

# METHODS

# APPLICATIONS

## LM (Light microscopy)

Mass concentration and sedimentation rate of opaque (= anthropogenic) and transparent (= mineral and biogenic) particles

## SEM/EDS

(Scanning electron microscopy coupled to x-ray energy dispersive spectroscopy)

Automated chemical and morphological analysis of single particles (> 600 particles)

## PACLA

(Particle Classifier Software)

Identification and quantification of sources (natural vs. pollutant) on a statistical base (cluster analysis)

## ICP-MS

(Inductively coupled plasma mass spectrometry)

Detection of metals and non-metals at low concentrations (part per quadrillion, ppq)

## SIGMA-2 PASSIVE SAMPLER



### Air quality monitoring network

(Governmental Offices for the Environment)

### Air quality in mining, quarrying and dumping environments

(private industry)

### Monitoring of construction works

(private and public properties)

### Asbestos monitoring during renovation works

(long-term measurements)

### Volcano Monitoring

(natural hazard assessment)

### Bio-monitoring

(pollen, spores, agriculture)

### Raman spectroscopy

Fingerprinting of specific molecules

# SIGMA-2

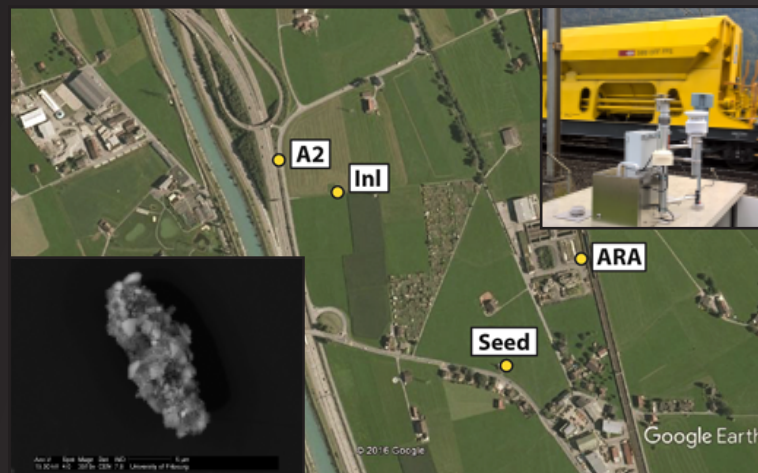
## POSSIBLE FIELDS OF APPLICATION



### A) Monitoring of quarries (e.g. cement industry)



### B) Monitoring of road and railway immissions (transect measurements)



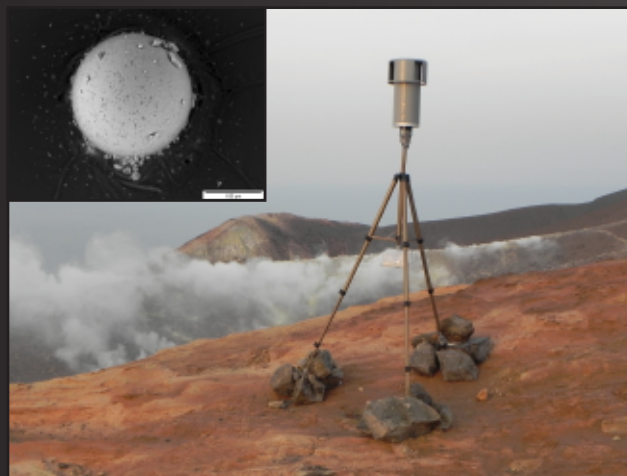
### C) Long-term asbestos monitoring at ambient air



### D) Monitoring of dumps (e.g. slag)



### E) Volcano monitoring



### F) Monitoring of construction work



Details about the specific projects are available upon request: [info@particle-vision.ch](mailto:info@particle-vision.ch)