



# *The Monthly Average Flight Time: A NAS Performance Metric*

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# *Overview*

- ❑ Monthly Average Flight Time is a NAS (MAFT) performance metric that reflects the flight time and its components for an “average” commercial passenger flight
- ❑ MAFT has been calculated for 1995-2005

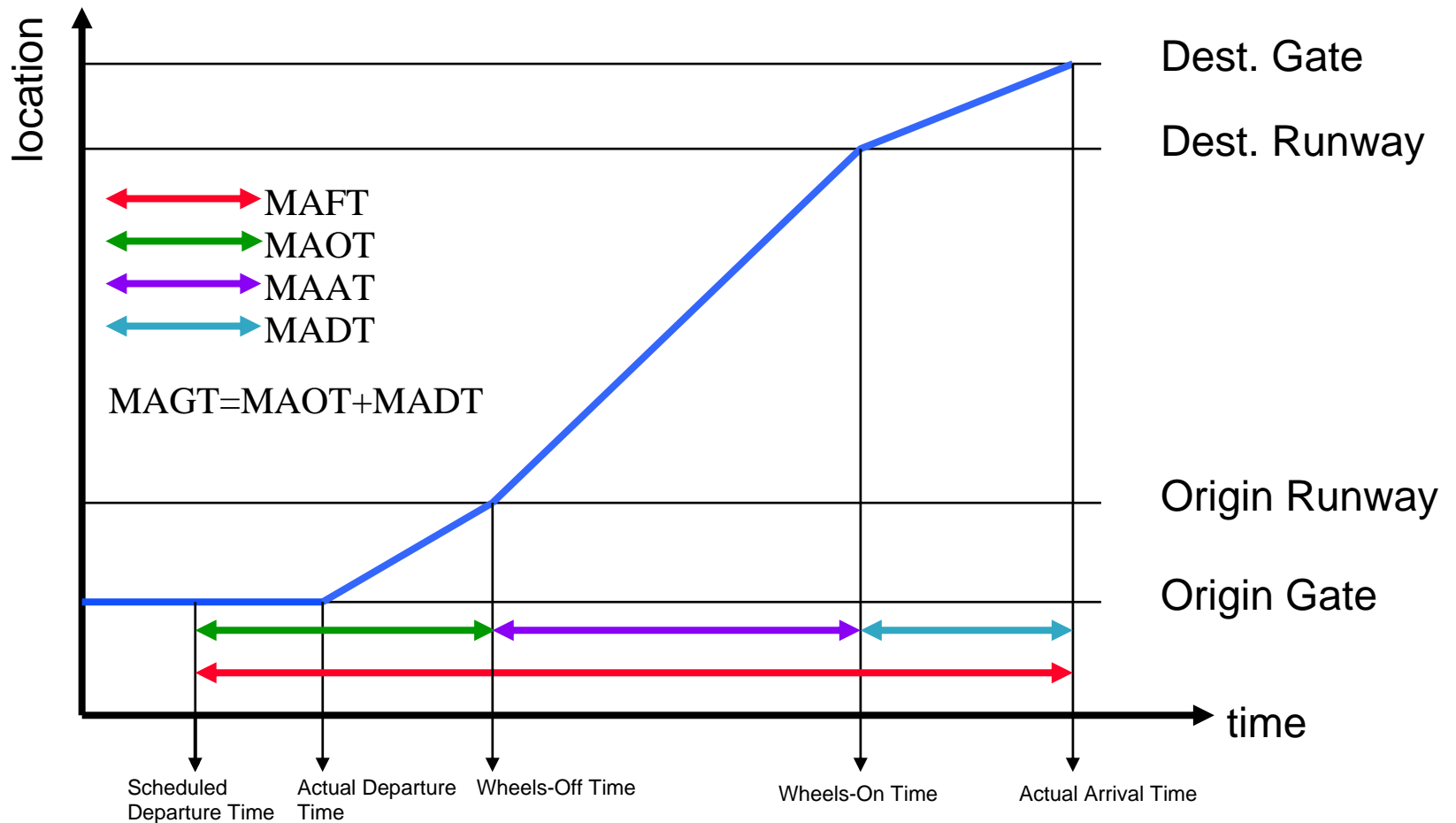


## *Advantages of the MAFT*

- Not affected by airline schedule padding
- Apples-to-apples comparisons for trend analysis
- Decomposable
  - By flight time component
  - By airport



