



EARLINET
EUROPEAN AEROSOL
RESEARCH LIDAR NETWORK



EARLINET-ASOS

Saturday, 22 May 2010

Eyjafjallajökul eruption

Eyjafjallajökull is one of the smallest glacier in Iceland. After seismic activity recorded during December 2009, a first eruption started on March 20, between 22:30 and 23:30 UT.

April 14, 2010

After a brief stop, Eyjafjallajökull eruption started again, but this time below the ice, resulting in a more explosive eruption

April 15, 2010

10 UT alert from CNR-IMAA, Potenza to EARLINET stations informing about a large amount of ash is directing towards North-West of Europe.

13 UTC, Linköping, Sweden

Volcano ash not yet visible in Linköping, probably washed out within the western landscapes of Sweden.

A layer at about 2000 m rising from noon until afternoon 15/4.

23 UTC Cabauw, the Netherlands

A small thin layer is visible at 10km altitude after 19:00 UT. This is a no depolarizing layer. Maybe it is volcanic ash.

Evora, Portugal

20:36 - 22:16 no volcanic ash, some clouds at 3 and 8 km agl until 21:00, very shallow boundary layer (about 500 m agl)

April 16, 2010

14:30 UT Minsk Belarus

Appearance of dust layer at 14:28 UT at the altitude 8 km. Unfortunately, then clouds covered sky

15 UTC Leipzig, Germany

Depolarising volcanic ash at about 3 and 4 to 6 km altitude is visible between a lot of clouds in the pbl (09 – 17 UT).

15:30 UTC Hamburg, Germany

An intense ash plume reached Hamburg during the morning hours of April 16 and was easily detected by the lidar after a dense low-level cloud cover broke after sunrise. High altitude cirrus was observed. The cirrus may have been a direct result of the Island eruption, because the initial eruption also transported - aside from ash - significant amounts of water vapor into the tropopause region. Back-trajectory data indicate that the cirrus on April 16 was at least contaminated by volcanic ash. In the evening the ash enhancement below 3km started to pick up again

16 UTC Palaiseau, Paris, France

Thick layer between 5 -6 km above mean sea level (msl) and then it has been descending until reaching 2.5 km msl today at 1000 UTC, on 17April.

In the free Troposphere, there are also several aerosol layers from 1.5 km msl up to 8 km msl with a background concentration that have been observed at the Palaiseau site since 12 April. These layers can be related to dust events .

16:30 UT Minsk, Belarus

A small thin layer is detected at 8km altitude after 16:30 UT.

17:00 UT, Munich, Germany

Before no measurements because of cloud.

Layer between 6.5 and 7.5 km at 1700 UT descending until 4 km around 24:00 UT in a 100 m thick layer.

21 UTC Payerne, Switzerland

Layer at about 6 km asl, descending down to about 4km at 06 UT , 17 April. Descending it increases in intensity and becomes thinner.

Thessaloniki, Greece

Some measurements among clouds. No volcanic layer detected.

Ispira lidar is not working because of system problems.

Bad weather conditions do not permit measurements at Italian and Greek EARLINET stations.

Evora, Portugal

10:05 - 10:56 no volcanic ash, low and mid altitude clouds

April 17, 2010

The volcanic activity is ongoing, ash plume height is about 8 km.

Models forecast volcanic ash impacting Northern and Central Europe.

00:00 UT, Munich, Germany

Layer descending from 4 km down to 3 km, but in a wider layer 500 m and more intense.

Weak signal at 1064 nm if compared to 355 and 532 nm.

Layer values:

$S(532\text{nm}) = 50 \text{ sr Ext}@532 \text{ nm} = 0.7 \text{ km}^{-1}$

Dep @532 nm = 0.38 Dep @355 nm = 0.36
AOD @532 nm ~ 0.35

00:00 UT Hamburg, Germany

A small enhancement of the aerosol continued April 17 all day. The small enhancement was refined to a small layer which slowly descended in altitude.

This enhancement locates the ash plume near 1.8km km at the beginning of April 17.

06:30 UT Belsk, Poland

Volcanic layer observed at 8-9 km accordingly to HYSPLIT trajectories.

16:30 UT Bucharest, Romania

HYSPLIT shows trajectories from Iceland and reaching Romania at both 5 and 9Km.

It seems that the cloud arrived at 8-10km altitude Observed at 16:20 -18:00 UT.

For the 9km layer, AOD(532)=0.3, color ratio(532/355)=0.7 and AngstromB(355/532)=0.8 and particle depolarization=3%.

Total column AOD(532)=0.3, 9KmLayerAOD(532)=0.4, 9KmLayerAOD(355)=0.6

20:00 UT Garmisch, Germany

in a short gaps between clouds measurements show a layer between about 5.5 and 12 km with a maximum in the backscatter coefficient at 532 nm of $1E-7$ m⁻¹ sr⁻¹

15:45-16:50 UT Alomar, Norway

faint layer at 6 km altitude (from N-America or ?)

April 18, 2010

00:00 UT Hamburg, Germany

A small enhancement of the aerosol continued until the evening hours of April 18. The small enhancement was refined to a small layer which slowly descended in altitude.

The ash enhancement had dropped to near 0.8 km in altitude at beginning of 18 April measurements.

11:00 UT Leipzig, Germany

Volcanic layer identified between 1-4 km until 20:00 UT

14:00 UT Sofia, Bulgaria

No layer detected during the 14:00 – 15:00 UT lidar observations.

15:30 UT Belsk, Poland

Volcanic layer observed at 8-10 km accordingly to HYSPLIT trajectories.

16:30 UT Bucharest, Romania

The volcanic ash is now concentrated at 2.5km above Bucharest. Weak layers are present up to 5km and more. HYSPLIT backtrajectories confirms Iceland as source.

2.5 km layer: color ratio (532/355)=0.5 angstromB(355/532)=1.6 AOD5(532)=0.5

20:00 UT Paris, France

The volcanic ash plume observed on Friday descended down to the atmospheric boundary layer until mixing with it during the afternoon of Sunday 18.

22:30 UT Minsk, Belarus

Probably volcanic layer is detected at the altitude 8 km at 22:35 UT

Evora, Portugal

19:02 - 19:18 no volcanic ash, low clouds

April 19, 2010

00:00 UT Minsk, Belarus

Strong layers are observed during night time 18-19 April 2010 at the altitude 6-10 km

The altitude of aerosol layer is decreased up to 4.5 km in the morning

08:30 UT L'Aquila, Italy

Layer detected at about 3.5-4 km a.s.l. Not volcano ash.

10:30 UT Bucharest, Romania

PM10 concentrations 3 times higher ground than ordinary days

Low clouds, no lidar measurements.

11:00 UT Paris, France

Since Monday 19, the arrival of a suite of sparse particle layers, probably volcanic ashes, were observed at the Free Troposphere. A first event on 19 April from 1100 UTC until 1800 UTC, at 2.4-3.8 km (MSL).

15:30 UT Garmisch, Germany

several sharp-edged layers to more than 10 km, aerosol also in lower stratosphere to more than 12 km (until 19:00 UT)

20:00 UT Potenza, Italy

A thin layer is detected at about 4 km. HYSPLIT backtrajectories show air mass coming from Northern Italy and Alps. Accordingly to RIU models for the transport of the emitted volcanic ash it could be a trace of the volcanic plume. The forecast of RIU foresees a PM10 of about 20-40 micromg/m³.

21:00 UT L'Aquila, Italy

Volcanic ash between 3.5 and 6 km, AOD~0.03 and LR~35sr @ 355 nm.

Standard continental aerosol in PBL

Lecce, Italy

very cloudy - no measurements

Linköping, Sweden

A clear air from north shown no sign of ash.

Madrid, Spain

Low clouds prevented measurements above 2 Km during the day.

No volcanic layer detected at nighttime.

Eruptions continue with lower altitude of the emitted plume (2km).

Evora, Portugal

13:17 - 15:22 no volcanic ash, low clouds with 10-minutes-gap, cirrus at 10 km agl and aerosol at 12 km agl (from SW-W according to HYSPLIT)

17:23 - 22:42 no volcanic ash, low, mid and high altitude clouds

April 20, 2010

05:00-10:00 UT Potenza, Italy

Aerosol content extends up to 6 km. If it is related to volcano emitted ash, it should be investigated.

07:00 UT Thessaloniki, Greece

A couple of hours measurements. No elevated layer was found but some structure was observed around 2.5km but has to be studied further. Then the weather become very windy and cloudy.

07:30 Athens, Greece

A strong aerosol layer is found above the PBL during all day, with aerosols up to ~4 km. Another layer is found between 7-9 km height, most visible in our high resolution data (this could be directly related with the icelandic volcano).

08:30 UT Leipzig, Germany

The ash layer that was at 2 km is mixed in the PBL starting around 13 UT. In situ observations at the ground show a sudden increase of the SSA from 0.83 to 0.95 (the ash is relatively white, high albedo).

12:00 UT Athens, Greece

Ash was seen around 2-3.5 km on 20 04 10n near 12-14UTC. Higher layers were found around 8-9 km during all day.

13:00 UT Belsk, Poland

Volcanic layers at 4 and 9 km.

18:00 UT Paris, France

A second minor event on 20 April from 1800 to 0000 UTC from 1.5-3 km (MSL).

20:00 UT Munich, Germany

Nice mixing in the BL during the morning. Around 20:00 UT a new plume arrives above about 6.5 km to 9 km a.g.

20:30 UT Potenza, Italy

Aerosol layer out of BL around 4 km asl that should be volcanic ash layer accordingly to HYSPLIT backtrajectories and EURAD model forecast. This layer descends in altitude.

Aerosols however are distributed on all altitude from BL up to 8 km within feeble layers.

DREAM does not forecast the presence of Saharan dust particles over Italy for this day.

21:00 UT Lecce, Italy

quite cloudy up to about 13.00 UTC, lidar measurements are available from about 7.00 up to midnight. Rather stable aerosol layer up to about 3-4 km without any marked structure.

21:00 UT L'Aquila, Italy

Volcanic ash between 3.5 and 5.5km, AOD~0.06 and LR~35sr at 355 nm.

Volcanic ash penetrated into PBL.

22 UT Alomar, Norway

a few minutes around 04 UT (layer at 5,7km - not identified yet)

Napoli, Italy

We start to observe ashes from Eyjafjallajokull in the morning at around 3 km height. Ash layer seeped into PBL in the morning.

Minsk, Belarus

Start the measurements at 5 am UT

No aerosol layer upper boundary layer.

