

The Eruption of the Eyjafjallajökull Volcano !!

Located on the
Island of Iceland
In the Atlantic
Ocean

Remember these
headings in the
News?

Started:
April 14th, 2010

Ended:
June 23rd, 2010

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Volcanic ash grounds aircraft across Europe

Half of North American flights likely hit Friday; worst disruption since 9/11



Carl Court / AFP/Getty Images

Ash from Iceland's active volcano creates a scenic sunset Thursday at London's Gatwick Airport, which like most airports in northern Europe was shut down due to the eruption.

 [View related photos](#)

msnbc.com staff and news service reports
updated 1 hour, 14 minutes ago

LONDON - An enormous ash cloud from an Icelandic volcano caused the biggest flight disruption since 9/11 as it drifted over northern Europe and stranded travelers on six continents Thursday.

Officials said it could take days for the skies to become safe again in one of aviation's most congested areas.

The cloud, floating miles above Earth and capable of knocking out jet engines, wrecked

Video



Launch

Airspace invaded

April 15: Ash clouds from Iceland's spewing volcano have crippled air travel across Europe. ITV's Chris Choi reports from London.

Nightly News

Iceland volcano: More resources

[Live webcam of the volcano](#)

[BBC: Why we can't fly through ash | Live blog](#)

[The Guardian: How the ash is spreading](#)

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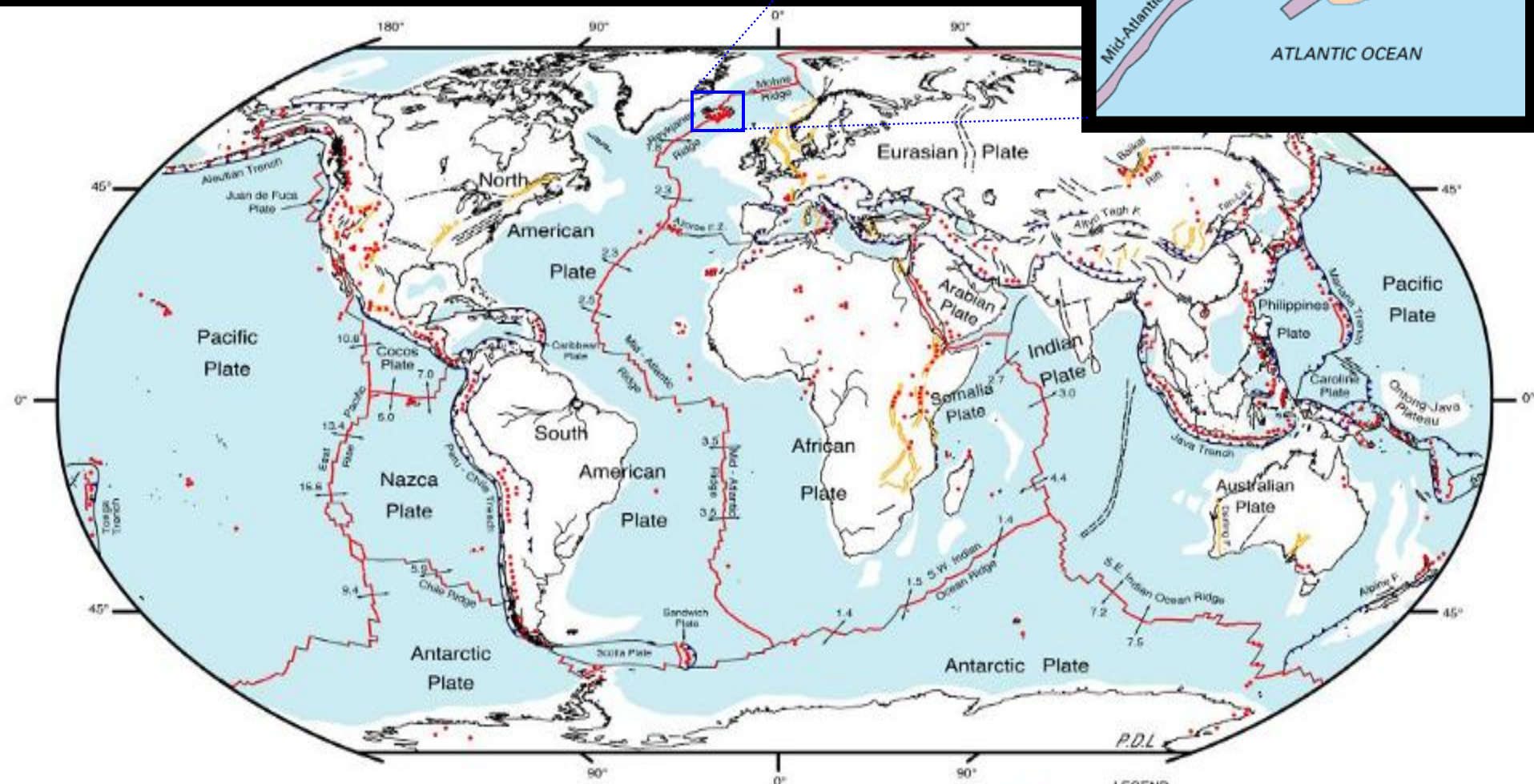


