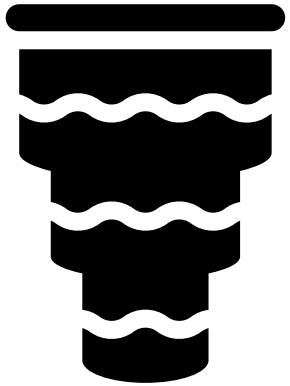
SEGELFLUGVERBAND DER SCHWEIZ

FEDERATION SUISSE DE VOL A VOILE
FEDERAZIONE SVIZZERA DI VOLO A VELA

Airspace Refresher 2025

Contents



This presentation has been prepared with great care. Nevertheless, mistakes may occur. In any case, the official publications on the current aeronautical charts, VFR manual and NOTAM are authoritative.

All map cutouts are courtesy of swisstopo and not for operational use.

References:

- eVFR Manual as of 20.02.2025
- Standardized European Rules of the Air (SERA) as of December 2024
- Verfügung betreffend Änderung der Luftraumstruktur der Schweiz 2025 vom 4. Februar 2025
- Verfügung betreffend Änderung der Luftraumstruktur Zürich und Dübendorf vom 5. März 2025

I am happy to receive any feedback.

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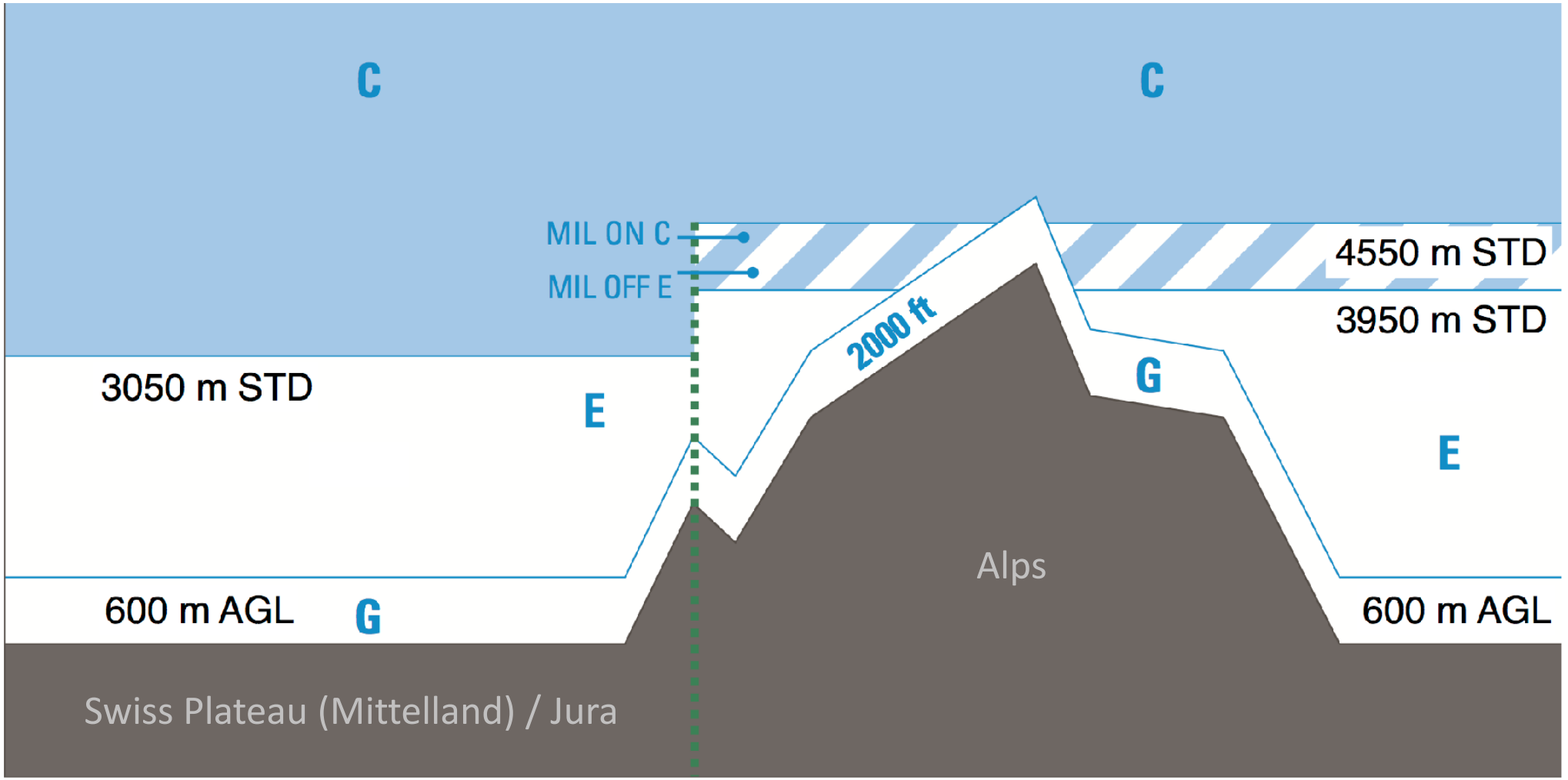
Airspace Classification

ICAO/EASA	ATC Clearance	Flight Rules
C	Required	VFR and IFR
D		
E	Not required	
G		VFR only*

*IFR with FOCA approval

Swiss Air Space Structure



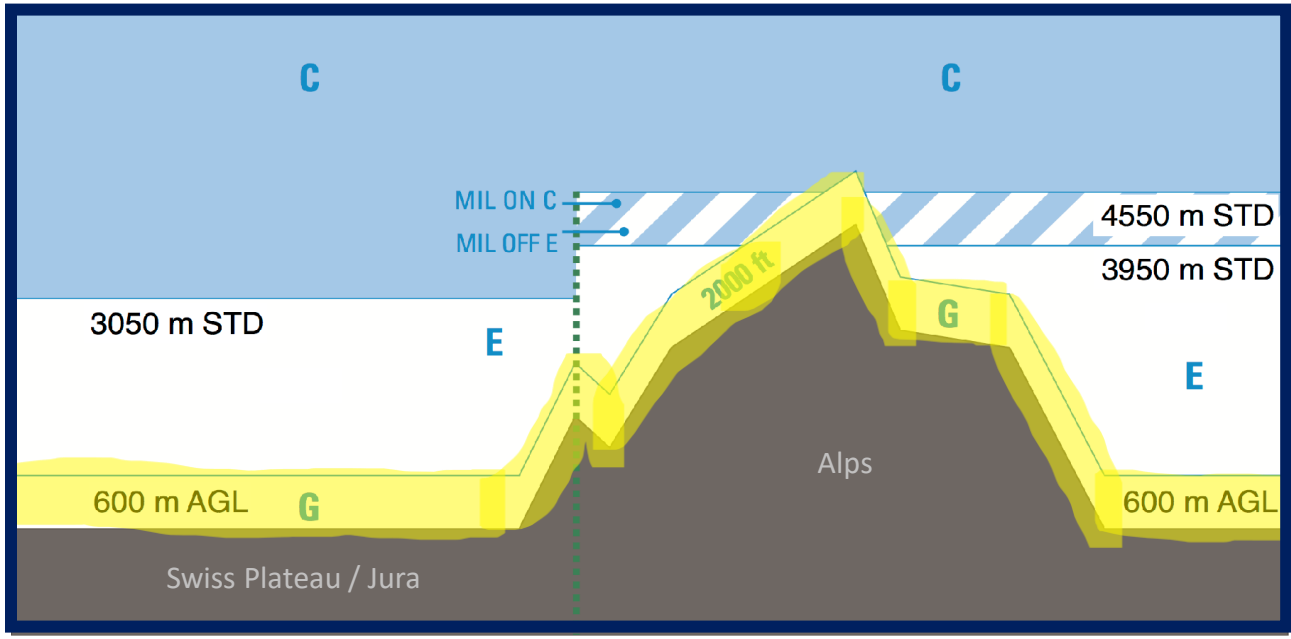
Airspace Golf

G

<u>Everywhere (except CTR)</u>

GND up to 600m AGL

- Uncontrolled
- VFR and IFR
- No ATC clearance required
- Outside of clouds
  - > 300m AGL with transponder ON



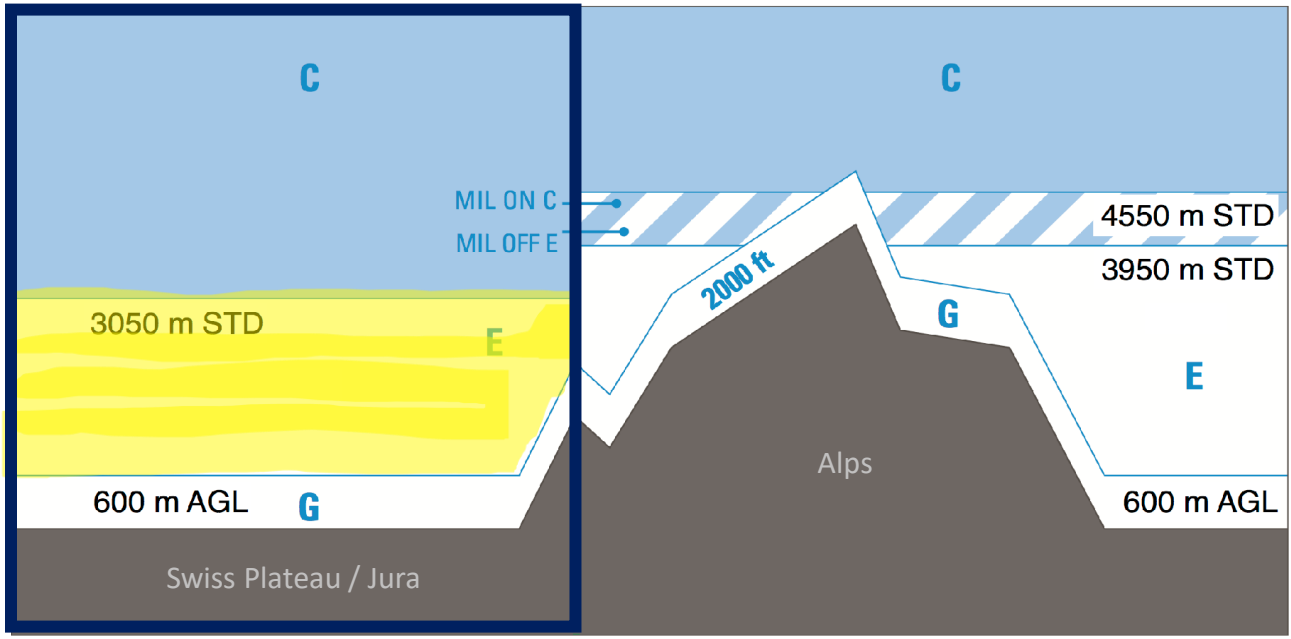
Airspace Echo

E

<u>Swiss Plateau/Jura</u>

600m AGL up to 3050m STD

- Controlled
- VFR and IFR
- No ATC clearance required
- Large cloud distance minima



