



# The Rega Meteo Network

## GA & Low-Level Weather Seminar

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# Challenge ①: HEMS VFR Minima



- Demanding area of operation with non-standard environment and topography
- High cruising and operation altitude with low freezing levels
- Approx. 8% aborted/cancelled missions due to weather below HEMS VFR minima

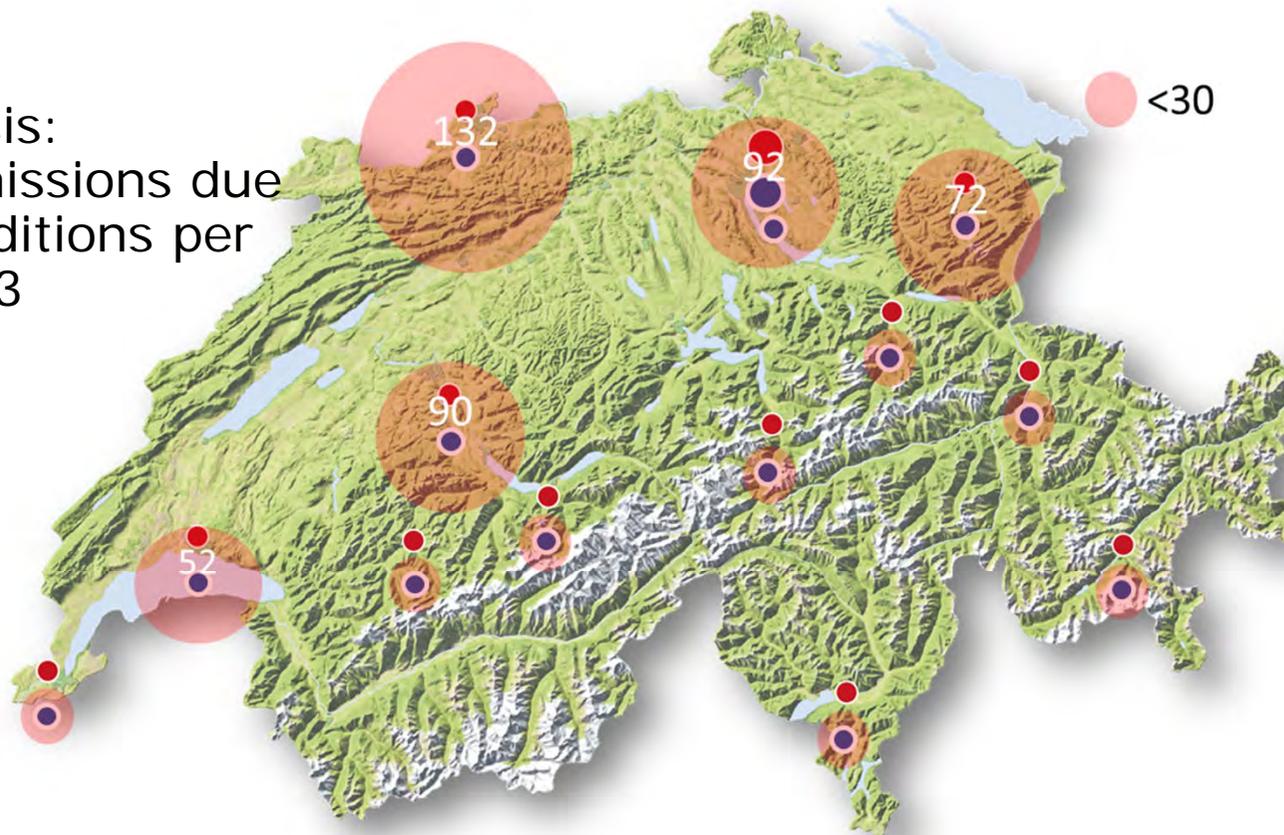
# Challenge ②: Cold temperatures



- Icing Conditions
- Lack of resp. inadequate icing forecast for small geographical areas and lower airspace
- Current weather report system in Switzerland is not available for 24/7 operations

