

# GLOBE Program: Aerosol Campaign 2013-2014

## Student-Teacher-Scientist partnerships



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### Introduction

The GLOBE Program seeks new student-teacher-scientist partnerships for the upcoming Aerosol Measurement Campaign. Secondary school students learn about aerosols and measure Aerosol Optical Thickness (AOT) as a part of the GLOBE Program Atmosphere Investigations. They study the composition of the atmosphere as an enhancement of their regular weather investigations. There is an active collaboration among schools and aerosol scientists established in several European countries under the umbrella of the GLOBE Program. Join us and get involved in helping young people understand aerosols!

### GLOBE Aerosols students observations

- can add *more detail* to satellite observations
- can provide useful *validation data* to satellite observations
- *add to improved 'picture' and understanding of the behaviour of aerosols*

which in turn can lead towards..

- *increased understanding of role of aerosols in climate change (and air quality)*

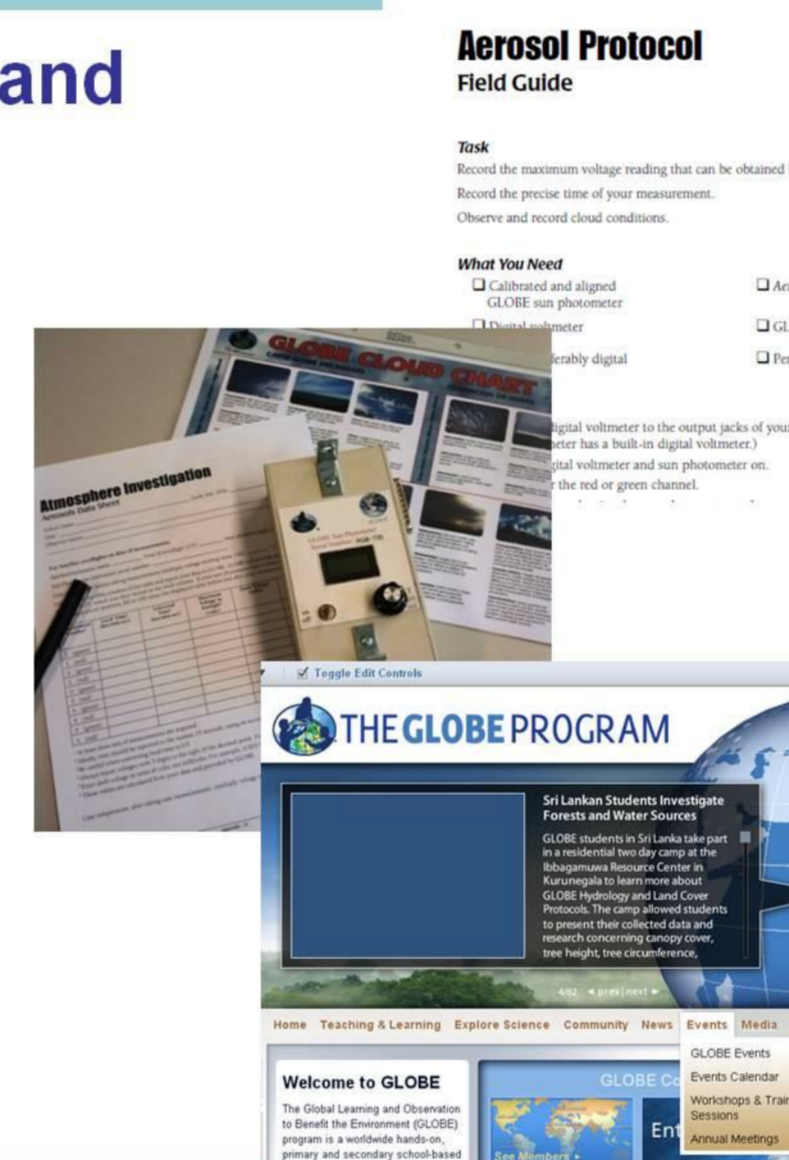
→ *and students learn about atmosphere*



### GLOBE aerosols resources and materials used by students

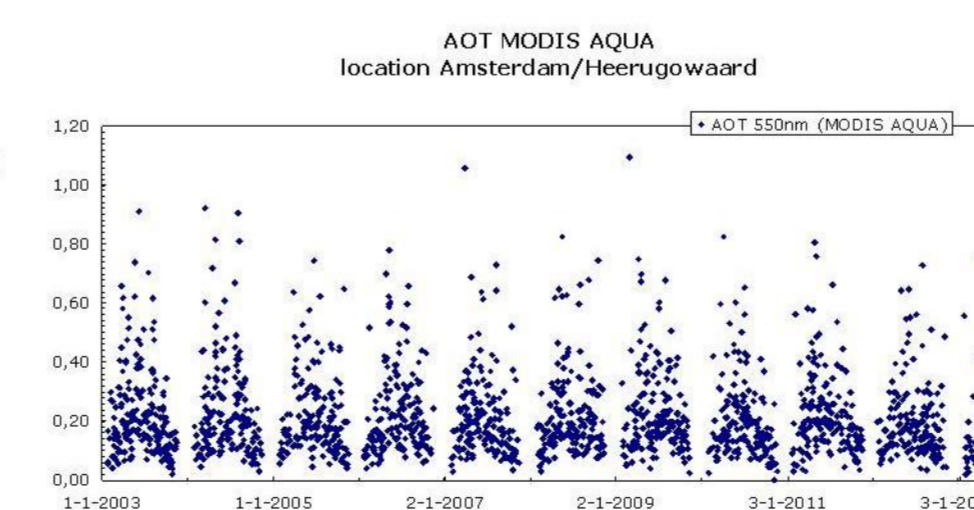
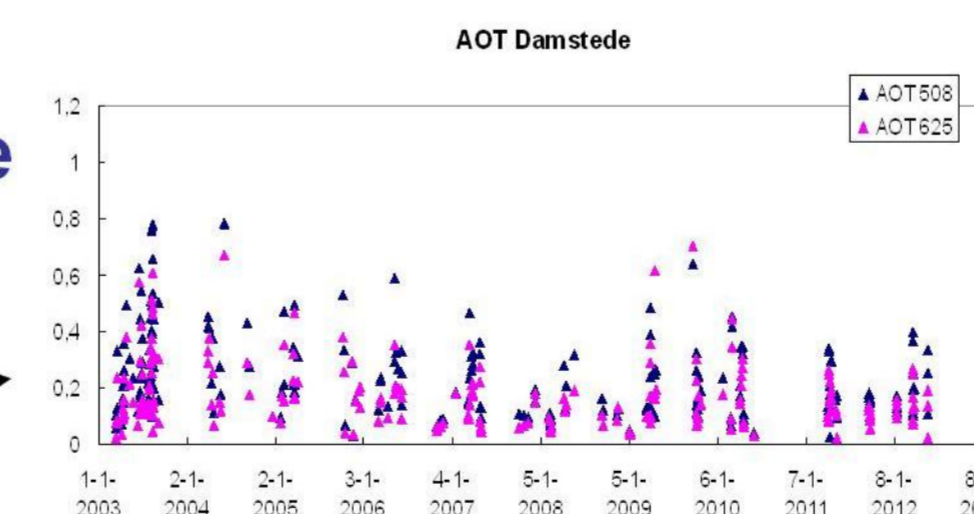
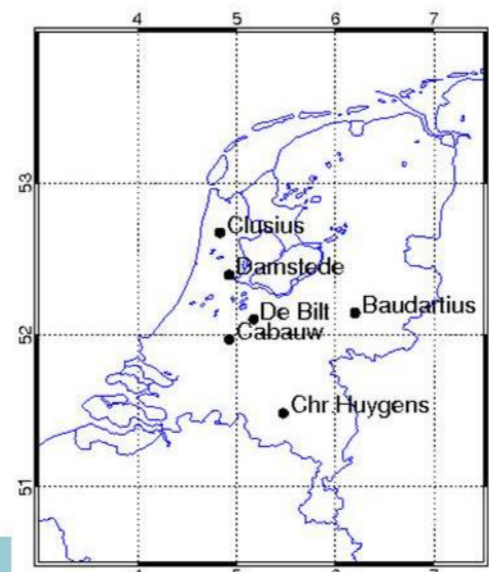
- aerosol protocol, field guide and data sheets are available on [globe.gov](http://globe.gov),
- links and additional materials and feedback through *GLOBE Aerosols community* at [globe.gov](http://globe.gov):
  - learning materials,
  - general feedback on European & Eurasian observations
  - how-to-use of online available satellite observations of aerosols