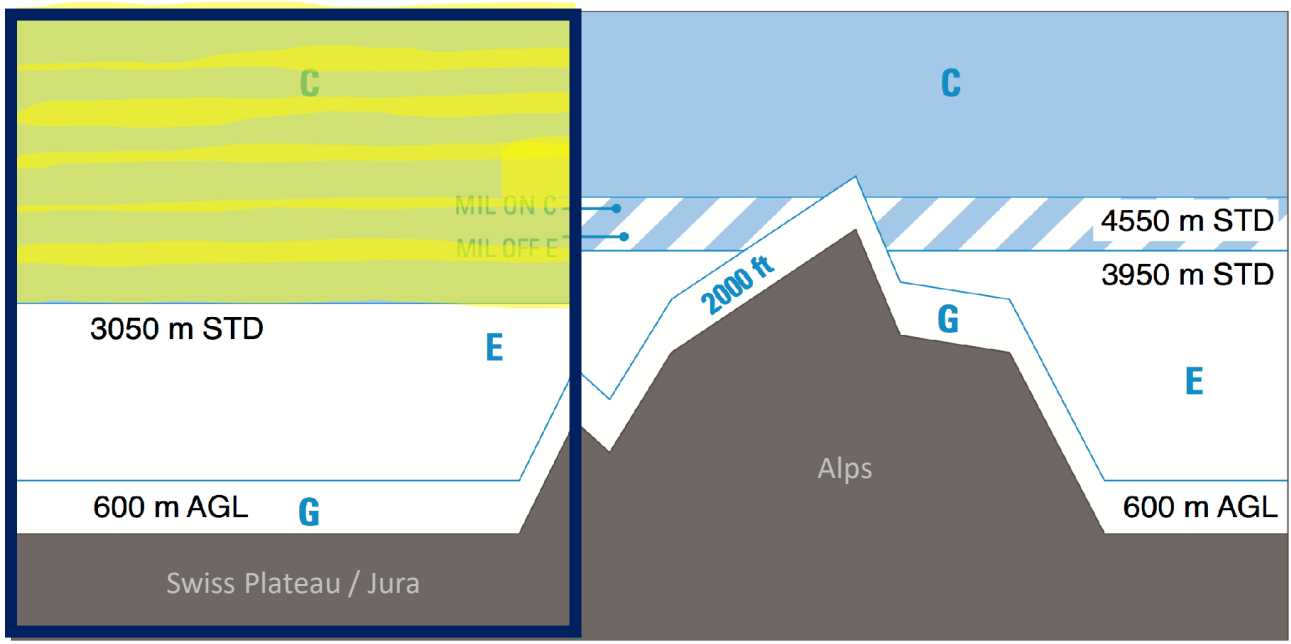
Airspace Charlie

C

<u>Swiss Plateau/Jura</u>

Above 3050m STD

- Controlled
- VFR and IFR
- ATC clearance required
- Large cloud distance minima



Airspace Echo

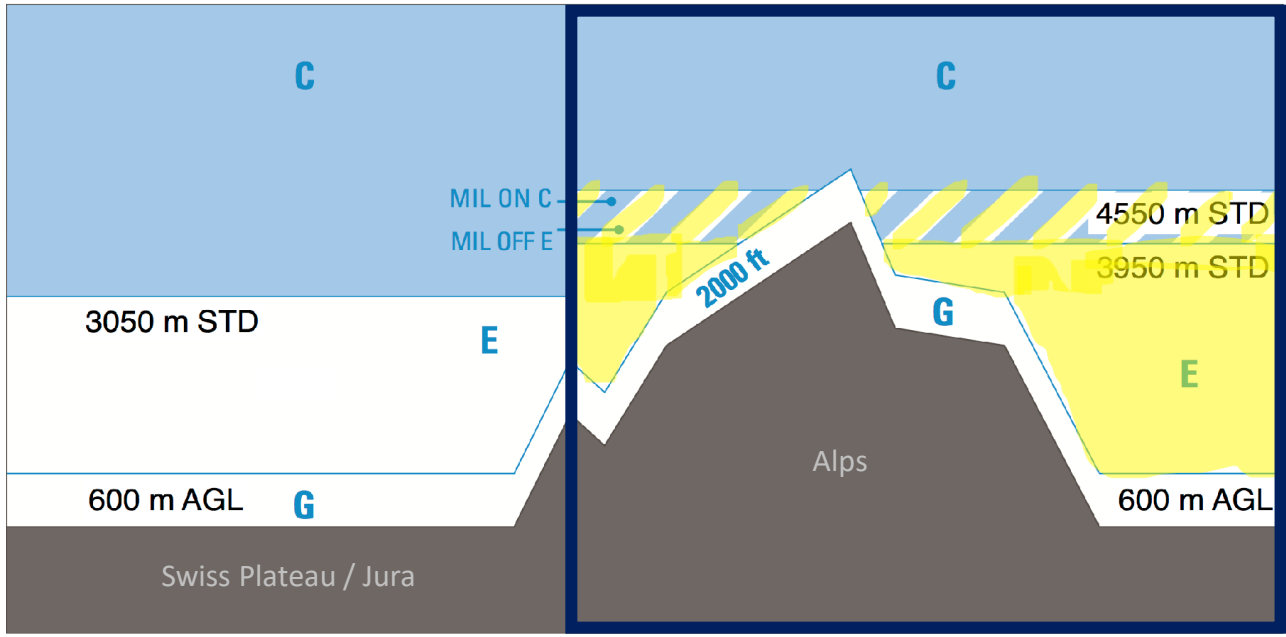
E

Alps

Mil ON: 600m AGL up to 3950m STD

Mil OFF: 600m AGL up to 4550m STD

- Controlled
- VFR and IFR
- No ATC clearance required
- Large cloud distance minima



Airspace Charlie

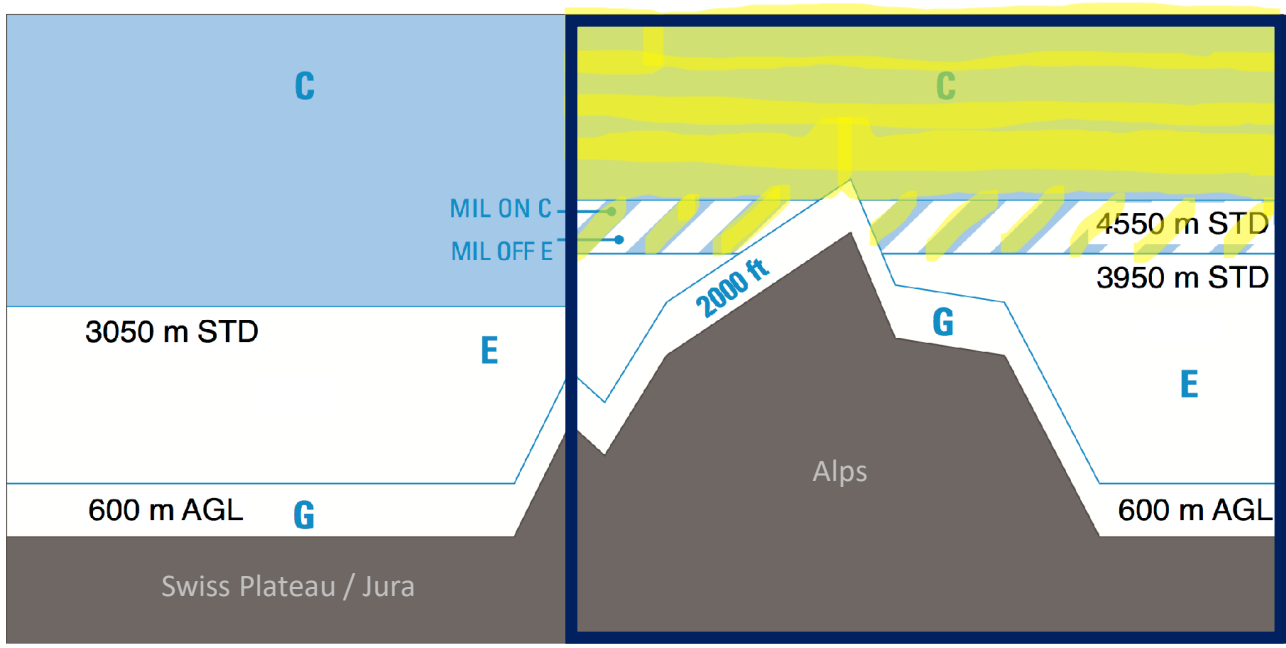
C

<u>Alps</u>

Mil ON – Above 3950m STD

Mil OFF – Above 4550m STD

- Controlled
- VFR and IFR
- ATC clearance required
- Large cloud distance minima



