

TWIN OTTER: RESULTS & ORGANIZATION



SPECIES MEASURED: CONTS AND/OR GRAB

CO₂, CO, CH₄, C₂-C₅ HYDROCARBONS

H₂O, O₃, CO₂, CO, CH₄, C₂H₂, C₂H₄,

C₃H₆, HCHO, HCOOH, CH₃OH,

CH₃COOH, NO, NO₂, HCN, NH₃

CO₂, H₂O

TEM GRIDS (182 - DUST, CITY, FIRE)

PM SIZE DIST 0-1 NM & INT PM₁

W/ OTHER AC: SUPERSET FOR

VALIDATION OF REGIONAL MODELS!!

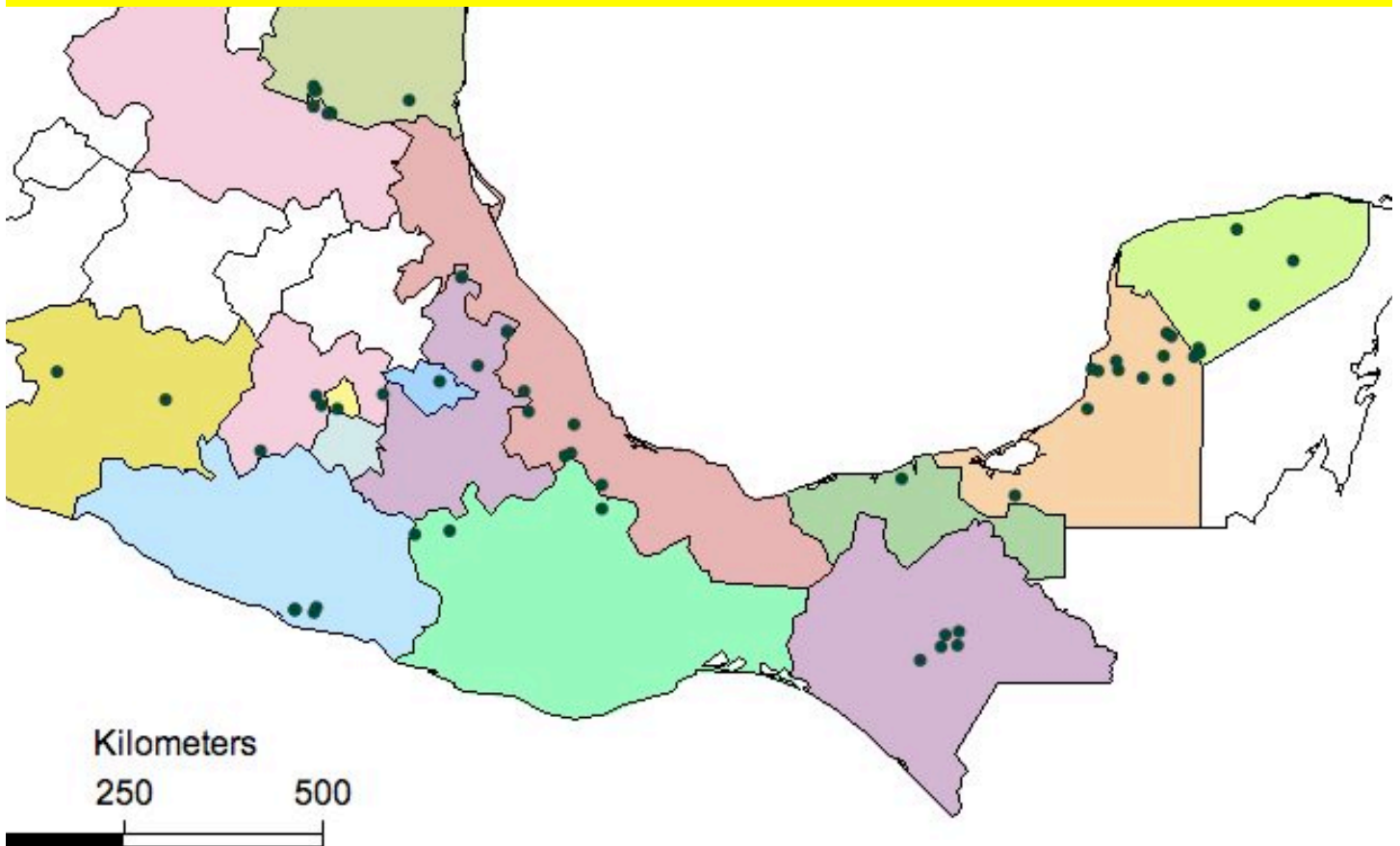
TWIN OTTER: RESULTS & ORGANIZATION

EF 63 FIRES

13 veg types

Ag waste, savannas,

Temp & Trop Forests



INPUT FOR REGIONAL MODELS !

