Monitoring the boundary layer height at the Junfraujoch (Switzerland, 3470m).

and

E-PROFILE: the European network of wind profilers and automatic Lidars.

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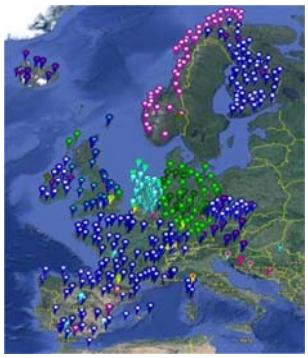
EUMETNET



Monitoring the **planetary boundary layer** is crucial to understand the dynamics in the atmosphere and the dispersion of pollutants. Ceilometers are low-costs Lidars that can measure aerosols and clouds 24/7. Since September 2014 a ceilometer is installed at the Kleiner Scheidegg (2060m). It allows to determine if (and when) the **Junfraujoch** GAW station (3470m) is influenced by the emissions in the lower troposphere. First case studies and the algorithm developed to automatically retrieve the boundary layer height will be presented.

Radar wind profilers are powerful instruments to measure wind profiles in the whole troposphere and the lower stratosphere. They can operate continuously and with a high temporal resolution. A single wind profiler has the potential to significantly improve numerical weather predictions. **Automatic Lidars and ceilometers** are already used to determine cloud base height in all major airports. However recent ceilometers can measure aerosol profiles and provide many other applications like volcanic ash detection and fog prediction. **E-PROFILE** is the EUMETNET observation programme to regroup winds profilers and automatic Lidars measurements in Europe. It aims to ensure quality-assured measurements and optimal retrievals.