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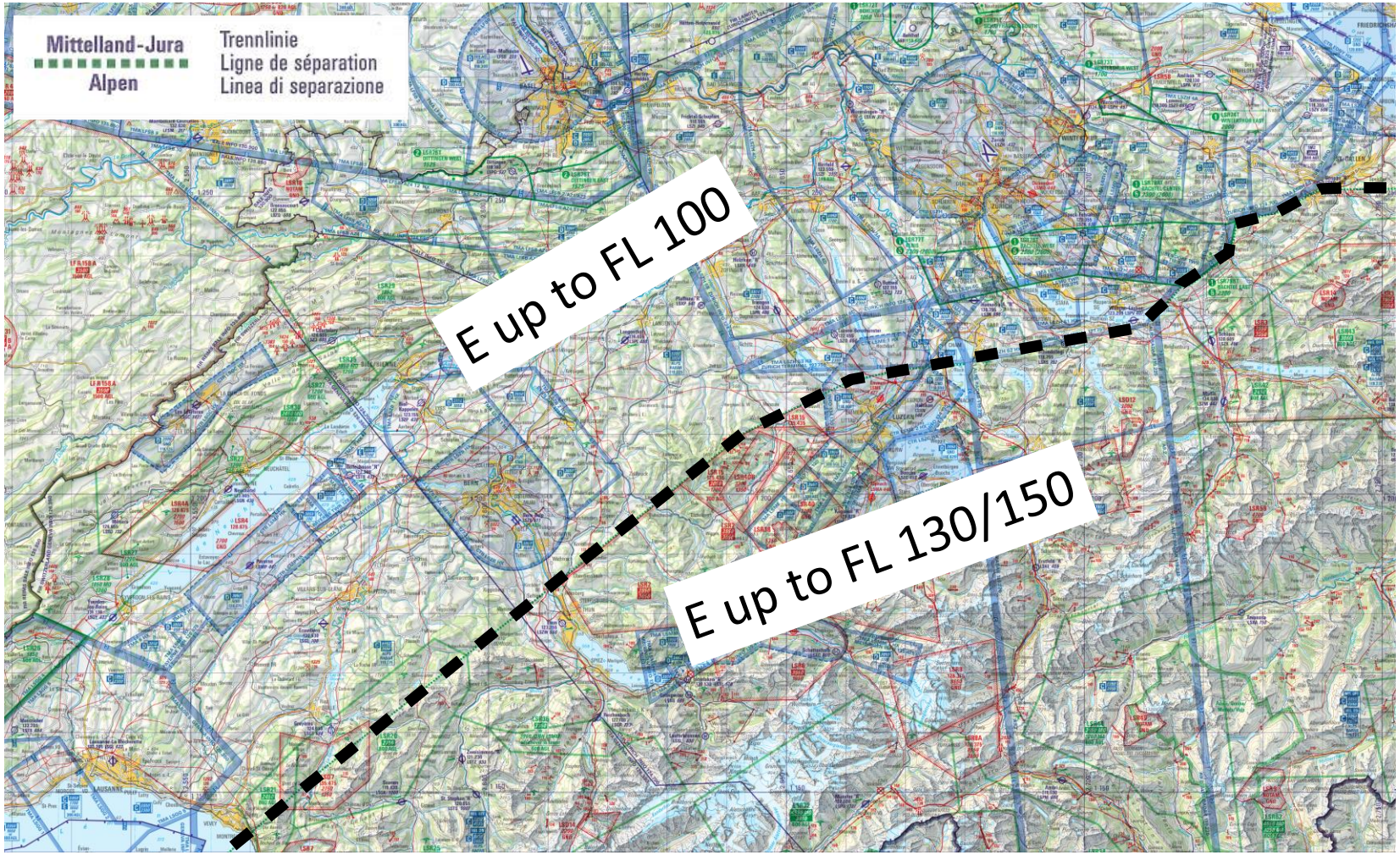
Higher Airspace



Echo up to FL100

<u>Mil ON</u>

Echo up to FL130

Monday – Friday

0730LT – 1205LT

1315LT – 1705LT

<u>Mil OFF</u>

Echo up to FL150

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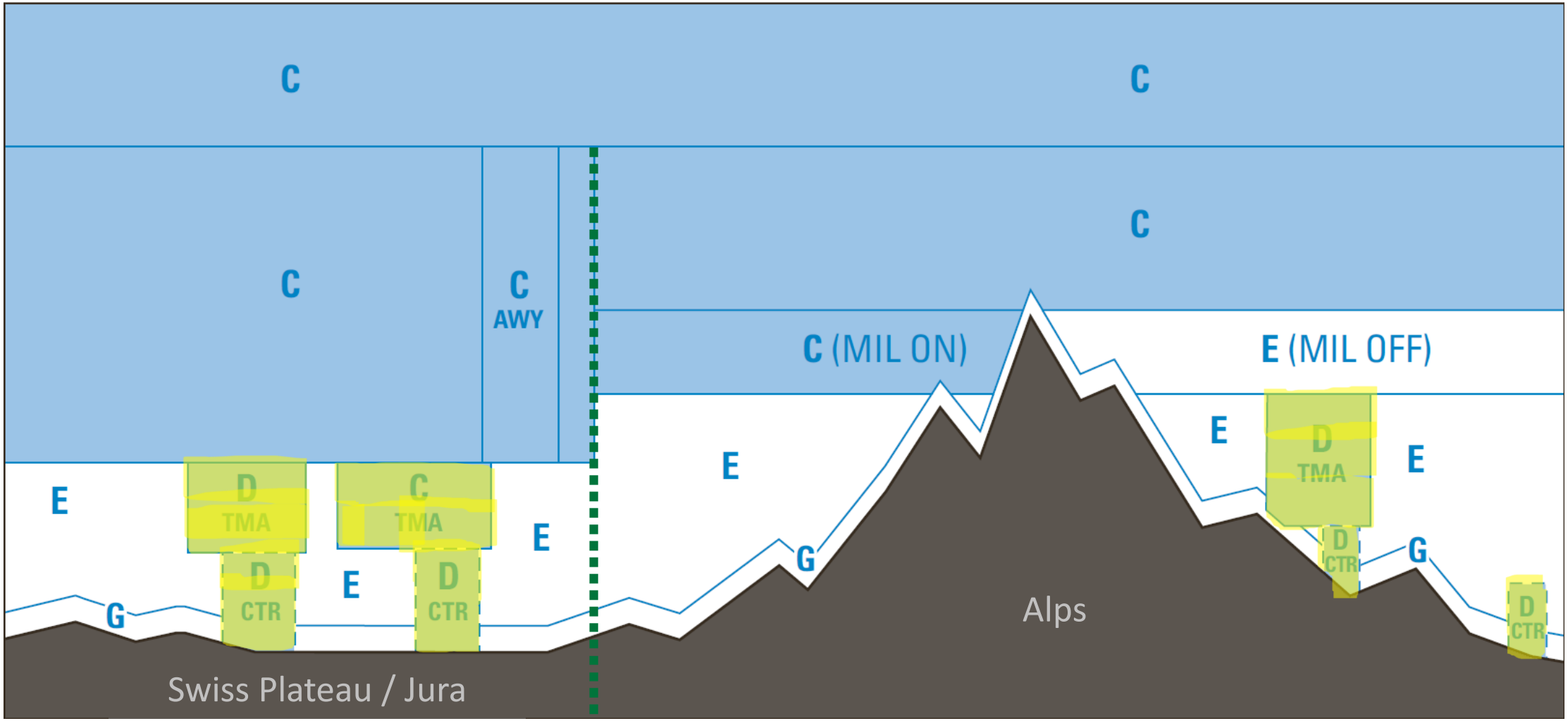
Air Space Structure with CTR/TMA



D

CTR & TMA

C D

<u>Control Zone (CTR)</u>

GND to upper limit

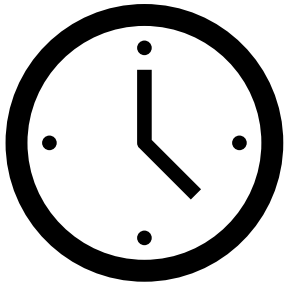
- Controlled
- VFR and IFR
- ATC clearance required
- Large cloud distance minima

<u>Terminal Control Area (TMA)</u>

Lower to upper limit

- Controlled
- VFR and IFR
- ATC clearance required
- Large cloud distance minima

TEMPO vs. HX



TEMPO

- Chart: Thin bright blue ribbon
- Activation via DABS/NOTAM
  - Generally not active!

Alpnach TMA 2 and 4

Sion TMA 1, 2 and 3

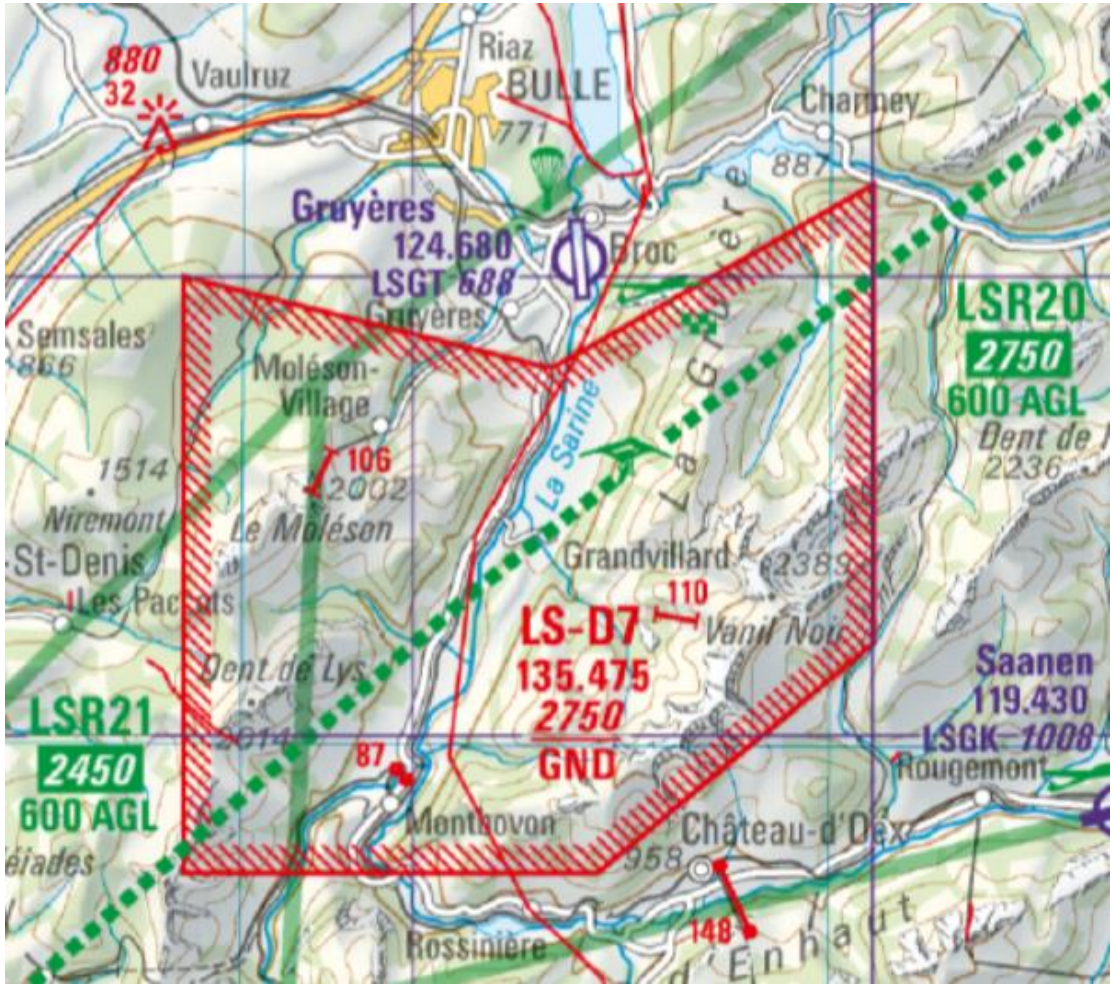
HX

- No specific working hours
- Check status before entry
- Maintain listening watch
- Deactivation: Same as surrounding airspace G and E