TWIN OTTER: RESULTS & ORGANIZATION



TWIN OTTER: RESULTS & ORGANIZATION

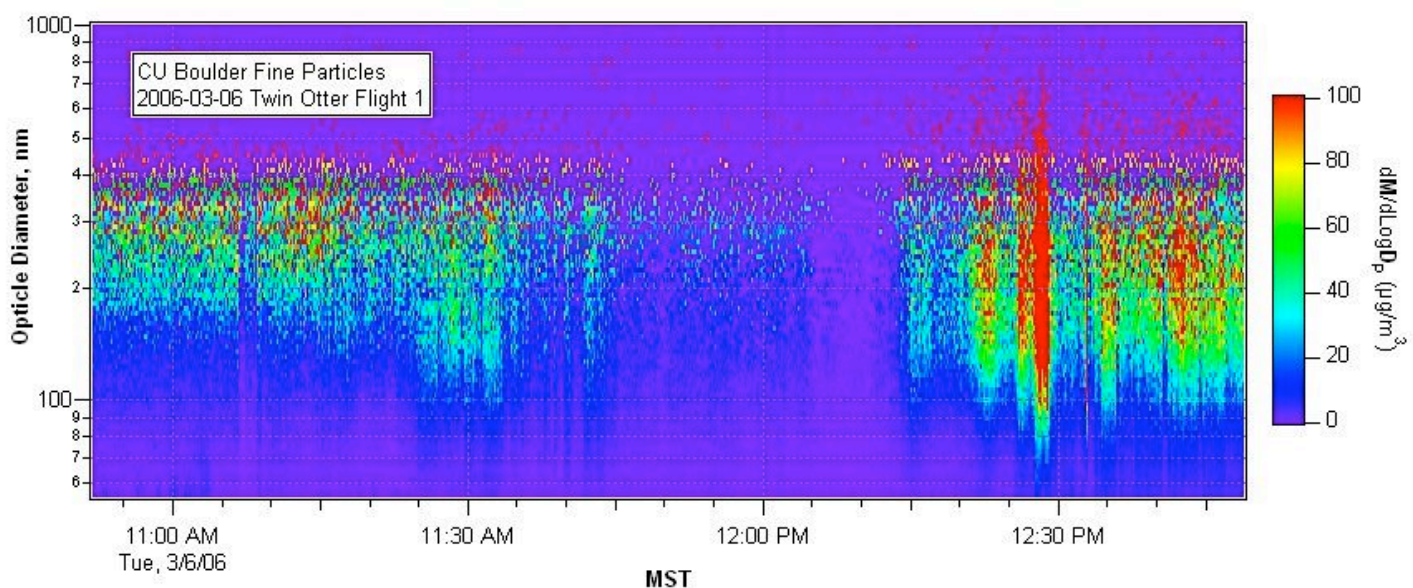
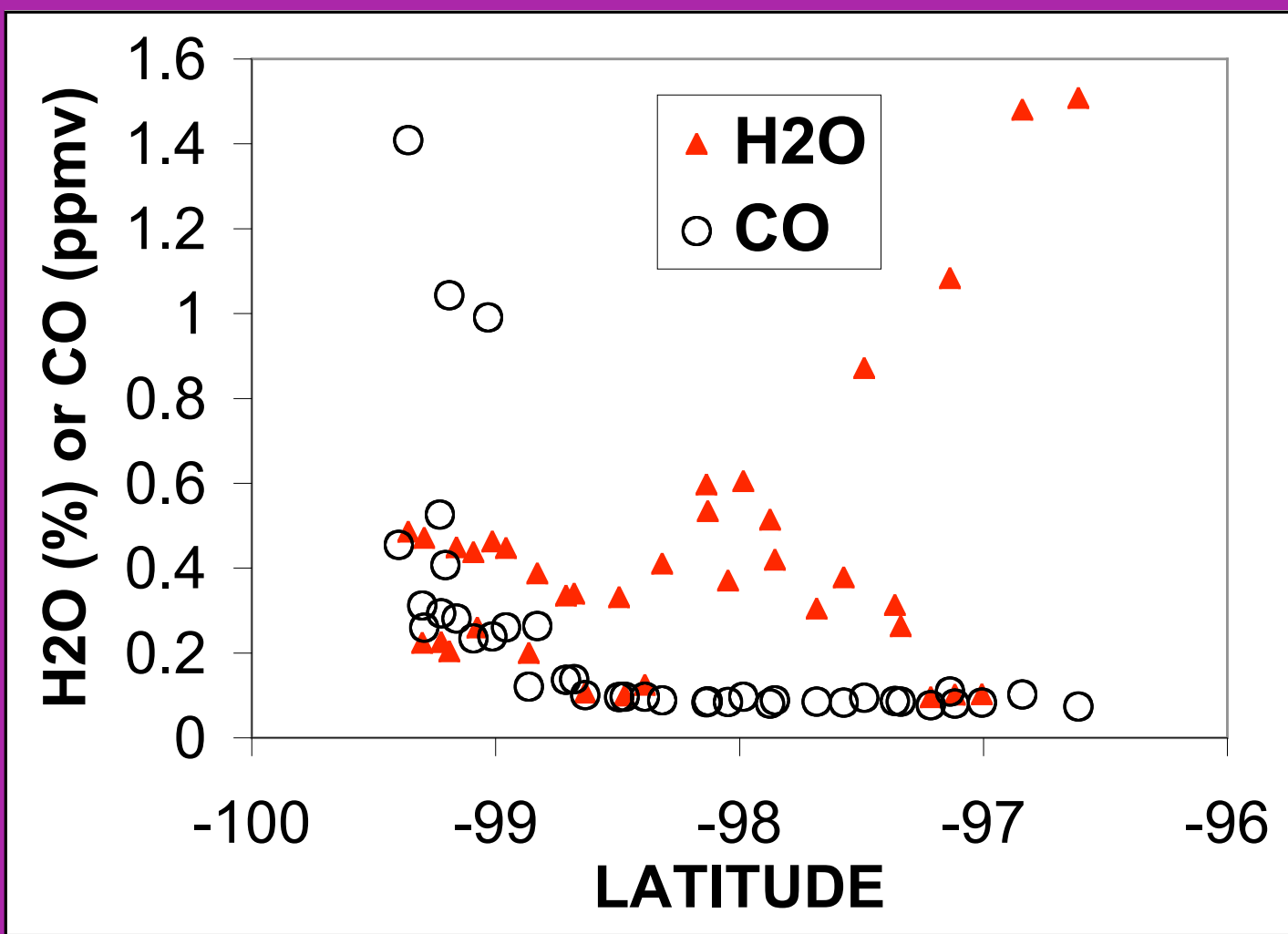