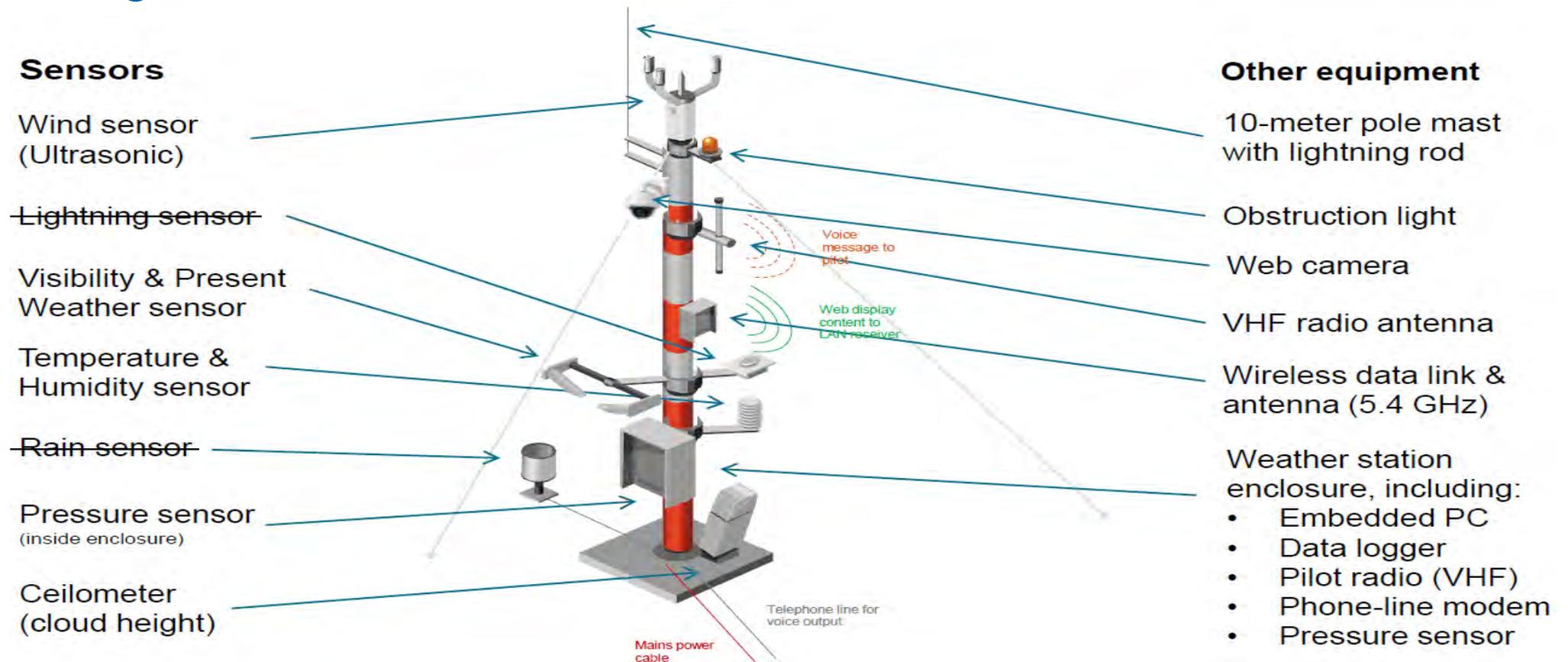
# Geographical distribution by base

Rega analysis:  
Cancelled missions due  
to icing conditions per  
base in 2013