Linkoping, Sweden

No measurement was performed during 20/4 due rain, snow and to low cloud situation.

Garmisch, Germany

The measurement show Russian influence at around 5 km and influence from Iceland at higher altitudes (trajectories: 6,7,8,9,10 km).

Madrid, Spain

No volcanic layer detected, Clouds at 4 Km coming from the Atlantic at 19:00UT.

Evora, Portugal

01:15 - 04:30 no volcanic ash, mid altitude clouds getting lower during the measurement, CALIPSO

08:41 - 13:22 no volcanic ash, very few low and mid altitude clouds (3 and 6 km agl respectively), cirrus and aerosol (from SW-W) at 9 to 12 km agl

18:04 - 22:48 no volcanic ash, mid altitude clouds, cirrus, aerosol layers falling from 2.5 to 1.5 km agl (from S and/or W), aerosol layer at 6 km agl (from North America)

April 21, 2010

00:00 UT Potenza, Italy

Volcanic Aerosol layer descends in altitude reaching in the first hours of 21 April about 2 km very close to the underneath BL. Aerosols however are distributed on all altitude from BL up to 8 km within feeble layers.

Additionally another thin strong layer is present at 10 km around 00:00 UT, 21 April. This layer descends down to about 7 km around 07:00 UT. Another thicker layer above the latest layer appears at 06:00 UT.

06:00 UT Thessaloniki, Greece

A layer around 2.5 and 4km is observed, just below a persistent visible thin cloud at 4km and a thin layer at 5km. The first layer is persistent but with variable thickness, while the thin layer at 5km almost disappeared. According to EURADs simulation these two layers should be volcanic ash.

12:30 UT Bucharest, Romania

As estimated from first measurements today, the ash layer is around 8-10Km above Bucharest. A thin layer is also present at 4Km.

16:00 UT Bucharest, Romania

The ash plume is now very weak in Romania and we have low clouds. As forecasted by EURAD, we had 8 to 10Km plume in the morning and 3 to 4 Km plume after noon. The 2 air masses were completely different, both depolarizing. HYSPLIT is still undecided if the 10Km air mass is coming from North (volcanic ash) or South (dust), but for sure it is not a cirrus (no high altitude clouds visible in EUMETCAST image). The lower layer is descending and will probably soon be mixed in the PBL.

16:00 UT Athens, Greece

Higher layers were found around 8-9 km during all day . Other ash layers (3-4 km) are also visible today around 1600 UTC. Lidar measurements were stopped early this morning due to clouds and later rain conditions. Around 18:00 UT, lidar measurements started again showing a persistent aerosol layer at 3-3.5 km.

18:00 UT Paris, France

Today since 0400 UTC, some layers in the Free Troposphere are being observed from 1 to 2 km (MSL).

20:45 UT Leipzig, Germany

Because of cloud and heavy showers no measurements during the day. After sky cleared off in the evening of 21 April, it is observed an increasing aerosol load in the free troposphere again. Layers were mainly between 4 and 9 km height, with a pronounced layer between 6 and 7 km. Layers descended in the course of the night. Highest aerosol load of the free troposphere was between 2 and 6 km in the morning of 22 April.

24:00 UT Hamburg, Germany

The aerosol load in the free troposphere is getting lower compared to the first days after the eruption. Looking through the holes in the cloud field there is still ash layers descending between 8 and 3 km, which are certainly much weaker in terms of backscatter compared to that for the very first days.

Minsk, Belarus

It seems that the content of ashes in atmosphere was the largest from start of observations.

The upper boundary of the layer was at the altitude about 2.4 km during the first half of the day.

Depolarization was significant and homogeneous over the layer.

After 17 UT the upper boundary and concentration of aerosol began to increase significantly. Layer became stratified, clouds and ashes. Depolarization of the layers was quite different.

Linköping, Sweden

No measurement was performed during 21/4 due rain, snow and to low cloud situation.

Alomar, Norway

3:30-05 UT 5-8 km, volcanic plume according to Hysplit/Flexpart

Garmisch, Germany

Cloudy and rainy

Lecce, Italy

fine weather, lidar measurements are available for all day. Rather stable aerosol layer up to about 3 km without any marked structure. Time evolutions of sun photometer AOD measurements and APS size distributions support lidar data.

Napoli, Italy

Eyjafjallajokull ashes layer is present between 2 and 3 km in the first part of measurement. Night time data show the presence of ashes at high altitudes as well.

Evora, Portugal

Up to now (21 April), no volcanic aerosols. But according to the news, yesterday (20 April) volcanic ash arrived at the Azores Islands.

Barcelona, Spain

No ashes.

Madrid, Spain

No volcanic layer detected. Cirrus at 9-12 Km and clouds at 7 Km was persistently present during the morning. In the afternoon, low clouds (2 Km) and rains appeared.

Evora, Portugal

10:33 - 15:41 no volcanic ash, mid altitude clouds until 12:00, cirrus from 12:30, few low clouds from 13:30, aerosol layers at 2.5 and 3 to 4.5 km agl

April 22, 2010

00:00 UT, Munich, Germany

Volcanic ash (lin. part. depol. ratio 0.3 to 0.35) between about 2 and 3.5 km NN with a small but clear offset to the boundary layer top (2 km NN) since midnight (UTC), becoming stronger in the morning until 10 UTC with optical thickness of about 0.025 at 532 and 355 nm but only about half this optical thickness at 1064 nm (all lidar ratios assumed 55 sr), and then slowly vanishing until 13 UTC.

Cirrus started developing from about 5 UTC between 6.5 and 10.5 km NN, the bottom descending in the afternoon to 4.5 km NN and the upper part dissolving above 7 km NN. Rests of volcanic ash seem to be present in the afternoon between the boundary layer top and the cirrus bottom but with small extinction coefficient well below 0.01 / km (532 nm).

00:00 UT Bucharest, Romania

Last night layers present at 6-8km and a small portion going down to the PBL. Ground monitors show an increase of concentration - especially PM10 - during the night. On 22 morning, layers are still present at 3km, with cloud formation on top. Some values for the layers (21 night and 22 morning):

color ratio 532/355 = 0.6 to 0.8

Angstrom 355/532 = 0.5 to 1.1

Linear particle depolarization ratio at 532nm: 2.4% to 2.91%

AOD 532 = 0.11 to 0.19

Neuchatel, Switzerland

early morning : Weak layer is seen at 3-4km about 11h-13h / (wind N-NE, that is Bise-like situation?).

03:00 UT Athens, Greece

Since 21 April evening, when the sky was cloud free again, a thin aerosol layer is observed above BL around 3-3.5 km asl, according to HYSPLIT backtrajectories, that should be volcanic ash layer. Also a thin layer was descended from 10km to 8km altitude between 15:30-17:30 UT. After 17:30 UT an intense layer was observed around 1.5km, later on the layer was extended from 0.8 up to 2.8 km and remains quite stable up to now. Additionally, since 17:30 UTC, thin layers between 7 and 10km follow descent motion. HYSPLIT model for Athens at 21/04/2010 21:00 UT shows that the air masses ending at 1500, 2500 and 7500km a.s.l. came from Iceland. The winds was N , NW all day . Over Athens observation shows a similar to Potenza's atmospheric structure almost 12 hours later.

16:00 Leipzig, Germany

Since clouds disappeared around 11.30 UTC, we have been observing a distinct ash layer between 2.5 and 3.5 km height (slightly descending). Aerosol load is increased between 3.5 and 6 km as well. Very thin layers occur between 7 and 11 km. Contrails develop in these layers between 8 and 9 km.

<http://polly.tropos.de/martha/quicklook/2010/4/MarthaQL-20100422-1317-400ns.jpg>

18:00 UT ALOMAR, Norway

from 3:30 onwards , 5 - 8 km, descending to 4-7 km (15 UT), volcanic plume acc. Flexpart

The link to the latest quick-plots is:

<http://alomar.rocketrange.no/Quickplot/quickplot.jpg>

The Cimel sun-photometer is also running (AERONET)

18:30 UT Potenza, Italy

continuous measurements

Layer at about 3.8 km a.s.l. since 14:30 UT.

Thin layers up to 8 km a.s.l.

19:00UT L'Aquila, Italy

•volcanic ash between 4.0 and 7.0km (AOD \square 0.08 and mean LR \square 35sr); other layers decaying and mixing in PBL; the *volcanica* aerosol layers are intermittent

•max. aerosol bck. 1.0 Mm-1sr-1; max. aerosol ext. 0.04 km-1.

•peak concentration (estimation) below 20 μ g/m³

As in Leipzig, we have also noted (this morning) a quite evident increase of developed contrails and as well as their long persistence. Is this connected to the lack of airplane exhaust emissions at tropopause levels?

pdf short reports available at

http://cetemps.aquila.infn.it/Cetemps/it/index.php?option=com_content&view=article&id=73:lidar-reports&catid=36:sensori-attivi

Lecce, Italy

fine weather, lidar measurements are available for all day. Rather stable aerosol layer up to about 3 km without any marked structure. Sun photometer AOD measurements support lidar data.

24:00 UT Thessaloniki, Greece

The ash layer was observed throughout the day starting at 3km altitude and slowly descending into the PBL by late afternoon.

Bucharest, Romania

Today mostly low clouds and some rain (quicklooks on the same web page, but no backscatter). Thin layer structure visible up to 8 Km.

Napoli, Italy

00-16 UT Layers at 2.4-3.5 km a.s.l.

Minsk, Belarus

Low clouds and intermittent rains. No measurements

Madrid, Spain

Very low clouds prevented measurements above 1 Km during the day. Rain started at 14:00 UT.

Evora, Portugal

09:49 - 12:18 no volcanic ash, low clouds with some gaps from 10:00

15:24 - 22:31 no volcanic ash, very few low clouds and cirrus, aerosol up to 3.5 (more or less local) and at around 6 km agl (from W)

April 23, 2010

Linköping, Sweden

Measurements performed in the period Thursday - Friday, April 22-23, UT 19:00 – 08:30, A cloudy Thursday ending within a clear evening when we started to measure. We saw a layer just below 6000 m during early evening and late morning.

05:00 UT Athens, Greece

Ash particles were continuously observed over Athens on 22 and 23 April 2010. Several layers appeared from 3000 m down to ground. Volcanic ash was systematically blocked inside the nocturnal PBL, and inside the stable layer over the nighttime PBL. PBL during nighttime was lower than 1000m according to radiosondes and lidar data.