TWIN OTTER RESULTS: DETAILED EXAMPLE

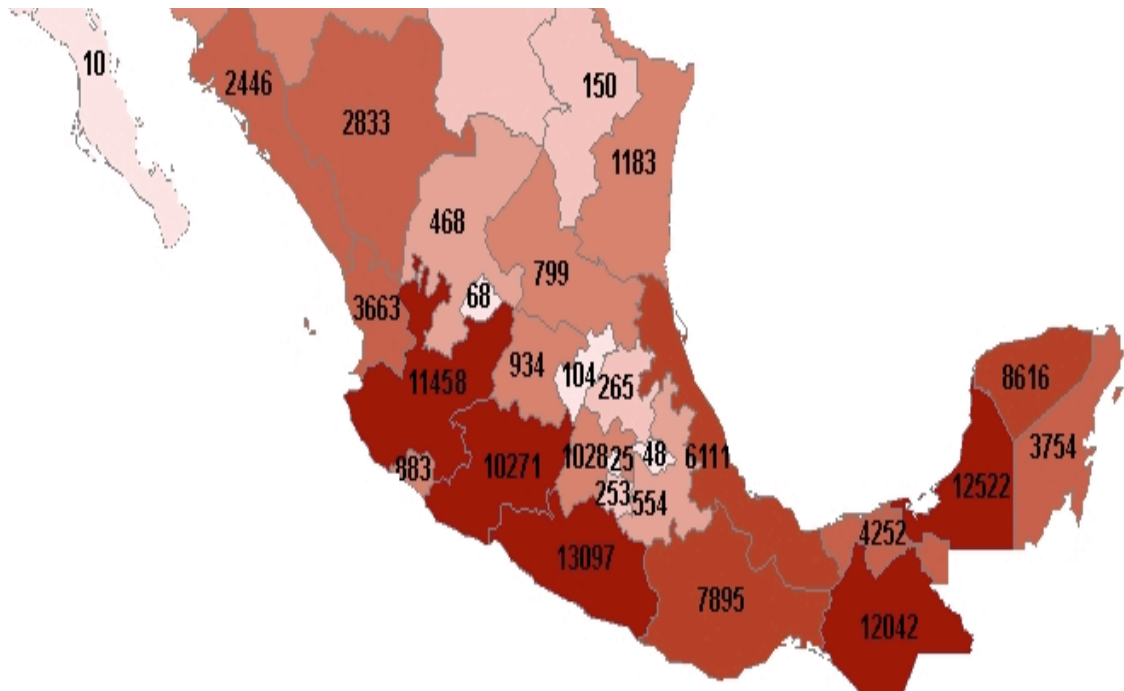
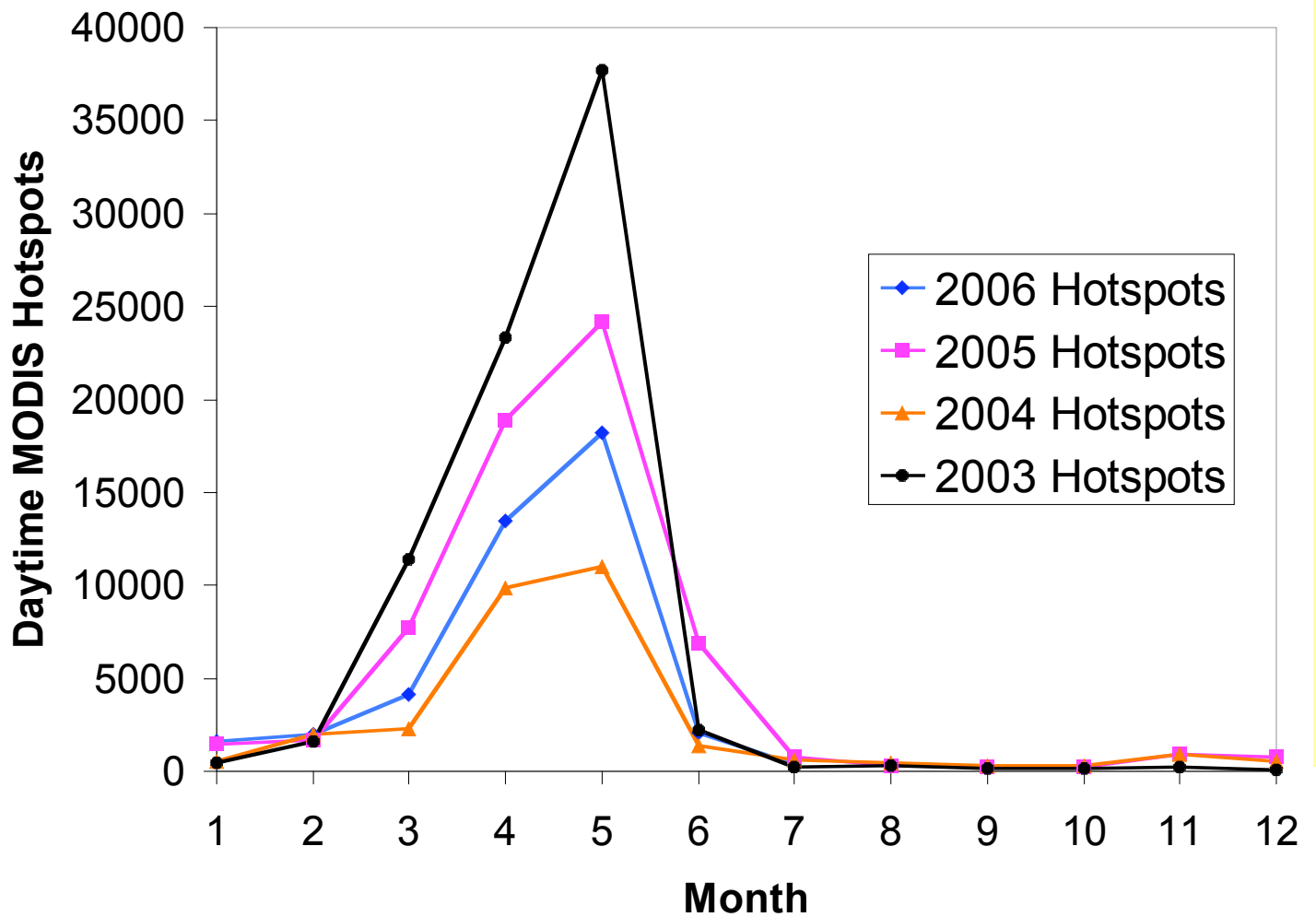
CO₂	1674.4
CO	84.2
MCE	0.927
NO	6.210
NO₂	5.576
NO_x as NO	9.846
CH₄	6.999
C₂H₂	0.2415
C₂H₄	0.9104
C₂H₆	0.3505
C₃H₆	0.1887
HCHO	nm
CH₃OH	1.4919
CH₃COOH	nm
HCOOH	nm
NH₃	2.4606
HCN	1.5179
C₃H₈	0.9622
isobutane	0.1216
n-butane	0.3301
t-2 butene	0.0134
1-butene	0.0336
isobutene	0.0504
c-2-butene	0.0101
cyclopentane	0.0042
isopentane	0.0216
n-pentane	0.0431
1,3 butadiene	0.0485

