ADL110B ADL120 ADL130 ADL140

How to use infrared satellite images

Version 1.01

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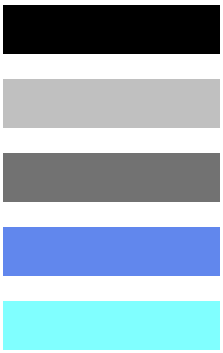
WARNING: Like any information of the ADL in flight weather system infrared images are for situational awareness only. Pilots shall not use the ADL system as primary mean of weather avoidance. Please use good judgement in all your weather avoidance decisions.

1 General Description

Infrared satellite images cover a vast geographical area. Those images show the temperature of the surface or the highest visible cloud layer. Knowing the temperature of the highest could layer is very valuable as it allows calculating the approximate height of those clouds. Usually the colder the higher the cloud is.

Thus, infrared images mainly give information about the height of clouds. Please note the satellite will only see the highest layer. It does not show what is below this layer.

2 Which scale does the ADL system use?



No clouds or cloud top below FL75

Cloud tops between FL150 and FL75

Cloud tops between FL250 and FL150

Cloud tops between FL350 and FL250

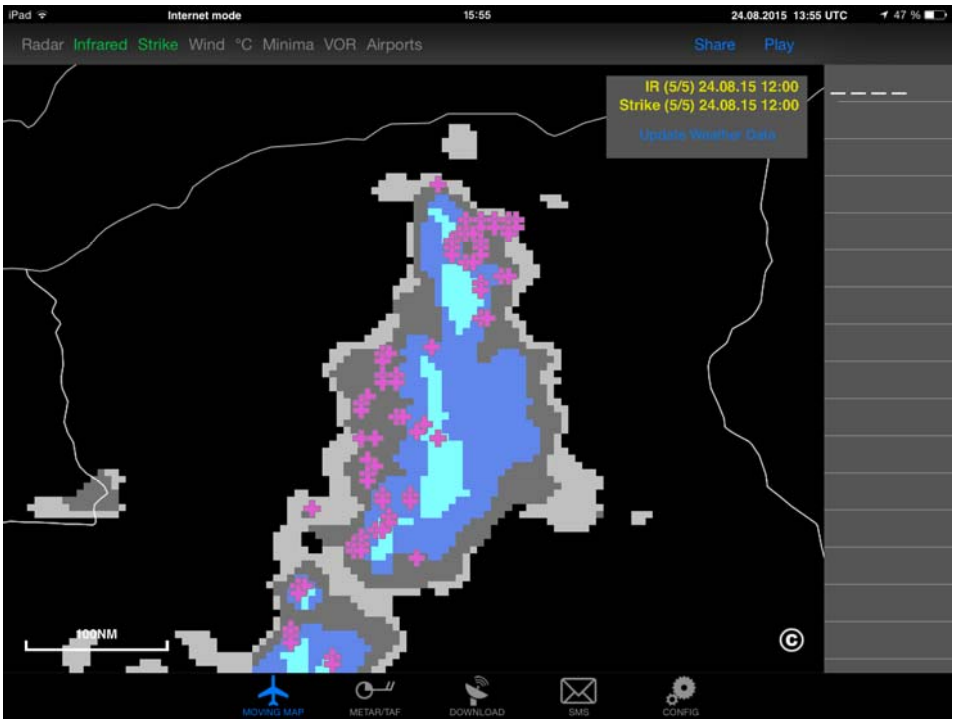
Cloud tops over FL350

3 How to read infrared images

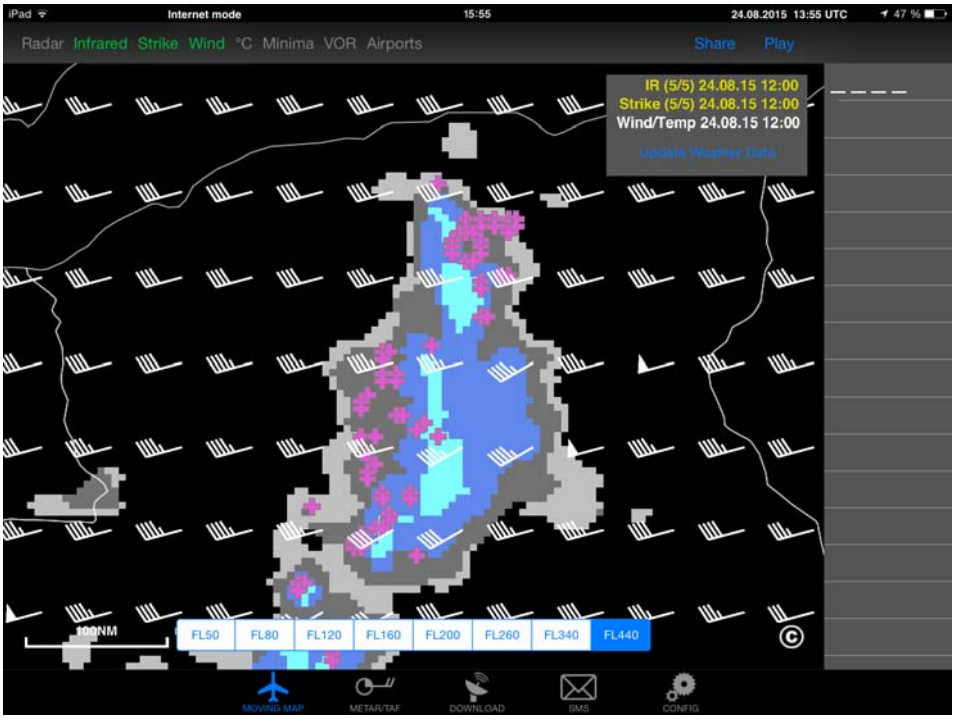
Infrared images are harder to interpret than radar images. There are no clear rules like not to fly into areas with a certain colour. The following chapters will give a few guidelines.

4 Thunderstorms

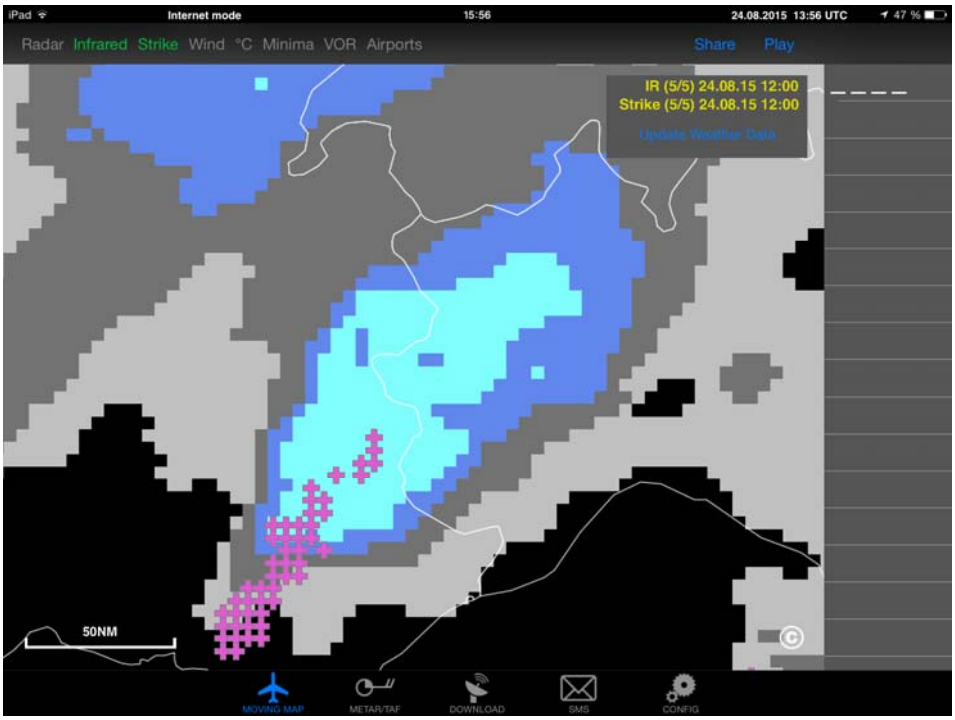
Mature thunderstorms show up very well on infrared (IR) images. You will see high clouds with a compact shape and steep borders. The following picture shows a fine example:

