



# Legislation - Air Law

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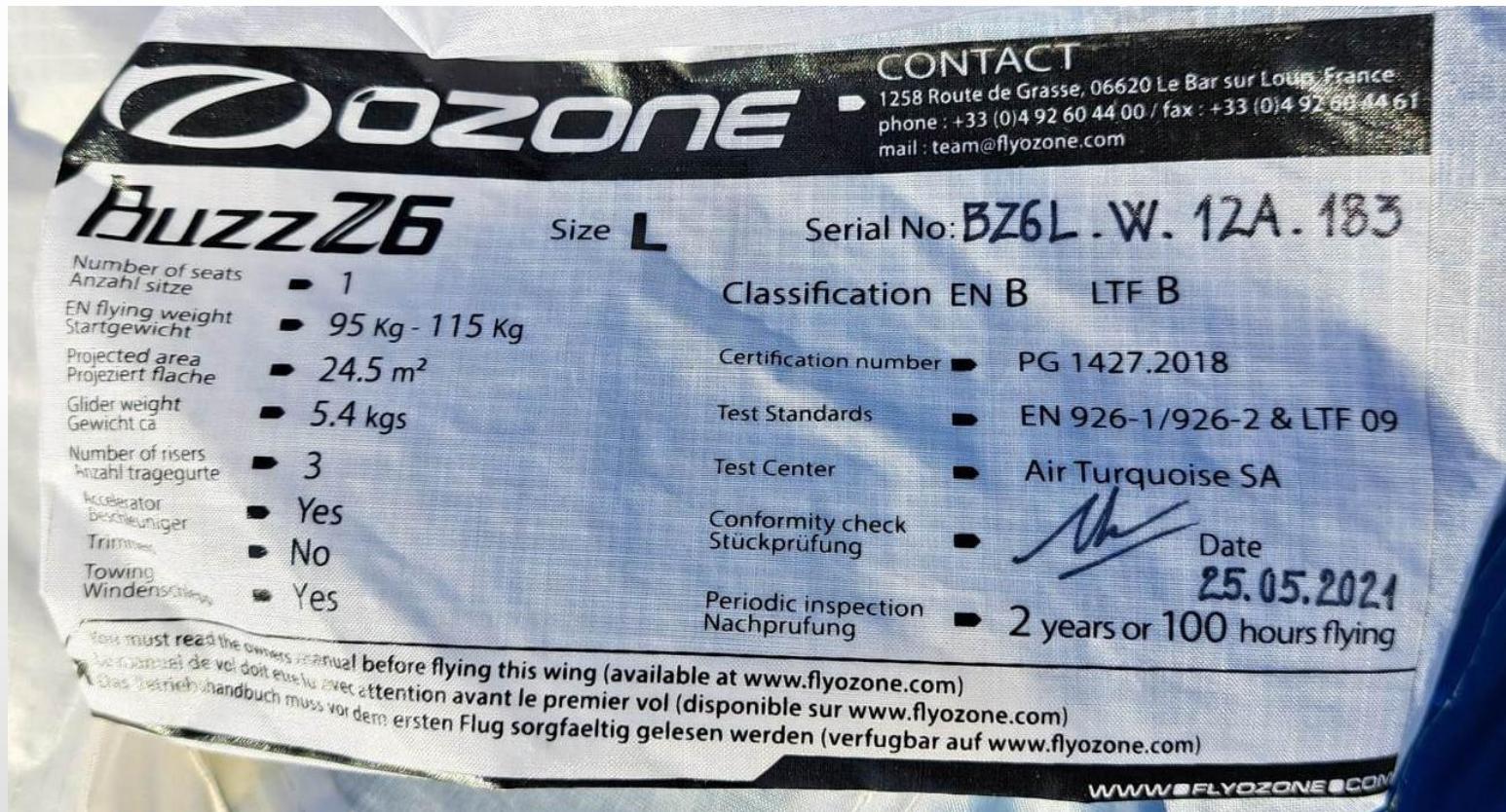
# Basics

- Swiss airspace legislation: FEDERAL GOVERNMENT
- Federal Office of Civil Aviation: BAZL (Bundesamt für Zivilluftfahrt)
- Legal regulations (Hang + Paragliding): for aircraft in special categories : VLK, 24.11.1994, SR 748.941
- VLK: Special categories of aircraft
- Hang glider: Foot launchable craft which can be used for gliding and soaring immediately after takeoff

# Basics – Equipment

- Hanggliders and paragliders
  - NOT ENTERED INTO Swiss aircraft register
  - Not required to be tested by any authority
  - Pilot is responsible for airworthiness
  - SHV number (max 5 digits, 40 cm, lower surface)
  - Manufacturer's label
- Rescue system: required by law on the practical exam
- Helmet: required by law on the practical exam

# Basics - Equipment



Manufacturer, type, year of manufacture, min-max load

# Basics – Insurance

- Hang glider / paraglider third party liability insurance is mandatory
- Must cover damages sustained by third parties on the ground
- Min cover: **CHF 1'000'000** (greater damage: the person is responsible who caused the accident)

# Basics – Training and pilot

- Min. 16 year for the License
- Medical examination: no laws
- Min yearly flights: no minimum number
- License validation: pilot, T1, T2: unlimited, T3 & instructor: 3y
- Foreign pilots (if they live abroad + IPPI4/5 + 3rd party ins.)
- Training: only under the supervision of an SHV certified Instructor
- Tandem1: only with other pilots (students\*)
- Tandem3: commercial flights
- Flight book: not mandatory after license, but recommended (tandem + instructor)
- Exams: Stipulated by BAZL, approved regulations of the SHV

# Basics – Other things

- Takoffs – landings: Federal government, cantons, local councils, private landowners
- Landing on water: (permission needed from canton's shipping administration)
- Tow winching: up to 150m ok, above: permission from BAZL
- Para-motor: takeoff only on airfields
- People-buildings-roads-ski pistes-cables-powerlines-public transport: provide sufficient degree of safety distance
- Border XING: according to VLK regulations (+ respecting abroad law)
- Radio for schools: 123.430 MHz
- Radio for pilots: 130.930 MHz (no specific license)