Very Impressive descent of volcanic ash (speed of 0.6 km/hr) was observed over Athens between 21 April (1800 UT) and 22 April (0500UT). Later also these ash particles were diluted inside the PBL.

Ground measurements of PM10 concentrations showed a marked increase of a factor 5X.

Currently the event is continuing at low levels (below 3km height) down to ground.

6:15 UT Thessaloniki, Greece

Today in the morning we don't see a distinct signature, however aerosols are present up to 2.8km, so probably some residuals from the previous day (EURAD's forecast estimates some ash over the area for today). At higher altitudes (7 and 11km) thin clouds are occasionally observed. It is expected to fade out today.

10 UT Sofia, Bulgaria

We have most time a cloudy weather over Sofia. During the short clear sky periods, we made some measurements we uploaded on the Quicklook database of our lidar station (<http://www.ie-bas.dir.bg/Departments/LidarData/Quicklooks.htm>).

We cannot claim absolutely we registered a volcanic ash above Sofia. In fact the BG-meteoservice predicted that it will pass only over the far North-East part of Bulgaria. Nevertheless, the lidar profiles we detected seems very interesting.

We continue our measurements and will provide a new quicklooks soon.

12:30 Hamburg, Germany

In general, the situation stays the same as it was during the last few days. Over the whole day of 10.04.22 we observed few well stratified descending aerosol layers (see our quicklooks), which are supposed to be the eruption products according the back tracing results. The upper hight of the layered structure was at about 8km in the morning and lowered down to about 4km in the evening. Currently the tendency is the same, the layers are still descending, the upper boundary of layered structure got down to about 3km.

The double layer at about 4km and another one with the low boundary at about 7.5km give a certain depolarization to the backscattered signal. Maximum backscatter for the lower layer is about 0.5 [1/(Mm sr)], which is just a tiny bit of the value measured on the first day when the concentrated plume has arrived. Backscatter profile for this very first day 10.04.16 shows maximum backscatter at 532nm of about 10 [1/(Mm sr)].

15 UT Minsk, Belarus

It is clear atmosphere during the first half of the day.

EURAD model forecasts appearance of the ash layer after 18 UT

We are continuing measurements.

16 UT Evora, Portugal

we see some aerosols in the free troposphere. 10-day-Back-trajectories show that the air masses come from the Atlantic Ocean and America.

16:00 UT Leipzig, Germany

The atmosphere at Leipzig has become relatively clean. We see minor aerosol structures throughout the free troposphere between 2 and 11 km height, but no distinct layers anymore.

There were Falcon flights on 22 April from Oberpfaffenhofen via Leipzig (at 8 km, no in situ profiles) to Hamburg and from Hamburg towards Norway and back to Hamburg.

Today, in the afternoon, a Falcon flight was planned from Hamburg towards Belarus and back via Leipzig and Maisach to Oberpfaffenhofen. We have not heard about any details and we don't know if in situ profiles could be taken.

During the next days we will run MARTHA (big lidar) just from time to time for a couple of hours. Polly (small autonomous lidar) will measure continuously.

17.00 UT Bucharest, Romania

This morning, a lot of thick clouds. This afternoon, we saw a layer at 9Km, which does not seem a cirrus, and two thin layers (not depolarizing too much) at 2 and 3.5Km (sparse clouds on top of this one). Conform to HYSPLIT, the 9Km layer is coming over the ocean, Sahara and Europe, the 3.5Km from Iceland (5-6Km altitude at source) and the 2Km from local sources.

All quicklooks are uploaded.

The final (only 30min due to weather) measurement shows "filaments" (as Alex mentioned) up to 3.5Km. The cloud at 8Km has interesting characteristics: very thin and not continuous, depol. too low for an ice cloud but too high for water cloud (maybe some mix?) + low color ratio

Ispira, Italy

The lidar operated from Monday until yesterday when it started raining.

At a glance through the profiles, it seems that we caught any volcanic ash. Maybe the Alps is a good barrier. However, analysis will be performed, checking all the info available from meteorological, satellite, etc.

From Monday, we will start analyzing the ground based measurements.

As for tomorrow, it looks like the rain will stop. Thus I will start again the system.

I put the figures on the ftp site <ftp://ftp-ccu.jrc.it/pub/adam/LIDAR/>

Napoli, Italy

Clouds and rain -No measurements

Potenza, Italy

Clouds and rain – no measurements

L'Aquila, Italy

low clouds and rain, no measurements

Lecce, Italy

cloudy and rain, no Lidar measurements

08-23.59 UT Athens, Greece

Volcanic ash continued to be observed over Athens, under west-southwest wind flow.

The ash layer was again very well stratified, in the form of filaments starting from 2.5 km down to 1000 m. Mixing of ash with locally produced aerosols was observed again during all reported period; increased in situ PM10 concentrations raised up to 70ug/m³, a factor 6-7X compared to April 20.

During nighttime, 2 distinct ash layers were visible at 2km and 1.5 km height asl., above the PBL (located around 950m). Cirrus clouds were developed from April 23(07:57UT) to April 24(02:18UT).

21:20 UT Maisach/Munich, Germany

At good weather conditions, we performed today again continuous measurements. Through all the day we detected Cirrus clouds (bottom starting at 11 km agl at 00UTC and descending down to 7 km at 20 UTC).

Below the Cirrus seems to be Volcanic ash in very low concentrations distributed through the whole atmosphere (Rayleigh calibration is very difficult) with a stable but still weak layer in about 5 km. The linear volume depolarization ratio of this weak layer is high.

In the PBL the l. v. depolarization has increased since 8 UTC. Overall it seems that the l. v. depolarization is strongly correlated with the relative humidity.

An elevated aerosol layer at about 1.5 -2.5 km is not depolarising.

Please note that a Saharan dust of MEDIUM importance is covering Italy (today 1200 UTC) and Greece up to April 24, 2010.

Mixing of dust with remnants of ash! depolar measurements are needed combined with RH

Evora, Portugal

10:18 - 11:00 no volcanic ash, low clouds

13:03 - 16:32 no volcanic ash, some low clouds and cirrus
18:13 - 22:50 no volcanic ash, cirrus until 21:40, aerosol up to 2.5 km agl (local)

Garmisch, Germany
The measurement seem to be dominated by Saharan dust.

April 24, 2010

04:30 UT Cabauw, The Netherlands
Like reported by others we saw mostly low dust loading throughout the troposphere today. Some structure could be seen in the depolarisation.
There were many and persistent contrails, clearly developing in the aerosol layers. In the measurements they somehow look a bit different than usual.
A CALIPSO measurement was performed tonight, while ISS was sighted over Cabauw.

Unless circumstances with respect to the dust change, we will measure preferably during evening hours only the next days.

16:00 UT Minsk, Belarus
Strong ash layer was observed at the altitude 4-7 km.
Measurements were carried out during 20 UT, 23.04.10 – 03 UT, 24.04.210 and were stopped because of low clouds and rain.

16:00 UT Evora, Portugal
Up to now we don't see any volcanic aerosols over Évora.
As in previous days, 10-day back-trajectories indicate that the air masses come from the Atlantic Ocean and America.
Now the sky is cloudy completely. We'll continue the measurements tonight.

17:00 UT Potenza, Italy
low clouds – no measurements since yesterday
Measurements will start as soon as the weather conditions will allow it.

L'Aquila, Italy
low clouds and rain, no measurements.

Napoli, Italy
Low clouds and rain prevent measurements in Napoli.
Measurements will start as soon as the weather conditions will allow it.

Bucharest, Romania
low clouds and some rain - no measurements with lidar

Leipzig, Germany
In the night of 23/24 April 2010 and during the day we still observed increased aerosol load throughout the troposphere. Scattering was high between 5 and 9 km in the night (no cirrus) and between 4 and 7 km during the day (with cirrus above).

Maisach, Germany

Continuous measurements (day and night)

A few hundred meter thin cirrus was visible from about 4 UTC to 16 UTC between about 11 to 12 km NN.

The boundary layer extended to max 2.5 km NN, but convection ended at about 1.5 km NN.

Between the boundary layer and the cirrus we found depolarizing particles everywhere (OD at 532 nm roughly a bit lower than 0.1), with a bit stronger signatures below 7 km NN.

But also in the boundary layer we saw unusually high linear particle depolarization ratios above 0.1, with a seeming anti-correlation to the humidity in the vertical, and also stronger (volume) depolarization over day and lower depolarization over night.

As the wavelength dependence of the backscatter is high, probably these could be small, hygroscopic particles, with very high depolarization when dry, which are mixed in the boundary layer.

00-02:18UT Athens, Greece

After 0100UT ash layers were diluted, thus some minor remnants were visible above PBL (around 1 km height). No further measurements were performed since.

During daytime low clouds prevented our lidar measurements.

Hysplit trajectories verified again the source region for the ash layers.

Lecce, Italy

clouds at low altitude up to about 10:00 UTC, Lidar quicklook shows aerosol load up to 3-4 km. This is probably dust.

Linköping, Sweden

no measurement.

Evora, Portugal

12:17 - 15:31 no volcanic ash, few low clouds until 13:15, mid altitude clouds all the time

19:28 - 23:01 no volcanic ash, mid altitude clouds and cirrus, weak aerosol layers in 3.5 and 4.5 km agl (from W)

April 25, 2010

02:20 UT Maisach, Germany

Continuous measurements

As low clouds and rain are forecasted for the next days, we will end our measurements of this volcanic episode after the CALISPO measurements tomorrow.

All the quicklooks of MULIS, rcs and lin.vol.dep.ratio, of all the days have been assembled on one page to get a better overview of the Eyjafjallajokull episode as seen in Maisach. This web page can be found in our quicklooks archive under the link "Eyjafjallajokull".

Bucharest, Romania

low clouds and rain - probably no measurements with lidar

Lidar quicklooks available at: http://inoe.inoe.ro/Quicklooks/php-files-INOE/photogallery.php?album_id=65

Ceilometer is measuring continuously - quicklooks: http://inoe.inoe.ro/Quicklooks-IFIN-HH/Ceilometer/photogallery.php?album_id=3

Temperature and humidity quicklooks available at: http://inoe.inoe.ro/Quicklooks/php-files-INOE/Microwave-Radiometer/photogallery.php?album_id=5

Ground concentration available at: http://inoe.inoe.ro/Quicklooks/php-files-INOE/APS/photogallery.php?album_id=1

As soon as the weather permits, we will switch on the laser.

15:00 UT Palaiseau/Paris, France

Non-stop observations at the Palaiseau site are still being performed: see

<http://sirta.ipsl.polytechnique.fr/data-search/2.html>.