 [When in Rome ...](#)
Nicknamed "The Eternal City"

First, find Iceland on the map.

What plate boundary goes through Iceland?
(convergent or divergent?)

Why are there volcanoes in Iceland?



Where is the Eyjafjallajökull volcano?



How far did the volcanic ash cloud from the eruption travel?



First the volcano erupted as a “Strombolian” eruption – meaning that it ejected lots of hot cinders and lava bombs a few hundreds of meters into the air! (end of March - beg. of April)





**Then the volcano erupted
EXPLOSIVELY!!
These photographs
were taken from space of
the volcano and the ash
cloud.**



April 17th 2010

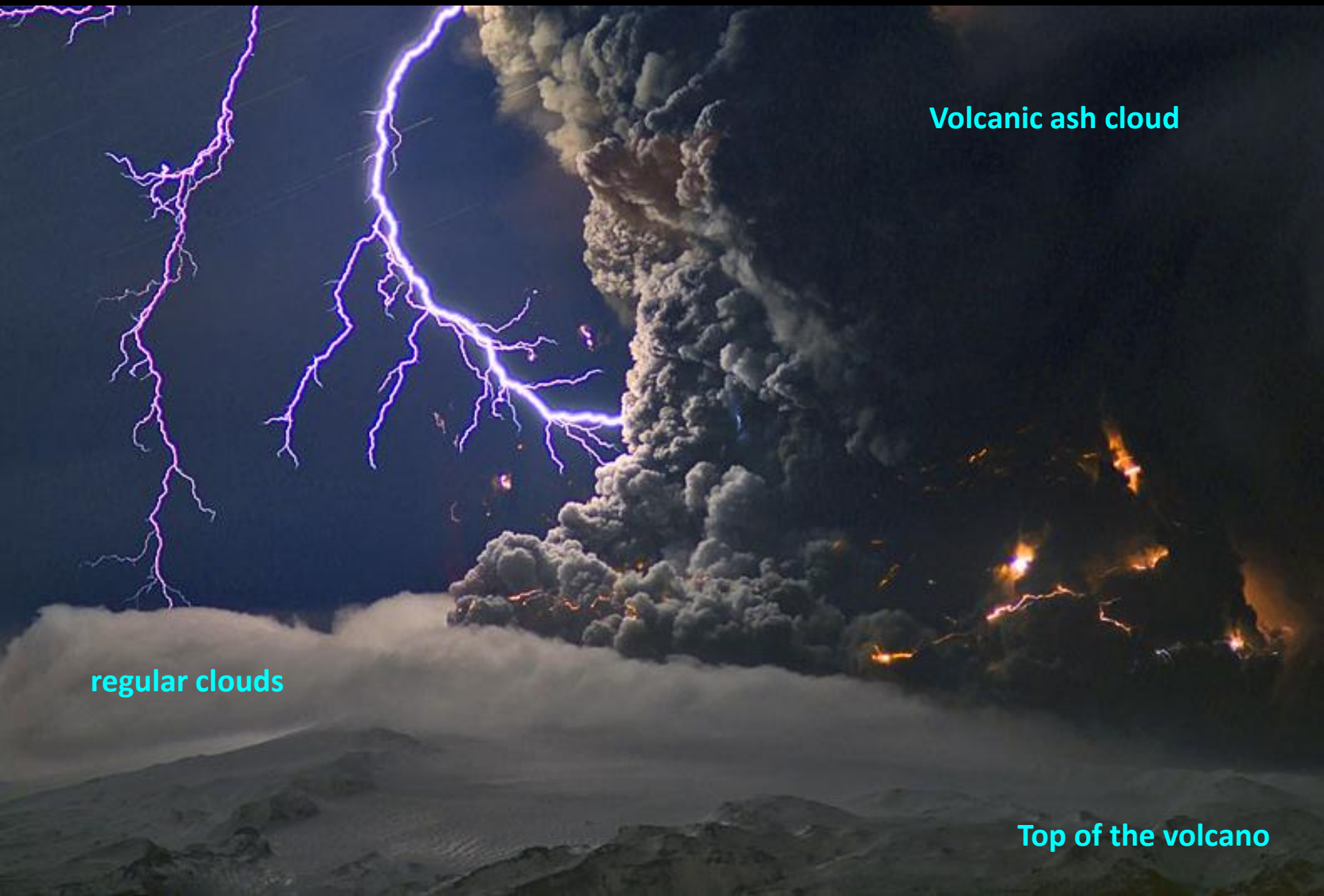
April 19th 2010

Volcanic eruption cloud rises above clouds



Those are farm houses!!

Awesome!