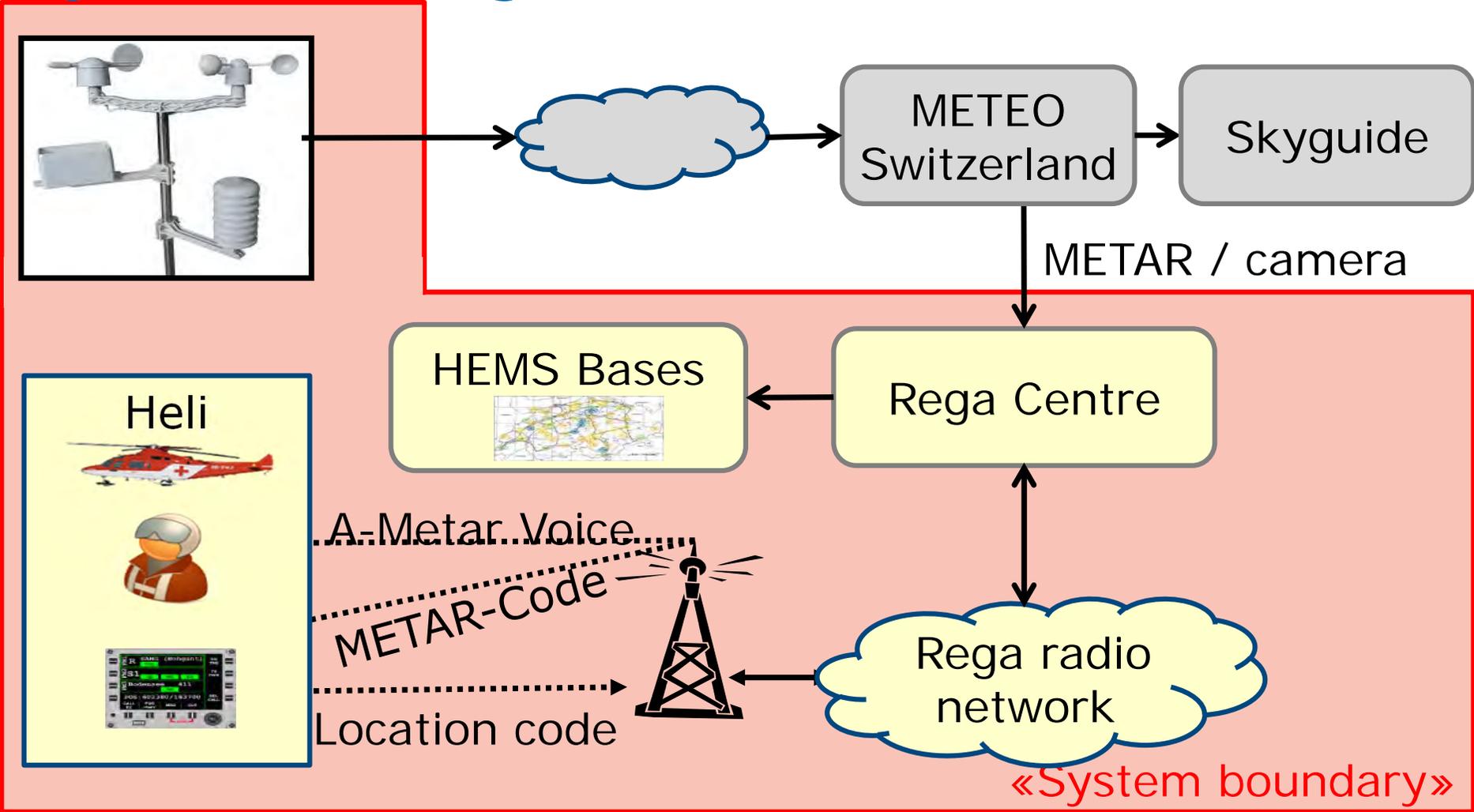


# Enhanced Weather reporting/forecast

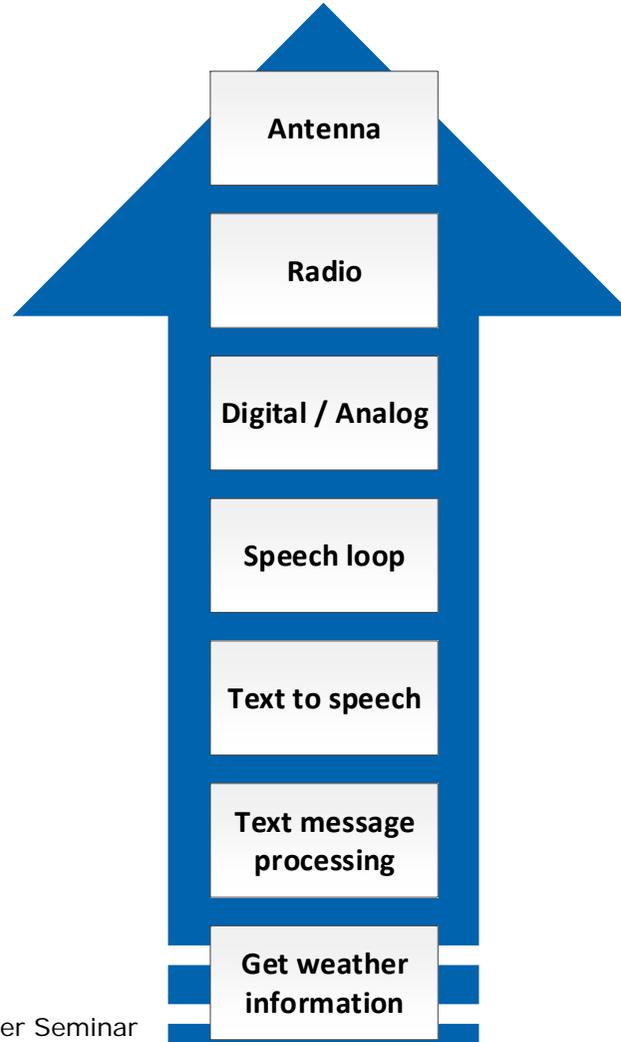
## Project «Thor» 24 h AWOS 3+



# System integration



# Weather data