# Airspaces

- A - B - C - D - E - F - G
- Switzerland: G - E - C - D

Separation line: on the GLDK

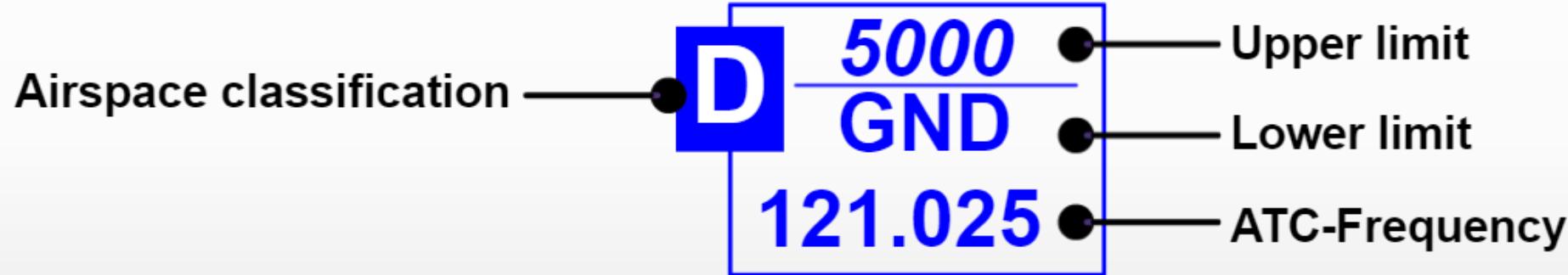


# Airspaces

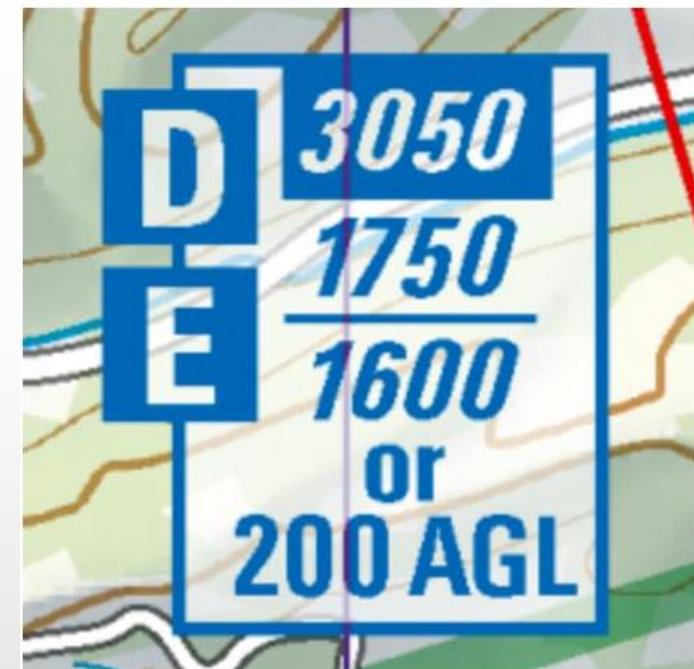
ICAO/EASA	ATC Clearance	Flight Rules
C	Required	VFR and IFR
D		
E	Not required	VFR only*
G		