[www.globe.gov/web/europe-aerosols-campaign](http://www.globe.gov/web/europe-aerosols-campaign)



### GLOBE Aerosols by students: an example

- Time series 2003 – 2013:
- Damstede (Amsterdam, the Netherlands)
  - MODIS AOT<sub>550nm</sub>



Are scientists interested in my aerosol measurements?

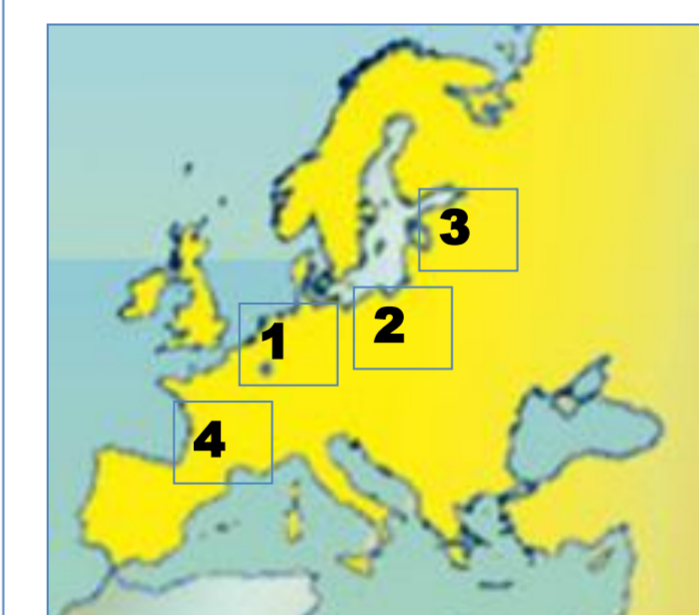
➤ GLOBE schools provide the potential to establish a global aerosol monitoring network.

➤ Locally, aerosol optical thickness can be influenced by air quality, season, relative humidity, natural and human-caused events such as volcanoes, forest fires and biomass burning, agricultural activity, windblown dust, and sea spray. All these connections provide many possible sources for student research projects. GLOBE schools provide the potential for addressing these topics.

➤ By building a data record that extends across several seasons and includes data from many locations, GLOBE can help scientists learn more about the global distribution of aerosols.

### Scientists involved in GLOBE Aerosol Campaign

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### Countries active in GLOBE Program

Belgium	Iceland	Malta
Croatia	Israel	Netherlands
Czech Republic	Italy	Norway
Cyprus	Kyrgyz Republic	Poland
Estonia	Latvia	Russia
Finland	Lichtenstein	Spain
France	Lithuania	Switzerland
Germany	Macedonia	Ukraine
Greece		

### GLOBE Aerosols time line

#### Europe & Eurasia

#### Aerosol Campaign

- Spring campaign *March-June 2013* (currently going on: students data analysis, wrap up)

#### Upcoming

- Fall campaign *September-October 2013*
- Spring campaign *March-May 2014*



#### Resources

Hendriks, E. (2013): *On Earth Observation of our atmosphere: GLOBE Aerosols*. Presentation for the GLOBE Program Regional Meeting, Tallinn, Estonia, April 2013. Royal Netherlands Meteorological Institute (KNMI), Utrecht  
The GLOBE Program webpage: [www.globe.gov](http://www.globe.gov)

[www.globe.gov/web/europe-aerosols-campaign](http://www.globe.gov/web/europe-aerosols-campaign)