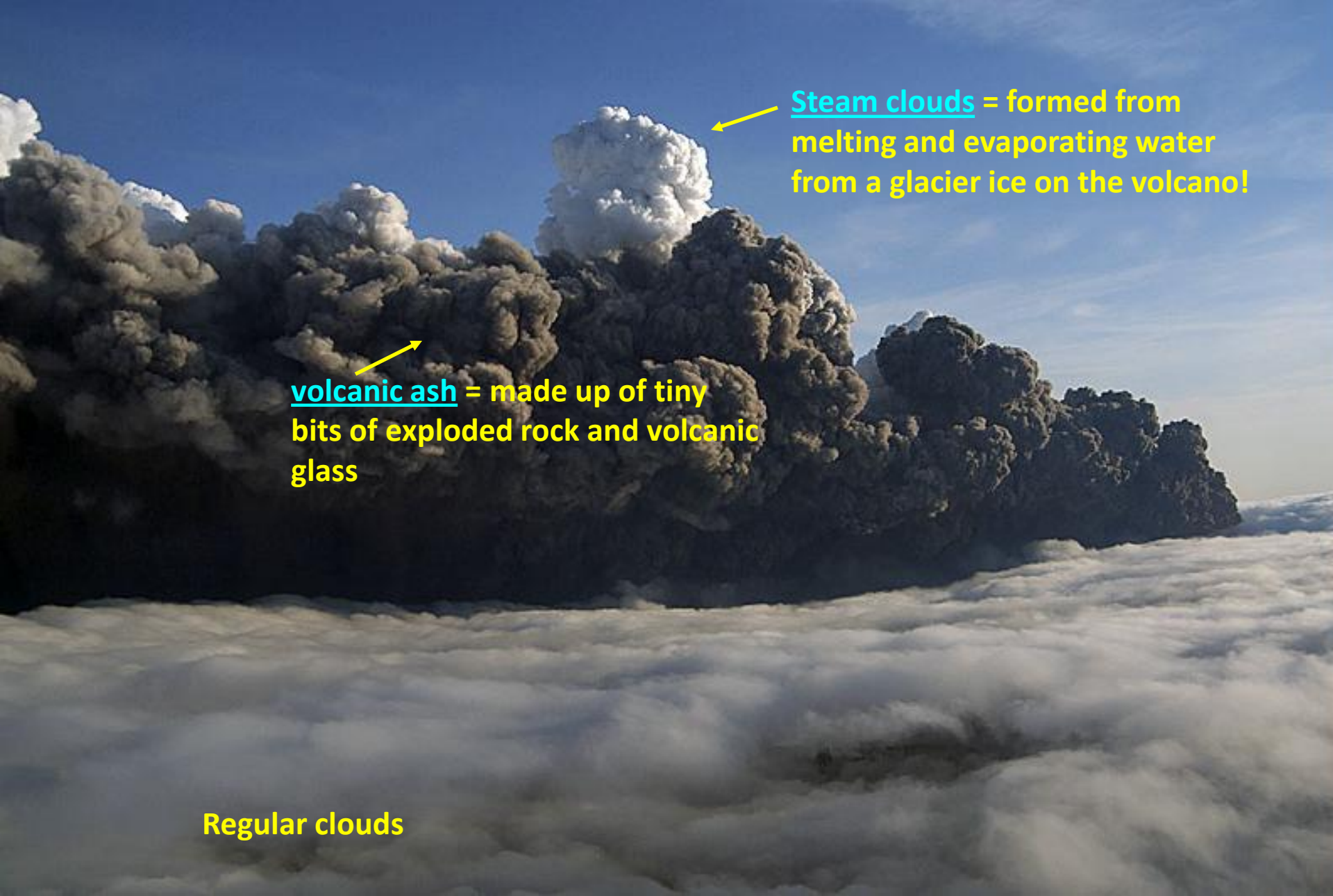


Volcanic ash cloud

regular clouds

Top of the volcano

The white clouds are steam clouds, and the dark clouds are volcanic ash clouds, made up volcanic glass, bits of rock, and gasses.



Steam clouds = formed from melting and evaporating water from a glacier ice on the volcano!

volcanic ash = made up of tiny bits of exploded rock and volcanic glass

Regular clouds

Ash clouds from the eruption. The ash is falling out and will eventually reach the ground.