\*IFR with FOCA approval

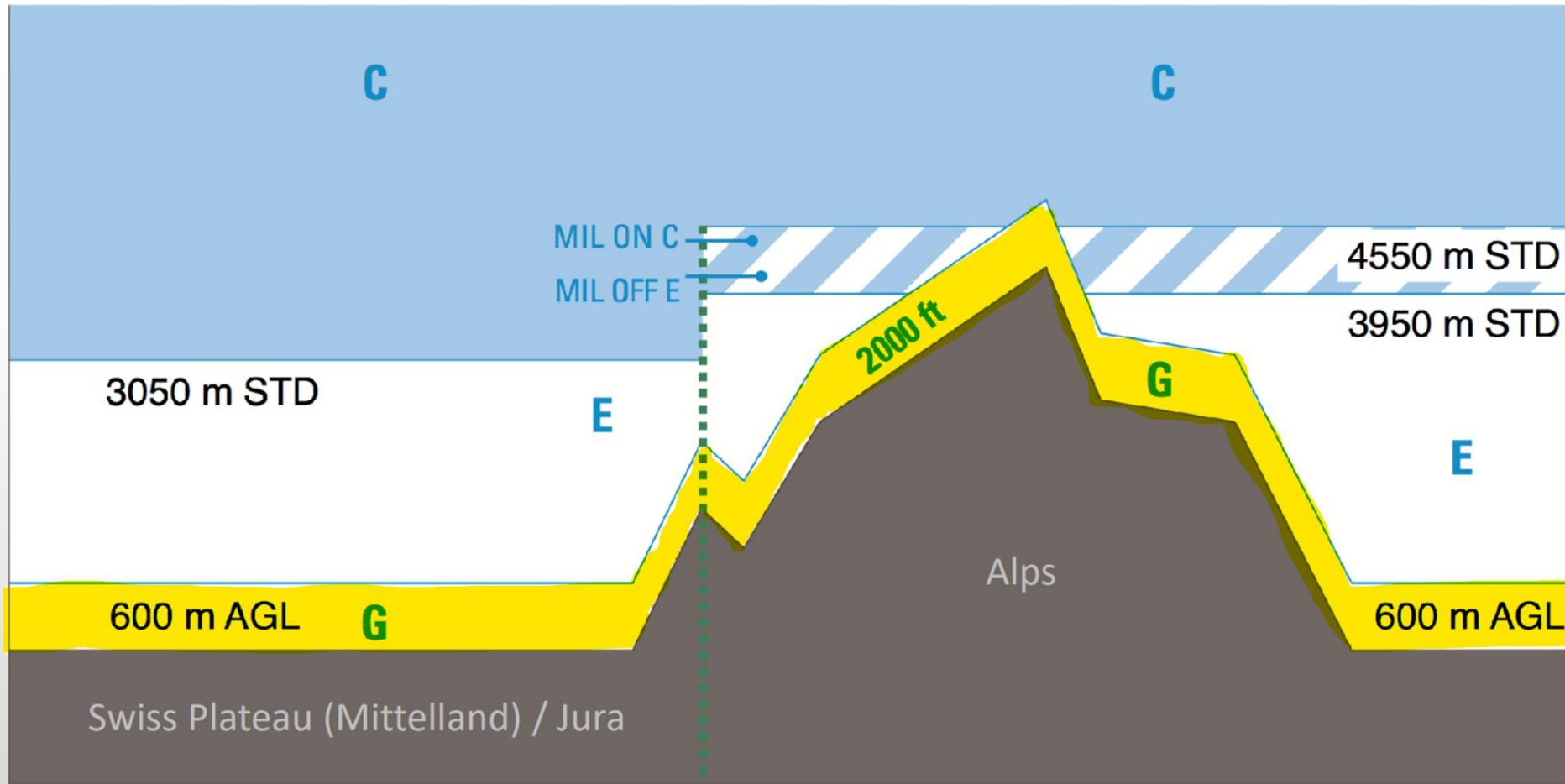
# Airspaces



# Airspaces



# Airspaces – G (Golf)



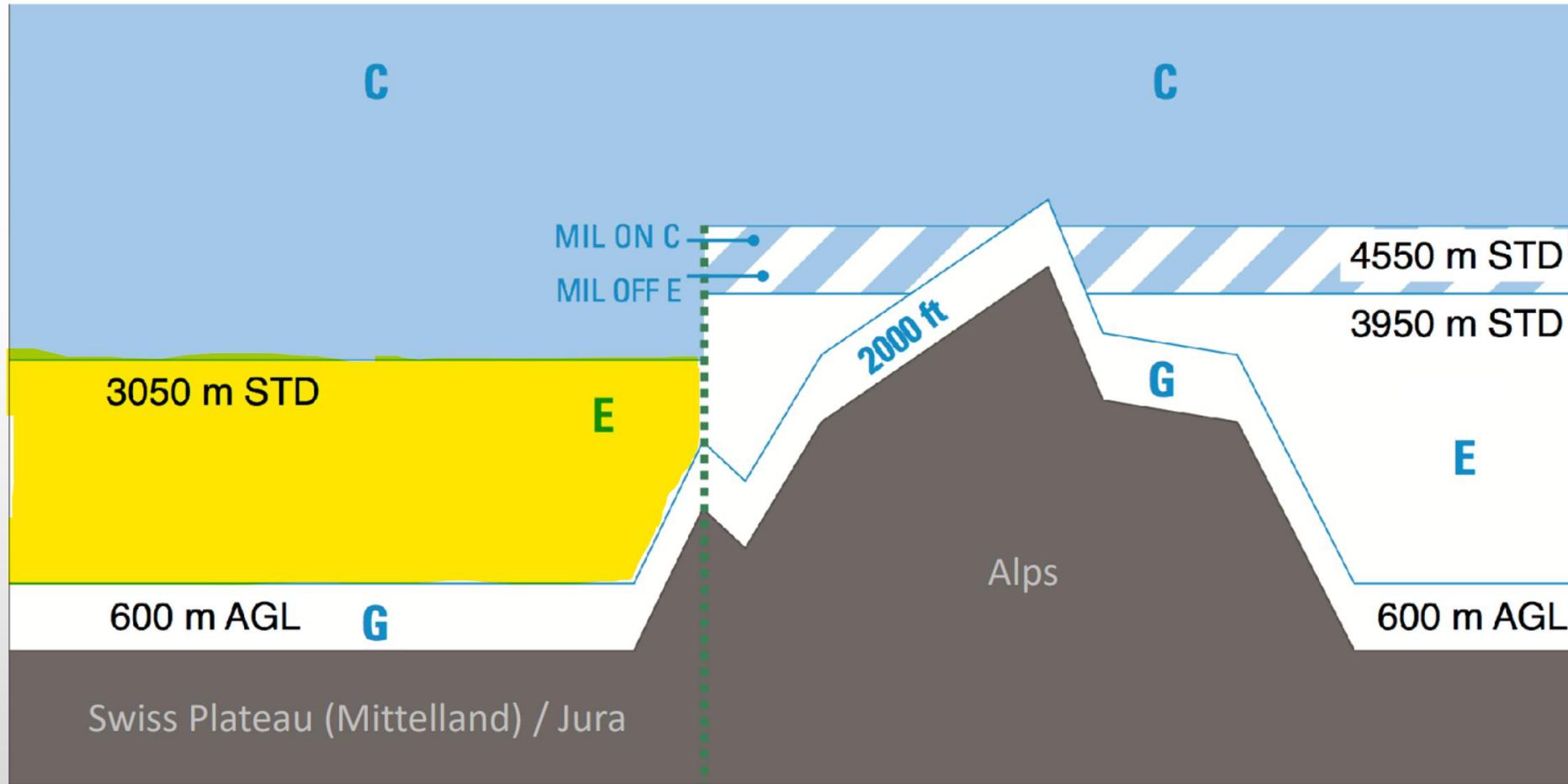
Lower limit: GND  
Upper limit: 600m AGL

Visibility:  
<300m AGL: 1.5km / ground/water  
>300m AGL: 5km

Cloud distance:  
<300m AGL: outside cloud  
>300m AGL: 1.5 km / 300,

Uncontrolled  
VFR & IFR

# Airspaces – E (Echo) Mittelland/JURA



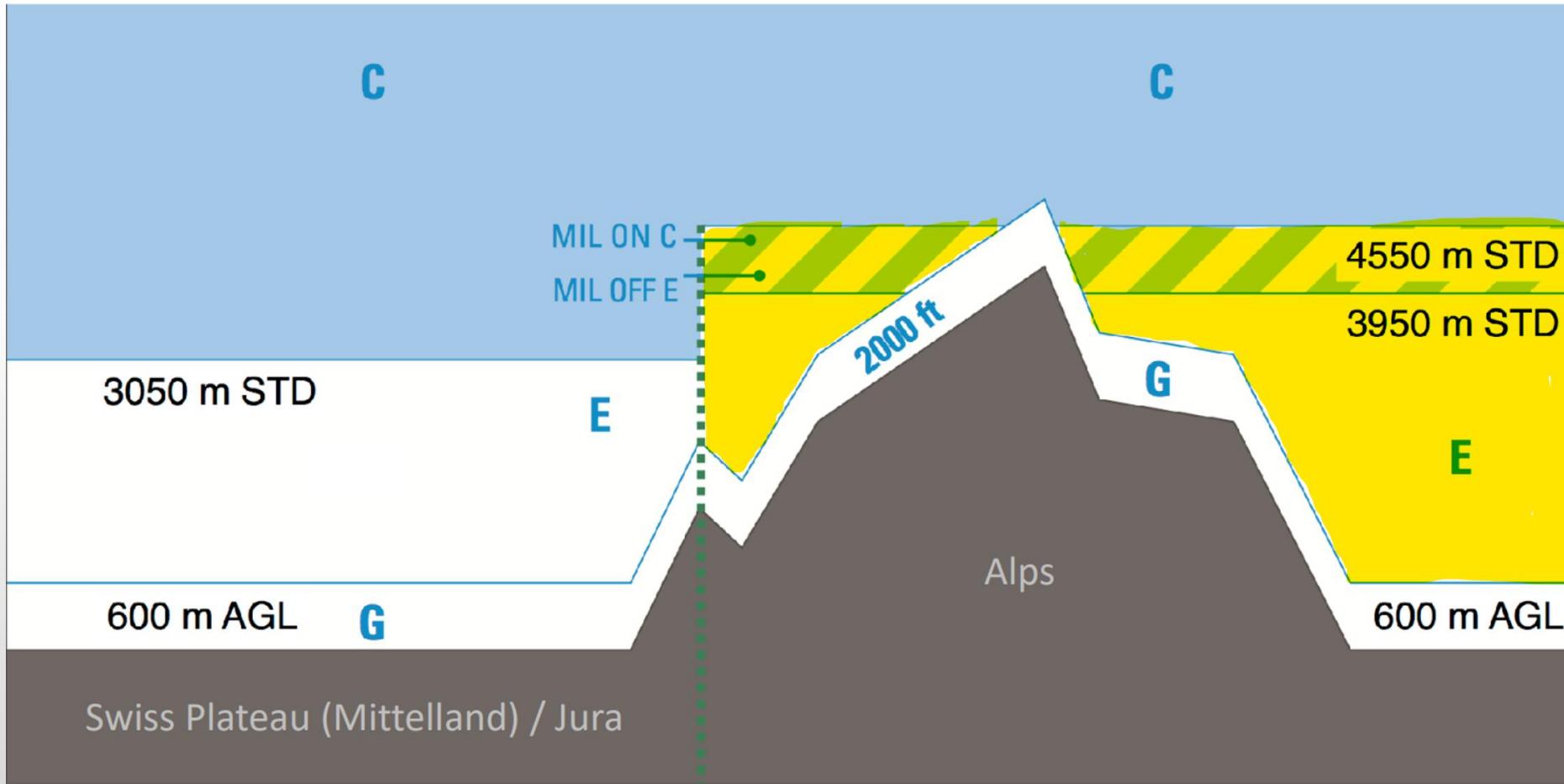
Lower limit: 600m AGL  
Upper limit: 3050m AMSL