Danger Area

LSD

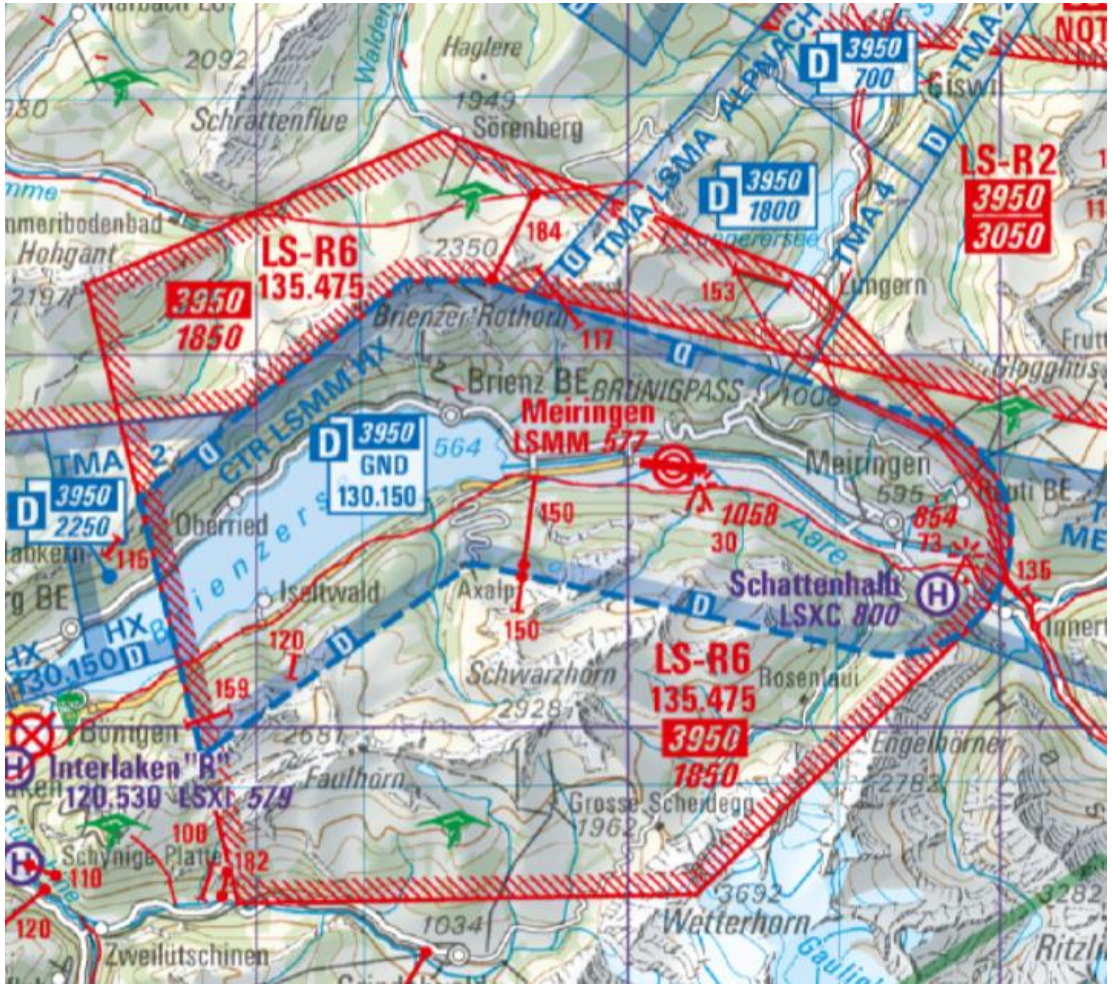
- Activities dangerous for aircraft
- No specific working hours
- Activation via DABS/NOTAM
- Entry not recommended
  - Legally allowed



LSR

Restricted Area

- Entry prohibited (when active)
- No specific working hours
- Activation via DABS/NOTAM
- Assure deactivation before entry
  - Designated frequency
  - INFORMATION

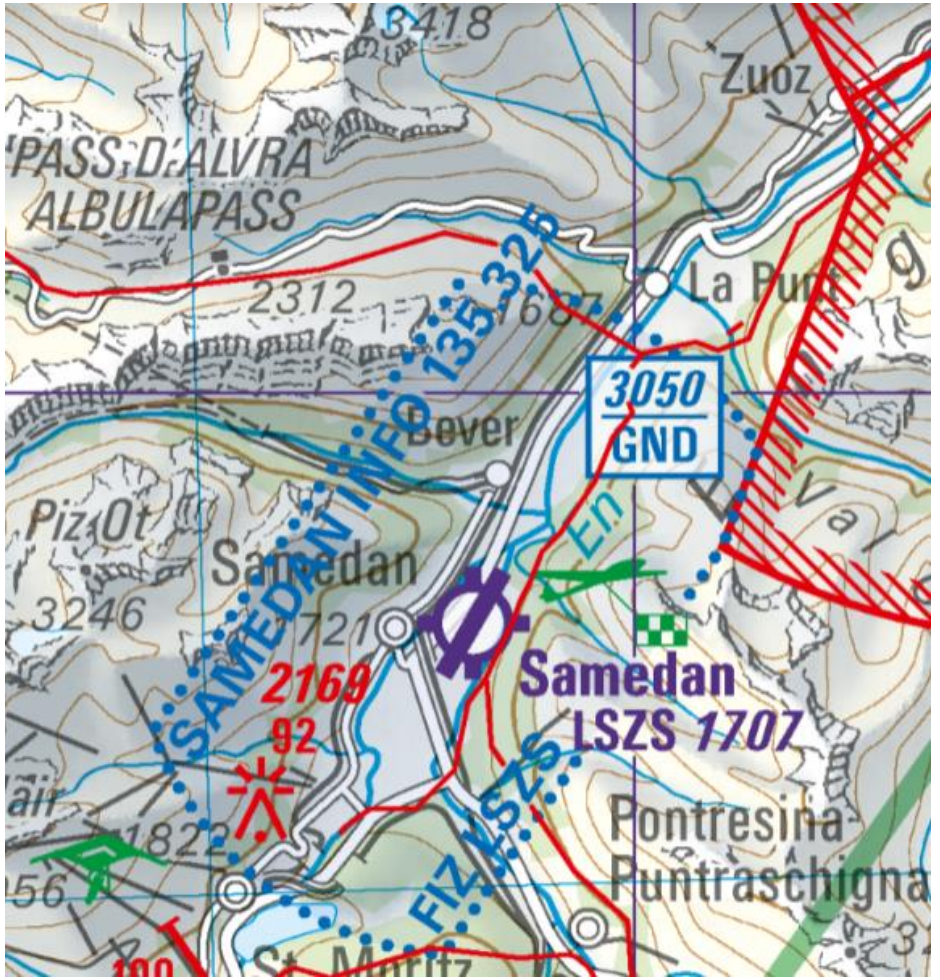


Flight Information Zone

FIZ

- Flight information and alerting services
- Mandatory radio contact before entry
  - No ATC clearance required!
- Maintain listening watch
- Airspace class remains Golf and Echo
- Separation is pilot's responsibility

Samedan, various airports in Italy



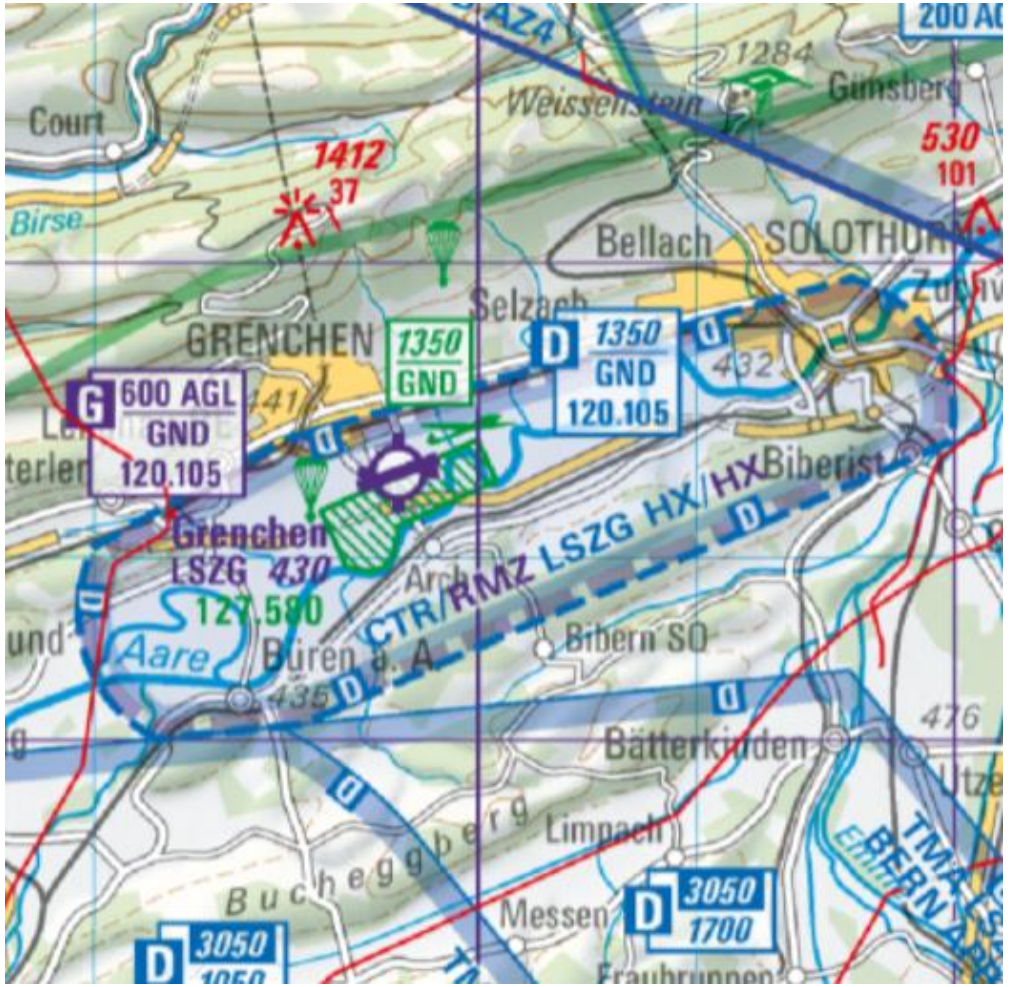
Radio Mandatory Zone

RMZ

- Blind transmission before entry, maintain listening watch
- Separation is pilot's responsibility
  - «see and avoid»
- Airspace class remains Golf

Grenchen (without ATC)

Various airports in Germany!



