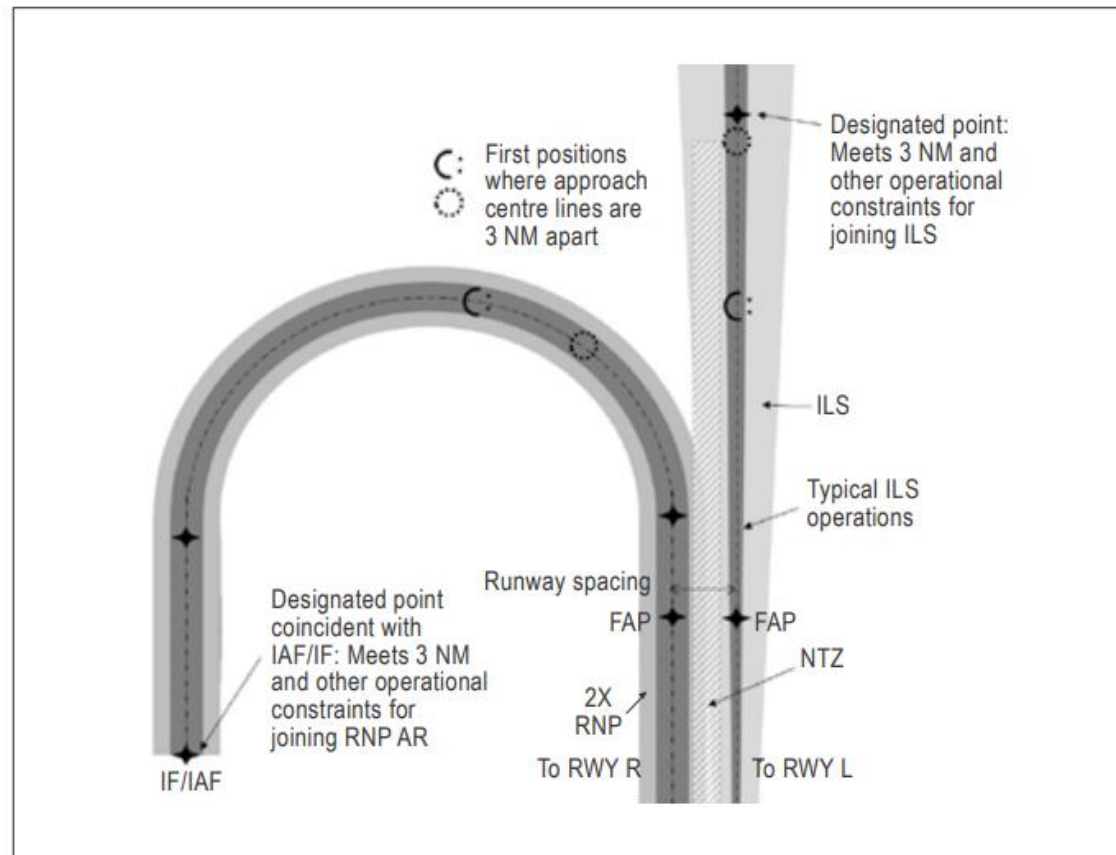


Figure A-2. Theoretical 'Established on RNP AR APCH' Environment

# Established on RNP AR(EoR)

## Benefits:

- flexibility in the design of simultaneous approach operations
- shorter track miles and optimized descent profiles compared to traditional SOIR
- increased operational efficiency in terms of runway or airspace capacity
- environmental benefits such as a reduction in noise and greenhouse gas emissions

## Presenters:

### 1. Garnet Miller

Manager, Airspace Modernization

NAV CANADA

[millerg@navcanada.ca](mailto:millerg@navcanada.ca)

### 2. Jorge BLANCO MONGE

Chief Flight Procedure Designer | Airspace, NavBlue

## EoR Implementation:

Calgary & Toronto Pearson International  
Airports in Canada

## Action by Meeting

The meeting is invited to:

1. note the information presented; and take action, as appropriate; and
2. provide update on the subject in subsequent meetings.



---

Thank You!