



# Who am I? What do I do with COSMO?

- Currently division Bio-environmental Applications at MeteoSwiss
- After 1.1.2013: Division Numerical Models at MeteoSwiss
- Develop and run the pollen module of COSMO-ART (Aerosols and Reactive Trace gases)

=>2011 birch, 2012 birch and grass operationally



# Pollen concentration depends on...

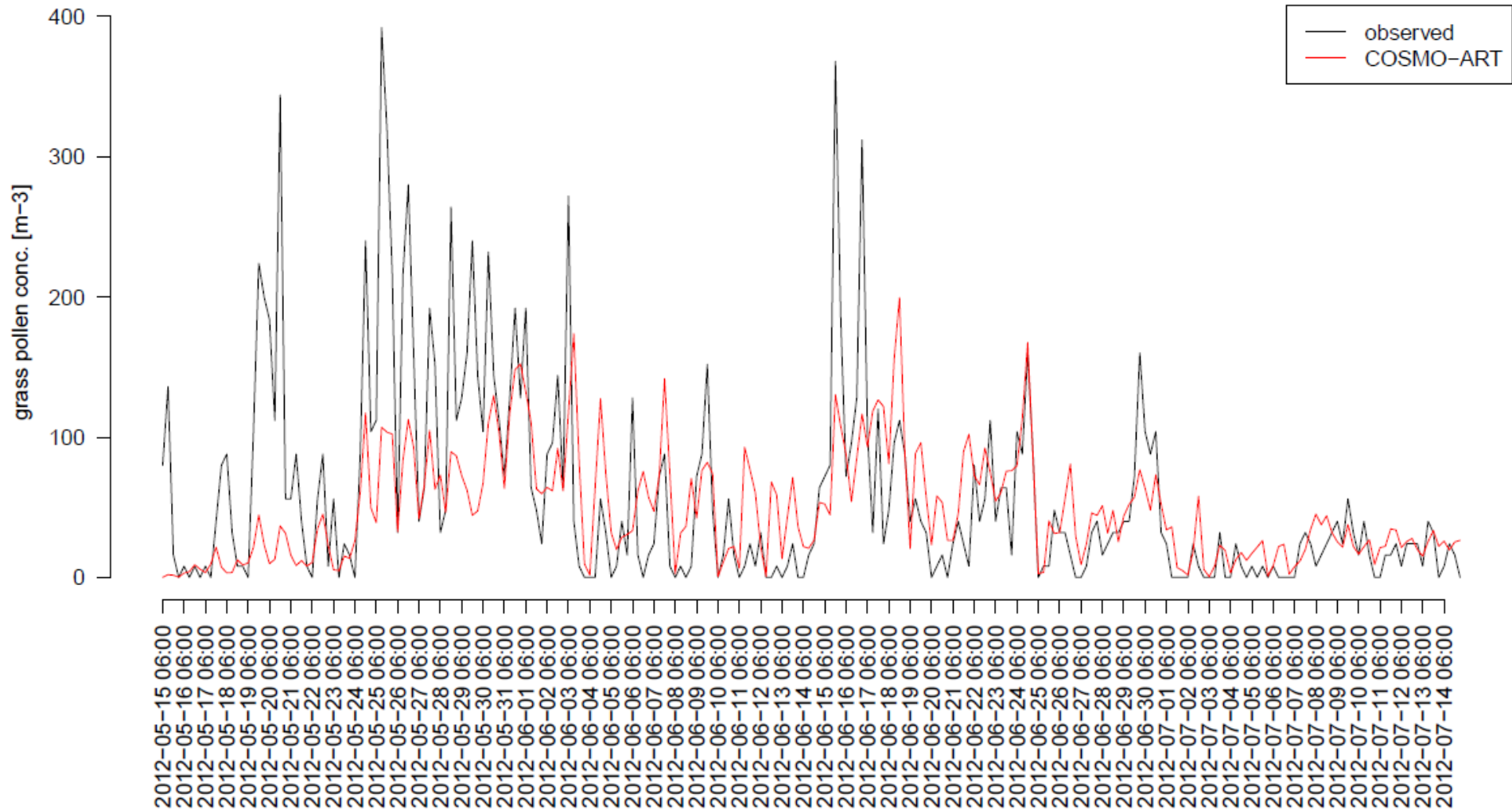
- Pollen properties (shape, density)
- Emission
  - Location of the plants
  - Phenology (spatially very variable)
  - Altitude
  - Meteorology: temperature, humidity, wind, precipitation, radiation?
- Sedimentation
- Transport (horizontal and vertical)
- Plant physiology is very complex



# Grass pollen concentration 2012

## Zurich 6h-resolution

Station PZH 6-hourly data

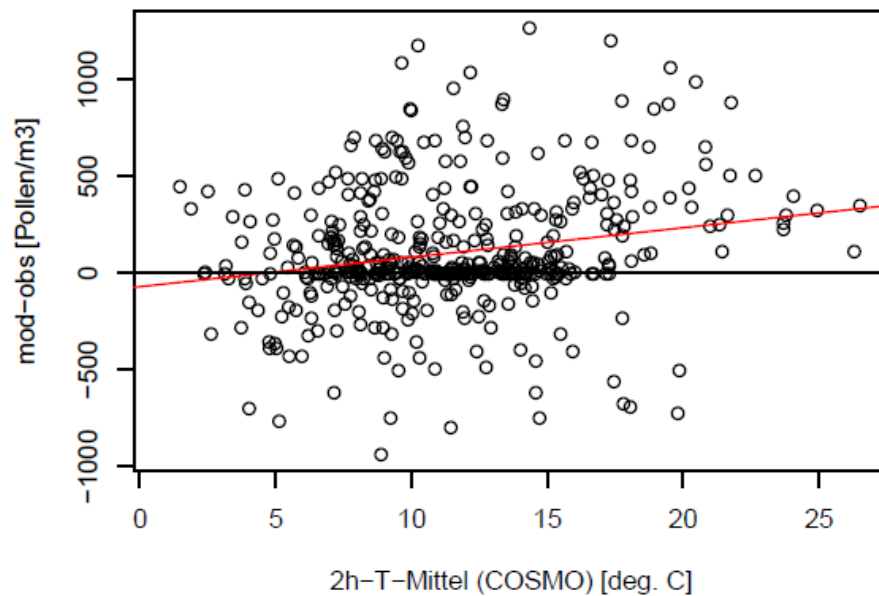




# How to attribute errors to its causes?

- Improve understanding of the underlying processes
- Sensitivity studies

Analyse error depending on parameter of interest  
Birch, Basel, all 2h-values



Conditional verification, e.g.:  
Birch, Basel, 2h-values if precip>1mm