AVAILABLE TO ALL FOR EACH FLIGHT

TWIN OTTER RESULTS: DETAILED EXAMPLE

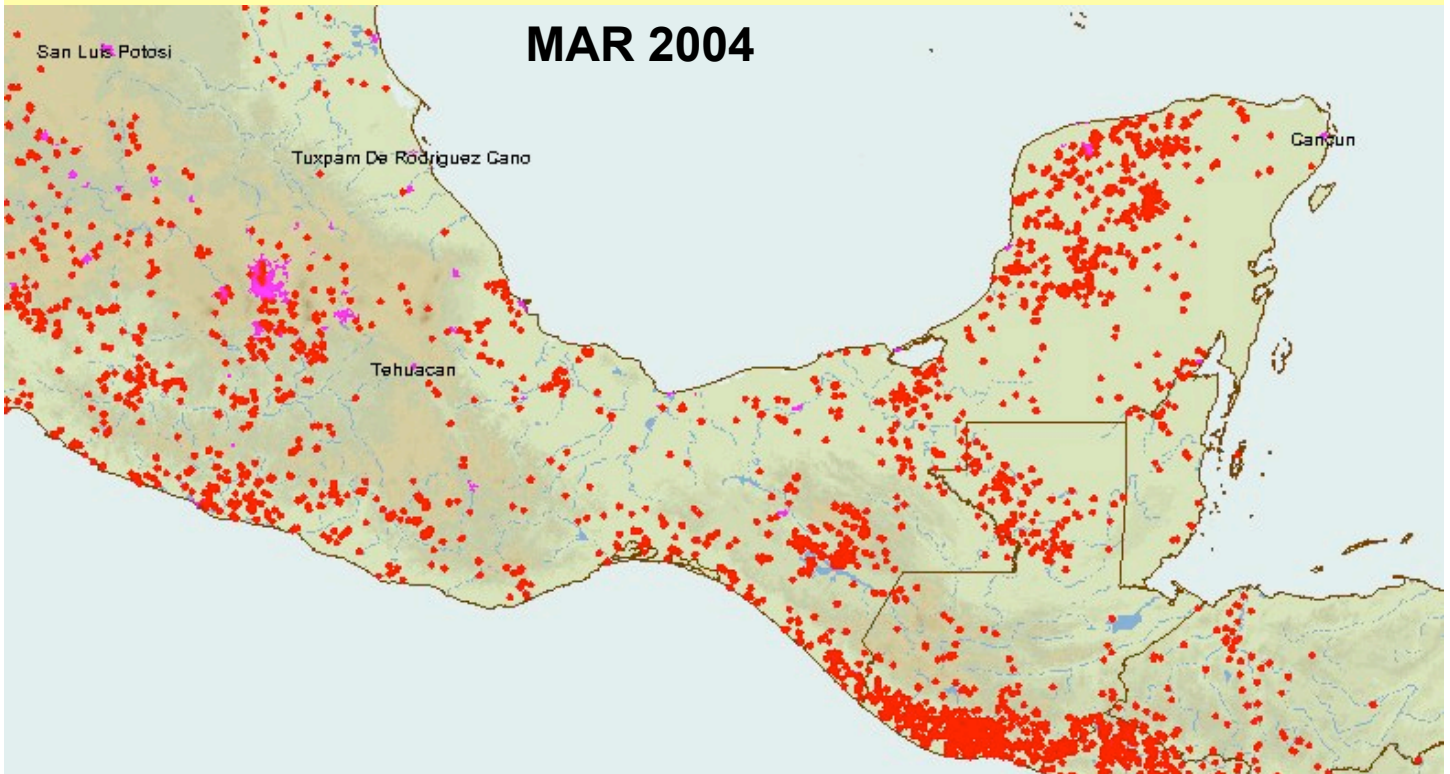


TWIN OTTER: PRELIMINARY FINDINGS

