**General**

According to forecasts of the VAAC, volcanic ash will pass over Switzerland during Friday afternoon at altitudes between 6000 and 10000 m asl. Under clear sky conditions, ash can be detected up to 10000 m by the LIDAR. Below, no ash is expected.

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**Raman LIDAR Payerne**

The LIDAR is running normally. **No traces of volcanic ash** are detected.

ASR stands for aerosol scattering ratio, defined as the ratio of aerosol backscatter $\beta_{Aer}$ to molecular backscatter $\beta_{Mol}$. ASR of clean air is one and values above one indicate aerosol presence.

ASR is derived from the ratio of the total backscatter ($\beta_{Tot} = \beta_{Aer} + \beta_{Mol}$) to molecular backscatter $\beta_{Mol}$ as:

$$\text{ASR} = \frac{\beta_{Tot}}{\beta_{Mol}}$$

The molecular backscatter is obtained from pure rotational Raman scattering of nitrogen and oxygen excited by 355 nm radiation, and the total backscatter from elastic scattering at the same wavelength. For more details on the method see [http://eflum.epfl.ch/cms/site/eflum/op/edit/page-17850.html](http://eflum.epfl.ch/cms/site/eflum/op/edit/page-17850.html), [http://eflum.epfl.ch/research/lidars](http://eflum.epfl.ch/research/lidars)
Note that the aerosol origin cannot be defined by lidar measurements only, but has to be confirmed by other methods (direct measurements, back-trajectory, etc.).

Weather conditions

Clouds and rain for Thursday afternoon. Friday, rain and clouds, improvement towards the evening. Saturday, generally sunny. Chance to detect ash Friday night is limited due to clouds and rain.

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