Transponder Mandatory Zone

TMZ

- Entry only with transponder ON
  - Mode S (i.e. ALT)

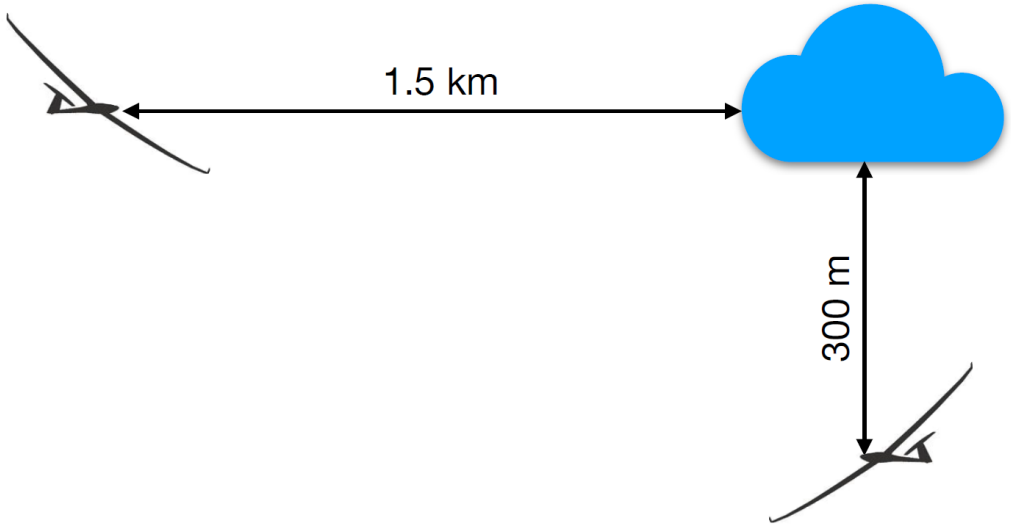
Switzerland: TMZ North East

- Without listening watch: Code 7000
  - Visible to ATC, no traffic information
- With listening watch: Code 2677
  - Frequency 119.925
  - Traffic information by ATC

Large Cloud Distance Minima

Airspace classes:

- Charlie, Delta, Echo
  - LSR for gliders within TMA
- Golf > 300m AGL (transponder OFF)



Visibility:

- 8km above FL100 (3050m STD)
- 5km below FL100 (3050m STD)

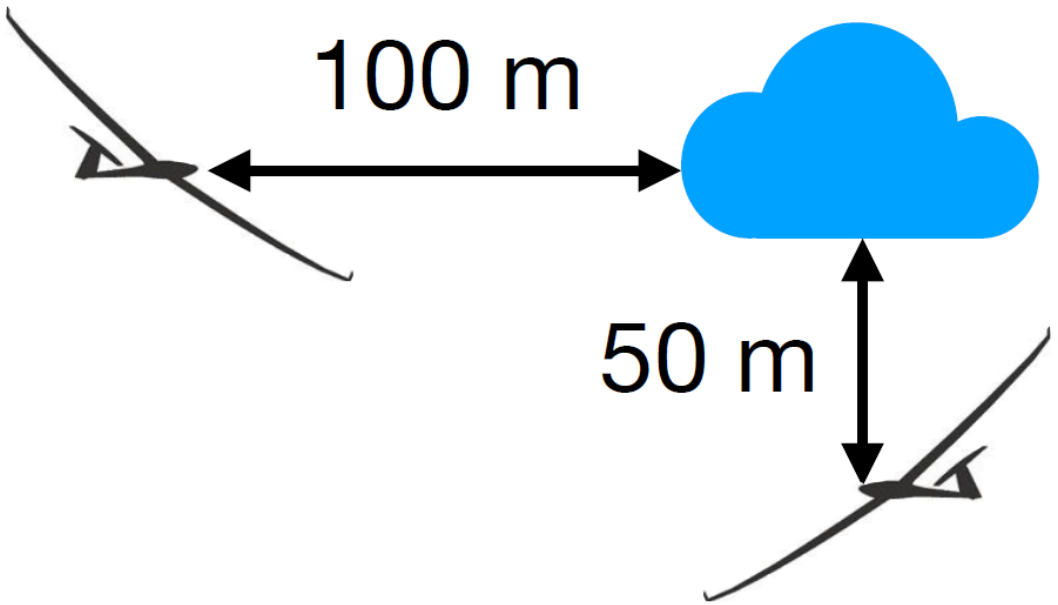
Reduced Cloud Distance Minima

Airspace class: Echo

- LSR for gliders outside TMA

Visibility:

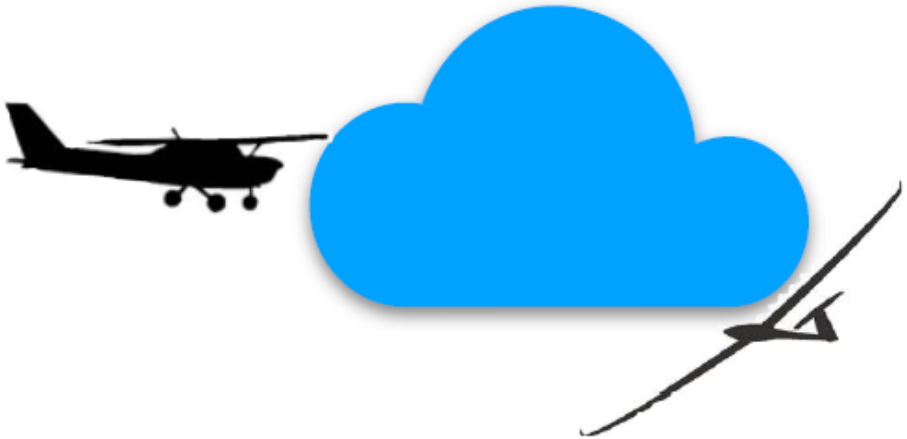
- 8km above FL100 (3050m STD)
- 5km below FL100 (3050m STD)



No Cloud Distance Minima

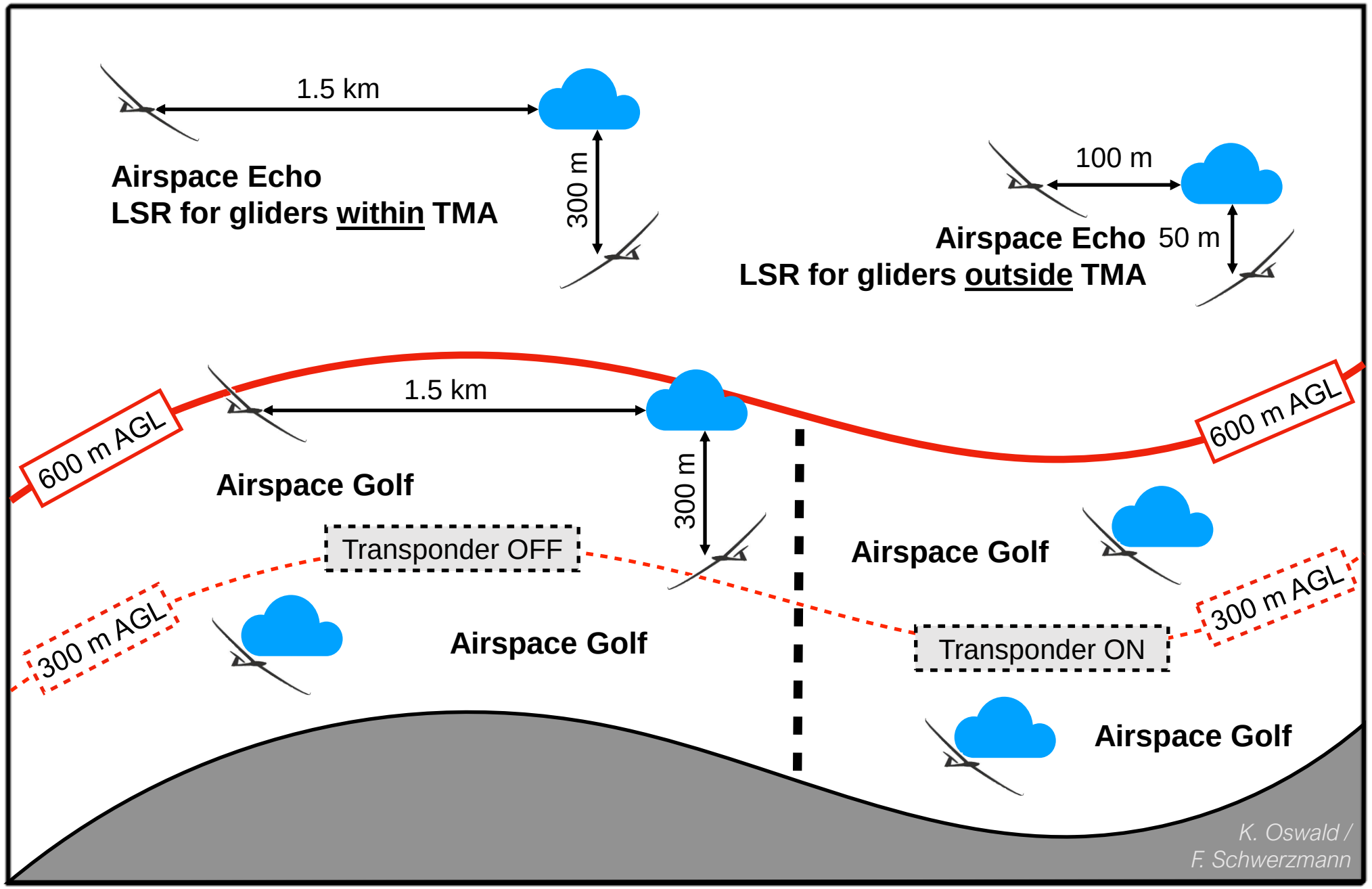
Airspace class: Golf

- GND up to 300m AGL
- 300m to 600m AGL (transponder ON)