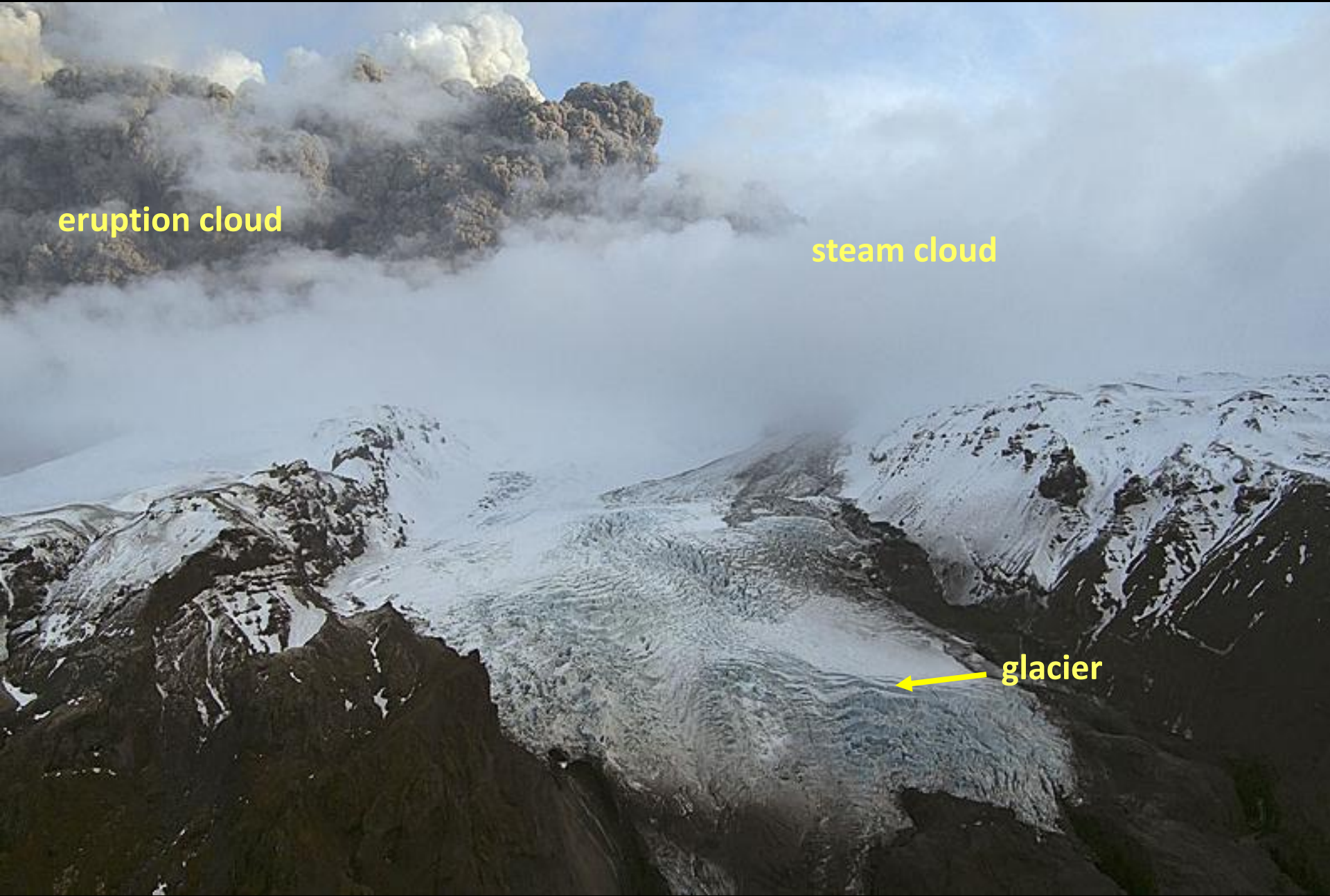


volcanic ash cloud

Falling ash!!