Three minor events of particles layers at the Free troposphere (from 1.5 km msl to 4 km msl) occurred since Wednesday 21 April. For the three particle layers, the attenuated backscatter coefficient at 1064 nm remained below 0.2 Mm⁻¹sr⁻¹. HYSPLIT backtrajectories suggest that the first two events correspond to volcanic ash plumes from Eyjafjallajokull:

A first plume from 1.5 to 2.5 km arrived at 0300 UTC of 21 April and was partially mixed with the boundary layer, until disappearing at 1200 UTC of the same day.

A second layer being transported between 1.2 and 2.2 km arrived at 0200 UTC of 22 April and completely mixed down with the boundary layer at 1200 UTC of the same day.

A third particle layer was observed from 3 to 4 km msl from 1600 UTC of 24 April until 0400 UTC of 25 April. HYSPLIT backtrajectories (http://ready.arl.noaa.gov/HYSPLIT_traj.php) and NAAPS Saharan dust simulations (<http://www.nrlmry.navy.mil/aerosol/>) indicate that this layer is a desert dust plume originating in NorthWest Africa. Moreover, some clouds formed within this layer since 0000 to 0400 UTC of today.

17:30 UT Cabauw, the Netherlands

Contrails and cirrus have disappeared.

After midnight a 2km high dust layer drifted in, visible in the UV-backscatter lidar in Cabauw and the 3-lambda backscatter lidar in Bithoven. This layer and the boundary layer aerosol seem to depolarise more than usual (i.e. before the eruption). So perhaps this is dust that was first transported West, mixed in, and is now carried over here in the Westerly flow.

In the afternoon high clouds appeared associated with a front and subsequently lower clouds appeared. Due to fair chances of rain no Raman lidar measurements will be performed tonight and the 3-lambda backscatter lidar in Bithoven was stopped.

The UV-backscatter lidar in Cabauw continues.

See the quicklooks:

<http://www.knmi.nl/~savenije/UVLIDAR/>

http://cerberus.rivm.nl/lidar/Bilthoven/Caeli-T/20100425_Caeli-T_Eyja/

17:30 UT Evora, Portugal

As in previous days we don't see any volcanic aerosols over Évora.

The measurements during the last night (24 April) showed permanent clouds between 5 and 9 km.

Today 25 April, the sky is almost completely clear except some cirrus from 14:30 to 15:15 UTC. Some aerosols (not volcanic) are monitored above the PBL up to 5 km. Again, 10-day backtrajectories indicate that the air masses come from the Atlantic Ocean and America.

We'll continue the measurements tonight.

20:00 UT Potenza Italy

No measurements during the day because of low clouds and rain.

Measurements started again at 17:30 UT

Layers up to about 5 km of altitude. Backtrajectories indicate air masses from Iceland. A medium Saharan dust event is present over Central and Southern Italy. Measurements will continue.

Napoli, Italy

Due to the presence of low clouds, measurements have been performed only between 14:37 and 17:00.

Aerosol layers are visible below 3 km and between 4 and 5.5 km (clearly visible in the depolarization). Backtrajectories indicate that the origin is the Sahara region.

Lecce, Italy

cloudy in the morning, no Lidar measurements.

Linköping, Sweden

no measurement.

Hamburg, Germany

The troposphere was relatively clean, with few well stratified but weak aerosol layers. According the back tracing these layers did not come directly from Iceland, however, the temporal behavior is the same as it was during the previous days, and depolarization says that these are non-spherical particles. Previously delivered aerosols seem to be accumulating in the boundary layer, which for this day was combined from one developed locally and another one transported from outside. Locally developed boundary layer with the top varying within 1.5-2km (agl) had a usual diurnal circle. Another boundary layer structure showed up at about 14-15 UTC. Slowly ascending it reached 3km (agl) by the end of the day. According the back trajectories these aerosols has volcanic origin.

L'Aquila, Italy

Measurements started at 19:07: scattered clouds; the cloudiness persistence prevented a reasonable sampling of the free troposphere.

Minsk, Belarus

We continued measurements during 06-09 UT.

A small aerosol layers with significant depolarization were observed at the altitude 4-7 km

Evora, Portugal

13:40 - 17:01 no volcanic ash, few cirrus until 16:00, aerosol at around 3 km agl (local and from W)

19:06 - 22:39 no volcanic ash, no clouds, aerosol layers up to 5 km agl (local and from W)

April 26, 2010

6:00 UT Thessaloniki, Greece

A thin layer was systematically observed at 3km height throughout 23 and 24 April sometimes with clouds slightly above. These clouds in the afternoon of the 23 resulted to light rain. On the 25th this distinct layer was observed at around 2km. During the weekend Thessaloniki was affected also by desert dust however the model prediction was for higher altitudes. So it is not straightforward to associate these layers with the volcano. Today we have overcast so no measurements are performed at the moment.

12.30 UT Ispra, Italy

The lidar runs after the rain event (23rd). Updated plots are enclosed within attached pdf. There were many LLC.

The plots are also available on my public ftp. (<ftp://ftp-ccu.jrc.it/pub/adam/LIDAR/>).

Ground measurements analyzes start today.

Lecce, Italy

fine weather, lidar measurements are available since 7:30 UTC.

Aerosol layer up to about 3 km from ground during all day. Mean AERONET AOD(340 nm)=0.54. Ash particles mixed with dust contribute to the aerosol load mainly in the afternoon, in accordance with backtrajectories and AERONET products.

Potenza, Italy

Measurements stopped at 15 UT because of rain.

Quicklook available on the website.

Measurements started again at 21:30 UT and stopped at 03:15 UT (CALIPSO overpass – Case A)

Cabauw, The Netherlands

A weakly scattering but depolarising layer up to 2 km was observed on 25 april over the Netherlands throughout the day. After a light shower at 18 UTC the depolarisation abruptly changed to lower 'normal' values for boundary payer aerosol. The rain collected in rain sensors is being analysed as soon as possible.

Low clouds predominated the night and morning. In the afternoon clouds broke and cleared in the evening. Raman lidar measurements were done (EARLINET schedule up to 20 UTC/ nautical dusk) showing light aerosol loading in the troposphere without pronounced structures and apparently only slight depolarisation.

Maisach/Munich, Germany

We performed regular EARLINET measurements in Maisach in the evening of Monday 26.04.10.

Above a two step boundary layer with tops at 2.5 and 3 km NN we still see enhanced particle linear depolarization ratios typical for dust or volcanic ash up to about 5 km NN, with extinction coefficients at 532 nm below 0.01/km, and cirrus between about 10 and 11 km NN.

Hamburg, Germany

The same boundary layer structure with the same height (as for April 25th) staying stable at least till 7UTC, when rain stopped the measurements.

L'Aquila, Italy

measurements started at 18:10UTC: scattered clouds; marginal (qualitative) signature of an high (4-6km) aerosol layer (maybe desert dust)

Ispra, Italy

Ispra lidar was shut down yesterday due to rain.

Bucharest, Romania

After 2 days of low clouds and rain, we had clear sky. Unexpectedly, we still have filaments around 2 - 3Km, and dispersed depolarizing particles around 5-6Km altitude. HYSPLIT shows that 5Km layer is coming from Iceland passing North-Europe (Lithuania). The 3Km layer is also coming from Iceland but traveling Germany and not depolarizing too much.

Morning: one very well delimited layer, not depolarizing, at 2.5Km + dispersed depolarizing (0.28 - 0.3) structures (filaments) up to 6Km - all trajectories coming from NW Europe

Afternoon: the same filaments + cirrus at 10Km - trajectories coming from W Europe
Night: one thin weak depolarizing layer 2Km + cirrus at 10Km - trajectories coming NW Europe
Quicklooks uploaded at http://inoe.inoe.ro/Quicklooks/php-files-INOE/photogallery.php?album_id=65

Napoli, Italy

Several aerosol layers are visible up to 5 Km of altitude. Linear depolarization greater than 4 % between 2 and 4 Km, probably indicating Saharan dust (in agreement with back trajectories). A layer with depolarization ratio of about 1.5 % is detected at 1 Km. Trajectories are compatible with remnant volcanic ashes.

Linköping, Sweden

~16 – 17:30 UT Cirrus covered sky started a measurement in the afternoon. Several layers during the measurement but it is not possible to differ between cirrus clouds and any other layer.

Minsk, Belarus

We continued measurements during 07-24 UT.

A small aerosol layers with significant depolarization were observed at the altitude 2.4-9 km all day.

Evora, Portugal

11:05 - 15:19 no volcanic ash, few cirrus, aerosol layer at 2.5 km agl until 12:30

18:49 - 23:55 no volcanic ash, some cirrus from 22:15, aerosol up to 4 km agl (local and from W) and from 12 to 13.5 km agl (unknown origin, asian dust?)

April 27, 2010

Hamburg, Germany

Low clouds and rain gave us a chance to start the lidar revision (which has been planned early before the eruption), and we put all the time in this work to come back to operation as soon as we can.

Athens, Greece

During the last days (saturday 24-today) no lidar measurements were performed due to low clouds and light rain.

We started again lidar measurements, after the sky clearance, up to 2300 UT.

Some distinct aerosol layers were visible around 2-4km height, as also seen over S. Italy and Thessaloniki.

One layer was directly connected to Saharan dust source, while the second was coming from Iceland. This kind of situation is very important to analyze with closely sited stations (ie, Potenza-Thessaloniki-Sofia-Bucarest).

9:00 UT Garmisch, Germany

Unfortunately, the condition over the Alps continued to be unfavourable, with exception of Saturday when nobody was available. On Sunday and yesterday we experienced a thunderstorm (first of the year, too early) and rain. The PBL is clear now. I hope that the clouds disappear later today.

Ispira, Italy

It's still raining.

Updated plots on <ftp://ftp-ccu.jrc.it/pub/adam/LIDAR/>.

10:00 UT Thessaloniki, Greece

A thin layer is still observed at 3km above Thessaloniki. EURAD predicts some sparse patches of volcanic ash over the Balkans for today at this height.

Leipzig, Germany

Since 25 April, we have continued observations with the autonomous Raman lidar Polly.

Aerosol situation is "normal" for the season, i.e. we observe relatively high aerosol load up to 2-3 km and some aerosol in the free troposphere as well, but no distinct features. Showers and low clouds prevented observations in the free troposphere for some time from the 26 April, 9 UTC, to 27 April.

We have stopped observations with MARTHA at the weekend because of a drastic decrease of laser power. We found that the laser Q-switch and some other optics are damaged. Spare parts are ordered, but MARTHA will not be operational again before the end of next week.