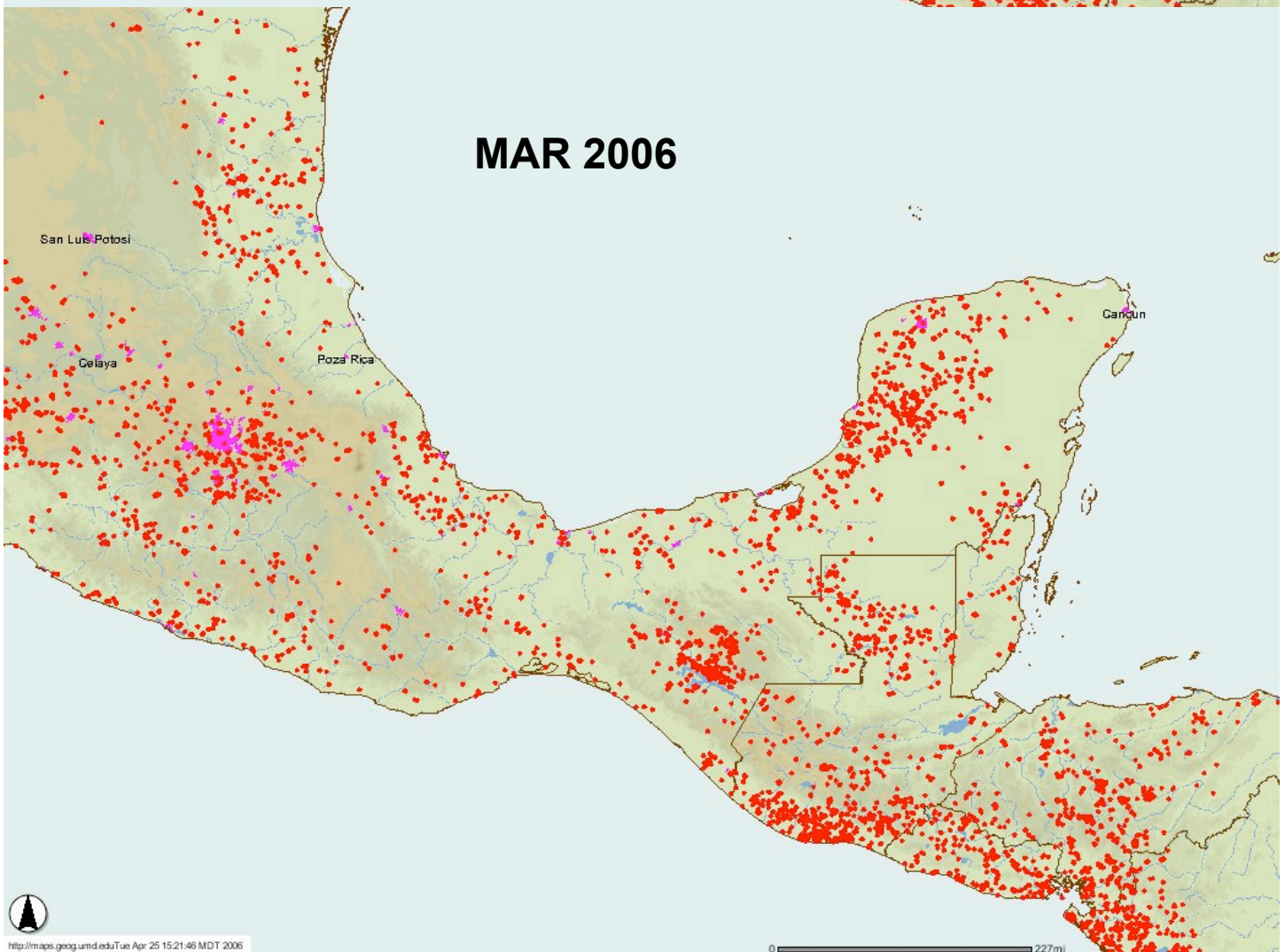


TWIN OTTER: PRELIMINARY FINDINGS

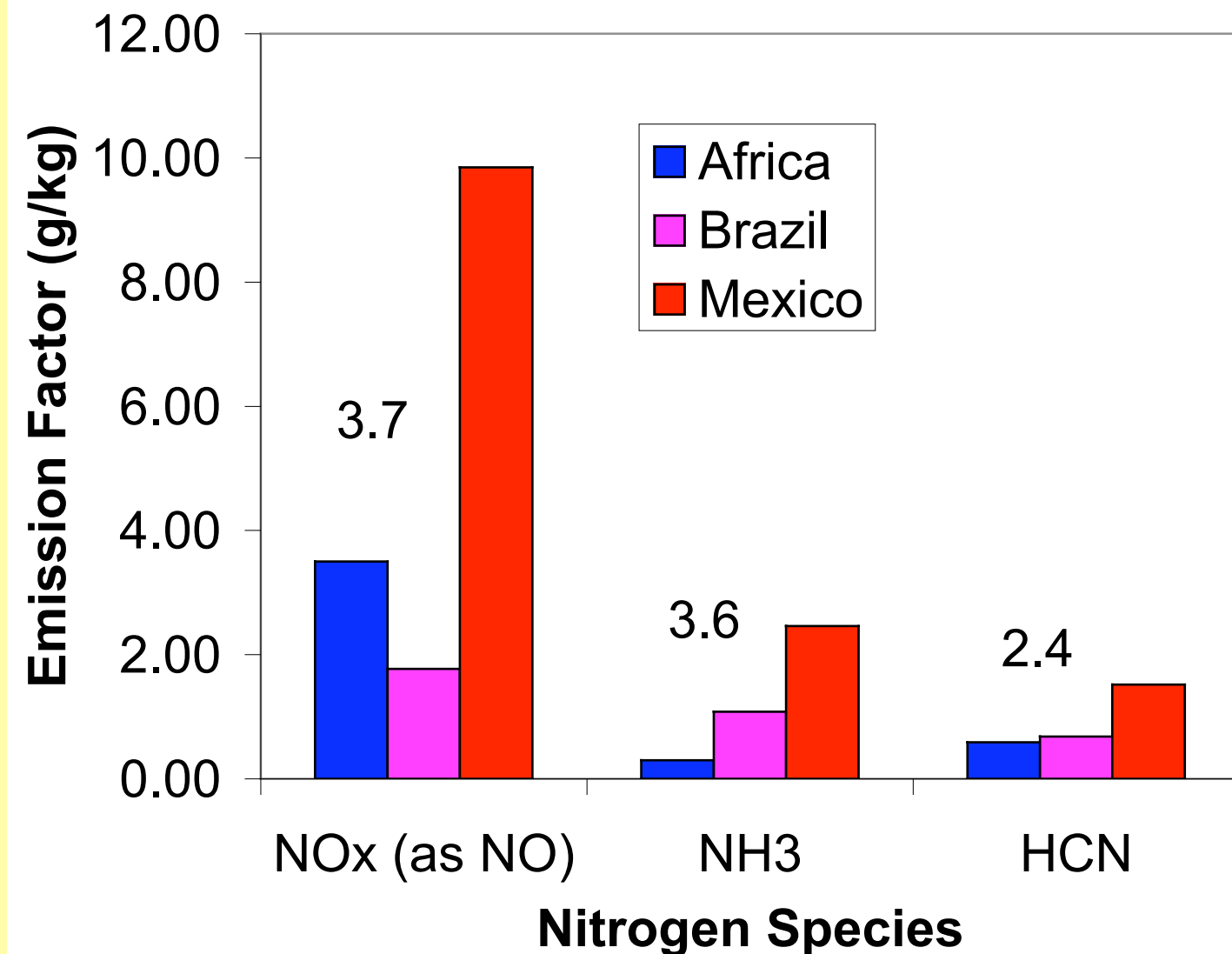
MAR 2004



MAR 2006



TWIN OTTER: PRELIMINARY FINDINGS



