

In-Situ Measurements of Biomass Burning during the MILAGRO Campaign

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The objective of this part of the Twin Otter campaign was to conduct a comprehensive characterization of vegetation characteristics, fire behavior and biomass consumption on the ground for typical fires near Mexico City (MC) that were sampled by the Twin Otter aircraft. Two planned fires were sampled in forest and savannahs in the state of Morelos, SE of MC. Intensive measurements were conducted before, during, and after the fire. The aircraft flew the plumes of those two fires. Four additional fires that were flown by the aircraft were located and sampled few days after the flight. Biomass consumption and fire extent was estimated by sampling adjacent burn and un-burnt plots. Two of the fires were located near the freeway Mexico-Puebla, E of MC. A third burnt area was sampled on the SW of Mexico City, and the fourth one near Toluca, W of MC. Biomass consumption for the rest of the 63 fires flown by the Twin Otter is being estimated by assigning characteristic fuelbeds to the most recent vegetation type (series III) mapped by Mexico's INEGI. The assigned fuel beds are then run through fire behavior and fuel consumption models developed by the USFS.