Regular clouds

The Eyjafjallajökull volcano has a glacier on top of it

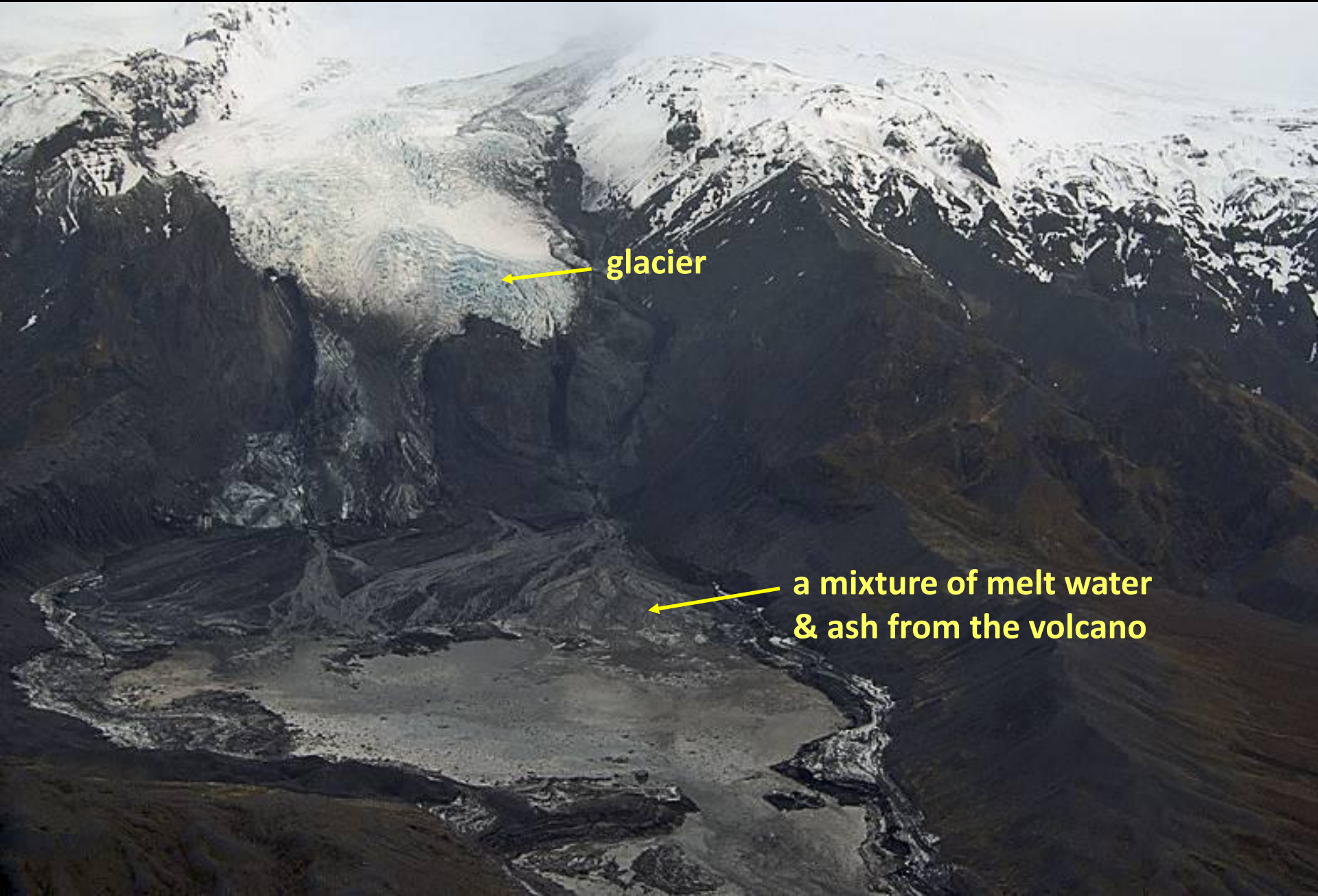


eruption cloud

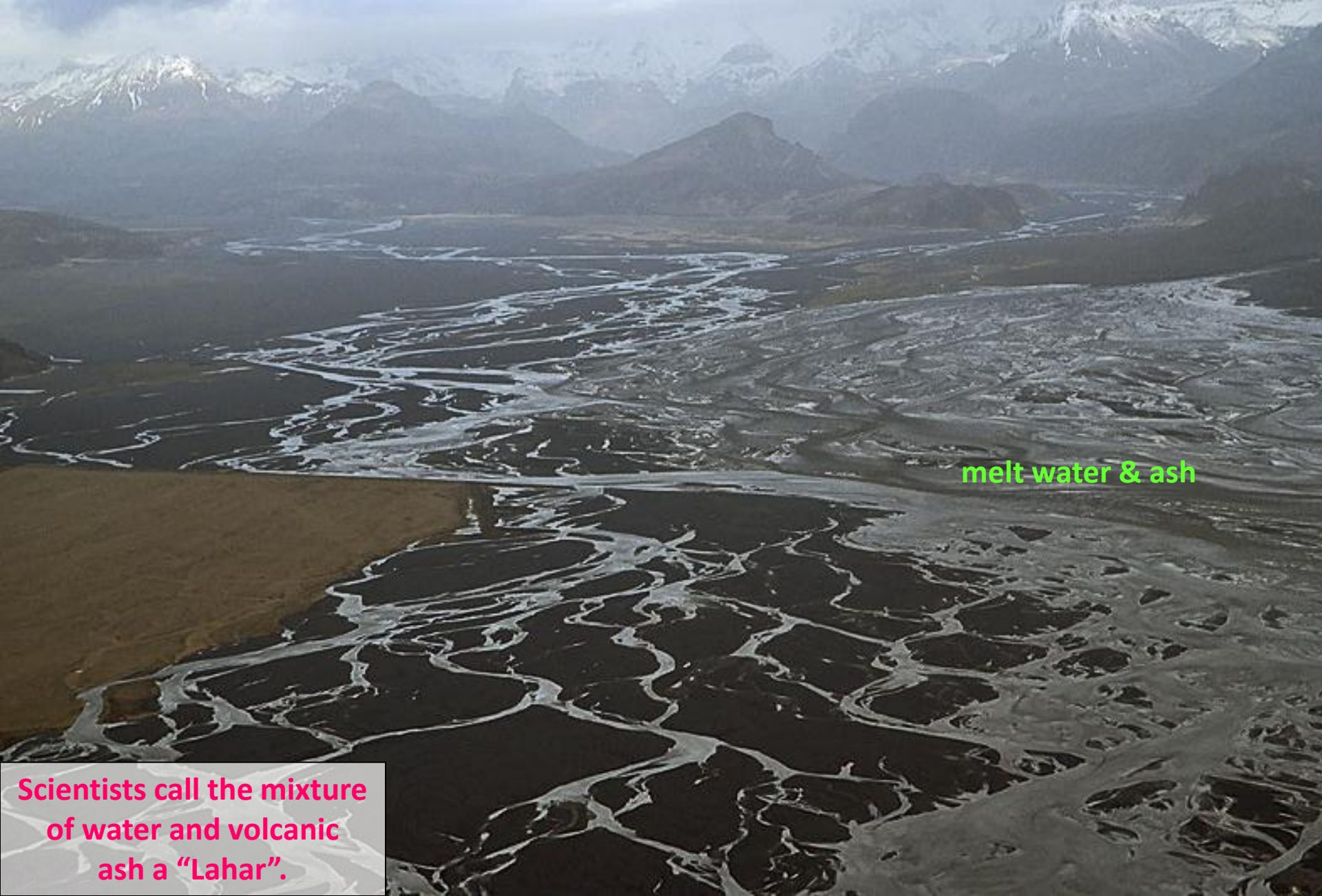
steam cloud

glacier

Part of the glacier melted due to the heat of the eruption!



Melt water and volcanic ash flowed downstream



melt water & ash

Scientists call the mixture of water and volcanic ash a "Lahar".

When this ash and water mixture flowed downstream it caused flooding!



flowing

melt water & ash

That's a Road! Yikes!

How do you think volcanic eruptions can affect people?



World Economic Influence of Eruptions