Napoli, Italy

Layers up to 2.5 Km, Linear volume depolarization and trajectories suggest a saharan origin. A thin layer at 3.5 Km, weakly depolarizing, is compatible with remnant volcanic ashes.

Potenza, Italy

Measurements started again at 10:12 UT and were stopped at 12:48 UT (CALIPSO overpass – Case A).

No further measurements were performed due to too low clouds.

Quicklooks are available on the website.

Cabauw, The Netherlands

Scattered clouds in the morning. A faint depolarising layer showed at an altitude of about 5 km.

Later in the day this layer contracted and descended to 3 km under cirrus clouds. Raman lidar observations were made from 14:00 until 18:00 UTC. The UV-backscatter lidar ran continuously.

Minsk, Belarus

We continued measurements during 00-03 UT.

A small aerosol layers with significant depolarization were detected at the altitude 6-10 km. Then measurements were stopped because of low clouds.

Lecce, Italy

Aerosol layer up to about 3 km from ground during all day. Mean AERONET AOD(340 nm)=0.51.

Ash particles mixed with dust contribute to the aerosol load, in accordance with backtrajectories and AERONET products.

Measurements are going on.

L'Aquila, Italy

No measurements low clouds

Evora, Portugal

00:50 - 04:30 no volcanic ash, cirrus, aerosol up to 3 km agl, CALIPSO

11:00 - 15:44 no volcanic ash, cirrus, aerosol up to 3 km agl

20:00 - 23:21 no volcanic ash, cirrus, aerosol up to 3 km agl

April 28, 2010

07:00 UT Athens, Greece

Today no lidar measurements have been performed so far.

09:00 UT Minsk, Belarus

It is low clouds and rain. No measurements

Bucharest, Romania

Morning: "sandwich" depolarizing structure with clouds on top up to 3Km + the same dispersed depolarizing structure bellow 5Km - trajectories coming from W Europe.

Afternoon: "sandwich" depolarizing structure up to 3Km + the same dispersed depolarizing structure bellow 5Km - trajectories coming from W Europe.

In conclusion, the layering seems to be "traces" of remaining suspended ash.

Quicklooks uploaded at http://inoe.inoe.ro/Quicklooks/php-files-INOE/photogallery.php?album_id=65

17:30 UT L'Aquila, Italy

No measurements, low clouds and showers. Expected to start the measurements after 20:00UTC

18:00 Potenza, Italy

No measurements during the day because of not favourable met conditions.

Measurements will start again at 20 UT

18:00 Ispira, Italy

After the rain during April 26-27, the cimelometer works again.

For the first time, we see some thin layers (~filaments) during evening of 27th and half day of 28th.

Unfortunately we can not say is volcano ash! Some back trajectories (over 6 days) at 1 and 2 km show origin within either East-Central East Europe or South of Italy. Usually 1 km and 2km layers have different origin (e.g. 1 km source in S Italy and 2 km source in E Romania).

Figures found as usual on <ftp-ccu.jrc.it/pub/adam/lidar>

Granada, Spain

At Granada we continue without any trace of volcanic ash, as in the previous days.

The daily reports of our station including information retrieved from lidar and the rest of instrumentation in operation at the CEAMA are available through the next link:

<http://atmosfera.ugr.es/inv/index.php/es/granada-lidar/volcano-eyjafjallajokull/175-granada-report.html>

We will analyse our data and will do our best to provide good "null report" (good measurements - no volcanic cloud observed).

Cabauw, The Netherlands

Fair weather day. No low clouds, only cirrus. The depolarising aerosol layer that appeared again yesterday evening, was visible all day in the measurements between 2 and 3 km, changing gradually in thickness. In the early morning around 06 UTC more strongly enhanced scattering and depolarisation appeared in a layer below 1 km. Difficult to say if this was mixed into the very shallow boundary layer. No Raman lidar measurements today.

Lecce, Italy

Aerosol layer up to about 3 km from ground during all day. Mean AERONET AOD (340 nm)=0.6.

Evora, Portugal

08:30 - 19:39 no volcanic ash, cirrus, Saharan dust up to 3 km agl

20:22 - 23:55 no volcanic ash, cirrus, Saharan dust up to 3 km agl

Napoli, Italy

In the early morning diffused particles, weakly depolarizing, have been detected up to 4.5. Km. In the afternoon rain prevented any measurements.

April 29, 2010

06: 30 UT Belsk, Poland

cloudy and rainy conditions; no measurements

13:30 UT Garmisch, Germany

It has become very clear here after the recent frontal passages. However, The H2O DIAL (817) shows elevated aerosol between 3 and 4.5 km (3 km being the beginning of the operating range) and 6.7 and 8.5 km. Given the current wind direction (T = 26 degrees!!!) I suspect Saharan dust. There is also some extra aerosol between 12.5 and 13.8 km, possibly remnants from the eruption.

Lecce, Italy

cloudy but, measurements are going on.

Ispra, Italy

Measurements are continuing

files at the same location: <ftp-ccu.jrc.it/pub/adam/lidar>

Napoli, Italy

During the morning two layers appeared at 3 and 4 km, weakly depolarizing, they are not related with saharan dust.

Potenza, Italy

Measurements started at 19:30 UT.

Quicklook available on the website.

Bucharest, Romania

low clouds, no measurements.

4 May 2010

Ireland closed the air space today for the lower atmospheres (0-6 km).
It seems that the ash cloud now gets transported from the Atlantic to Ireland.

Alert:

06 May 2010: Spain (at last!) and France will be affected by volcanic ash (around 3 km height)

04-08 May 2010: The rest of Europe, and more strongly Greece and Italy, will be affected by Saharan dust (big loads!!)

The period between 06-08 May 2010 is very interesting for Spain-Italy-Greece since ash starting from Iceland will be mixed over Italy with Saharan dust and will be transported over the Balkans.

Bucharest, Romania

Measurements from yesterday (May 03) and today (May 04) showed layers at 2.5, 3.5 and 5Km.

Layers at 2.5 and 5Km are depolarizing and conform to HYSPLIT are coming from Sahara.

Potenza, Italy

Low clouds - rain: no measurements

Ispira, Italy

Rain: no measurements

5 May 2010

17:30 UT Madrid, Spain

Regarding the forecast of volcanic ash coming to the Iberian Peninsula, We performed measurements during the whole day in Madrid and no ash layers were observed. The day has been cloudy at some times (low clouds, 2 Km aprox.) but now the sky has cleared up. The station will keep measuring during the night and try to detect the arrival of volcanic ashes, forecasted for early hours of tomorrow.

The quicklooks will be updated at:

<http://www.lidar.es/spalinet/es/instrumentos/?instrument=2&view=5>

18:30 UT Granada, Spain

We are measuring continuously since this morning under a really clear sky, with high visibility.

Quick looks with today's measurements can be visited at

<http://atmosfera.ugr.es/inv/index.php/en/observatorio/quicklooks.html>.

We will continue the measurements waiting the arrival of volcanic ashes.

Barcelona, Spain

performed measurements in the afternoon and evening until clouds came in again.

Quick look available at

<http://www.lidar.es/spalinet/en/instruments/?instrument=1&view=5>

20:00 UT Evora, Portugal

we see some aerosol layers in the free troposphere.

Backtrajectories are coming from North, and the one around 4000m arrival height touched Iceland.

22:00 UT additional information from INTA, Spain

We flown to Galicia this morning at 3500 m.a.sl. with a vertical profile near La Corunia. Large particle concentrations were found only in the MBL not associated to ash (120 particles/cm³ in the range 1-3 microns compared to 1-10 particles/cm³ the rest of the flight). SO₂ of 50 ppb were found in the way (over Valladolid area). The rest of the time was below the detection limit of the instrument.

Tomorrow we expect more chances although it seems that the plume arrival will be delayed compared to previous forecast.

6 May 2010

00:20 UT Granada, Spain

We are seeing aerosol layers in the free troposphere. Backtrajectories are coming from North, and all of them proceed from Iceland or around, specially the air mass between 3000 and 5000 meters a.s.l.

We will continue with the intensive lidar measurements during this night (05-06/05/2010) and while we keep on noticing the presence of volcanic ash.

06:00 UT Granada, Spain

Like we told you in the last mail, we are measuring the volcanic ash trace over our station from 3000 to 7000 meters a.s.l. The backtrajectories are coming from North, and all of them proceed from Iceland or around, specially the air mass located around 5000 meters a.s.l.

We are continously running the lidar measurements.

Madrid, Spain

No volcanic layer detected, except a small double-layer aerosol structure that appeared between 00:00 and 02:00 and disappeared afterwards. Clean troposphere and no clouds most of the day.

10:00 UT Additional info from INTA, Spain

We flown yesterday morning to Galicia. The ash plume was visually detected as a grey thin layer over the ocean 30 miles North of La Coruña but no SO₂ was found above the detection limit level of the instrument. PCASP evaluation in under way. In principle, density seems quite low (much lower than a medium Saharan intrusion).

Today aircraft is going to Leon and Burgos, where chances to meet the cloud are very high.

16:30 UT Evora, Portugal

We still see volcanic aerosols around 3 km.

18:00 UT Additional info from INTA, Spain

Trajectories from Iceland are going straight to the Evora area. The U. Köln RIU forecast for tomorrow even more heavy load at this area.

Today we have been flying between Burgos and Leon where forecasts predict large loading. We have seen two overlapping layers of 300-400 m wide each one (between 3100 and 3800 masl) but of very low density (only double number of particles than in the layer below). That is 10% of the typical boundary layer particles (between 0.1 and 3 microns) . No sign of SO₂.

Pilots have found an anomaly in one of the engines and I am afraid we will not fly tomorrow.

20:00 UT Potenza, Italy

Low clouds and rain – no measurements

Huge dust event. You do not need the lidar to see it

20:30 UT Barcelona, Spain

no measurements today: the sky was cloudy for most of the day, with only occasional occurrences of broken clouds too short for a significant measurement. This evening it was rainy again.

Granada, Spain

lidar measurements performed during all day. Volcanic ash trace have been detected over our station from 3000 to 6000 meters a.s.l. during early morning, the backtrajectories indicate an Iceland origin. Low clouds have been presented during daytime and the presence of volcanic ash has not been so clear. We will follow with the measurements early tomorrow.

Quicklooks available at: <http://atmosfera.ugr.es/inv/index.php/es/observatorio/quicklooks.html>

7 May 2010

17:40 UT Granada, Spain

Today we have performed continuous measurements.