Visibility:  
5km

Cloud distance:  
1.5 km / 300m

Controlled  
VFR & IFR

# Airspaces – E (Echo) ALPS



Lower limit: 600m AGL

Upper limit:

MIL-ON: 3950m AMSL (STD)

MIL-OFF: 4550m AMSL (STD)

Visibility:

<3050m: 5km

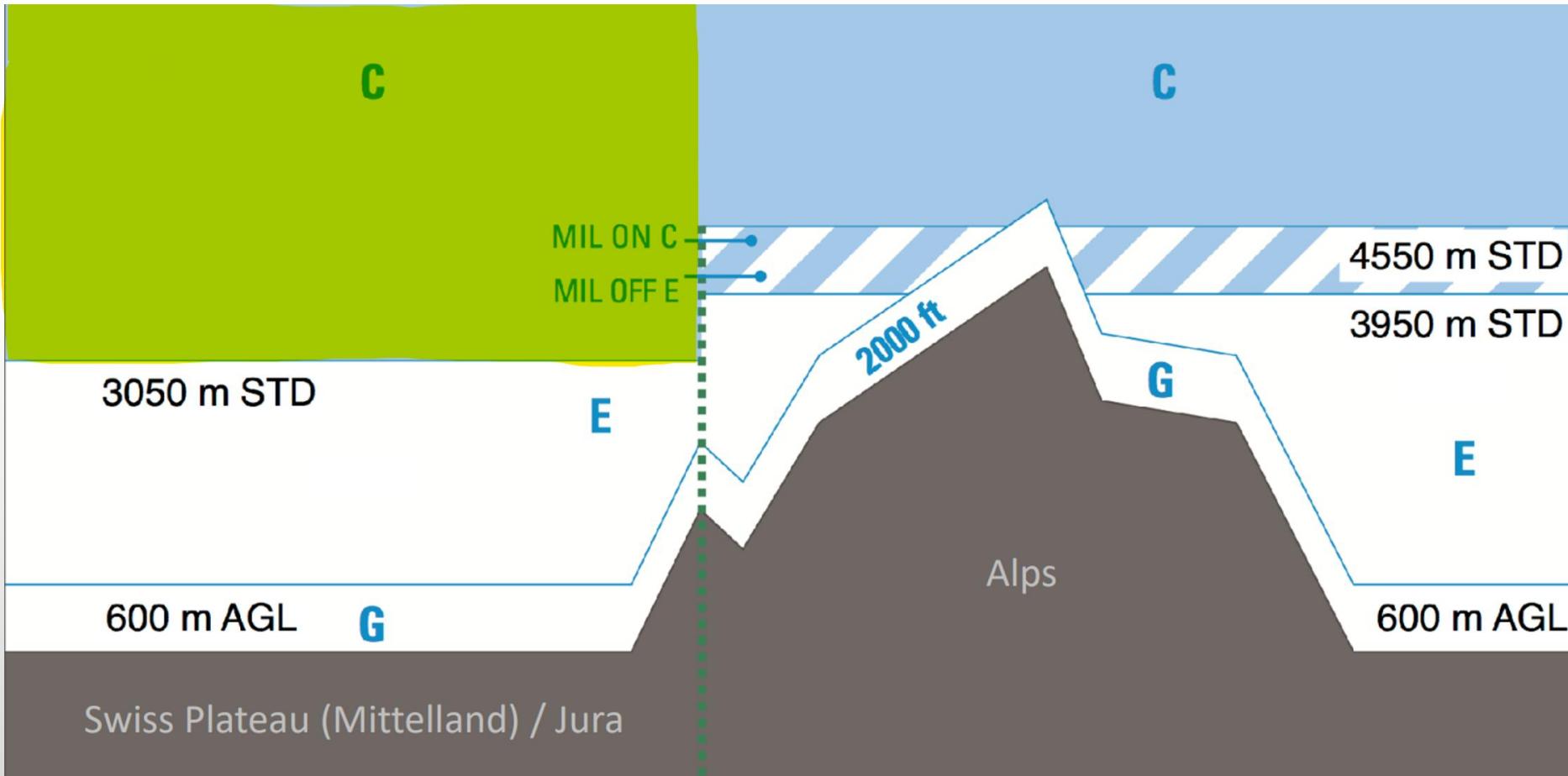
>3050m: 8km

Cloud distance:

1.5 km / 300m

Controlled  
VFR & IFR

# Airspaces -C (Charlie) Mittelland/Jura



Lower limit: 3050m AMSL (STD)  
Upper limit: -

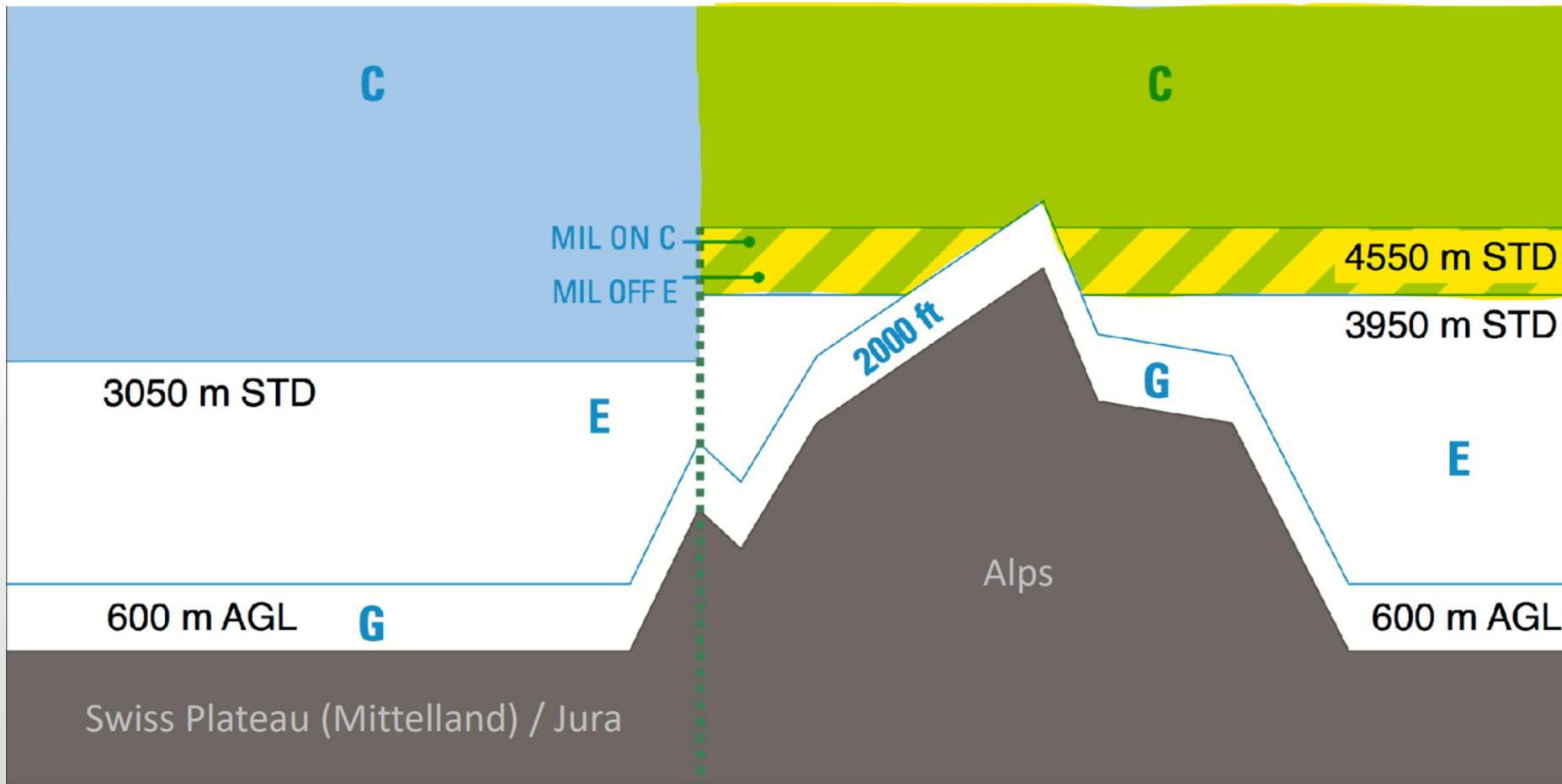
Visibility:  
8km

Cloud distance:  
1.5 km / 300m

Controlled  
VFR & IFR

# Airspaces -C (Charlie) ALPS

MIL OFF	MIL ON
Ausserhalb Militärflugdienstzeiten Hors des heures du service de vol militaire Outside of military operating hours	Militärflugdienstzeiten Heures du service de vol militaire Military operating hours
	MON – FRI: 0730 – 1205 LT 1315 – 1705 LT or NOTAM
MIL – Nachtflüge JET / HEL / PROP Vols de nuit MIL JET / HEL / PROP JET / HEL / PROP MIL night flights	NOTAM (EXC Air Policing and SAR Mission)



Lower limit:  
MIL-ON: 3950m AMSL (STD)  
MIL-OFF: 4550m AMSL (STD)