# MAFT and its Components





## *Constructing the MAFT*

- ❑ Based on ASQP data
  - ❑ Covers all flights by major pax carriers
  - ❑ Provides out-off-on-in times for domestic flights
- ❑ Weighted Average
  - ❑ Set of city pairs with at least 10 completed flights in each month (1188 in present version)
  - ❑ Weights based on proportion of flights over entire analysis period
  - ❑ Monthly average flight time calculated for each od-pair
  - ❑ od-pair weights applied to determine overall average



# Weight Calculation

- Identify od-pairs for which there are at least 10 completed flights with valid data every month

- Calculate weights as

$$W_i = \frac{F_i}{\sum_{j \in CP} F_j}$$

$W_i$ - Weight for od-pair i

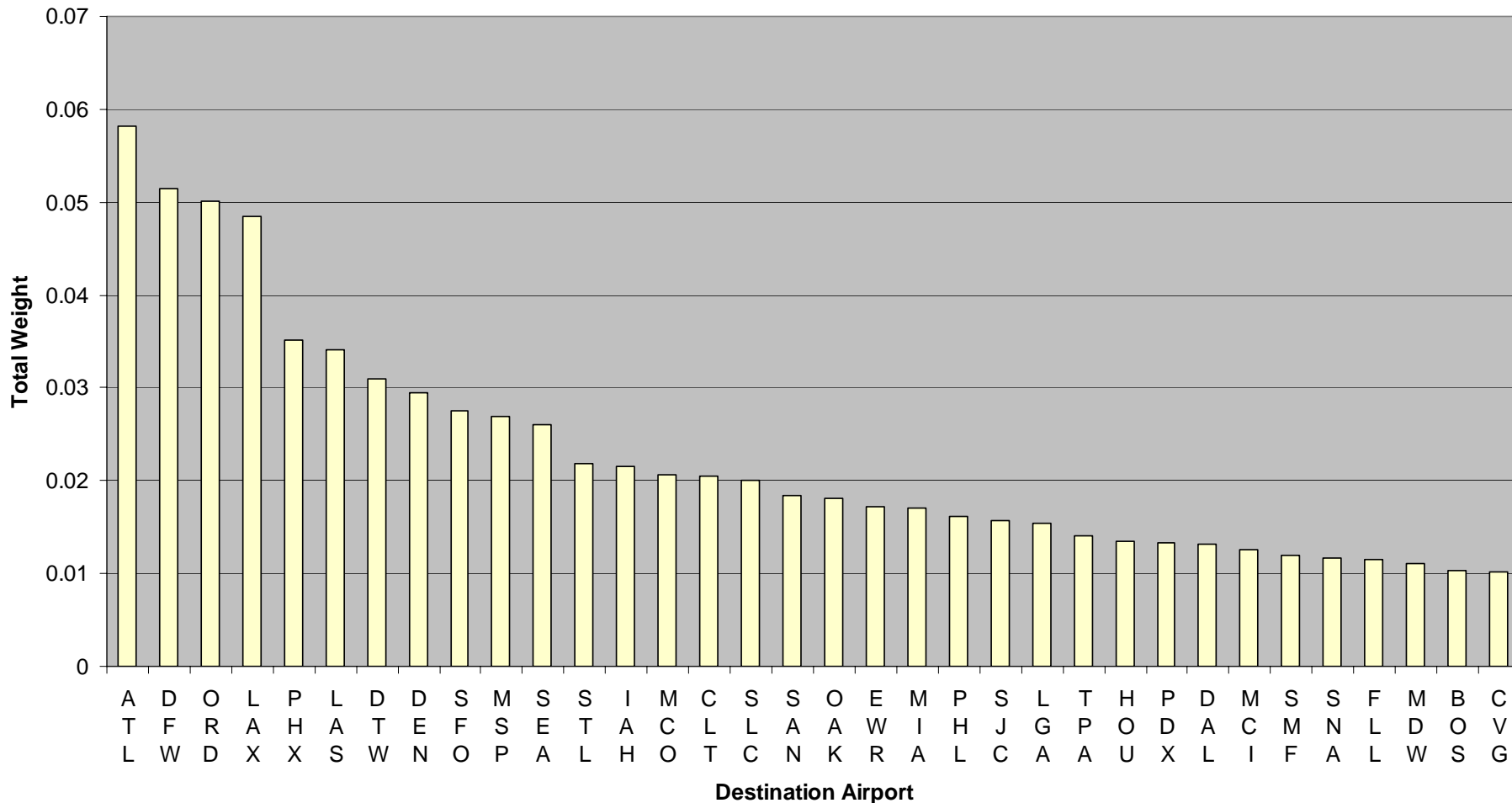
$F_i$ - Flights for od-pair j during study period