Layers of volcanic ashes are clearly evident in the quick looks, a pronounced increase in AOD with Angstrom exponent slightly over one.

Layers up to 5 kms were present along the day, but the the quickloks evidence some vertical movement that suggest the possibility of mixing with PBL aerosols. Surface boundary layer measurements are also continuously run, including filter sampling for chemical analyses.

You can revise all the recent quick looks at

<http://atmosfera.ugr.es/inv/index.php/es/observatorio/quicklooks.html>

19:30 UT Potenza, Italy

cloudy sky – no measurements

Evora, Portugal

Evora continued measurements until today 13 UTC in the night (06-07 May) we saw volcanic aerosols in thin filaments in about 3 to 4 km height.

This morning (07 May) we saw volcanic aerosols in 3 km height.

Then Cu clouds at 1 km arrived and shortly after noon we stopped the measurements.

In the evening cloud cover reduced and we still see aerosols up to 3 km above the cloud level.

Back-Trajectories at 3500m point to Iceland.

Madrid, Spain

Volcanic layer detected between 4 and 7 Km. Low clouds at 2-3 Km were present sometimes. In the afternoon, it started to rain at 13:00 UTC and measurements were stopped.

8 May 2010

Napoli, Italy

In Napoli the event is clearly visible. A strong depolarizing layer (about 10%) is at 4 km. Several other layers not depolarizing are visible at 2 km, 3km and 5 km.

We will restart measurements tomorrow morning.

Potenza, Italy

A strong depolarizing layer observed over Potenza at 4 km.

A further layer has been observed at about 8 km since 21:30 UT

Measurements stopped at 22:30 UT because of low clouds.

Measurements will start as soon as weather will permit.

Granada, Spain

Today we have performed continuous measurements at Granada.

Quicklooks show vertical movement that suggest the possibility of mixing with PBL aerosols. We are going to follow with the measurements all the night and tomorrow (if the weather permits it)..

Barcelona, Spain

1532-1635UTC - Ash might be between 2-3 km and slowly decreasing and mixing with the PBL.

23:30 UT Lecce, Italy

different layers are observed over Lecce (at 2,3,4 km with aerosol up to 6 km).

Measurements will continue.

Alert

The event will persist over Italy tomorrow

Perhaps (!), volcano ash arrives again in Southern Germany tomorrow.

9 May 2010

4:30 UT News

rain is expected over Southern Germany, no strong contamination is expected

8:30 UT Napoli, Italy

This morning the strongly depolarizing layer at 4 km is no longer present over Napoli. The most intense layer is at 2.5- 3 km(linear volume dep about 2%). Other layers are present below the main layer, they are well distinguishable from the PBL, at least for now.

12:00 UT Potenza, Italy

Scattered clouds at low altitude: measurements are running.

The elevated layer observed last night at 8 km of altitude is not present any longer.

Most of the particles are confined within the first 3 km of altitude.

Measurements will continue until tonight, quicklook available.

Palaiseau, France

We observed a depolarizing aerosol plume on Saturday at about 3-4km, the lidar was then stopped at night because of rain and restarted this morning. No lofted aerosols layers today.

15:00 UT Ispra, Italy

Lots of clouds today over Ispra so it's hard to say if there was some volcanic ash.

Measurements are stopped due to the rain.

18:00 UT Thessaloniki, Greece

Various layers have been observed today over Thessaloniki. Below 4 km these should be Sahara dust while volcanic ash is observed at 4km.

19.30 UT Napoli, Italy

In the afternoon, in Napoli we observed a layer just above the PBL at 2.5 km. The volume depolarization is about 2%. Thin layers are also observed at 3 and 3.5 km.

Maisach, Germany

An ash layer was clearly identifiable by the depolarisation values between about 12:15 UTC to 14:30 UTC and between about 3 to 4 km above ground.

The identified ash layer was surrounded by clouds in time and space, which showed ice formation possibly influenced by ash.

More details as usual under

http://www.meteo.physik.uni-muenchen.de/~stlidar/quicklooks/mim_quicklooks.html

=> quicklook archive 09.05.2010

and more under

<http://www.meteo.physik.uni-muenchen.de/%7Estlidar/quicklooks/data/Eyjafjallajokull.php>

(scroll down to 09.May)

Barcelona, Spain

08:17-11:31UT - lots of low clouds, ash might be present between 1-1.5 km.

10 May 2010

Evora, Portugal

In the morning: no volcanic aerosols

In the afternoon: likely some filaments of volcanic aerosols around 3km height.

Granada, Spain

Today and yesterday (9th and 10th May) low clouds and rain conditions have been presented over Granada. We could not measurement these days. We will try to follow tomorrow with the Lidar measurements.

You can see our update quicklooks at:

<http://atmosfera.ugr.es/inv/index.php/es/observatorio/quicklooks.html>

Potenza, Italy

Saharan dust up to about 6 km. Difficult to say at moment if still volcanic aerosol is present in the PBL.

Quicklook available at

http://www.imaa.cnr.it/index.php?option=com_content&task=category§ionid=33&id=398&Itemid=389

Sofia, Bulgaria

We observed multi-layered aerosol over Sofia. A low level at ~3 km AGL, we think, is due to Sahara dust transportation, and the higher one at ~7 km AGL is probably a volcanic dust (accordingly to the backward HYSPLIT trajectories).

quicklooks available at: <http://www.ie-bas.dir.bg/Departments/LidarData/Quicklooks.htm>

Bucharest, Romania

13:00 - depolarizing layer at 4Km - air masses from West Europe (both at 4 and 6 Km) - probably volcanic ash

17:30 - same layer, going down to 3Km - air masses from W-S-W - probably ash mixed with Saharan dust

19:30 - layer structure (thin) starting 1Km up to 6Km - lower layers (around 2 Km) from W (probably ash), upper layers (around 4 and 6 Km) from W-S-W (probably ash mixed with Saharan dust)

21:30 - clouds on top of the 4Km layer, persistent layer structure below and above clouds - 4Km layer from Sahara, 2Km and 6Km from South Spain (probably mix of volcanic ash and Saharan dust)

Thessaloniki, Greece

We observed over Thessaloniki a layer between 3 and 4 km throughout the day.

Barcelona, Spain

08:13-09:22UT and 13:39-15:48UT - Several very thin ash? layers between 6-8 km.

Alert

There has been an increase in seismic activity today underneath the volcano, although this has temporarily eased. Recent information from the Icelandic Met Office shows that Eyjafjallajökull is erupting to heights of 13,000 to 16,000ft, occasionally 20,000ft (4-5, occasionally 6km), moving off from Iceland in a southeasterly, then southerly direction. The plume continues to encroach near Ireland, whilst further south a residual plume moves northeast from the Atlantic towards Iberia. Issued at 2048 on Mon 10 May 2010

11 May 2010

08:00 UT Granada, Spain

This morning low clouds and rain conditions appeared over Granada. We can not measure in this moment. We will restart our measurements when atmospheric conditions allow it.

09:00 UT Ispra, Italy

It's been raining since Sunday and it is forecast rain for at least another week.

No measurements.

09:30 UT Thessaloniki, Greece

We observe a thick layer from 3.5 to 5km over Thessaloniki this morning. This layer should be desert dust according to DREAM. Below that thin layers still are observed that could be related remnants of volcanic ash.

12.00 UT Madrid, Spain

We have had low clouds and occasional rain since last Friday. Last night the sky cleared up and we detected an aerosol layers at 7 km during the whole night, sometimes mixed with clouds and other times with clouds below (4-6 km). The backtrajectories suggest an Iceland or around origin. The sky is covered with clouds right now, but We will continue with the measurements when weather permits.

Barcelona, Spain

09:57-11:01 UT and 12:16-14:02UT - a thin ash? layer at 7 km and an extremely thin continuous layer between 8-10 km.

Bucharest, Romania

00:30 - same layer structure, clouds at 4Km occasionally - 2 and 4Km layers from Sahara and S Spain (probably Saharan dust), 6Km layer from UK (probably volcanic ash)

02:30 - same layer structure, clouds at 4Km - 2Km layer from Sahara, 4km layer from W (probably mix of volcanic ash and Saharan dust), 6Km from UK (probably volcanic ash)

Strange situation isn't it? It seems that the Saharan dust is pushing down the volcanic ash but at the same time new high altitude air masses are coming and bring volcanic ash. Clouds are generated on dust and mixed layers.

Measurements ongoing. Detailed analysis in course.

We will upload quicklooks as soon as possible.

Munich, Germany

During the regular EARLINET correlative measurements for CALIPSO between 11 UTC and 15 UTC volcanic ash, identified by enhanced volume linear depolarisation ratios and back trajectories, was detected between about 6 and 8 km above ground, descending a few hundred meters during the measurement time.

Thin cirrus clouds were detected above between about 8 and 10 km a.g., and the boundary layer top was at about 1.5 km a.g..

Potenza, Italy

Low clouds and rain: no measurements.

ALERT

Recent information from the Icelandic Met Office shows that Eyjafjallajökull continues to erupt to heights of 4-5 km. The ash cloud is currently heading in a southerly direction. Residual ash plumes are evident on satellite imagery, one moving south-southeast just to the west of southwest Ireland, another moving northeast from the Atlantic towards Iberia.

12 May 2010

Potenza, Italy

Measurements performed in the 12-14:30 UT and continuous measurements since 17 UT.

Saharan dust.

Barcelona, Spain

The laser stopped working. No measurements

Granada, Spain

Since our last report on 11 May we have had middle and low level clouds and some rain. During the nighttime measurements a short period without clouds over the lidar allowed us to measure a well define layer at 4.5 km, that according to our analyses could be volcanic ashes (backward trajectories suggest air flow from Iceland at that altitude). After that cloudless conditions and eventual rains have hindered the observations.

13 May 2010

Evora, Portugal

we did not see volcanic aerosols the last days (11. and 12.05.). And due to low clouds and rain we did not run the lidar continuously.

Last night we performed the CALIPSO correlative measurement and found some aerosol layers up to 4 km (13 May 2010, 1-4 UT). According to the HYSPLIT model, those came from Iceland.

Although we have some low clouds now and then, the lidar at Evora is running.

Quicklooks can, as usually, be found at: <http://polly.tropos.de/lidar>

Potenza, Italy

Continuous measurements

A layer (depol) at about 6 km of altitude (well separated from SD below) and probably of volcanic origin has been observed at 6 UT.

A strong depolarizing layer is evident at about 3 km since 16 UT, probably of volcanic origin.