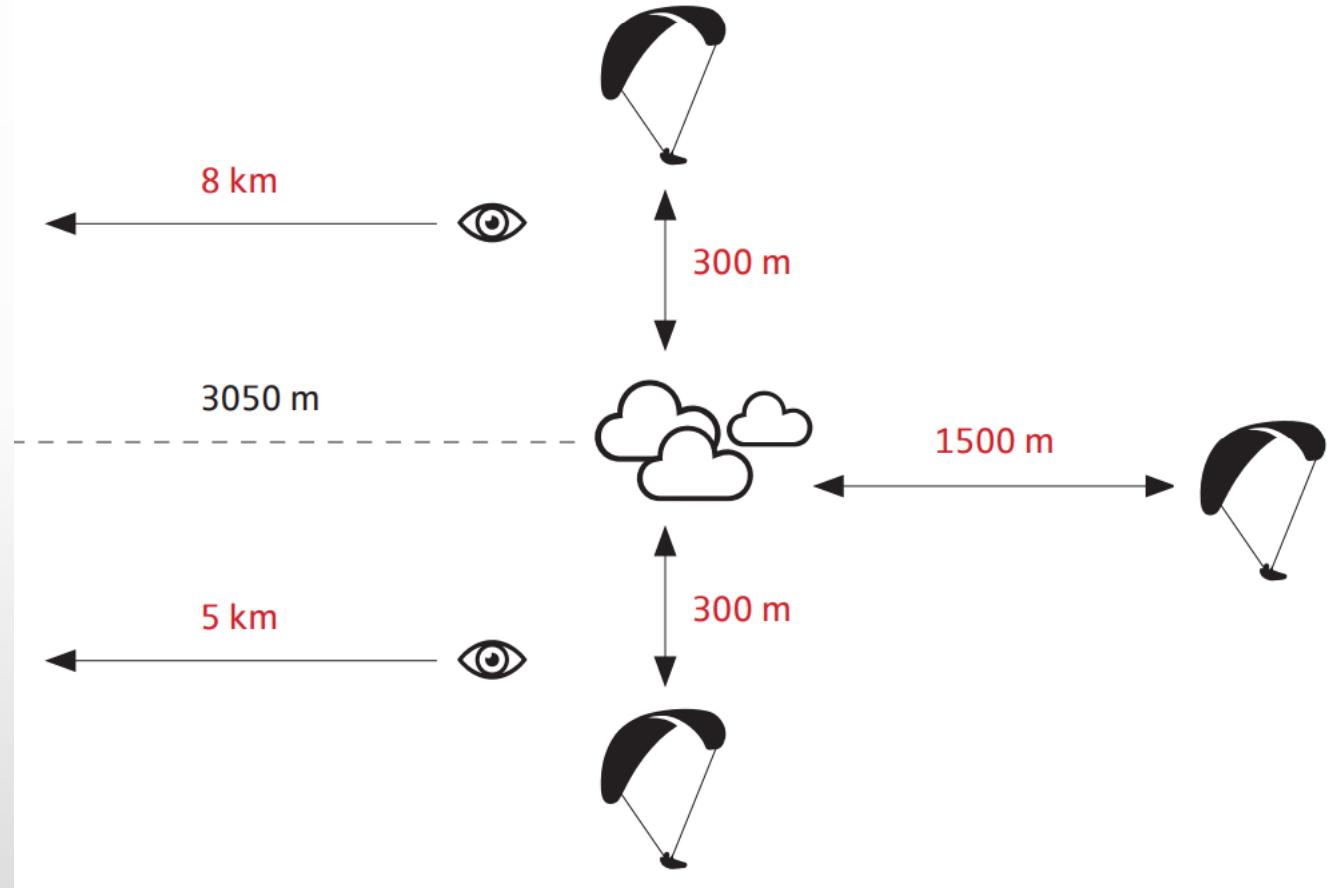
Upper limit: -

Visibility:  
8km

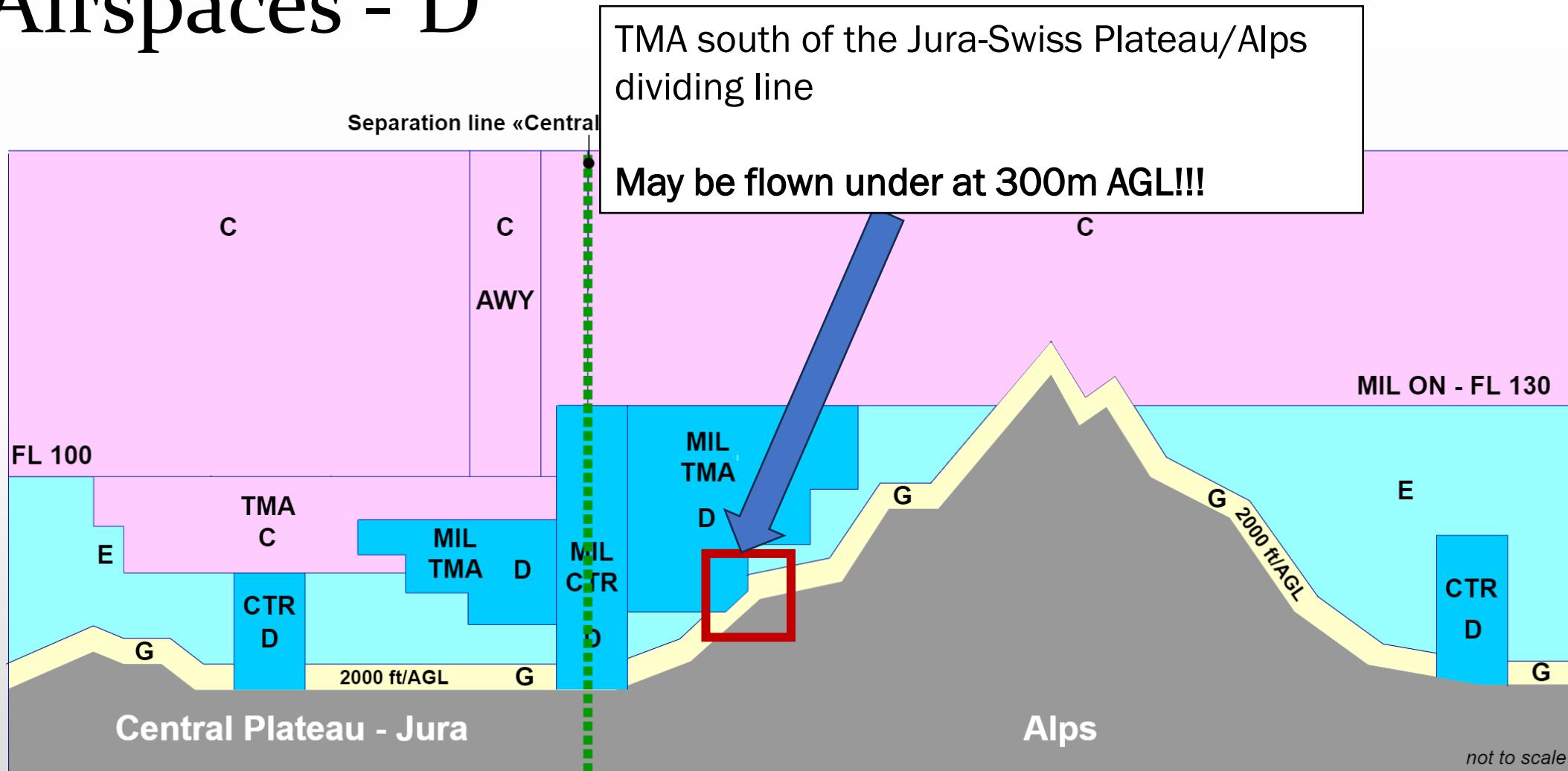
Cloud distance:  
1.5 km / 300m

Controlled  
VFR & IFR

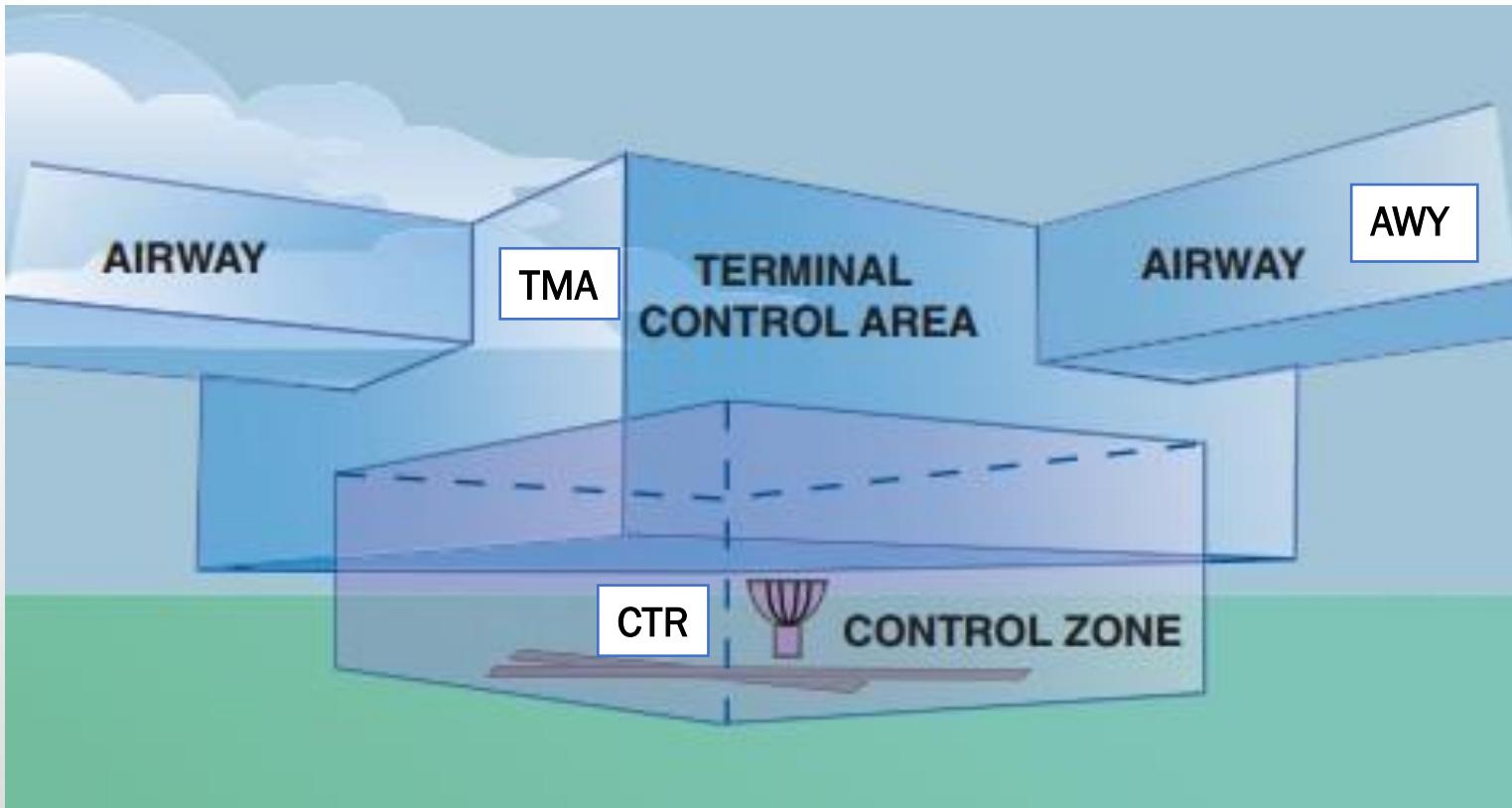
