

B o t t l e   s a m p l i n g

A i r c r a f t   s a m p l i n g /

S a m p l i n g   f r o m   c o m m e r c i a l   a i r l i n e s

P.   S t e e l e

D i v i s i o n   o f   A t m o s p h e r i c   R e s e a r c h

C S I R O

## FLASK SAMPLING NETWORKS

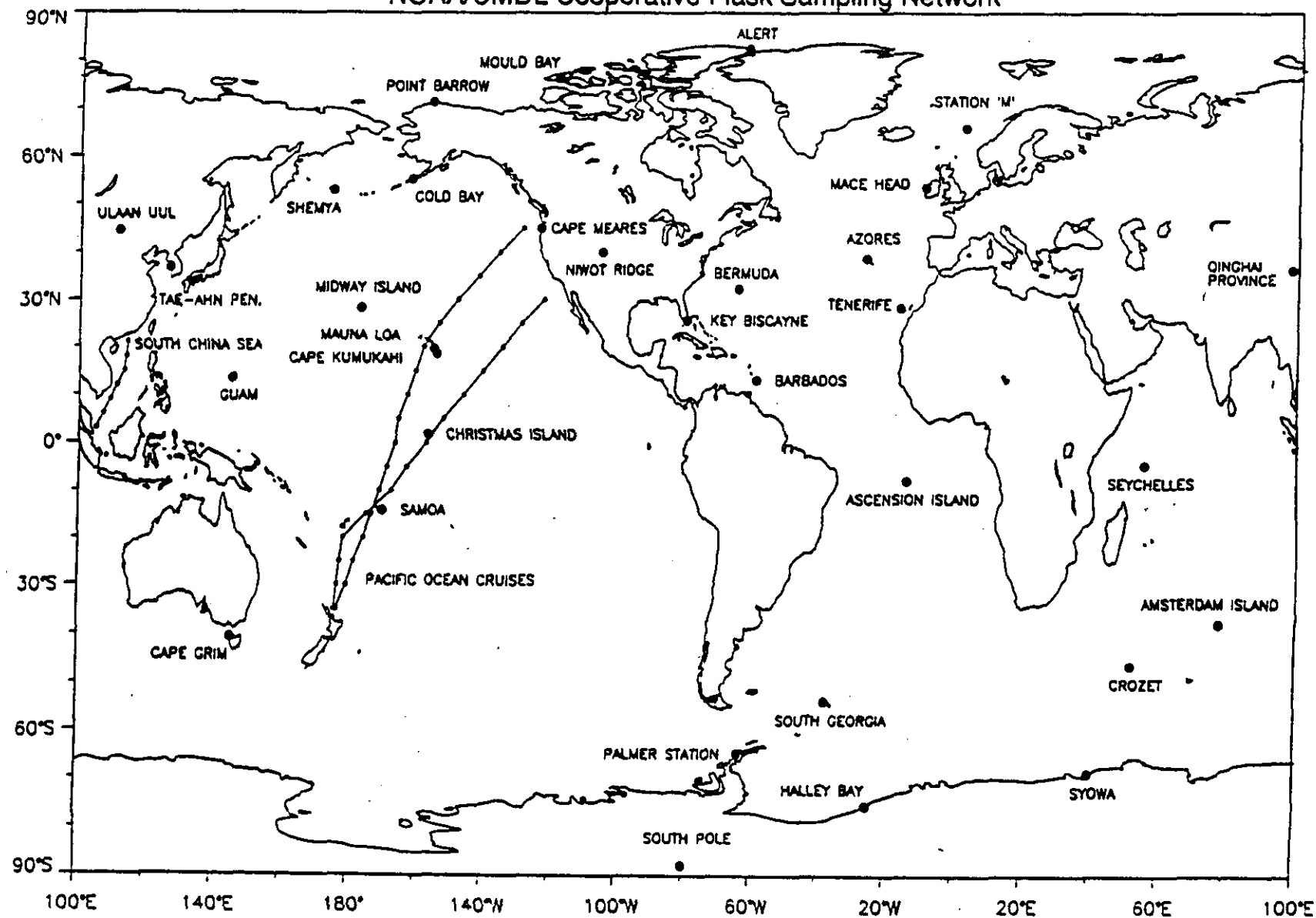
### ADVANTAGES

- \* COST-EFFECTIVE
  - MANY SPECIES FROM EACH FLASK  
(IN GASLAB, CO<sub>2</sub>, CH<sub>4</sub>, CO, H<sub>2</sub>, N<sub>2</sub>O  
13C, 18O IN CO<sub>2</sub>, 13C IN CH<sub>4</sub> LATER)
- \* WIDE GEOGRAPHICAL COVERAGE, WITH MODEST INVESTMENT.
- \* CAN INITIALLY EVALUATE PARTICULAR REGIONS OR PROCESSES.
- \* ALLOW EASY INTERCOMPARISON BETWEEN DIFFERENT AGENCIES OR COUNTRIES, BY EXCHANGING FLASK SAMPLES.
- \* SIMULTANEOUS MEASUREMENTS OF TRACE GASES WHICH FLASK SAMPLES CAN PROVIDE EXPAND POSSIBILITIES FOR INTERPRETATION OF VARIATIONS.

