

Impact of fire above the surface and in the atmosphere: before, during and after

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50 ha fires will be fast:

- Rate of 100 ha/h
- Fireline intensity around 6000 kw/m

Research questions:

- To observe how radiative and surface energy balance are modified during and after the fire
- To observe if the fire plume reaches the boundary-layer top and its effect in the entrainment zone
- To determine changes in the small scales of the wind due to the bidirectional interaction between the turbulence and fire
- To observe changes of the isotope composition in and around the fire plume

Experiment design:

- 2 fires about 50 ha each (one after the other the same day), both ignited around same time (morning)
- We can drive the fire in order to fulfil the observations needed for the ongoing research

Resources provided by Fire brigade Generalitat:

- Burns will be carried out by fire service resources
- They can provide helicopters as platforms for sensors
- They can provide a basecamp (tents, servers, network and facilities) for the experiments