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Development of a remote sensing meteorological network assimilated to a fine grid NWP model for the nuclear power plants security in Switzerland

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The nuclear power plants in operation in Switzertland are all located on the Swiss Plateau at a distance of 100km or less one from the other: this essentially means that they undergo similar weather conditions, the Swiss Plateau consisting of a basin surrounded by mountains in the N-NW (Jura mountains) and by the Alps in the S-SE.

As a consequence, this peculiar situation allows us designing a meteorological security tool based on a network of ground-based and remote sensing stations that measure the instantaneous inflow / outflow conditions over the Swiss Plateau. This network will bring the adequate database to a fine grid numerical weather prediction model (aLMo2, 2km horizontal grid cell resolution) directly designed for providing the right tool for decision makers in case of a nuclear accident over the Swiss Plateau.