transfer

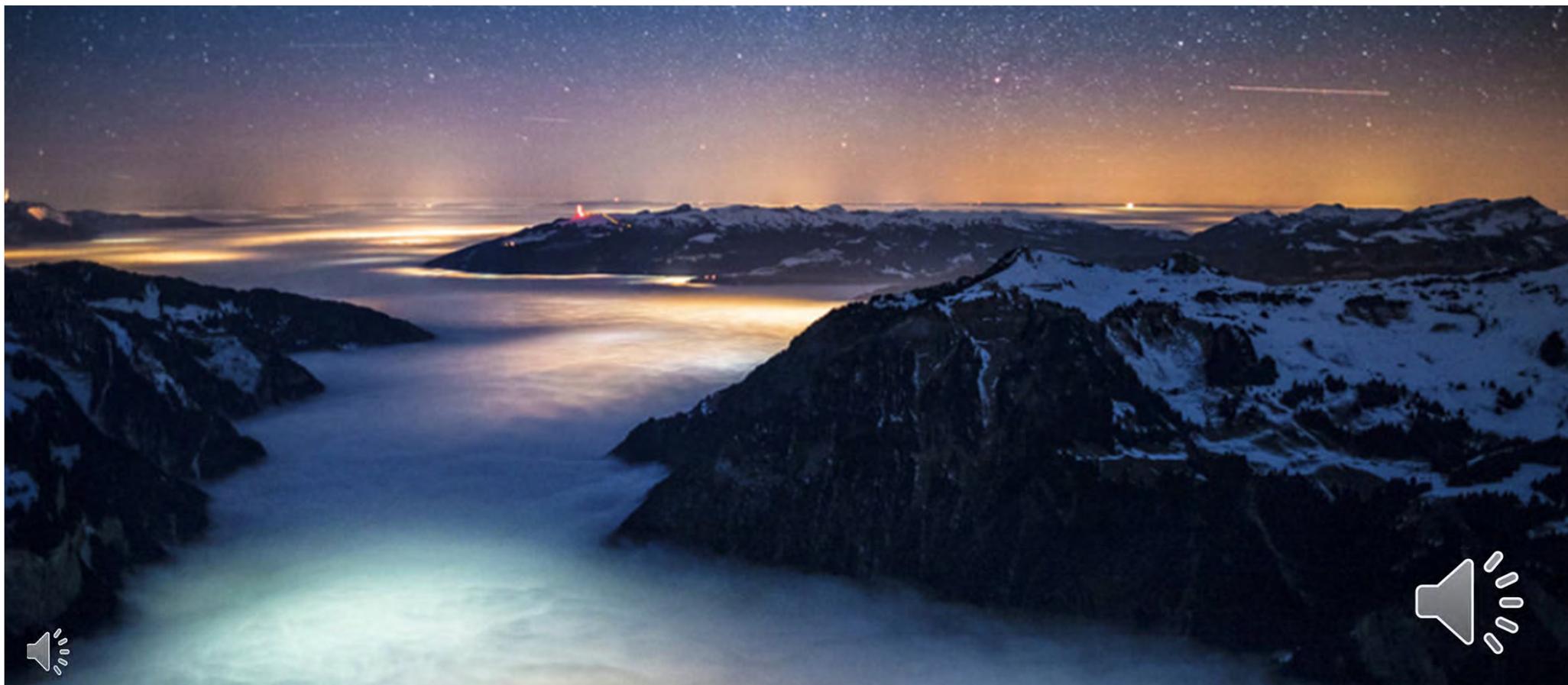


Auto-Metar Frequenzen

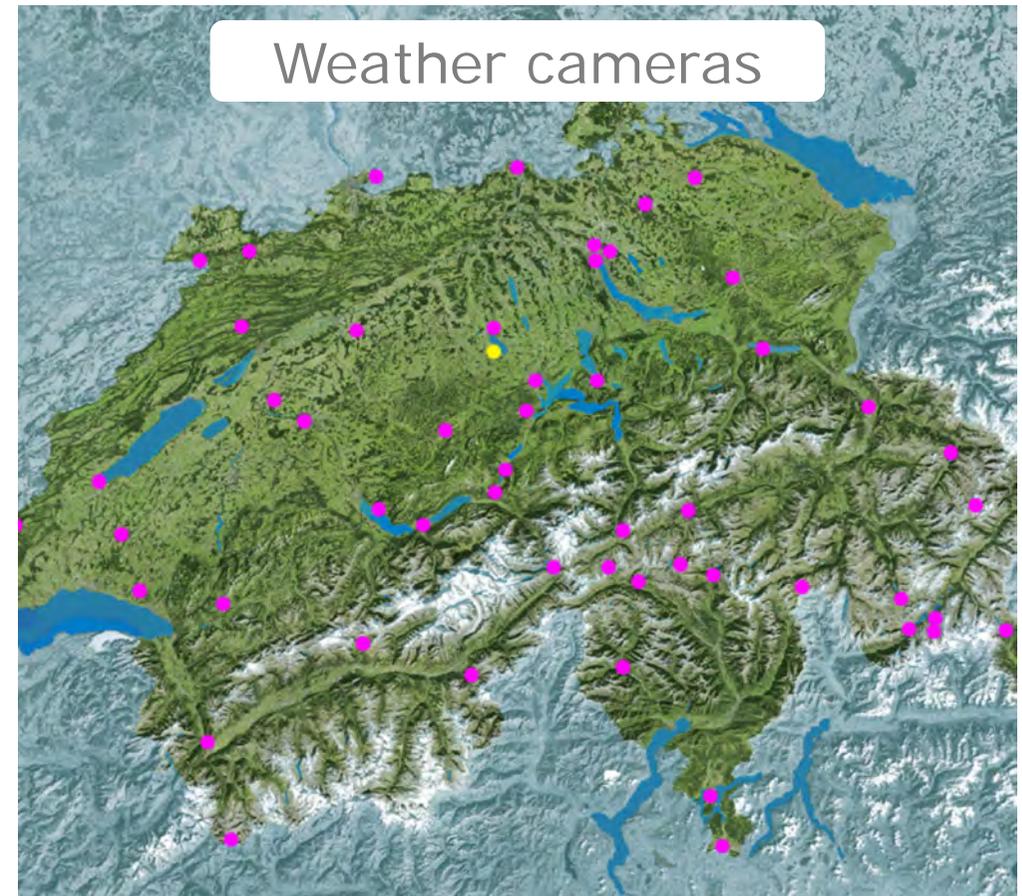
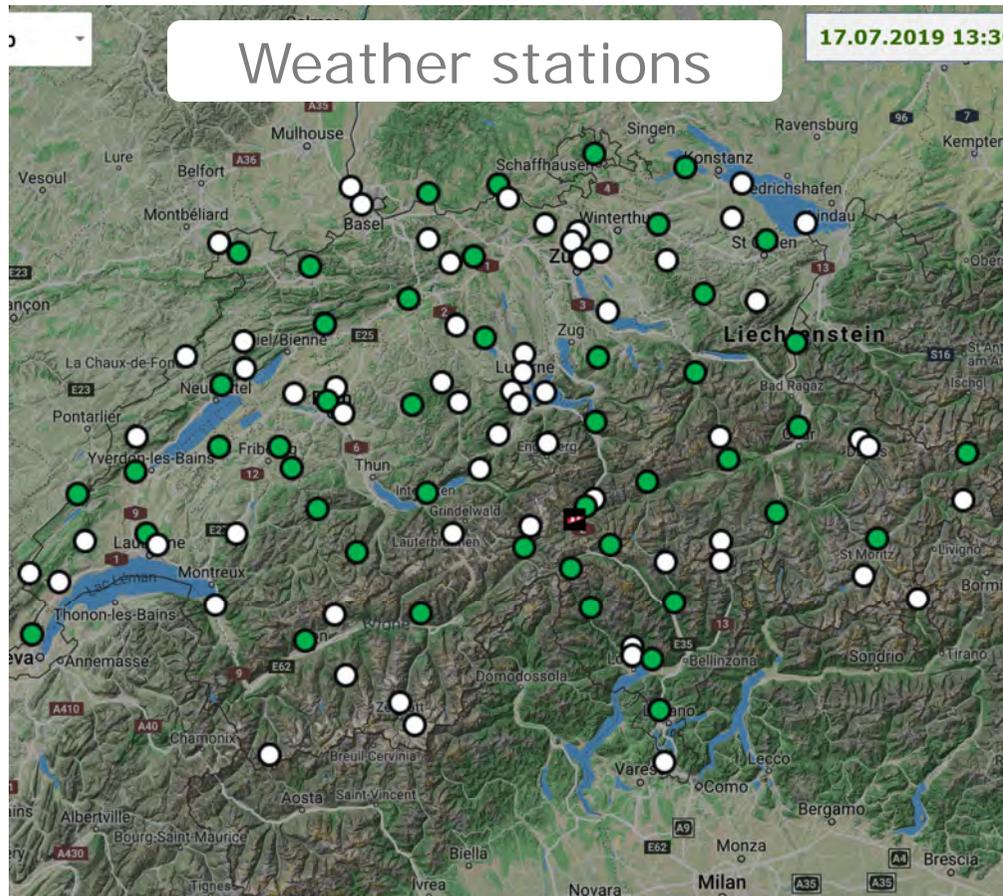
**123.810 MHz**

