



SIG Aviation Meteorology
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Introduction:

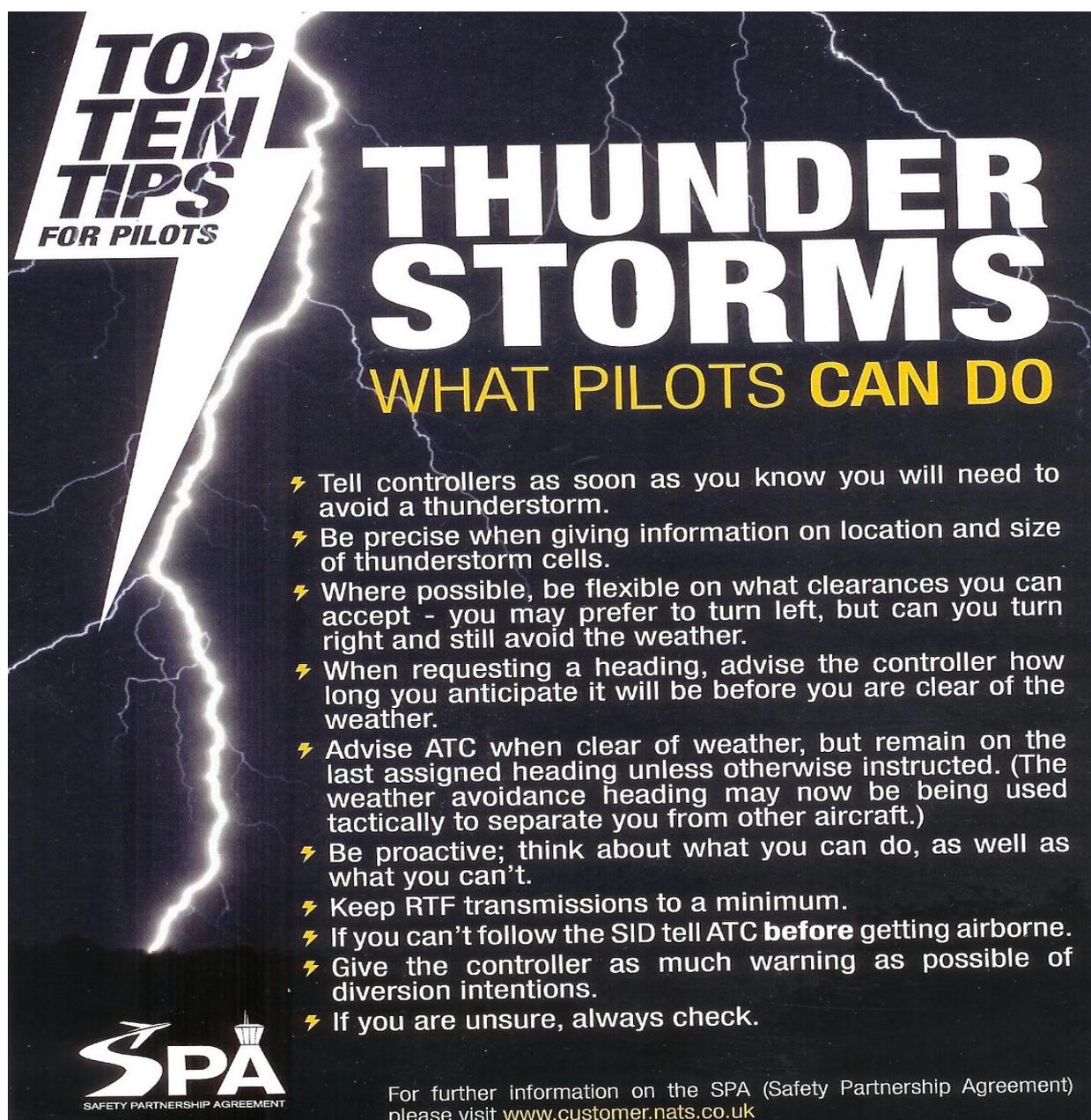
Jacob Kollegger

After a Spring and Summer hiatus involving a job upgrade as mentioned to you in an email I sent out, the newsletter is back.

Top Ten Tips for Pilots, Thunderstorms flyer:

Jacob Kollegger

This may be old news for some of you, but I have noticed these flyers at several airports in the UK, notably Farnborough, recently. These flyers, I believe, are from 2012 or 2013.