$CP$  – Set of od-pairs in the MAFT

- Other weights can also be used

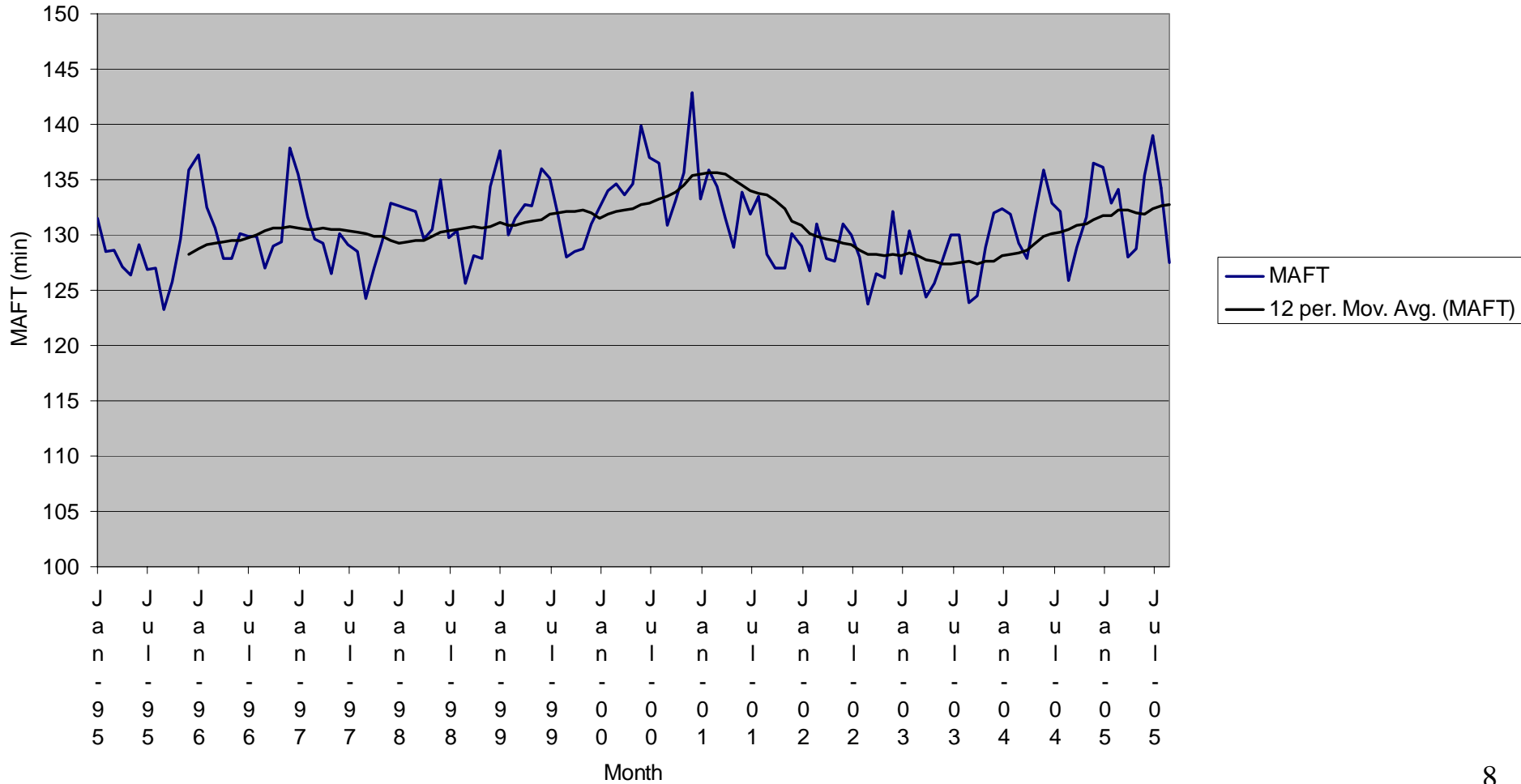