Visibility:

- 5km
- 1.5km, traffic avoidance ensured
  - Ground surface in sight
  - Max. 140 knots

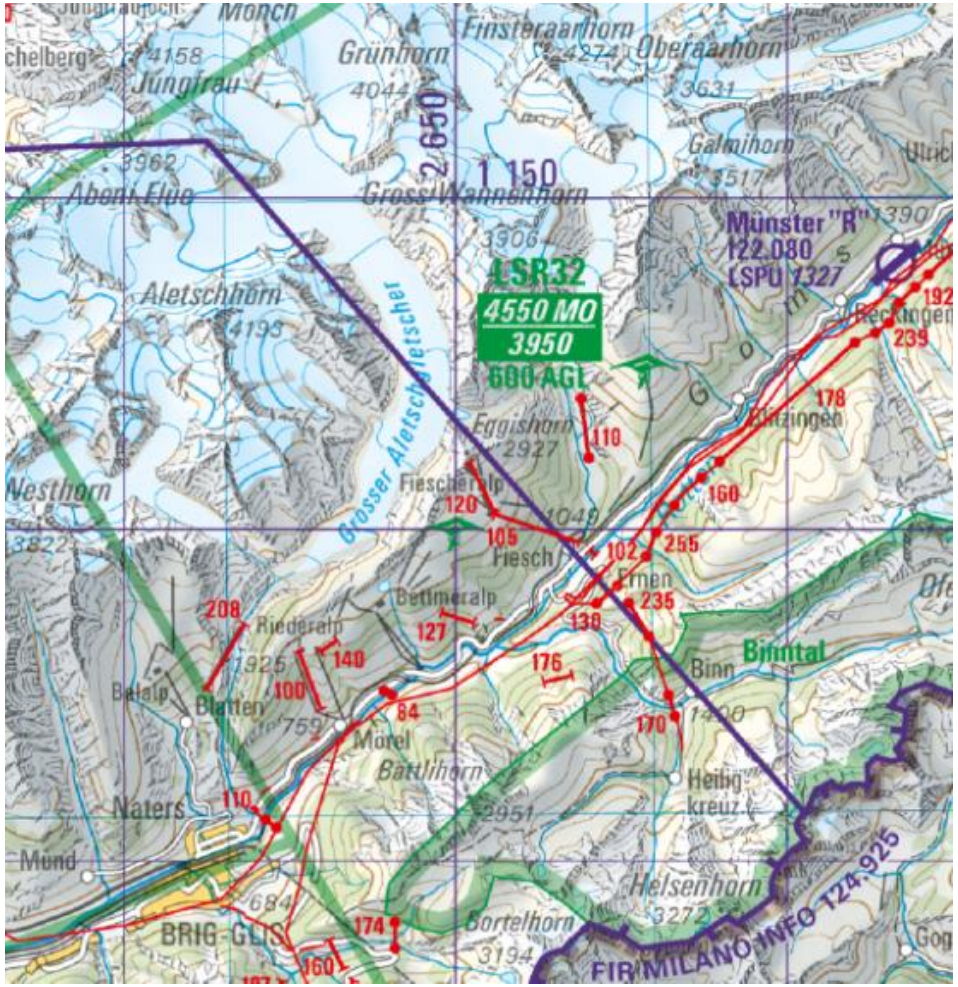

1.5 km
300 m
Airspace Echo
LSR for gliders within TMA
100 m
Airspace Echo
50 m
LSR for gliders outside TMA
600 m AGL
1.5 km
600 m AGL
Airspace Golf
300 m
Transponder OFF
Airspace Golf
300 m AGL
Airspace Golf
Transponder ON
300 m AGL
Airspace Golf
K. Oswald /
F. Schwerzmann

LSR for Gliders Outside TMA

LSR

<u>Outside TMA</u>

- Reduced cloud distance minima
  - 100 m lateral, 50 m vertical
- Active from 1. March until 31. October
  - SR to SS
  - Mil OFF without approval
  - Mil ON only with specific approval

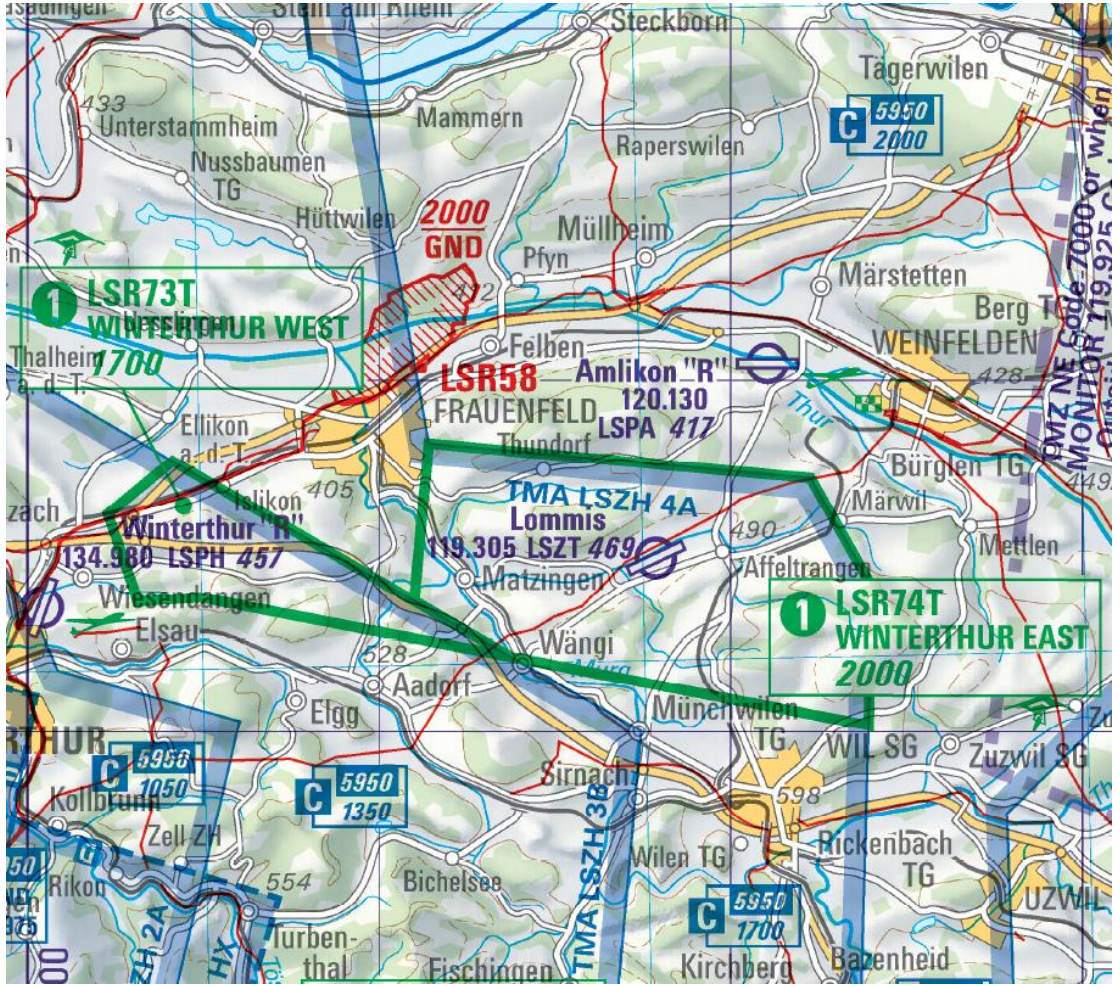


LSR for Gliders Within TMA

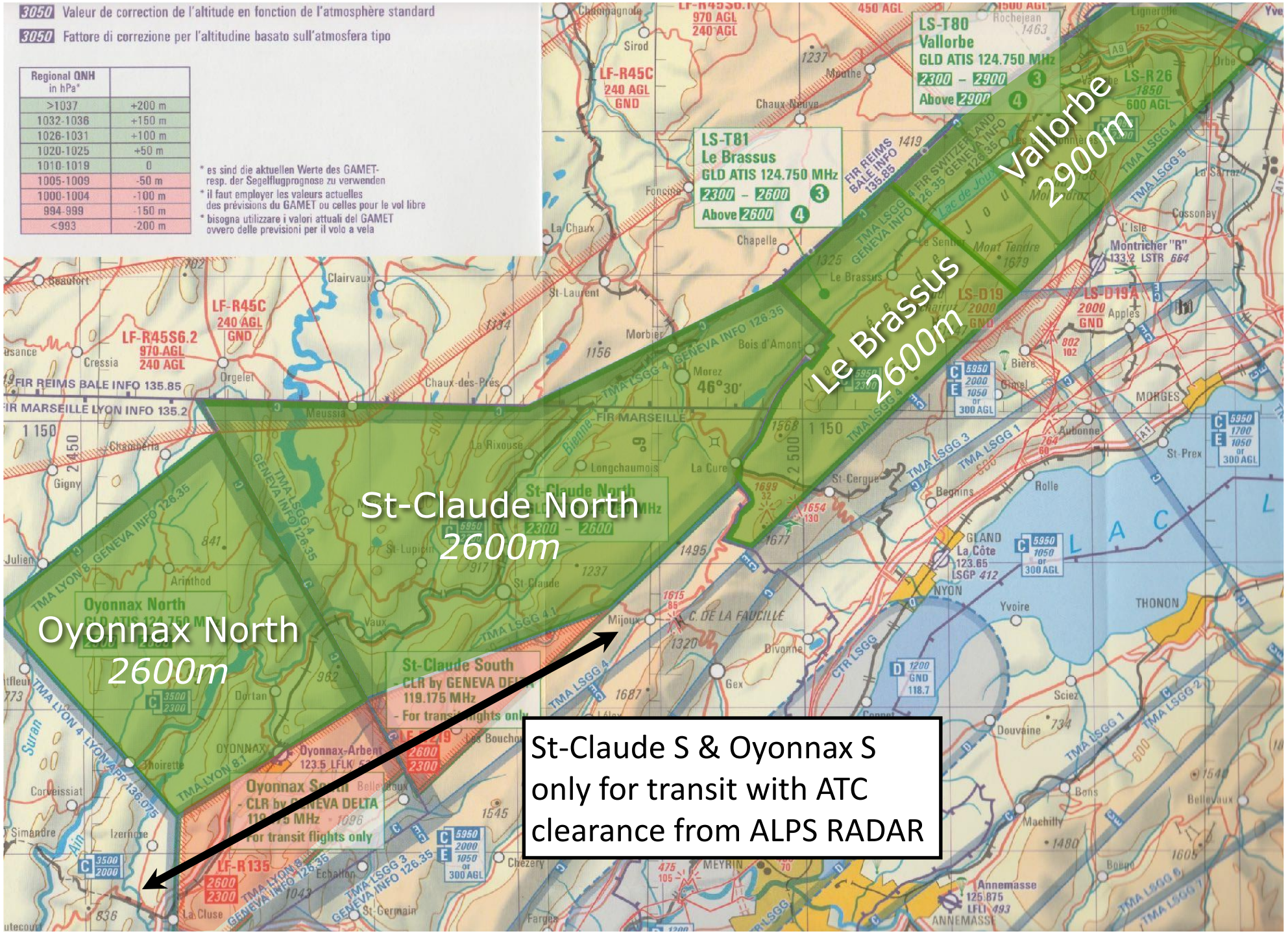
LSR

Within TMA

- No ATC clearance required
  - Only for gliders and tow planes
- Rules of airspace class Echo
  - Large cloud distance minima!
- Activation: See glider chart
- Maintain listening watch