**124.465 MHz**

# Auto-METAR via radio



# Rega meteorological network



# Weather information

ch ob Andermatt, 7480 ft: Kamerabild (17.07.2019 13:50 LT)



renzbild:



dort:



Umgebungskarte/Bildbereich:



Gütsch ob Andermatt (2287 m.ü.M.) 17.07.2019 13:50 Uhr

+ SC

GUE 171350 AUTO 34209KT - 11/07 QNH1022

342°	Windrichtung	11°C	Lufttemperatur 2m
9kt	Mittl. Windgeschwindigkeit	7°C	Taupunkt
13kt	Böenspitze	---	Differenz Lufttemperatur
---	Sichtweite	1022.20hPa	Luftdruck (QNH)
///	Betrag der untersten Wolken	74%	Relative Luftfeuchtigkeit 2m
///	Höhe über Station der untersten Wolkenbasis	9min	Sonnenscheindauer
///	Betrag der mittleren Wolken	0x	Nahblitze (Entfernung weniger als 3 km)
///	Höhe über Station der mittleren Wolkenbasis	0x	Fernblitze (Entfernung 3-30km)
///	Betrag der obersten Wolken	---	Wetter zur Zeit der Beobachtung (SYNOP-Code)
///	Höhe über Station der obersten Wolkenbasis	---	Wetter zur Zeit der Beobachtung (NWS-Code)

## Legende

[Hilfe/Info an](#)

VFR	Marginal VFR	IFR	Intensive IFR	Very Intensive IFR	Undefined
Visibility >= 8km	5 to 8 km	1500m to 5 km	800 to 1500 m	< 800 m	n/a
Ceiling >= 3000ft	1000 to 3000ft	500 to 1000 ft	200 to 500 ft	< 200 ft	n/a
Fog	Snow	Heavy precipitations	Wind > 25kt		

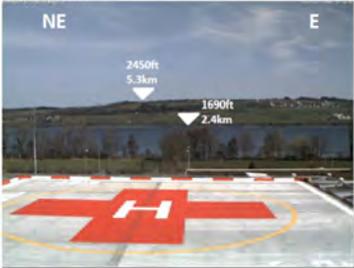
# Weather information

## Wetterstation - Details

Nottwil, 2034 ft: Kamerabild  
(17.07.2019 16:00 LT)



## Referenzbild:



## Standort:



größer History: aktuellstes Bild Übersicht

## Wetterdaten vom 20.03.2015 16:53 Uhr

14.3 °C	Temperatur momentan
42 %	Luftfeuchte momentan
1.4 °C	Taupunkt momentan
1019.7 hPa	Luftdruck momentan
2.5 kn	Windgeschwindigkeit Mittelwert 3 Sekunden
122 °	Windrichtung Mittelwert 3 Sekunden
5.5 kn	Windgeschwindigkeit Maximalwert 10 Minuten