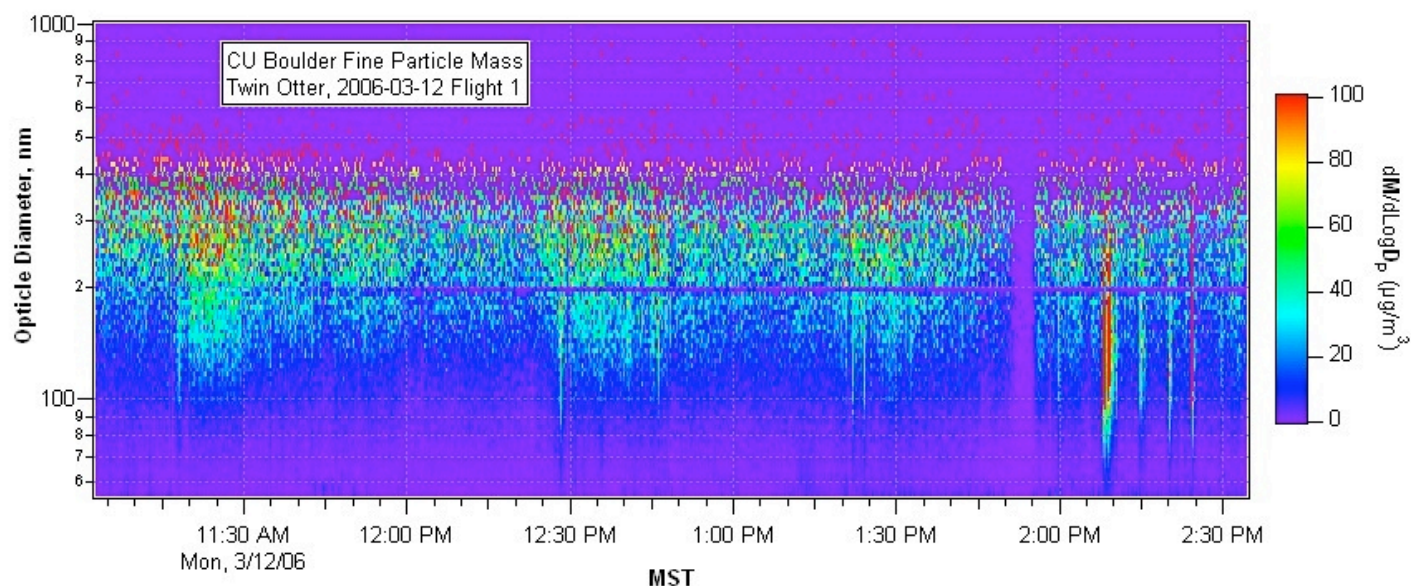
HIGH N EMISSIONS!

High NOx + Dust → O₃ ↓

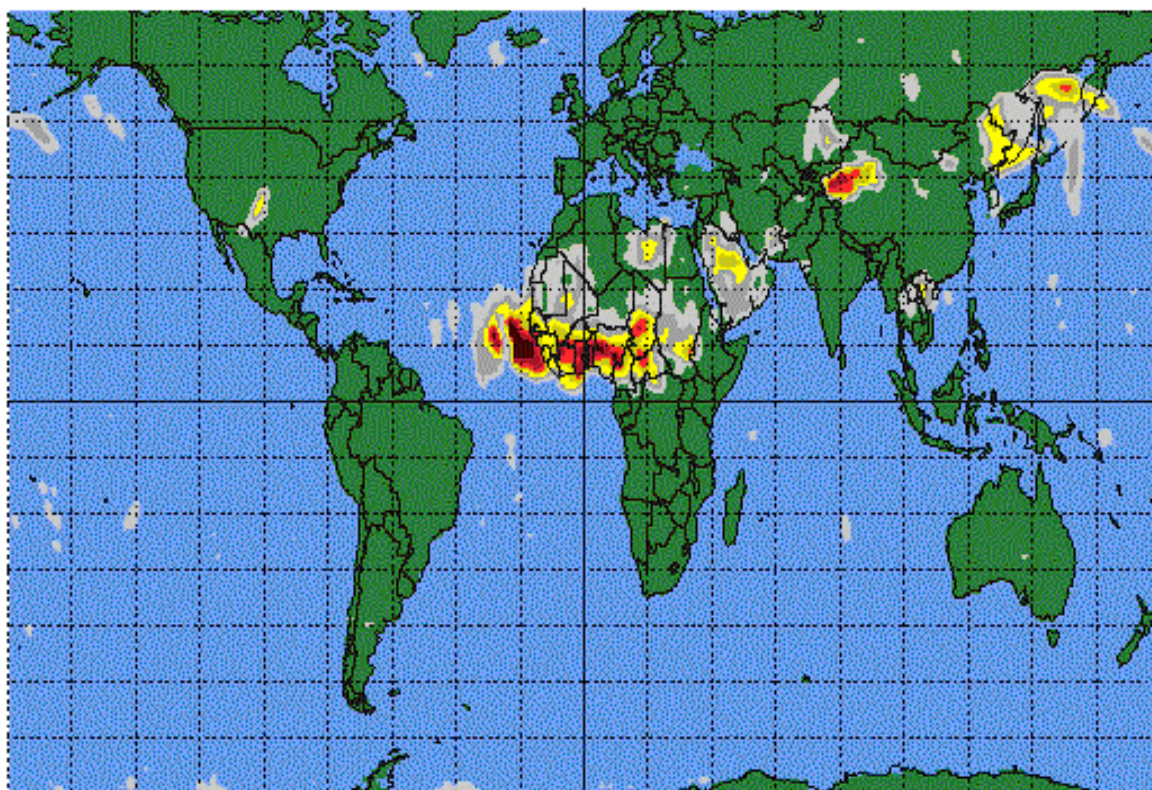
High NH₃ → PM → O₃ ↓

High HCN → High CH₃CN?