11.30 UT Madrid, Spain

Right now the sky is covered with clouds (1-2 km) and it has been raining until a few minutes ago.

This morning (8:00-9:00 UT) the LIDAR detected an aerosol layer about 4 Km that could be related to volcanic ash coming from the West after some circulation over the Atlantic. Before and after the measurement, low clouds prevented measurements

In previous days, there were low clouds almost always.

Barcelona, Spain

Low clouds and rain all day long.

1 measurement was made between 11 and 12am UTC and low clouds between 1 and 2 km were found.

11:30 UT Bucharest, Romania

We are measuring between low clouds. We still have multiple layers, but conform to HYSPLIT starting May 11 air masses are coming from Sahara, at least those at low altitude. From time to time is raining, so don't count too much on our data now.

12:30 UT Garmisch, Germany

rain – no measurements

16:30 UT Granada, Spain

This morning during a short period we have had partially cloud cover conditions and we have detected clearly a layer at 3 kms. Back trajectories analyses suggest the arrival of air masses coming from Iceland. More analyses are needed to determine the features of the layer and to clarify the presence of volcanic ashes. At the moment some patchy clouds are present and the lidar measurements are running, but as in previous days likely we would have some storms and we will be forced to stop measurements.

17:20 UT Napoli, Italy

In Napoli, clouds prevented measurements in the morning. Starting from 13:00 UT, layers are present at 1.5 km, 2.0 km, 2.5 km. Starting from 14:00 UT, a strong signal is detected at 3 km, corresponding to high value of linear volume depolarization ($>10\%$).

14 May 2010

12:30 UT Granada, Spain

Today low clouds and rain conditions appeared over Granada. So it was not possible to take any measurements. We will restart our measurements when atmospheric conditions allow it.

12:50 UT Madrid, Spain

Last night low clouds and rain prevented measurements. This morning We attempted measurements among low clouds and about an hour ago an aerosol layer appeared about 5 km. It will need further characterization, as no volcanic ash is predicted today.

We will continue with the measurements along the weekend, following the alert of Alex for Italy and Greece, that partly affect Spain.

Barcelona, Spain

Low clouds and rain all day long. No measurement could be performed.

More measurements will be performed over the weekend.

All quicklooks are available at: <http://www.lidar.es/spalinet/en/instruments/?instrument=1&view=5>.

15:30 UT Bucharest, Romania

Saharan dust at 2.5 km is leaving Romania. There are very thin ash traces at 3.5km (at least HYSPLIT shows air masses coming from Spain), but nothing important. Although EURAD's forecast for 15 and 16 shows ash plumes going around Romanian border, we will measure from time to time, if the weather permits.

Evora, Portugal

As there is no ash predicted for Portugal the next days, we will not measure continuously over the weekend.

Napoli, Italy

Last night it was not possible to take any measurements due to low clouds. This morning we performed measurements among clouds.

Aerosol layers (probably mixed with Saharan dust) appeared between 2 and 3.5 km. Beginning from 14:00 UT a more depolarizing layer appeared between 3 and 5 km. Backward trajectories suggest the origin in Iceland. Measurements have been stopped at 17 UT due to low clouds. Rain is forecast until Monday, no measurements will be performed during the weekend.

Potenza, Italy

Measurements were interrupted at 3:24 UT because of low clouds and light rain.

Measurements restarted at 8:45 UT and are running continuously.

Aerosol layers up to 6 km – mainly Saharan dust.

Measurements will continue over the weekend.

Quicklook available on the earlinet website.

Thessaloniki, Greece

We performed measurements around noon and saw layers between 1-2 km, 3-3.5km and at 5 km. Hysplit trajectories suggests Saharan dust.

15 May 2010

Potenza, Italy

Measurements stopped at 01:00 UT because of rain.

Rain and low clouds for the whole day – no measurements.

Measurements will start again as soon as weather will permit.

Cabauw, The Netherlands

Throughout last week, low clouds and rain prevailed in NL. Yesterday, the weather has improved. Since just before midnight, a new thin ash layer has appeared over Cabauw at 2.5 km, perhaps only 100 m thick. The layer has been present all day at rather constant altitude, and is now increasing in thickness to about 600m. The layer has risen a bit as well and is now just below the cloudbase (clouds above 3 km).

Athens, Greece

A very strange meteorological situation brings dust (quite important quantities) from Saharan and the Arabic Peninsula over E. Europe+Georgia then to over central+western+northern Europe then over Iceland. Since the volcano continues to blow off ash, this makes a very interesting mixing. In situ sampling of aerosols at ground over Athens (on May 10) showed the simultaneous presence of dust and ash. Our analysis of in situ samples continues.

This situation started today 15/5 and will continue at least up to 18 May (ash will be again over central+eastern Europe), and most probably up to 19 May.

In case the sky is clear, please do your lidar measurements.

We will start performing measurements today.

Maisach/Munich, Germany

In Maisach low clouds and rain (see ceilometer) prevented lidar measurements in the last days.

We are ready to start measurements any time when the weather allows.

Thessaloniki, Greece

cloudy and rainy – no measurements

16 May 2010

Evora, Portugal

Last night we detected several thin but optical dense aerosol layers up to 3km height agl and some weaker filaments up to 5km agl. According to Hysplit trajectories, the aerosols were trapped over the Atlantic the last days. It might be some older volcanic ash. The layers were becoming less distinct during the morning.

The quicklooks of all measurements are available at: <http://polly.tropos.de/lidar>

Barcelona, Spain

This morning in Barcelona three layers located at 3, 5 and 6.6 km has been detected. The initially tiny layer at 5 km has developed into a high concentrated one while the other have decreased. The sky is cloud-free.

Potenza, Italy

Low clouds and rain prevented measurements.

We will restart the measurement as soon as the weather will permit.

Maisach/Munich, Germany

low clouds

Thessaloniki, Greece

we observed, among clouds, an optical thin layer between 3 and 4 km.

EURAD predicts Volcanic Ash

17 May 2010

Athens, Greece

After clearing of the sky from dust on Saturday 15/5, ash was again observed. Major ash event will hit again NW, central, Italy +eastern Europe), with a peak during all day of 19 May. For us the

event will be much much stronger than ever before. May be 20 May will be also an ash day. In case the sky is clear, please do your lidar measurements.

Madrid, Spain

After several days (10-15/05) of cloud-covered skies, there was fine weather at Madrid from the 15/05 18:30 UTC until now. Lidar measurements detected aerosol layers just over the PBL (2-3 Km) the 15th and 16th and those layers seemed to mix with the PBL from the 16th-17:00UTC on. Today's measurements do not show any aerosol structure on the free troposphere.

All quicklooks are available at: <http://www.lidar.es/spalinet/es/instrumentos/?instrument=2&view=5>

Leipzig, Germany

after some days with low clouds and rain we started measurements last night at 21:43 UT. Measurements were stopped today at 12:40 UT due to low clouds and rain risk. We see aerosol layers up to 8 km height agl. Around 02:00 UTC two stronger aerosol layers appeared in about 3 and 3.4 km which unify at around 08:30 UTC. This layer is still visible between 3 and 3.5 km altitude and shows enhanced volume depolarisation. Hysplit trajectories indicate that these layers were trapped over the Atlantic the last days. It might be some older volcanic ash.

Cabauw, The Netherlands

An ash cloud came in over The Netherlands in the night of 17 May. Airports were temporarily closed today. The ash appeared in the lidar data after rain stopped at about 6 UTC. The ash extended from 3 to 6 km altitude. Later on in the day, was also detected up to 8 km. A separate layer was present between 3 - 4 km at that later times. UV-backscatter lidar data were acquired continuously. Raman lidar data started around 12 UTC and will continue until darkness, weather permitting. More ash is expected to arrive over The Netherlands over the next days. We are standing by to cover this by measurements if the weather allows.

Maisach/Munich, Germany

- low clouds until about 03:45 UTC
- until 05:45 UTC volcanic ash layer between 5.5 to 6.5 km msl and ash traces to 7.5 km
- after 05:45 Cirrus clouds developing in this layer
- after 10:15 low clouds; measurements stopped at 11 UTC
- started measurements 15:50 UTC => low clouds at 1.5 and after 16:30 at 3.5 km msl; but between clouds we see maybe traces of ash from 3.5 to 6 km msl.

the last days we had lots of low clouds and rain in Munich.

19:00 UT Potenza, Italy

Low clouds prevented measurements for the whole day.
We are ready to start measurements as soon as possible.

Evora, Portugal

We have very nice weather for lidar measurements (clear sky, no rain), but as we do not observe ash, we do not run the lidar continuously.

20:00 UT Granada, Spain

Today we have performed several measurements at Granada but we have not detected volcanic ash. However, we are going to follow with regular lidar measurements as it is usually.

01:05-03:40 UT, 09:06-16:40 UT and 19:56-22:00 UT

During the last session aerosol load in the free troposphere increases (3-4 km), likely as a result of the outbreak of Saharan dust that has been forecast by different models.

Barcelona, Spain

0732-0802UTC, 1024-1054UTC and 1250-1708UTC

A very thin but strong layer is visible below 1 km. It follows approximately the same vertical evolution as the PBL.

18 May 2010

6:30 UT Bucharest, Romania

Bucharest had rain and low clouds during 15 afternoon, 16 and 17.

We will try to perform some measurements, but I don't expect to be able to deliver more than Quicklooks.

Potenza, Italy

Cloudy sky.

Lidar measurements are running to see if we can see anything between clouds.

Aerosol layers appear up to 4 km. Peak at about 3 km (between clouds). We do not know the origin yet.

Palaiseau/Paris, France

We've had an aerosol layer at 3km height all day above Palaiseau. Strong depol. Don't know what it is yet. can be seen on our quicklooks (both 532/1063 and 355 nm) at

<http://sirta.ipsl.polytechnique.fr/data-search/index.html>

Ispra, Italy

- rain and LLC until Friday; - ~ good weather Sat and Sun

Lidar was off until today.

Today we saw a layer at around 3-3.5km.

It is probably a pollution layer. Tomorrow I will perform some back-trajectories.

Evora, Portugal

we don't have volcanic aerosols over Portugal. But we have clear sky. Therefore we are performing some night-time measurements. The Aeronet AOD at 500nm was today 0.061.

Munich, Germany

After clouds disappeared at about 13 UTC enhanced volume linear depolarisation ratio could be measured between 3-6 km in several thin layers, some merged to a main layer between about 3.5 - 4.5 km, splitting again after about 23 UTC.