**Airport Destination Weights in MAFT Flight Basket (>1%)**





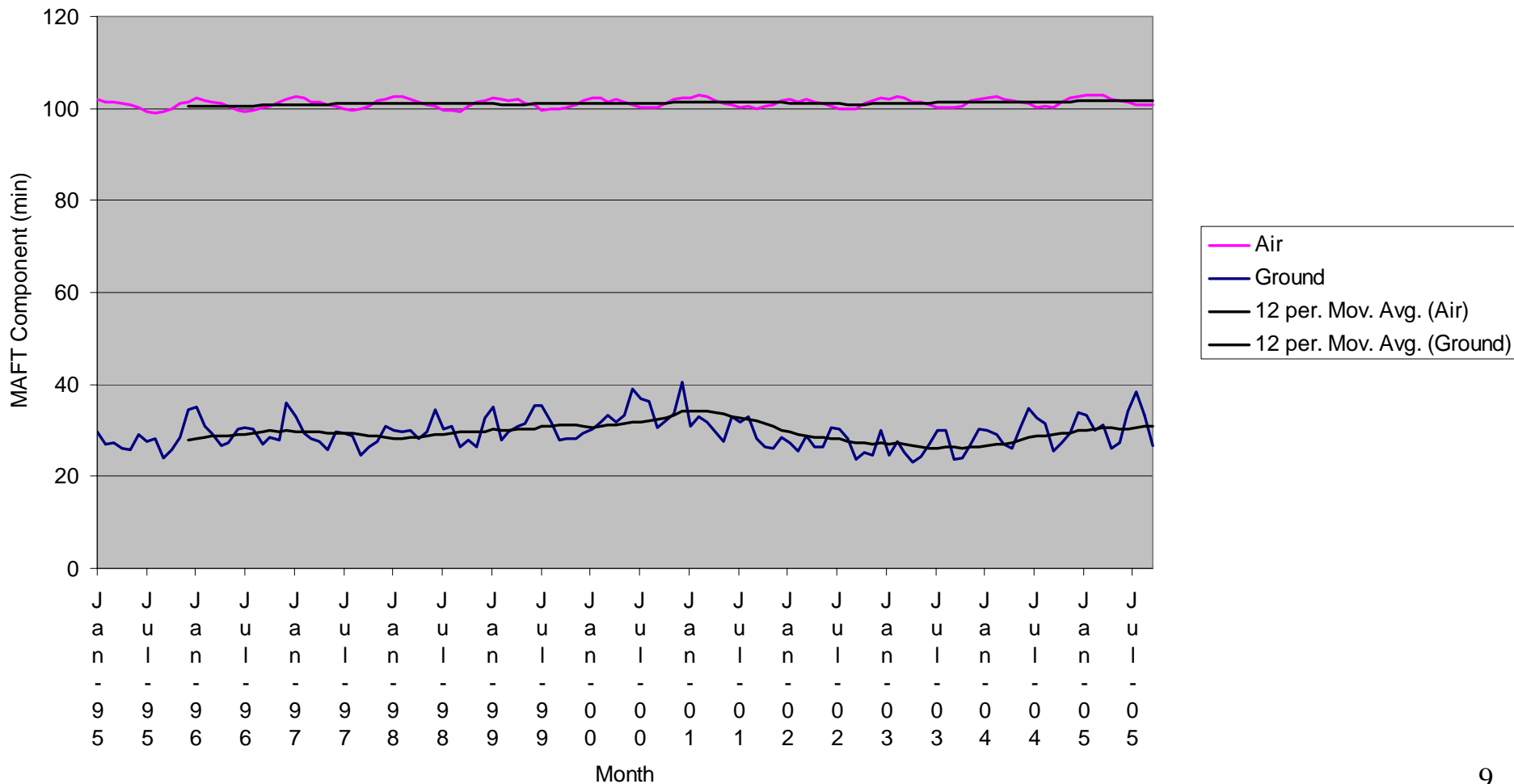
## Monthly Average Flight Time, 1995-2005