### DISADVANTAGES

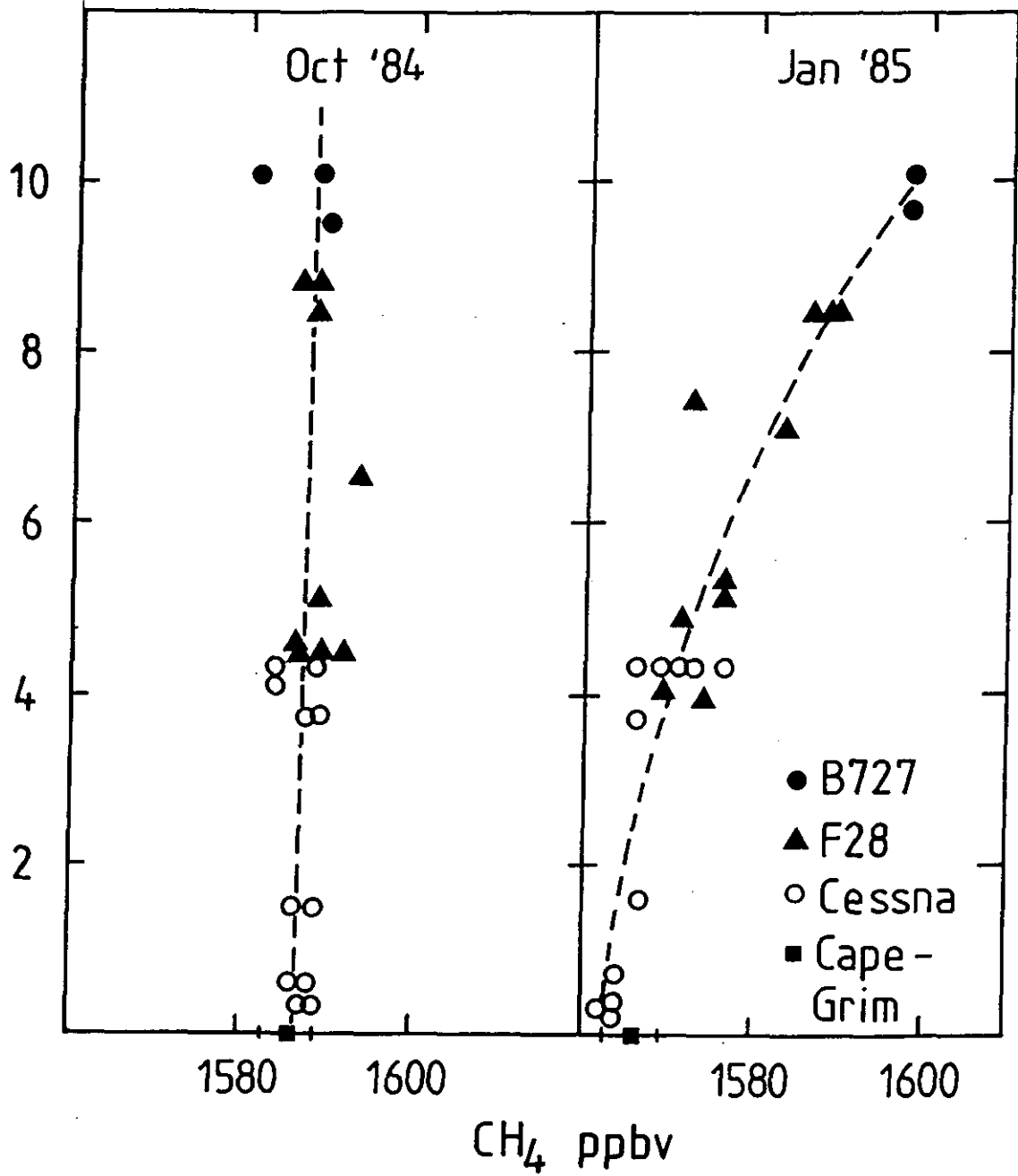
- \* TIME RESOLUTION INADEQUATE TO STUDY SOME PHENOMENA.
- \* FLASKS CAN BE BROKEN OR LOST.
- \* LOGISTICS OF MAINTAINING FLASK NETWORK CAN BE DIFFICULT IF HUNDREDS OR THOUSANDS OF FLASKS ARE INVOLVED.

# NOAA/CMDL Cooperative Flask Sampling Network



# Mid-latitude

SE Australia



YEAR: 1991

MONTH: 11

— 157 —

ALTITUDE (KM)