Verlauf anzeigen

Nottwil, Paraplegiker Zentrum (528 m.ü.M.) 17.07.2019 16:10 Uhr [\\* schliessen](#)

METAR LSHH 171410Z AUTO VRB04KT 9999 FEW071/// 28/09 Q1013=

<b>336°</b>	Windrichtung	<b>28°C</b>	<u>Lufttemperatur 2m</u>
<b>4kt</b>	<u>Mittl. Windgeschwindigkeit</u>	<b>8°C</b>	<u>Taupunkt</u>
<b>12kt</b>	<u>Böenspitze</u>	---	<u>Differenz Lufttemperatur</u>
<b>20000m</b>	<u>Sichtweite</u>	<b>1013.80hPa</b>	<u>Luftdruck (QNH)</u>
<b>1/8</b>	<u>Betrag der untersten Wolken</u>	<b>30%</b>	<u>Relative Luftfeuchtigkeit 2m</u>
<b>7100ft</b>	<u>Höhe über Station der untersten Wolkenbasis</u>	---	<u>Sonnenscheindauer</u>
---	<u>Betrag der mittleren Wolken</u>	---	<u>Nahblitze (Entfernung weniger als 3 km)</u>
---	<u>Höhe über Station der mittleren Wolkenbasis</u>	---	<u>Fernblitze (Entfernung 3-30km)</u>
---	<u>Betrag der obersten Wolken</u>	<b>0</b>	Wetter zur Zeit der Beobachtung (SYNOP-Code)
---	<u>Höhe über Station der obersten Wolkenbasis</u>	<b>C</b>	Wetter zur Zeit der Beobachtung (NWS-Code)

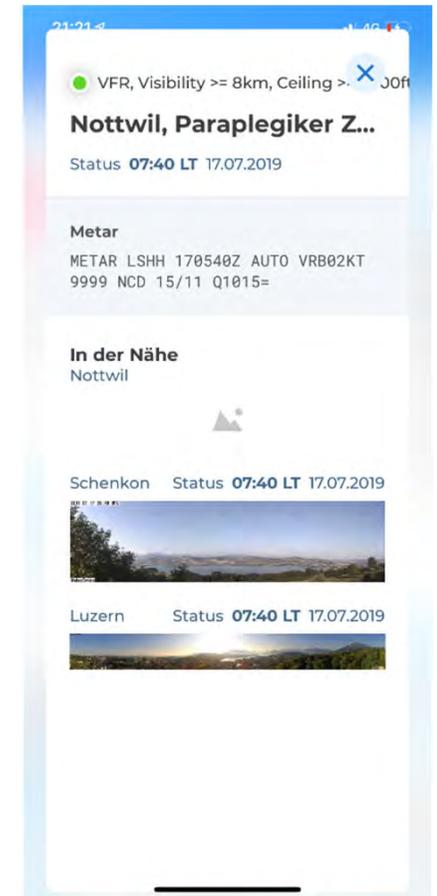
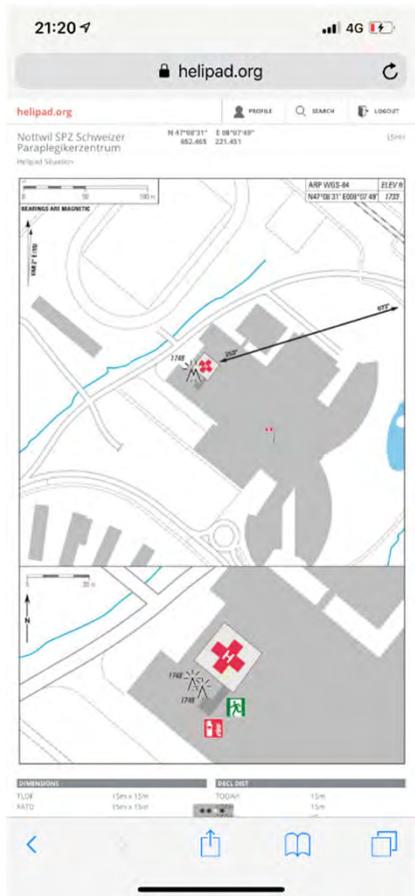
## Legende

<b>VFR</b>	<b>Marginal VFR</b>	<b>IFR</b>	<b>Intensive IFR</b>	<b>Very Intensive IFR</b>	<b>Undefined</b>
Visibility >= 8km	5 to 8 km	1500m to 5 km	800 to 1500 m	< 800 m	n/a
Ceiling >= 3000ft	1000 to 3000ft	500 to 1000 ft	200 to 500 ft	< 200 ft	n/a
<b>Fog</b>	<b>Snow</b>	<b>Heavy precipitations</b>	<b>Wind &gt; 25kt</b>		

[Hilfe/Info anzeigen](#)