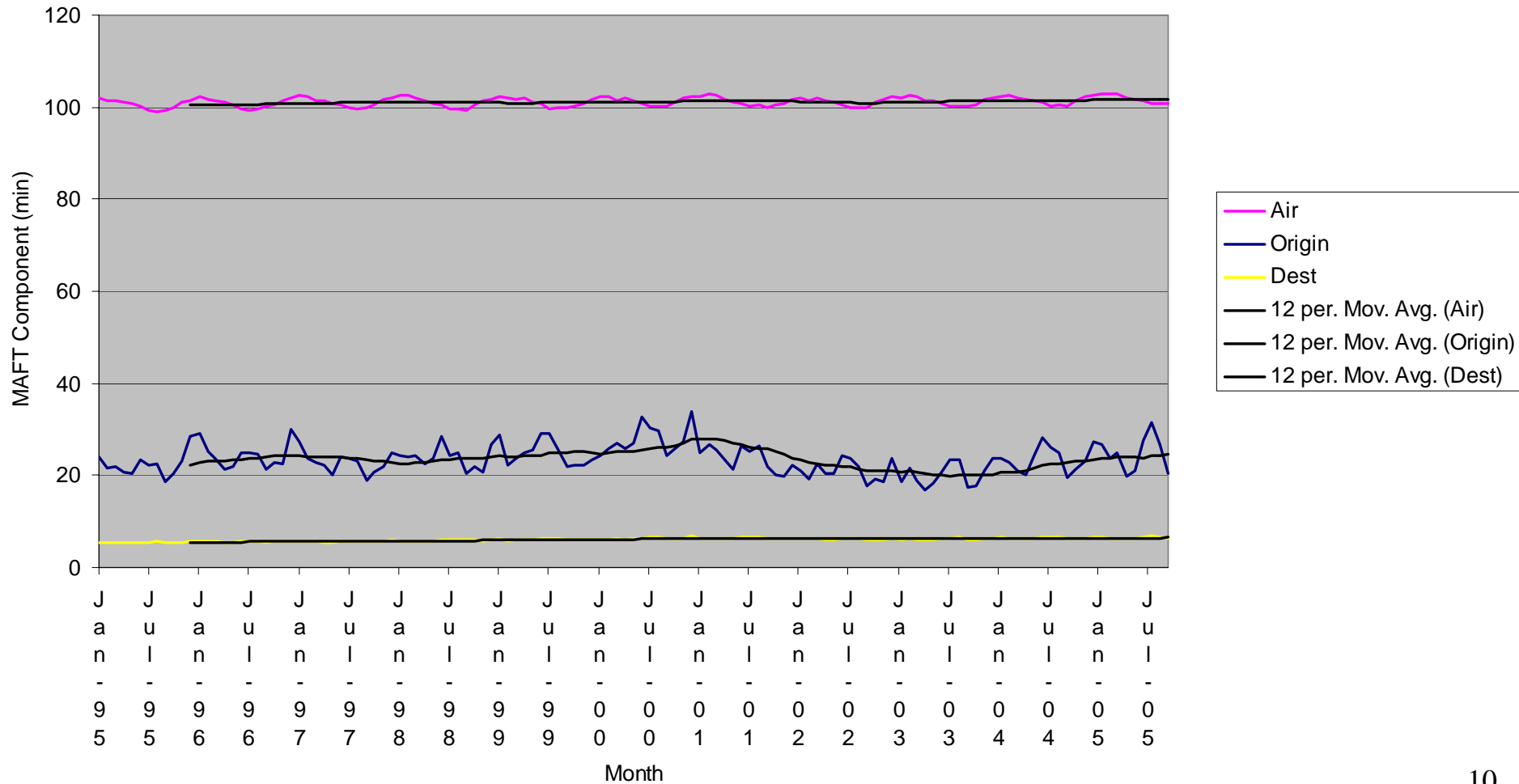


## MAFT Air and Ground Components, 1995-2005



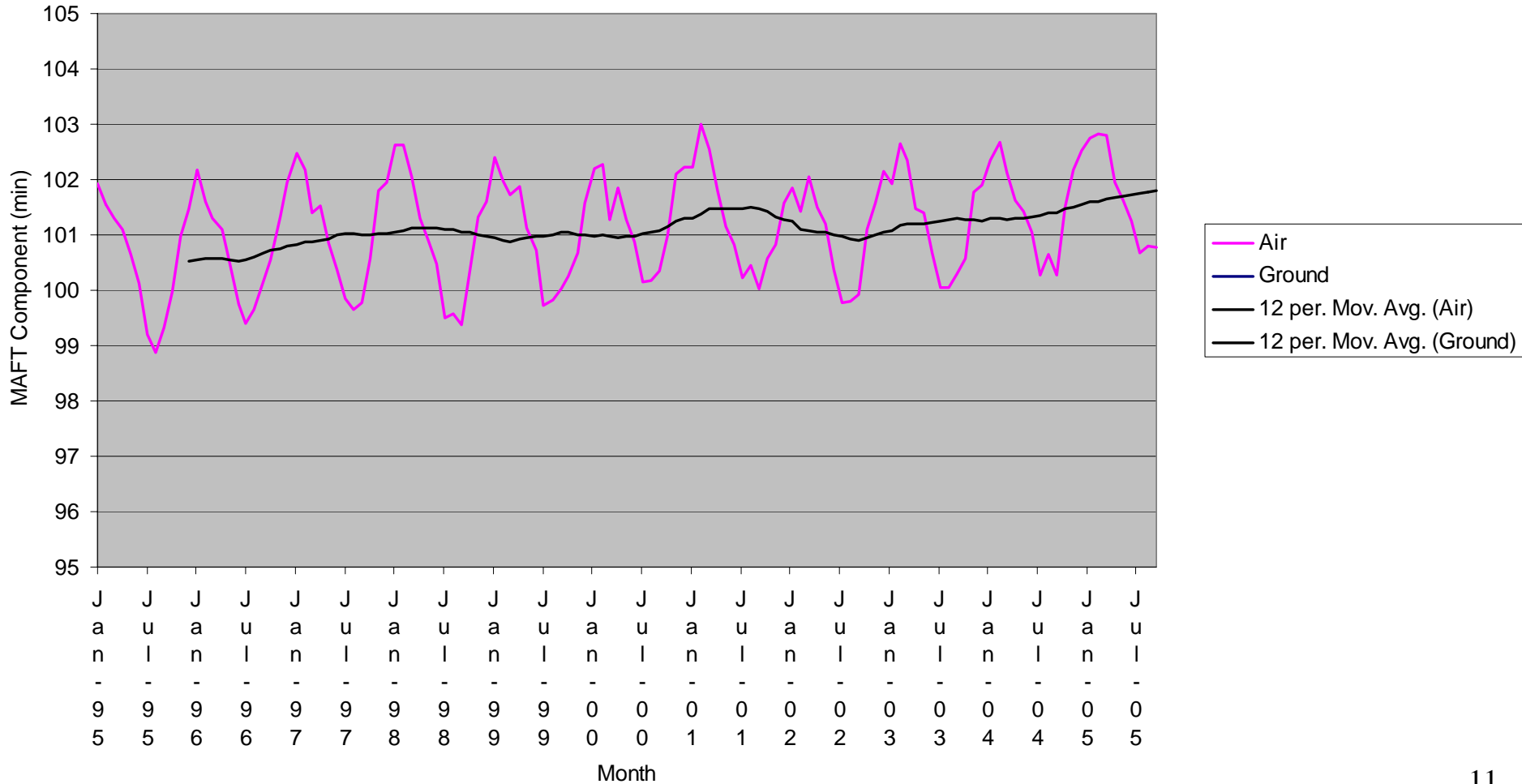


## MAFT Air, Origin, and Destination Components, 1995-2005





### MAFT Air Component, 1995-2005





## Monthly Average Flight Time and OAG Time, 1995-2005