[illegible]

How did the volcanic eruption affect air travel in particular?

What factors might influence where and how far the ash travels?

Hazards to aviation from volcanic ash cloud

The ash cloud from Iceland's erupting volcano continues to cause air travel chaos across Europe, closing airports and stranding thousands of passengers. The cloud contains tiny particles of abrasive glass, sand and rock that pose a serious danger to aircraft engines and structures

Exterior

Forward-facing surfaces, such as landing lights and wing leading edges, damaged or scratched

Cockpit: Vision obscured by cloud and windshield abrasion

Cabin
Air quality impaired

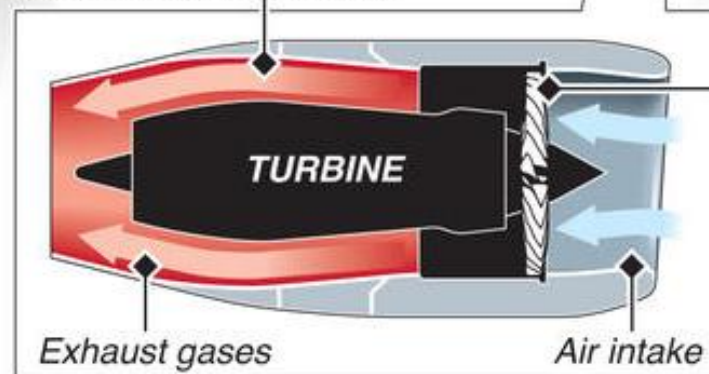
Corrosion: Possible damage to plastic, rubber and metal components from gases such as sulfur dioxide

ENGINES: Ash deposits melt and clog interior, blocking fuel nozzles and restricting airflow, resulting in loss of thrust or failure

Instruments

Ash blocks pitot tube, used to measure airspeed. Aircraft could stall if pilot does not know how fast it is going

Turbine blades eroded, leading to reduction in performance



Volcanic ash cloud is about 6-11km high – where most commercial aircraft fly