TOP TEN TIPS FOR PILOTS

THUNDER STORMS

WHAT PILOTS CAN DO

- ⚡ Tell controllers as soon as you know you will need to avoid a thunderstorm.
- ⚡ Be precise when giving information on location and size of thunderstorm cells.
- ⚡ Where possible, be flexible on what clearances you can accept - you may prefer to turn left, but can you turn right and still avoid the weather.
- ⚡ When requesting a heading, advise the controller how long you anticipate it will be before you are clear of the weather.
- ⚡ Advise ATC when clear of weather, but remain on the last assigned heading unless otherwise instructed. (The weather avoidance heading may now be being used tactically to separate you from other aircraft.)
- ⚡ Be proactive; think about what you can do, as well as what you can't.
- ⚡ Keep RTF transmissions to a minimum.
- ⚡ If you can't follow the SID tell ATC **before** getting airborne.
- ⚡ Give the controller as much warning as possible of diversion intentions.
- ⚡ If you are unsure, always check.

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**TOP
TEN
TIPS
FOR PILOTS**

THUNDER STORMS

WHAT PILOTS SHOULD KNOW

- ⚡ Controllers cannot see thunderstorm cells on their radars.
- ⚡ Requests for specific weather avoidance headings/levels may result in you going outside of controlled airspace. Be familiar with ATSOCAS as the ATC service you will receive will change and you will become responsible for your own separation.
- ⚡ A requested routing may infringe the airspace of other controllers and co-ordination will need to be carried out before the routing can be approved.
- ⚡ Where multiple aircraft are weather avoiding, it may be necessary to separate all aircraft in the sector by level.
- ⚡ Other aircraft which are avoiding weather may affect your routing.
- ⚡ Controllers can pass onto pilots information relating to thunderstorms gathered from Met feeds (not to the radar) and pilot reports.
- ⚡ RTF workload will increase as weather avoidance causes an increase in calls and requests from pilots.
- ⚡ The location of weather cells is dynamic; reduced landing rates, due to aircraft unable to land at airfields, will increase enroute holding.
- ⚡ Sector capacity may be reduced to allow for increased separation requirements and loss of holding areas.
- ⚡ If you turn to avoid weather without a clearance from ATC, you may no longer have separation from aircraft around you.

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There might be interest in revamping or updating them, in particular the internet link at the bottom of both sides of the flyers.

Swiss International Airlines Accident, July 10, 2002.

Jacob Kollegger

One of the accidents I am currently looking into and creating an article about, purely on the weather focus, is the Swiss International Airlines accident on July 10, 2002. Details of it can be checked out on http://www.skybrary.aero/index.php/SB20_Werneuchen_Germany_2002

As a brief summary, for only the weather point of view:

The flight departed from Basel to destination Hamburg. SIGMETs in Hamburg and the region were issued about two to three hours before departure of squall line formation, but this info was not passed to the crew, and the significant weather chart, although showing a cold front passage, was considered by the crew to be a typical cold front passage, with thunderstorm conditions for about 30 minutes duration without any major issue.

Flying north of Frankfurt towards Hamburg, the crew did notice the thunderstorm line, but circumnavigated the cumulonimbus clouds by use of airborne weather radar. On the other side, on approach to Hamburg, the crew discontinued the approach after encountering severe turbulence. They went into a holding pattern northeast of Hamburg and determined that Hannover, their alternate airport to the south of Hamburg, would have to be flown to. The line, however, moved eastwards, and the aircraft had to fly towards Berlin in order to circumnavigate the line.

Fuel became an issue, and the crew looked at Berlin Tegel as a possible alternate to the alternate. In Tegel the METAR stated CAVOK and at the end NOSIG, meaning no significant cloud below 5000 feet above aerodrome elevation, visibility of 10 km or more, no cumulonimbus cloud in a 25 nautical mile radius of the airfield. The NOSIG designates these conditions forecasted not to significantly change for the next two hours. This METAR report was, retrospectively but also contemporarily, highly optimistic, but the crew, with the information at hand, with low fuel, diverted to Berlin Tegel.

On approach in Tegel, even after having given the “committed to land” declaration to air traffic control, the crew had to discontinue the approach due to the line having reached the airport, and asked ATC for any airport available in the Berlin region free of cloud. Werneuchen aerodrome, east of Berlin, was clear, and the crew elected to land there, which they proceeded to do. The story, weather-wise, ended on landing, but the crew's adventure was by then almost only just beginning. You can read more on it using the above SKYbrary link.

This accident's final report took eight years to complete, and it was a nightmare case of the perfect storm. Inadequate crew resource management, inadequate weather forecasting, inadequate air traffic control assistance, inadequate company control centre assistance, in short, inadequate everything, except the cabin attendant service and the passengers paying the tickets, was to blame, resulting in the amount of time taken to complete the report.

The SKYbrary article on Squall Line, at time of writing, is being reviewed and edited with all of this in mind included.

OpenRunway, renewed/refreshed Met Office Product

Jacob Kollegger

<http://www.metoffice.gov.uk/aviation/openrunway>

Another service from the Met Office to aviation users, the Met Office has revised and refreshed its OpenRunway product.

