

GLOBAL AEROSOL PICTURE

5 to 7 AEROSOL TYPES

~ 2 SIZES (ACCUM < 1 μm)
COARSE > 1 μm)

~ 5 COMPOSITIONS {
SULFATE
SEA SALT
"DUST"
CARBONACEOUS
BLACK CARBON

MODELS - BEGINNING TO COMPARE.

- SOURCES
- MECHANISMS
- VERT, HORIZ. DIST.

INTERCOMPARISONS

③

- "VERY GOOD AGREEMENT"
 - 10% ?
 - FACTOR OF 2 ?
 - ORDER OF MAGNITUDE ?
- SPATIAL / TEMPORAL HETEROGENEITY
SELECTIVE SAMPLING
- MECHANISMS, ESPECIALLY NON-LINEAR
 - e.g., DUST SOURCE REGIONS
 - ⇒ OLD ONES ARE NOT USUALLY PRODUCTIVE
- "INDIRECT EFFECT"
 - CORRELATION ~~⇒~~ CAUSALITY

(4)

- "BEST MODELS" VS.
STRENGTHS & WEAKNESSES OF MODELS

- MODEL / MEASUREMENT
UNCERTAINTIES

WHAT CAN WE REALLY TAKE SERIOUSLY?

• DOUBLE PRECISION ARITHMETIC

- "COMMUNITY CONSENSUS" MECHANISMS

→ REALLY TEST MECHANISMS

→ CRITICAL TESTS

→ MORE DETAIL

⇒ STARTING TO HAPPEN

- NEED PARTICLE "TYPE" TO MAKE
SENSE OF AIR MASS EVOLUTIONS
SOURCES, ETC.

(α , β) $\xrightarrow{\text{SPATIAL PROXIMITY}}$ TYPE

(OFTEN THE BEST WE CAN DO...)

⇒ MORE DETAIL. ("PROCESS STUDIES")