



AP/ATM/4  
WP/12  
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**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
UNPD/ICAO REGIONAL PROJECT RLA/98/003  
TRANSITION TO THE CNS/ATM SYSTEMS IN THE CAR AND SAM REGIONS**

**FOURTH MEETING/WORKSHOP OF AIR TRAFFIC MANAGEMENT (ATM)  
AUTHORITIES AND PLANNERS**

(Santa Cruz de la Sierra, Bolivia, 27-31 January 2003)

Agenda Item 1: **Review of the Implementation Program of RNAV routes**

**IMPLEMENTATION SANTIAGO/MADRID RNAV ROUTE**

(Presented by IATA)

**Summary**

This working paper requests the States authorization for implementation of a RNAV route from San Juan (JUA) VOR in Mendoza FIR to Sao Luis (SLI) VOR in Belem FIR.

**1. Introduction**

1.1 The airlines operating between Chile and Spain have requested IATA the implementation of a RNAV route to join the airports Santiago de Chile and Madrid. The benefits expected in the implementation of this route are as follows:

- a) Reduction of 14-minute flying time
- b) Reduction of 106 nautical miles in the route
- c) Operational expense savings of over two millions dollars annually
- d) Traffic reduction on airway UN741 (western airway on the EUR/SAM corridor)
- e) Improvement of one of the longest existing route in the globe
- f) The route could be utilized to join Southwest Europe with Bolivia, Paraguay, etc.

1.2 This proposal will be also presented at the Eleventh Meeting for the Improvement of Air Traffic Services over the South Atlantic (SAT/11), which will be held in Johannesburg, South Africa, February 17<sup>th</sup>. The SAT/11 will discuss the route portion from Sao Luis SLI VOR to ROSTA.

## 2. **Route Description**

2.1 Considering the route on its northbound direction, it will originate in San Juan JUA VOR at Mendoza FIR, direct to Sao Luis SLI VOR at Belem FIR, direct to fix ROSTA which is the intersection of UN741 with the Canarias FIR/UIR boundary. In the Canarias FIR, under radar coverage, the route will continue to the most suitable route in the EUR/SAM corridor.

2.2 Informal contact has been established with Chilean and Spanish ATM authorities and neither has manifested objection. On the operators side, there are no problems crossing the Andes Cordillera, and/or descending/climbing from/to the San Juan VOR to/from Arturo Merino airport.

2.3 The following are the route coordinates:

|     |                          |             |              |
|-----|--------------------------|-------------|--------------|
| (a) | VOR JUA San Juan         | S 31° 33.8' | W 068° 25.2' |
| (b) | FIR Mendoza/Cordoba      | S 30° 40.1' | W 067° 28.4' |
| (c) | FIR Cordoba/Resistencia  | S 25° 01.3' | W 061° 54.3' |
| (d) | FIR Resistencia/Asuncion | S 23° 51.5' | W 060° 51.2' |
| (e) | FIR Asuncion/Curitiva    | S 20° 35.9' | W 058° 00.8' |
| (f) | FIR Curitiva/Brasilia    | S 17° 38.8' | W 055° 33.9' |
| (g) | FIR Brasilia/Belem       | S 10° 28.8' | W 050° 00.4' |
| (h) | VOR SLI San Louis        | S 02° 35.4' | W 044° 14.3' |
| (i) | FIR Belem/Atlantico      | N 00° 05.4' | W 042° 20.3' |
| (j) | FIR Atlantico/Rochambeau | N 06° 01.0' | W 038° 06.6' |
| (k) | FIR Rochambeau/Dakar     | N 09° 19.2' | W 035° 42.7' |
| (l) | FIR Dakar/Sal            | N 15° 28.7' | W 031° 03.9' |
| (m) | FIR Sal/Canarias         | N 23° 32.0' | W 024° 23.9' |
| (n) | FIX ROSTA UN741          | N 28° 15.3' | W 020° 00.0' |

2.4 **Appendix A** includes a graphic with the actual and proposed route.

## 3. **Action Requested**

3.1 The meeting is invited to take note of the information provided herein and implement the proposed RNAV route between San Juan VOR (JUA) in Mendoza FIR and Sao Luis VOR (SLI) in Belem FIR as soon as possible.

