

# *Data Archive Status*

*Presented by Mary Kleb*

# ICARTT Data

- INTEX-A (DC-8)

- Gas Phase Measurements:

$O_3$ , CO, NO,  $NO_2$ ,  $H_2O$ ,  $SO_2$ ,  $CO_2$ ,  $CH_2O$ ,  $HNO_3$ , PAN, VOCs, OVOCs, OH,  $HO_2$ ,  $CH_3OOH$ ,  $H_2O_2$ , PAA,  $HO_2NO_2$ , HCN,  $CH_3CN$

- Particle Measurements:

chemical composition ( $Cl^-$ ,  $NO_3^-$ ,  $SO_4^{=}$ ,  $C_2O_4^{=}$ ,  $Na^+$ ,  $NH_4^+$ ,  $K^+$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Be^7$ ,  $Pb^{210}$ ), particle number density, number and size distribution, optical properties, cloud microphysical properties

# ICARTT Data (continued)

- INTEX-A (DC-8) (continued)
  - DC-8 Overlap measurements:
    - CO (DACOM & WAS)
    - H<sub>2</sub>O (DLH & hygrometer)
    - HNO<sub>3</sub> (mist chamber & CIMS)
    - CH<sub>2</sub>O (tunable diode laser, enzyme fluorescence)
    - benzene (WAS & photo ion detector)
    - HCN (GC/reduction gas detector & CIMS)
    - H<sub>2</sub>O<sub>2</sub> (HPLC separation/enzyme fluorescence detection & CIMS)
    - PAA (enzyme fluorescence detection & CIMS)
    - particle chem. composition (SO<sub>4</sub><sup>=</sup>, (filter (<8μm), mist chamber (<2.5μm) & PILs (<1μm); Cl<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, Na<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, (filter & PILs)

# ICARTT Data (continued)

- NEAQS-ITCT 2004 (WP-3D)

- Gas Phase Measurements:

$O_3$ , CO, NO,  $NO_2$ ,  $NO_y$ ,  $H_2O$ ,  $SO_2$ ,  $CH_2O$ ,  $HNO_3$ , PAN, VOCs (PTRMS & WAS), OVOCs (PTRMS),  $HO_2+RO_2$  (CIMS)

- Particle Measurements:

Particle chem. comp (Org. carbon,  $SO_4^{=}$ ,  $NH_4^+$ ,  $NO_3^-$  by AMS and  $NH_4^+$ ,  $Ca^{2+}$ ,  $Cl^-$ ,  $Mg^{2+}$ ,  $NO_3^-$ ,  $K^+$ ,  $Na^+$ ,  $SO_4^{=}$  by PILs), particle number and size distributions, cloud microphysical properties,

# ICARTT Data (continued)

- DC-8/WP-3D Overlap

- Gas Phase Measurements:

- $O_3$  PAN
    - CO  $CH_3CN$
    - $NO_2$   $CH_3OH$
    - $H_2O$  DMS
    - $SO_2$  MEK
    - $CH_2O$  OCS
    - $HNO_3$  VOCs

- Particle Measurements:

- Ultrafine particle number density
    - Chem. Composition ( $Cl^-$ ,  $NO_3^-$ ,  $SO_4^{=}$ ,  $Na^+$ ,  $NH_4^+$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ )
    - Number/size distribution

# ICARTT Data (continued)

- ITOP

- BAE-146:

- Gas Phase Measurements:**

- $O_3$ , CO, NO,  $NO_2$ ,  $H_2O$ ,  $CH_2O$ ,  $HNO_3$ , PAN,  
 $RO_2+HO_2$ , Alkyl nitrates, VOCs

- Particle Measurements:**

- particle chem. comp (Org. carbon,  $SO_4^{=}$ ,  $NH_4^+$ ,  
 $NO_3^-$  by AMS), particle number density, particle  
number and size distribution

- DLR: working on obtaining data



# Future Work

## Other datasets to be considered

NARE ('93, '96, '97) (NOAA)

ACE-1 ('95) (NSF) ✓

ACE-2 ('97) (NSF)

SOS ('99) (NOAA)

TOPSE ('00) (NSF)

ACE-Asia ('01) (NSF) ✓

ITCT-2K2 ('02) (NOAA)

ITOP ('04) (EU) ✓ (still need DLR)

NEAQS-ITCT-2K4 ('04) (NOAA) ✓

AMMA ('06) (EU)

TexAQS ('00, '06) (NOAA)

NAMMA ('06) (NASA) ✓

ARCPAC ('08) (NOAA)

POLARCAT ('08) (EU)

MILAGRO/IMPEX ('06) (NSF) ✓

✓ = We have the data!