Measurements are still ongoing. Among low clouds layers between 3 -5 km are still visible.

Cabauw, The Netherlands

Ash clouds remained throughout the day between 2 and 7 km. More patchy structures were observed rather than stratified layers. After 20 UTC layers descended into a thin layer around 2 km altitude.

UV-backscatter lidar measurements and Raman lidar measurements were performed all day, as well as the CALIPSO Case-A overpass. Measurements continue into Wednesday 19 May when ash amounts are expected to decrease.

10:40-11:10UT Barcelona, Spain

Ash might be continuously present between ground and 5 km in the form of a weak background.

All quicklooks are available at: <http://www.lidar.es/spalinet/en/instruments/?instrument=1&view=5>.

Bucharest, Romania
low clouds and rain - no measurements

Granada, Spain
07:30-11:30 UT, 12:01-14:02 UT, 15:27-17:30UT and 19:56-22:00 UT
During all sessions strong backscatter signal is detected from surface up to 5-6 km (likely mineral dust from Sahara).

Madrid, Spain
we have also cloudless conditions since last 15th of May. We have performed day and night time measurements observing a very faint evidence of volcanic aerosols at 4 km today in the morning, but disappeared afterwards.

Athens, Greece
Low clouds prevented of taking lidar measurements.

Leipzig, Germany
01:03-03:17 UTC: Traces of (most probably) volcanic aerosol up to 7 km height asl
08:50-14:32 UTC: An aerosol layer between the PBL at 1.5 km asl and a cirrostratus layer with cloud base at 3 km asl was visible. No information from above 3 km available because of the cirrostratus cloud.

19 May 2010

Garmisch, Germany
Rain – no measurements

Bucharest, Romania
cloudy sky, low chances of measurements - but we are ready

L'Aquila, Italy
we recovered (14/5) the operative condition of our lidar after a failure in the laser system. The cloud coverage and rain prevented significant period of measurements. For today and tomorrow there is low chance to run the lidar because low clouds and rain. Ready to restart.

Granada, Spain
Due to the anticyclonic system that affects the Iberian Peninsula cloudless conditions are almost permanent over Granada . We have performed day and night time measurements without any evidence of volcanic aerosols . Now our region is influenced by a Saharan dust outbreak and aerosols are detected from surface up to 4-5 km (even during night time). We will follow with our measurement's schedule and we will keep inform you.
00:27-03:23UT during Calipso overpass strong backscatter signal is detected from surface up to 5-6 km (likely mineral dust from Sahara).
all Granada quicklooks are available at:

<http://atmosfera.ugr.es/inv/index.php/es/observatorio/quicklooks.html>

Maisach/Munich, Germany

during 0 UTC and about 8 UTC we observed an aerosol layer with high volume linear depolarisation ratio between 3 - 4 km and thin layers up to 6 km over Maisach, slightly descending during time.

After about 8 UTC we had low clouds. During about 9:30 - 10:30 UTC we saw a thin layer with enhanced volume linear depolarisation ratio among the clouds at ca. 2 km.

12.00 UT we have to shut down due to low clouds and rain risk.

12-24 UT no measurements due to low clouds / rain.

Madrid, Spain

Today's measurements do not show any aerosol structure on the free troposphere, so the Saharan dust has not reach our site yet.

All quicklooks are available at <http://www.lidar.es/spalinet/es/instrumentos/?instrument=2&view=5>

Athens, Greece

Low clouds prevented of taking lidar measurements. Today was the peak of ash particles over Athens.

Potenza, Italy

Measurements performed 00:00- 11:00 UT, then stopped because of low clouds and rain.

Quicklook available at www.earlinet.org.

Leipzig, Germany

No measurements due to rain

20 May 2010

Potenza, Italy

Rain – no measurements

Athens, Greece

Late night of 19/5 and early morning hours of 20/5 we got finally clear sky. As forecasted by EURAD very strong ash particles were detected between 2-5 km height over Athens. Later than 0100 UTC the sky became again cloudy, which prevented our lidar measurements. Similar conditions are forecasted for the next 2 days. If weather permits lidar measurements will be performed.

Ispira, Italy

We have seen increased "stuff" up to 4km during 18 and 19 of May. No back trajectory performed.

See quick looks on my ftp site <ftp://ftp-ccu.jrc.it/pub/adam/LIDAR/>

Bucharest, Romania

Today we had short periods without low clouds and we could see a slightly depolarizing layer at 3.5 - 5Km. I cannot tell what it is, neither EURAD or DREAM forecast dust or ash, and HYSPLIT is still not working.

Maisach/Munich, Germany

00-24 UT Maisach no measurements due to low clouds / rain

Leipzig, Germany

No measurements during the day due to rain followed by low clouds and fog in the evening

21 May 2010

Potenza, Italy

Low clouds and rain – no measurements

Leipzig, Germany

09:19-13:20 UTC: Depolarizing volcanic layer observed between about 1.5 and 3 km height asl.
Weak signals above 3 km because of extended altocumulus cloud fields.

Alomar, Norway

14:00 - 20:00: air space closed above Northern Norway

no measurements at the moment - due to bad weather (analog to period around 15,4, this is due to the typical circulation pattern)

People at ALOMAR are on alert and will measure in case the sky opens up.

Evora, Portugal

we have clear sky and we are measuring since 9 UTC.

Evora does not see volcanic aerosols.

About 11 UTC an aerosol plume between 3 and 4 km arrived. 5day Back-Trajectories in this altitude range are originating in Africa.

22 May 2010

Evora, Portugal

the desert dust episode continues. We still have clear skies. Optical depths @500nm about 0.24.

The dust layer is between ~2 and ~5 km

Potenza, Italy

Sky still cloudy and light rain – no measurements.

European lidar quicklooks (clickable map)

<http://www.meteo.physik.uni-muenchen.de/~stlidar/quicklooks/European-quicklooks.html>

Green color indicates EARLINET stations (sophisticated aerosol observations)

European Lidar Quicklook Map - Mozilla Firefox

http://www.meteo.physik.uni-muenchen.de/~stlidar/quicklooks/European-quicklooks.html

European Lidar Quicklook Map

Quicklooks of frequently updated **EARLINET** (other) lidars and **online ceilometers** (clickable map)

Note: EARLINET stations in small gray letters do not provide regularly updated quicklook web pages. But some do provide quicklooks for certain episodes like volcano activity. Links to such web pages (also from non-EARLINET lidars) are listed below. More information about all stations and addresses can be found on the [EARLINET web page](#).

contact: [Volker Freudenthaler](#)

Additional Eyjafjallajökull volcanic ash related links / quicklooks:

Cabauw / NL, Caesar-UV-lidar	quicklooks: http://www.knmi.nl/~savenije/UVLIDAR
Biltoven / NL, Caeli-T	quicklooks: http://cerberus.rivm.nl/lidar/Biltoven/Caeli-T/
Hamburg-MPI / D	quicklooks: http://lidar.dkrz.de/volcano
Minsk / UA	quicklooks: http://scat.bas-net.by/~lidarteam/
Barcelona / ES	quicklooks: http://www.lidar.es/earlinet/es/instrumento/instrumento-view-5

Completato

start | Posta in arrivo | CAF-Dichiarazion... | Esplora risorse | EyjafjallajökluEru... | EARLINETASOS... | European Lidar... | Microsoft Power... | IT | 22.09

Direct EARLINET links:

Athens (Greece)

<http://www.physics.ntua.gr/~papayannis/volcanos/2010/Eyjafjallajokull.html>

Barcelona (Spain)

<http://www.lidar.es/spalinet/en/instruments/?instrument=1&view=5>

go to quicklooks

Belsk (Poland)

<http://lidar.igf.edu.pl/>

choose date

Bucharest (Romania)

<http://inoe.inoe.ro/Quicklooks/php-files-INOE/photogallery.php>

click volcanic ash, click measurement by date

Cabauw (The Netherlands)

<http://cerberus.rivm.nl/lidar/Cabauw/2010/> (EARLINET lidar)

click date, click measurement

http://www.knmi.nl/~knap/lidar_cabauw/ (UV lidar)

<http://cerberus.rivm.nl/lidar/Bilthoven/Caeli-T/> (3-wavelength lidar)

Evora (Portugal)

via PollyNet at IfT

<http://polly.tropos.de/martha/quicklook.php>

click on POLLY.Net

choose location Evora (or click the map), choose PollyXT_CGE, choose date

Granada (Spain)

<http://atmosfera.ugr.es/inv/index.php/en/observatorio/quicklooks.html>

choose LIDAR quicklooks, year, month and day

Hamburg (Germany)

<http://lidar.dkrz.de/volcano/>

go to app1004dd (day)

L'Aquila (Italy)

http://cetemps.aquila.infn.it/Cetemps/it/index.php?option=com_content&view=article&id=73:lidar-reports&catid=36:sensori-attivi

Lecce (Italy)

<http://www.fisica.unisalento.it/AerosolClima/LidarQuicklook.html>

Leipzig (Germany)

<http://polly.tropos.de/martha/quicklook.php> (MARTHA, big lidar)

shows actual measurement, click date for previous measurements

or for Polly (small lidar) click on POLLY.Net

choose location Leipzig (or click the map), choose Polly_1st, choose date

Linköping (Sweden)

<http://www.earlinet.foi.se/>

go to Quicklook_day

Madrid (Spain)

<http://www.lidar.es/spalinet/es/instrumentos/?instrument=2&view=5>

Maisach/München (Germany)

http://www.meteo.physik.uni-muenchen.de/%7Estlidar/quicklooks/mim_quicklooks.html

shows actual measurement, use list on right side to click previous dates

Minsk (Belarus)

<http://scat.bas-net.by/~lidarteam/Eyjafjallajokul%20eruption/>

Napoli (Italy)

http://fisat.fisica.unina.it/index.php?option=com_phocagallery&view=category&id=1:eyjafjallajokull&Itemid=59

Palaiseau/Paris (France)

<http://sirta.ipsl.polytechnique.fr/data-search/2.html>

choose 532/1064 nm backscatter lidar and choose 355 nm backscatter lidar -> submit
choose month and day -> click quicklook

Potenza (Italy)

http://www.imaa.cnr.it/index.php?option=com_content&task=category§ionid=33&id=398&Itemid=389

click on item title (date)

Sofia (Bulgaria)

<http://www.ie-bas.dir.bg/Departments/LidarData/Quicklooks.htm>

click measurement by date

Thessaloniki (Greece)

<http://lap.physics.auth.gr/earlinet/quicklooks/>