

Overall View of the Southern Great Plains CART Site

D. L. Sisterson
Environmental Research Division
Argonne National Laboratory
Argonne, Illinois

R. A. Pepler
Cooperative Institute for Mesoscale Meteorological Studies
University of Oklahoma
Norman, Oklahoma

J. Teske
ERC, Incorporated
Billings, Oklahoma

Introduction

The Southern Great Plains (SGP) Cloud and Radiation Testbed (CART) site consists of 24 extended facilities (two located at the central facility) used to characterize the spatial variability of the 55,000-square-mile study area, 4 boundary facilities used to characterize the boundary conditions and the associated advective tendencies in and out of the study area, 3 intermediate facilities used to characterize the lower atmospheric state at intermediate scales (i.e., between the central and boundary facilities within the study area), and a

central facility used to characterize the radiative state and associated meteorological conditions in a narrow atmospheric column (i.e., the “soda straw”) at the center of the study area. Of the 24 extended facilities, 14 are pasture or rangeland sites, 9 are agricultural or cropland sites, and 1 is a forest site. These sites proportionally represent the major land use categories of the entire SGP CART site study area. Figure 1 shows a photograph for each of the 32 facilities in their appropriate counties within the study area, allowing visual interpretation of various measurements related to surface properties.

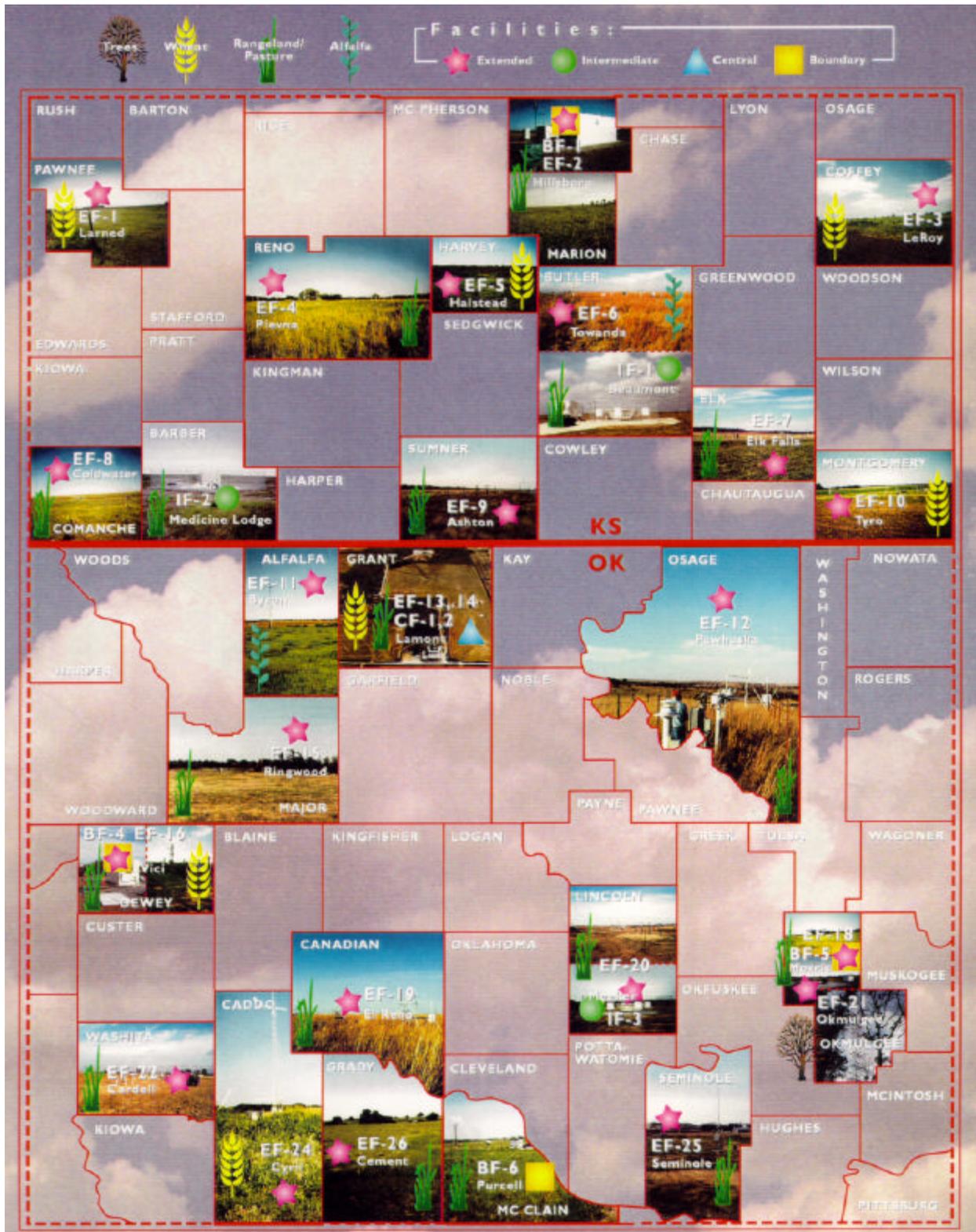


Figure 1. Overall view of the SGP CART site. (For a color version of this figure, please see http://www.arm.gov/docs/documents/technical/conf_9803/sisterson-98.pdf.)