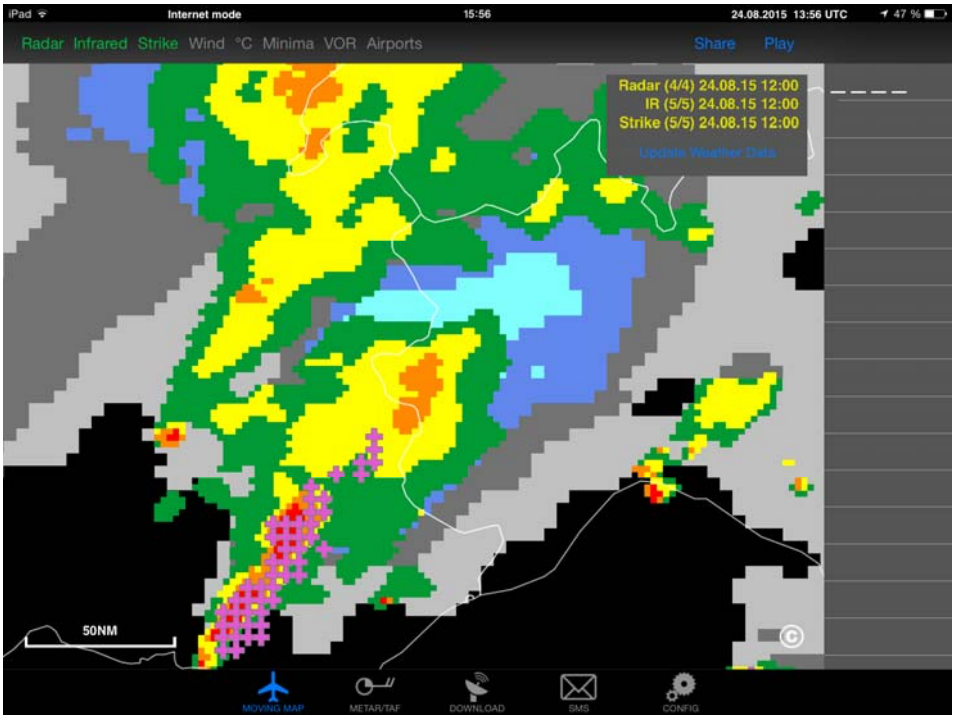


In addition if you overlay the strike and wind information you will see that the highest part of the cloud will often be a little downwind from where you see the strike activity. So the worst area of the thunderstorm will usually be on the windward side of the highest clouds.



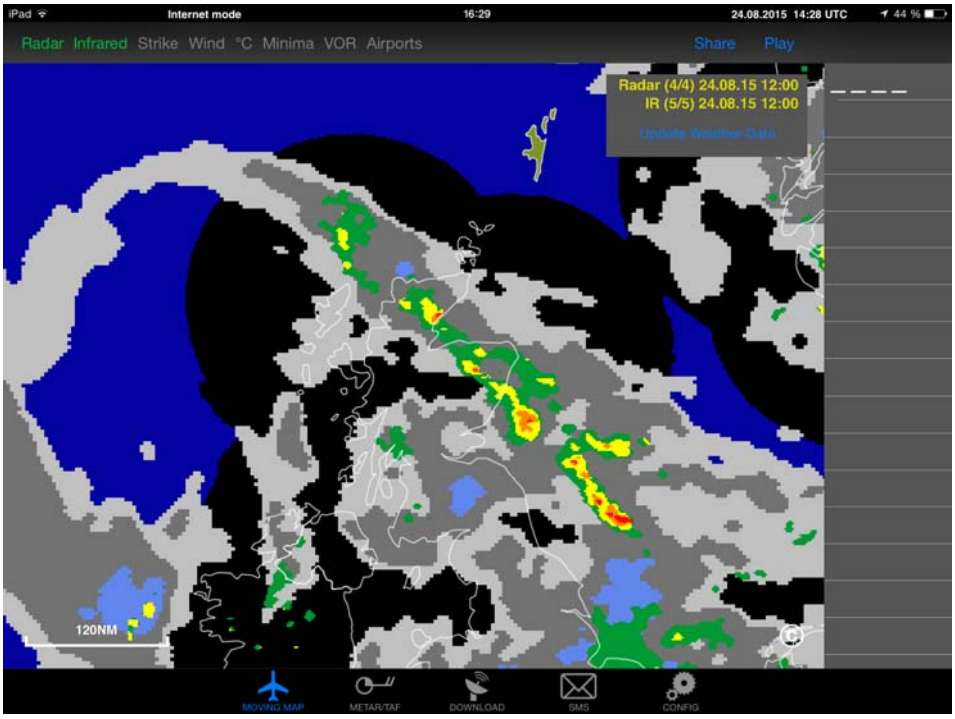
If you are in our radar coverage area you can also overlay the radar data and see how radar, IR image and strikes overlay:

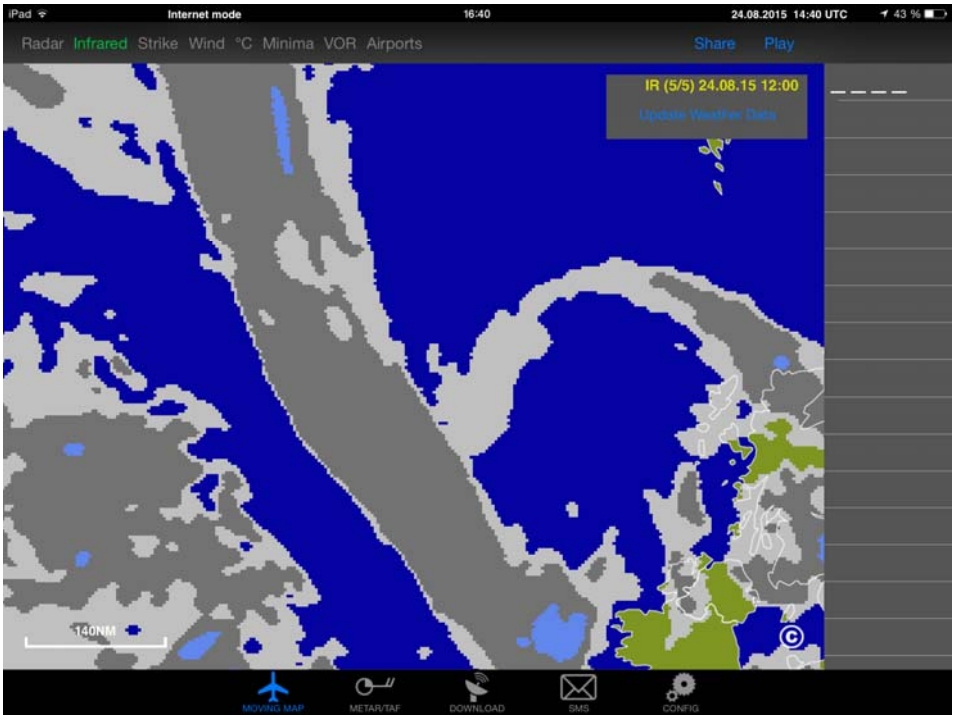




5 Frontal weather

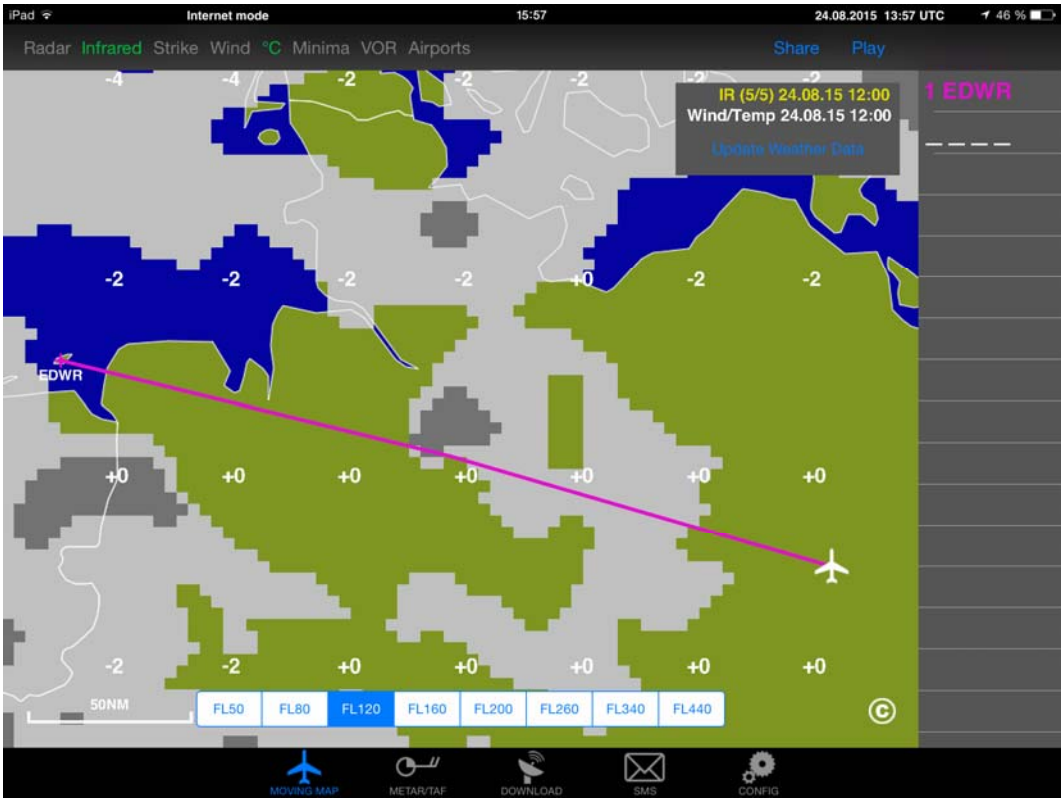
Infrared imaging will show frontal weather as long torn apart structures. Usually the clouds will not be as high as in thunderstorms. The worst radar return will usually be in the same area as the highest clouds. Two examples:





6 Other clouds

Besides frontal weather and thunderstorms you will see dispersed clouds at medium altitudes. Those will usually not be accompanied by any radar return or strikes. But depending on temperatures those could be icing clouds etc. Please remember the IR images only shows the highest clouds. There could be layers below or it can be a compact cloud



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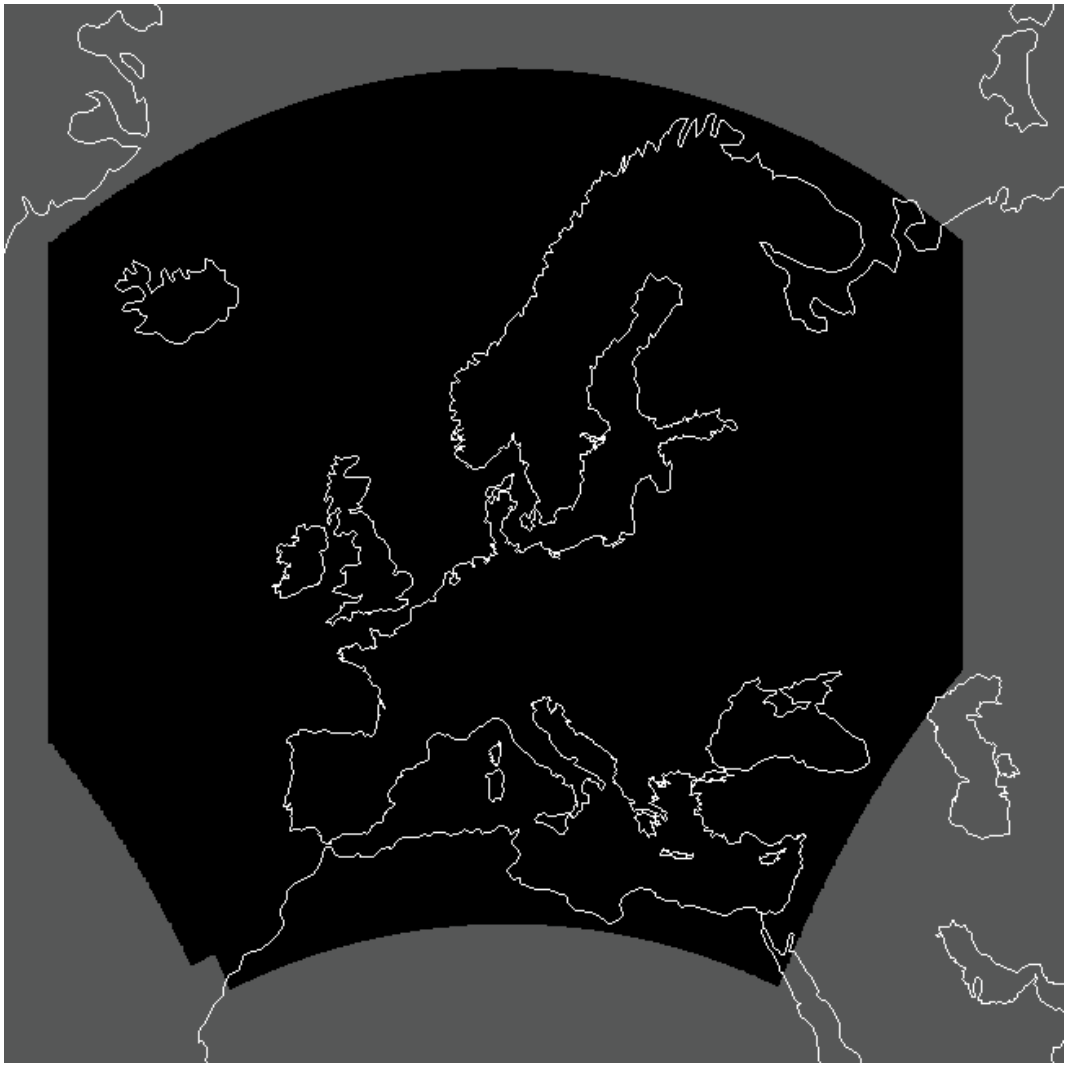
7 Coverage area

The maximum coverage area for infrared images in Europe is currently as follows:



8 Contact

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