TMA Genève with LSR for Gliders



Designation	MAX ALT *m* STD Altimeter (FL)	Operator / User TEL NR	Remarks and time of ACT Conditions of use
1	2	3	4
LSR80T VALLORBE a)	2900 2300	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If not active: Advise ALPS RADAR **119.175** MHz If sector activated: Continuous listening watch on FREQ **121 .130** MHz (3)
	above 2900	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If not active: Clearance by ALPS RADAR **119.175** MHz required. If sector activated: Continuous listening watch on FREQ **119.175** MHz (4)
LSR81T LE BRASSUS a)	2600 2300	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If not active: Advise ALPS RADAR **119.175** MHz If sector activated: Continuous listening watch on FREQ **121 .130** MHz (3)
	above 2600	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If not active: Clearance by ALPS RADAR **119.175** MHz required. If sector activated: Continuous listening watch on FREQ **119.175** MHz (4)
TMA GENEVE 4.1 ST-CLAUDE NORTH b)	2600 2300	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If TMA active: Advise ALPS RADAR **119.175** MHz If TMA deactivated: Continuous listening watch on FREQ **121 .130** MHz
LF R 219 ST-CLAUDE SOUTH	2600 2300	c)	Clearance by ALPS RADAR **119.175** MHz required. For transit flights only
TMA LYON 6.1 Oyonnax North b)	2600 2300	+41 (0) 22 747 13 91 GLD ATIS **124.755** MHz	If TMA active: Advise ALPS RADAR **119.175** MHz If TMA deactivated: Continuous listening watch on FREQ **121 .130** MHz
LF R 135 Oyonnax South	2600 2300	c)	Clearance by ALPS RADAR **119.175** MHz required. For transit flights only

Caption
Glider TMA Genève

Vallorbe & le Brassus:
a) LSR for Gliders

St-Claude North & Oyonnax North:
b) Declassified to airspace Golf

St-Claude South & Oyonnax South:
c) LF-R – transit only, clearance required

New CTR & TMA Zurich

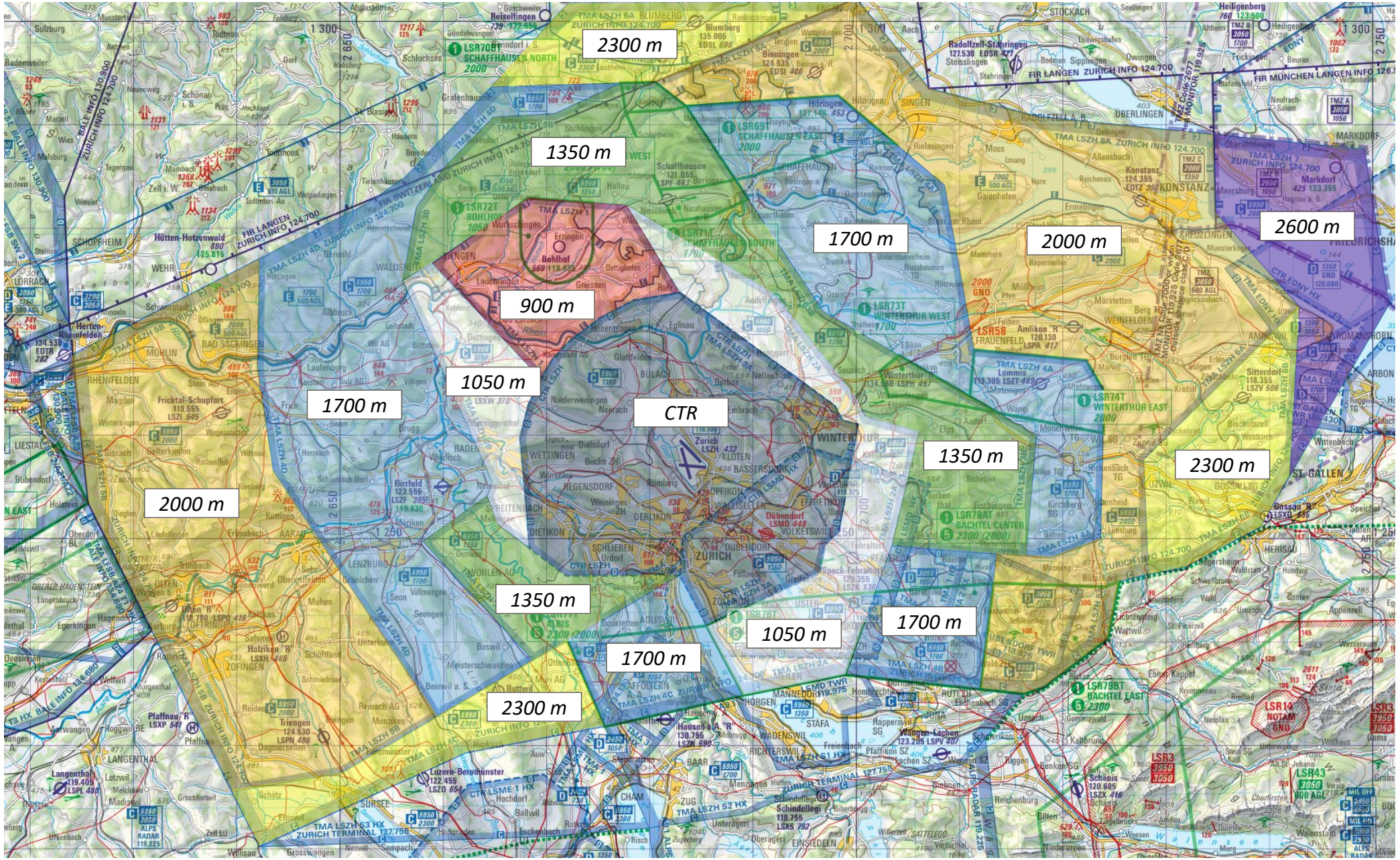
valid as of
20 MAR 2025

Advantages	Deteriorations
+ Smallest possible CTR & TMA	- Locally marginal extension of TMAs
+ Retention of LSR for gliders	- Complex overlap with Mil HX
+ Less separate sectors	- Lots of zigzag lines
+ Reduction of low TMAs	- H24 TMA at 1050m south of CTR

This airspace structure has been developed in a small expert team (including SFVS). It constitutes an acceptable compromise. Variable buffers to instrument flight procedures have been calculated using innovative collision risk modelling. Many local issues have been solved during productive discussions.

SFVS appreciates this collaborative effort and fully supports the new CTR & TMA Zurich.

New CTR & TMA Zurich: All HX OFF



Applicability

Normal weekend

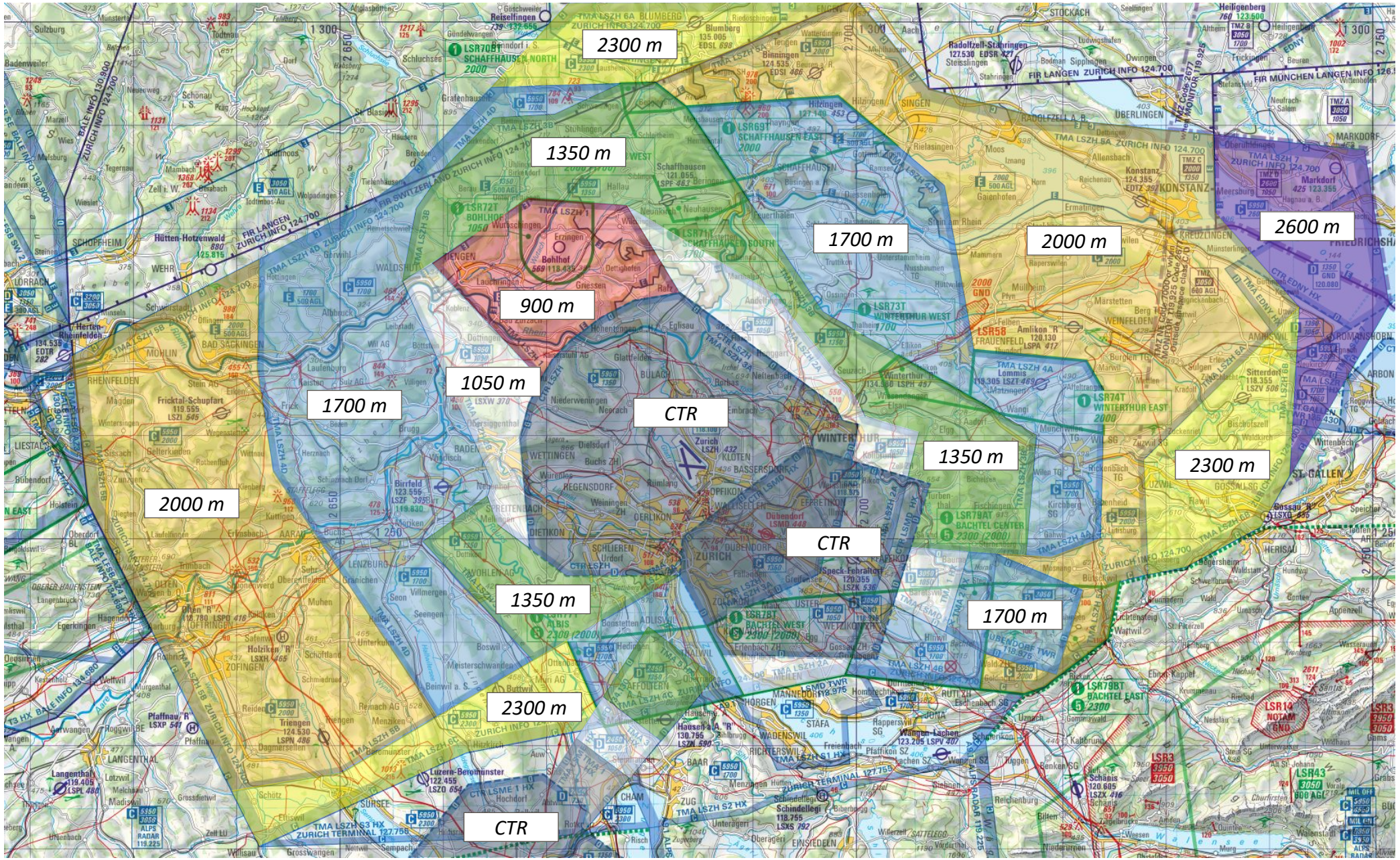
Charted HX

LSZH	OFF
LSMD	OFF
LSME	OFF

HX Status

LSMD	118.975
LSZH	129.005
LSME	134.130

New CTR & TMA Zurich: Mil HX ON



<u>Applicability</u>
Normal weekdays
(Mil ON hours)