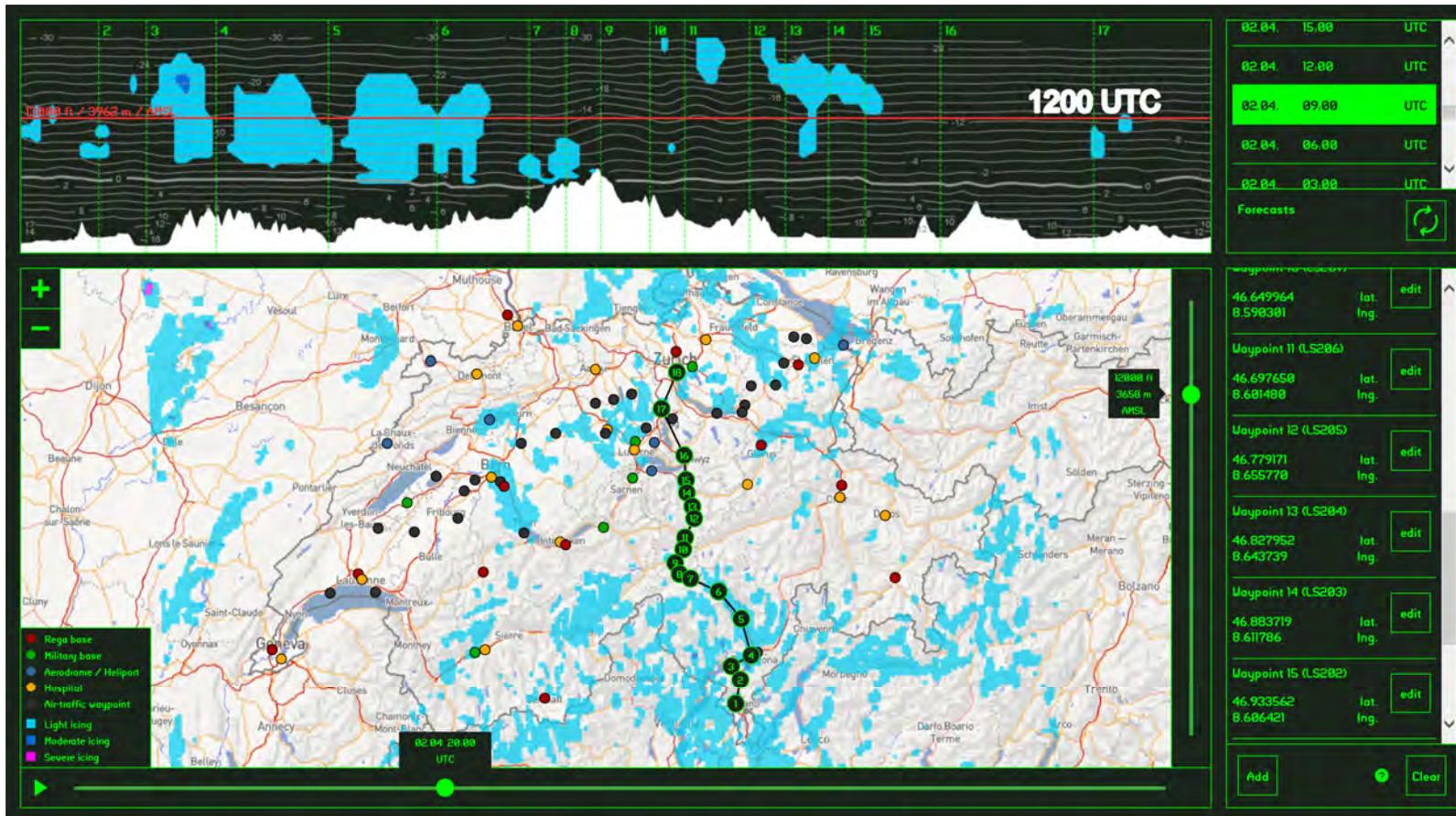


# Rega EFB app

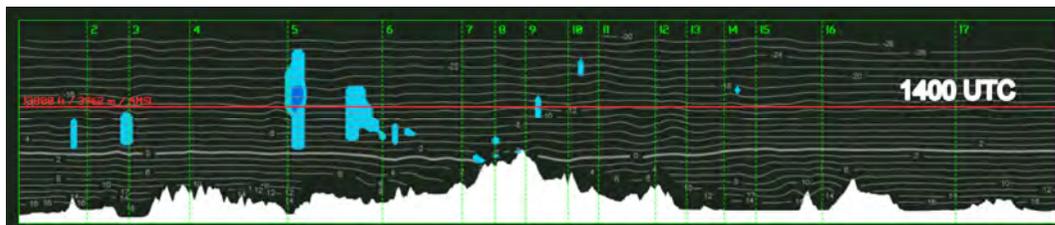
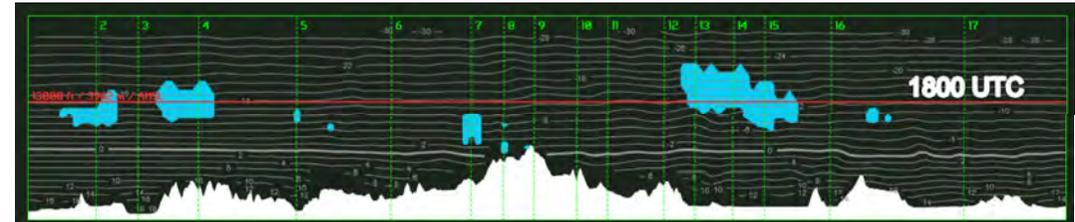
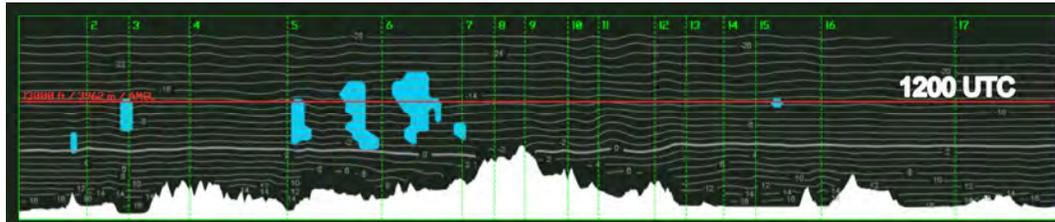
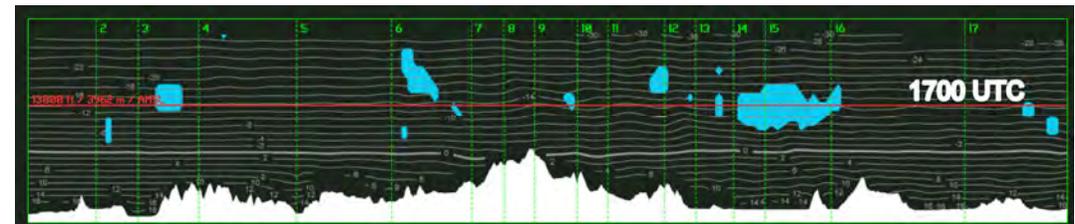
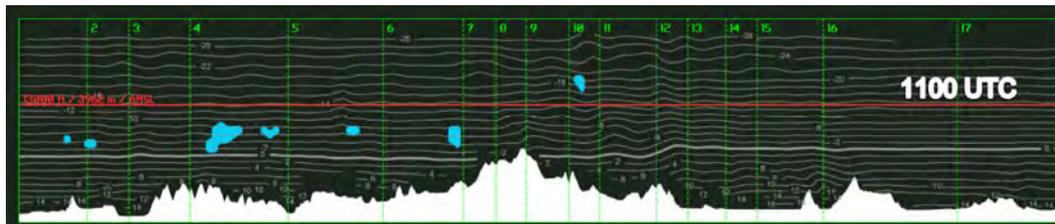
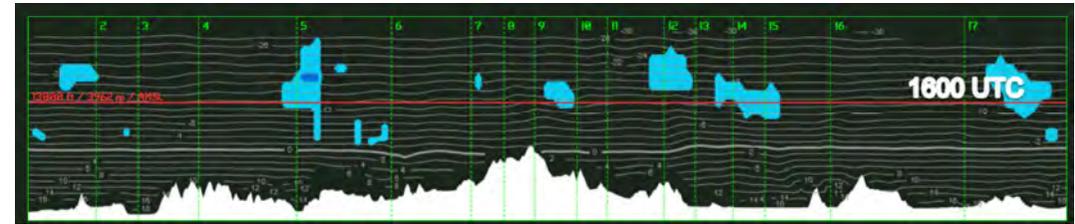




# Icing prediction



# Icing prediction

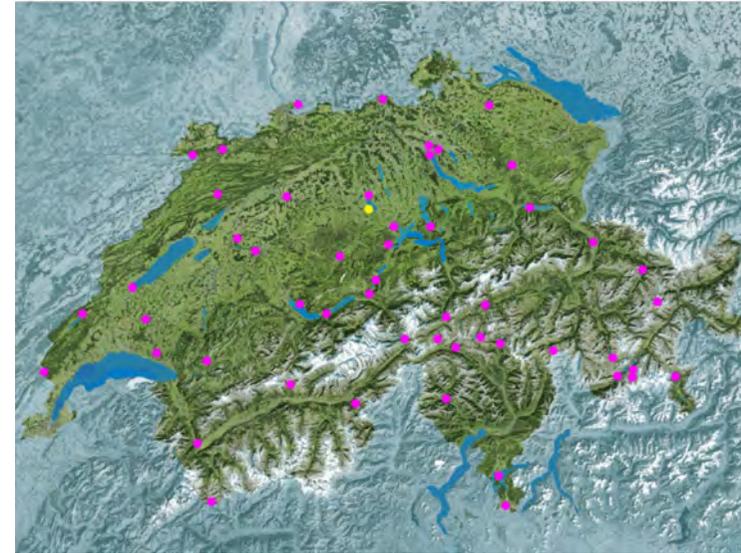


# Flight weather solution: EASA RMT.0573

AMC1 CAT.OP.MPA.192(d)(3): Selection of aerodromes and operating sites — helicopters

## **METEOROLOGICAL INFORMATION TO ESTABLISH A REASONABLE PROBABILITY OF LANDING AT DESTINATION**

- (a) The intent is to allow IFR operations to heliports / operating sites without the appropriate meteorological information usually available at aerodromes.
- (e) The following examples may qualify as controlled meteorological reports:
- (1) A picture from a camera that shows the weather conditions in the approach path at the destination,
  - (2) A meteorological observation from a properly trained observer, and
  - (3) A report from non-certified automatic weather observation systems.





He who stops being better  
stops being good.  
*Oliver Cromwell*

**Thank you for your interest**

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