TWIN OTTER: PRELIMINARY FINDINGS



OMI Aerosol Index
on March 12, 2006



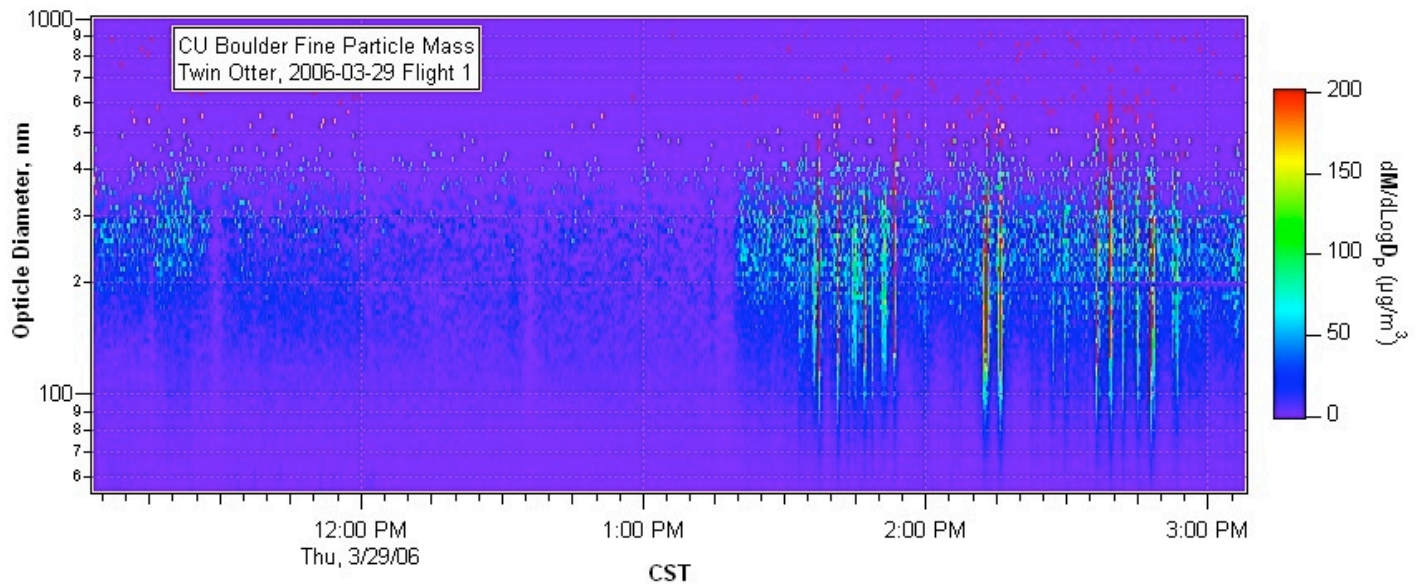
GSFC



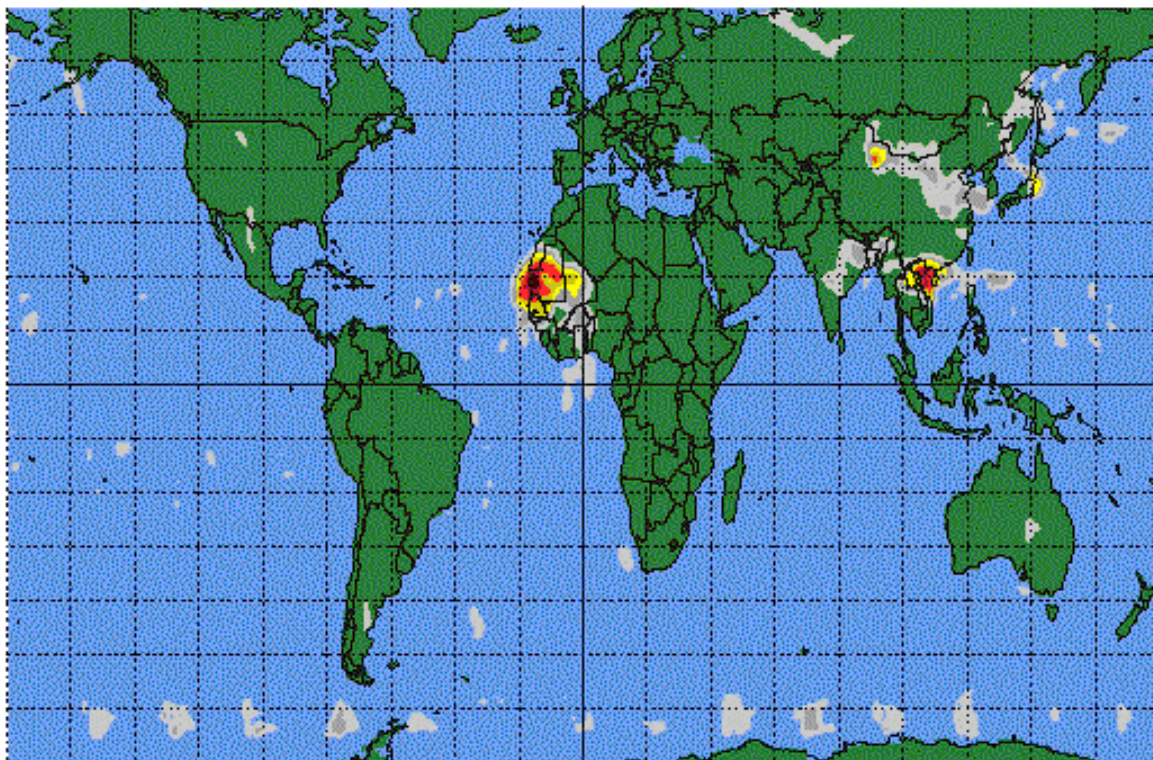
NIVR-FMI-NASA-KNMI



TWIN OTTER: PRELIMINARY FINDINGS



OMI Aerosol Index
on March 29, 2006



GSFC

NIVR-FMI-NASA-KNMI