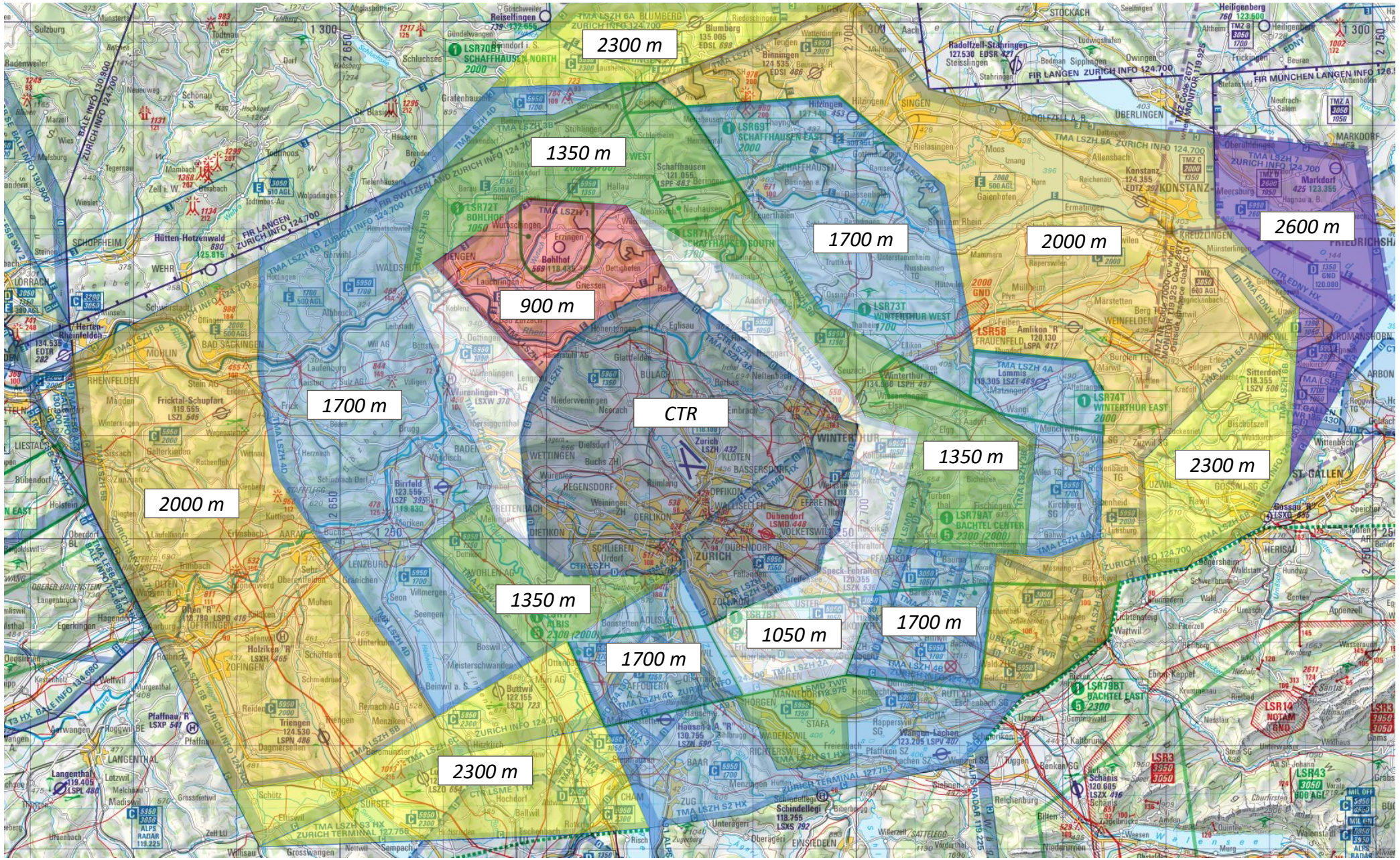
<u>Charted HX</u>

LSZH	OFF
LSMD	ON
LSME	ON

<u>HX Status</u>

LSMD	118.975
LSZH	129.005
LSME	134.130

New CTR & TMA Zurich: Zurich HX ON



<u>Applicability</u>
Early morning & late evenings

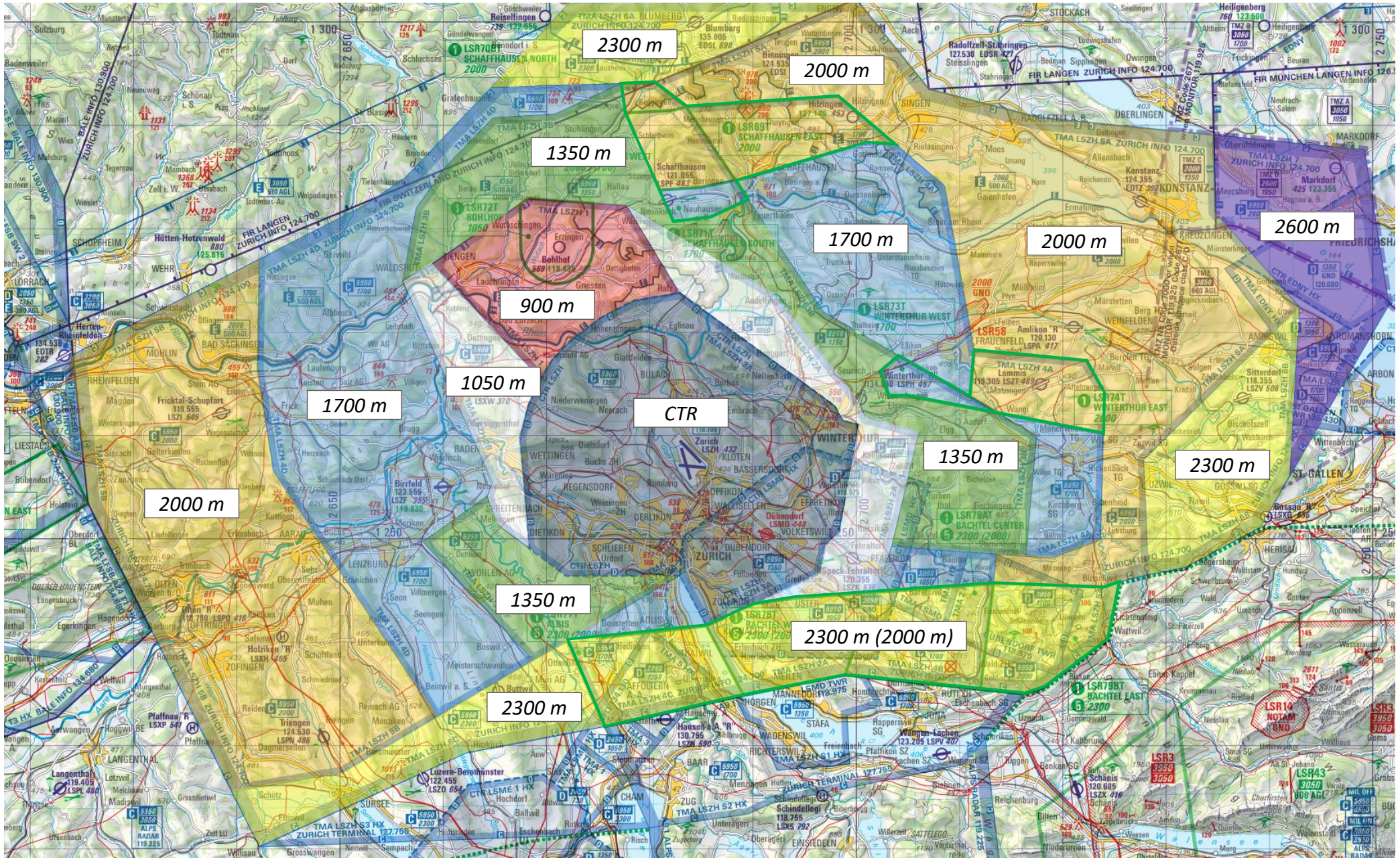
<u>Charted HX</u>

LSZH	ON
LSMD	OFF
LSME	OFF

<u>HX Status</u>

LSMD	118.975
LSZH	129.005
LSME	134.130

New CTR & TMA Zurich: LSR for Gliders



<u>Applicability</u>

Activation upon request by local airfield or pilot

<u>Charted HX</u>

LSZH	OFF
LSMD	OFF
LSME	OFF

<u>HX Status</u>

LSMD	118.975
LSZH	129.005
LSME	134.130
GLD Info	120.880

Electronic Conspicuity

There is no mandate for non-motorized aircraft to carry and operate an SSR transponder in Switzerland.

<u>Obligation to operate</u>:

- Aircraft is transponder equipped
- Sufficient supply of electrical power

→ Turn on your transponder!

In practice, a transponder is often required to obtain an ATC clearance for controlled airspace.

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FASST-CH

Future Aviation Surveillance Services and Technologies in Switzerland

- Government initiative to foster innovative solutions for e-conspicuity
- Co-existence of certified and non-certified equipment
- ADS-L, ADS-B, SSR Mode C & S, FLARM, FANET etc.
- Usage of ground-based infrastructure for interoperability
- Substitute/deferral for SSR transponder mandate

→ Mandatory **e**-conspicuity by 2028
→ Path towards **i**-conspicuity by 2035

More information: FOCA