# Airspaces – Visibility rules



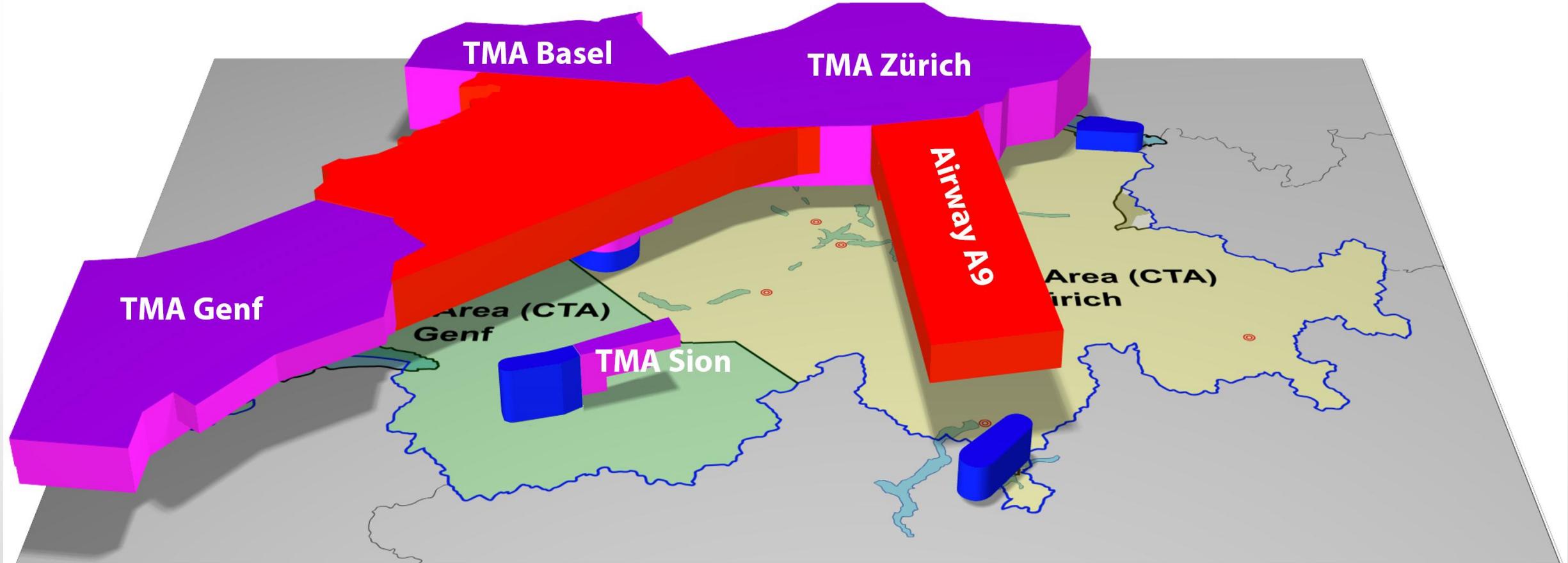
# Airspaces - D



# Airspaces – D (Delta)



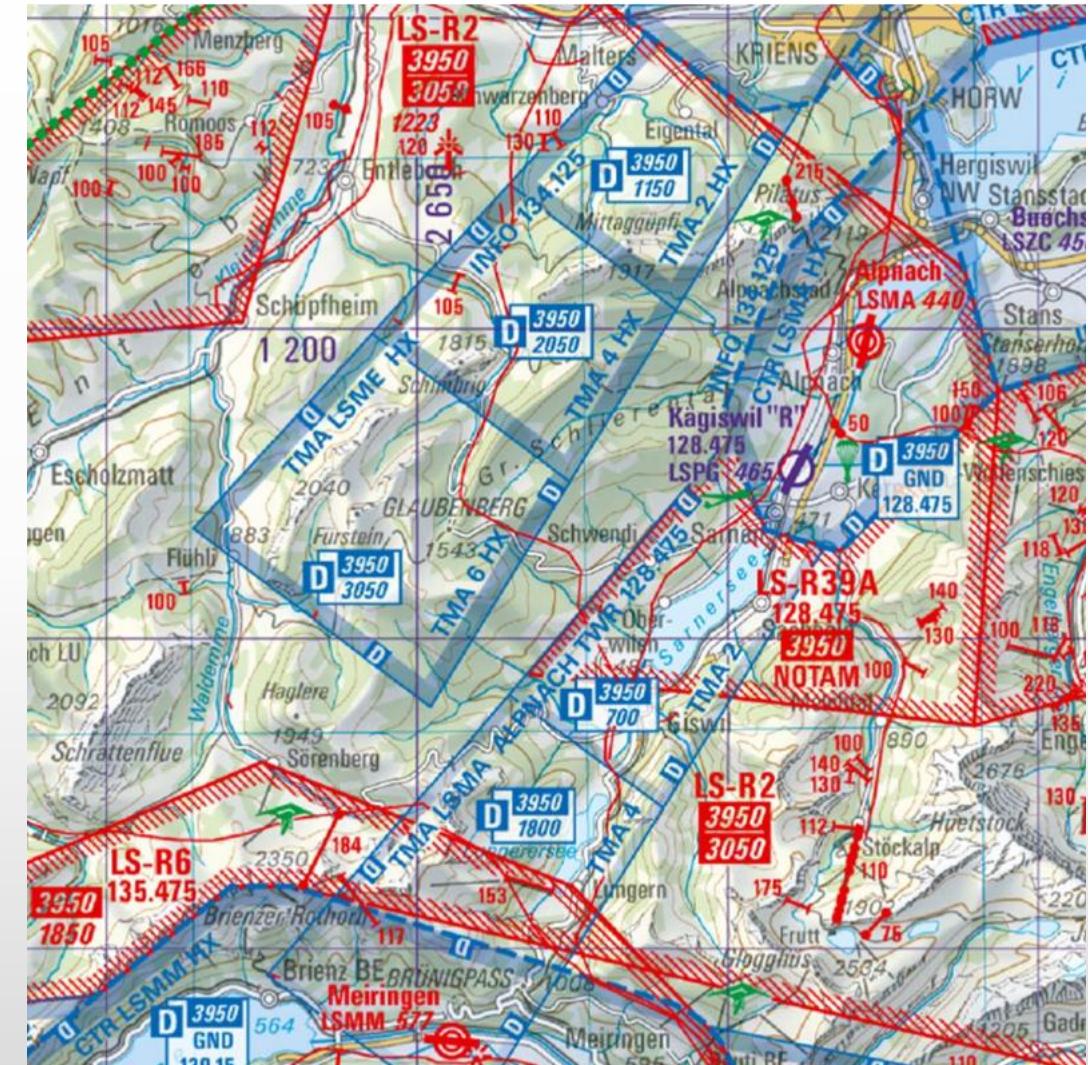