Many of our members are from the Met Office, and as with any interesting and serious new or renewed aviation product, we are happy to make it known to the general public. For the specifics, however, please refer to the above link.

Photos



Innsbruck, June 30, 2016... looking towards the west. Departure runway 26... better wait awhile...



This looks better, one and a half hours after the previous photo... the one-engine out escape valley is open... good to go. The clouds hugging the mountain sides reduce the space available for turning in the valleys and staying visual, should one have to turn in the area at the altitude of the clouds...



Approaching Edinburgh from the east, July 13, 2016 at 2020 UTC.



You can see where the landmass begins....



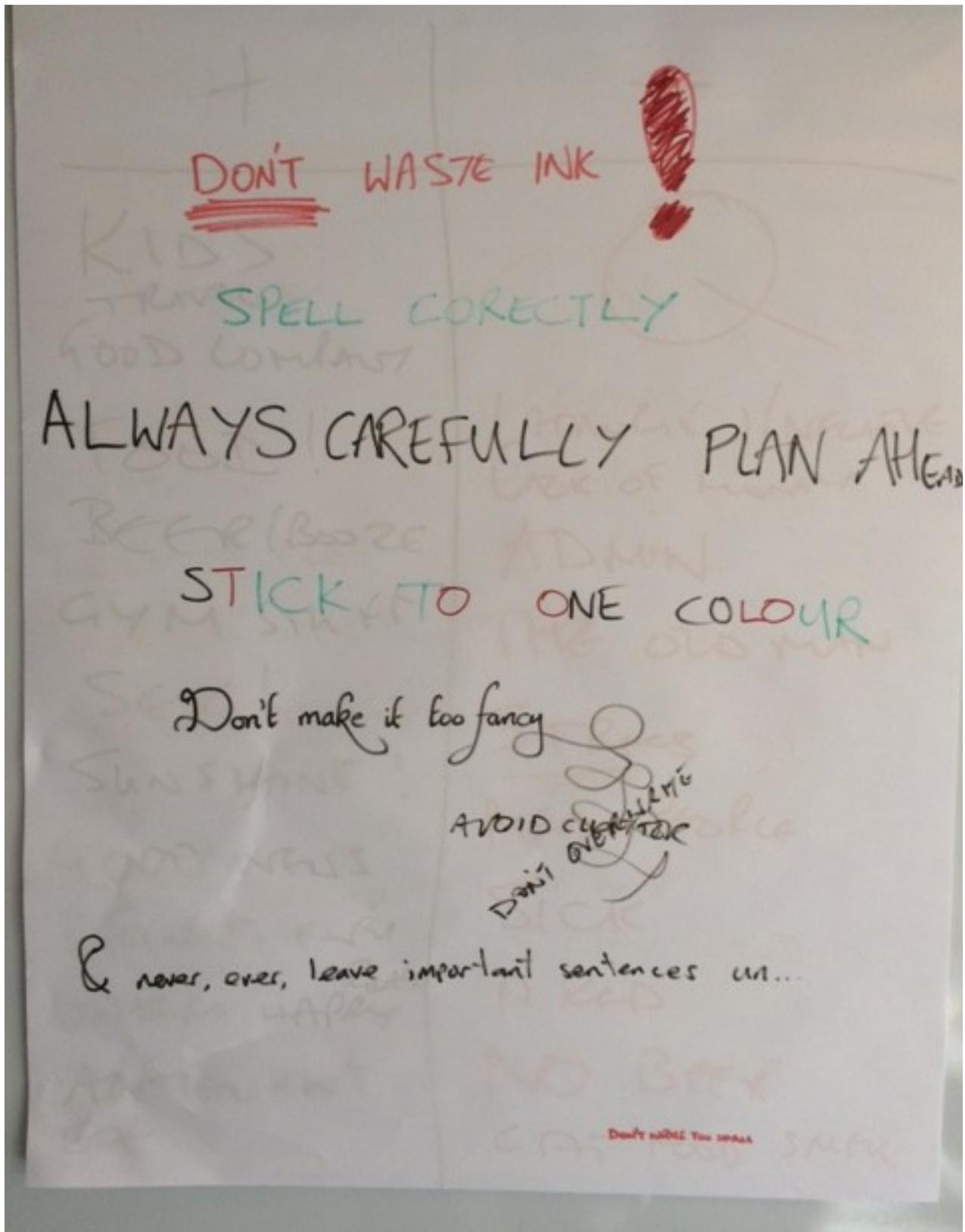
Gibraltar, from 41000 feet...



Irish sea, over England in this photo, October 21, 2016



Not bad..... over Doncaster, October 21, 2016



Senior Training Captains' jokes while planning simulator exercises.... has nothing to do with the weather, but if it brings a smile to your face, mission accomplished. :)