
NCAR
MMM* JOINT SEMINAR *RAL

**PHYSICAL MODELING OF WILDFIRE
BEHAVIOUR**

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We present some numerical results obtained during the European projects FIRESTAR and FIREPARADOX (5th-6th Framework programs) concerning the physical modeling of wildfires. After a short introduction of the problem of wildfires in the world, we present a model based on a fully physical approach, using a multiphase formulation, including the set of balance equations for mass, momentum and energy, governing the evolution of the coupled system formed by the vegetation and the surrounding gaseous phase. Some numerical results obtained for various types of vegetation such as grassland, Mediterranean shrubland and pine stand are shown to illustrate the possibility of this system to reproduce some physical phenomena characterizing the behaviour of wildfires (plume dominated and wind driven fires, surface to crown fire transition, etc). The numerical results (rate of spread, fire line intensity) were also compared with experimental data published in the literature.

Tuesday, 18 February 2008, 10:00 AM
Refreshments 9:45 AM
NCAR-Foothills Laboratory
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