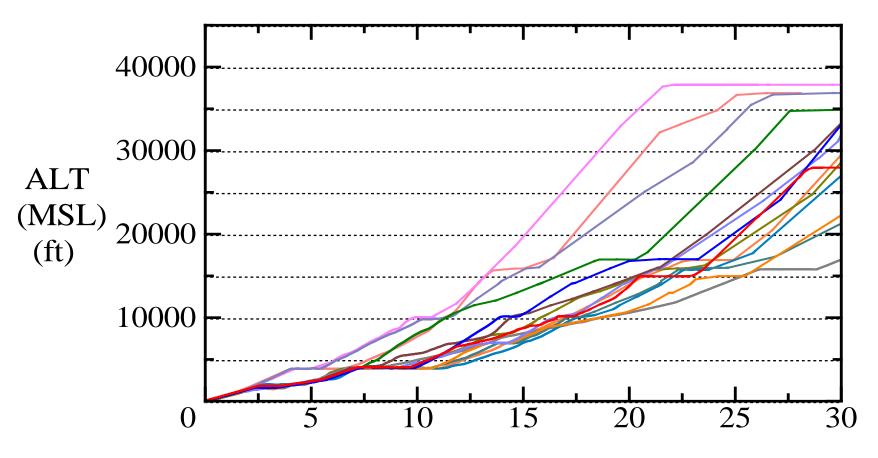


Ministry of Land, Infrastructure and Transport

CIVIL AVIATION IN JAPAN

Operational trial for Continuous Descent Arrivals (CDA) at Kansai International Airport

Actual flight path at Kansai International Airport

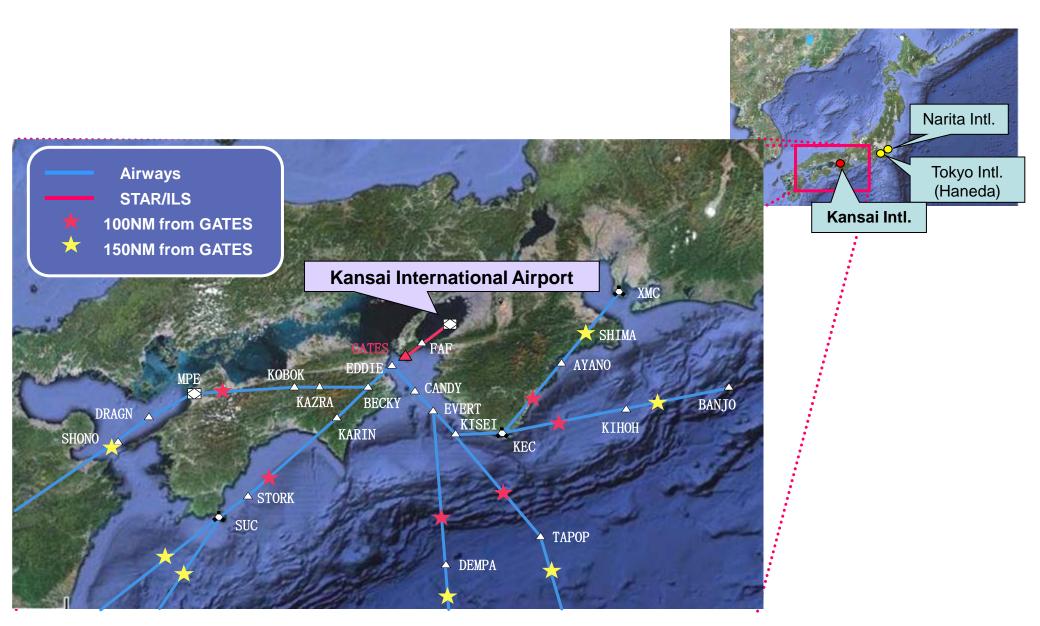


Time from Touch Down (minutes)

Oerational trial for CDA at Kansai International Airport

- Started 1500 UTC 6 May 2009 (0000 JST 7 May 2009)
- Participating aircraft: FMS equipped aircraft which is operated by Japanese airlines with ETA between 1400 UTC and 2200 UTC
- Routes applicable to operational trial for CDA: Those arrival routes for Kansai International Airport via KARIN, KAZRA or EVERT and join "TOMO Arrival" (when Runway 24 in use), or via KARIN, KAZRA or EVERT and GATES (when Runway 06 in use).
- Conditions on operational trial for CDA: Radar must be in operative at relevant ACC and Kansai radar approach control facility.
- After the evaluation for certain period is completed, JCAB plan to expand participant aircraft to those operated by foreign airlines with ETA between 1400 UTC and 2200 UTC.

CDA Routes for Kansai International Airport (2009.7.2~)



Procedures for CDA at Kansai International Airport

- Pilot should request CDA not later than 10 minutes before reaching Top of Descend (TOD) with position of TOD and estimated over time of KARIN, KAZRA or EVERT.
- CDA packaged routes are used when pilot request CDA and when ATC clears CDA. There are altitude restrictions on CDA routes. ATC may add altitude restrictions when necessary due to traffic situations.
- Once CDA is cleared by ATC, Pilot should notify ATC of beginning descend.
- ATC may suspend or cancel CDA due to traffic situation even after CDA is cleared. Alternate instructions will be issued when CDA is suspended or canceled.

Anticipating Benefit CDA at Kansai International Airport

If 5 aircraft, B767, conducted full CDA, (Annually)

- About 470,000 liters fuel saving
- About 1,160 tons CO2 emissions reduction

About 9 months evaluation after introduced

Totally, 777 aircraft had requested CDA from its cruising flight levels.

- → 726 aircraft cleared CDA from ATC (93.4%)
- → 620 aircraft conduct (85.4%)
- → 106 aircraft cance 510,000kg+ sector cor TMA due to weat Co2 Reduction c
- after 9 months trial,

over 360,000lbs fuel saved.