# Airspaces – D (Delta)



# Airspaces – D (Delta)

TMA Emmen: active accordance with HX

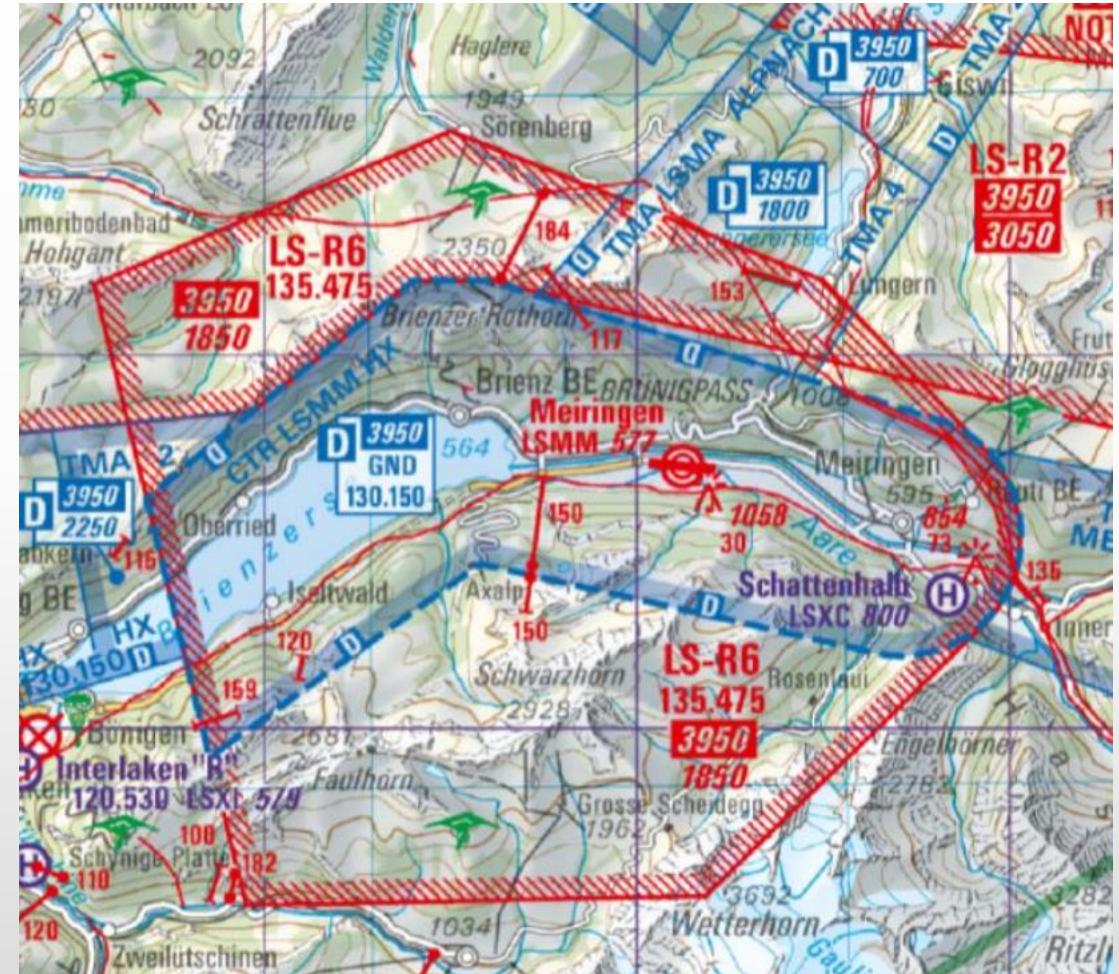
TMA Alpnach: activated via NOTAM/DABS



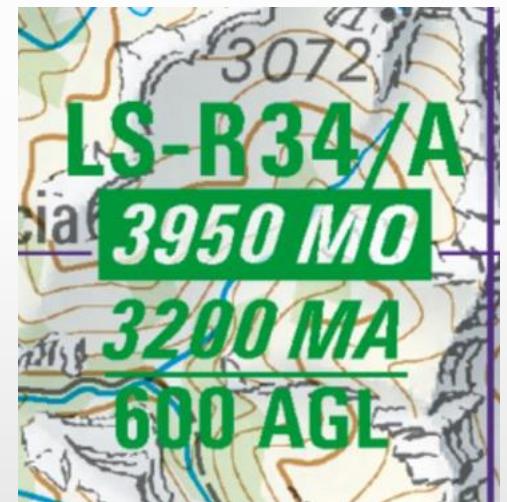
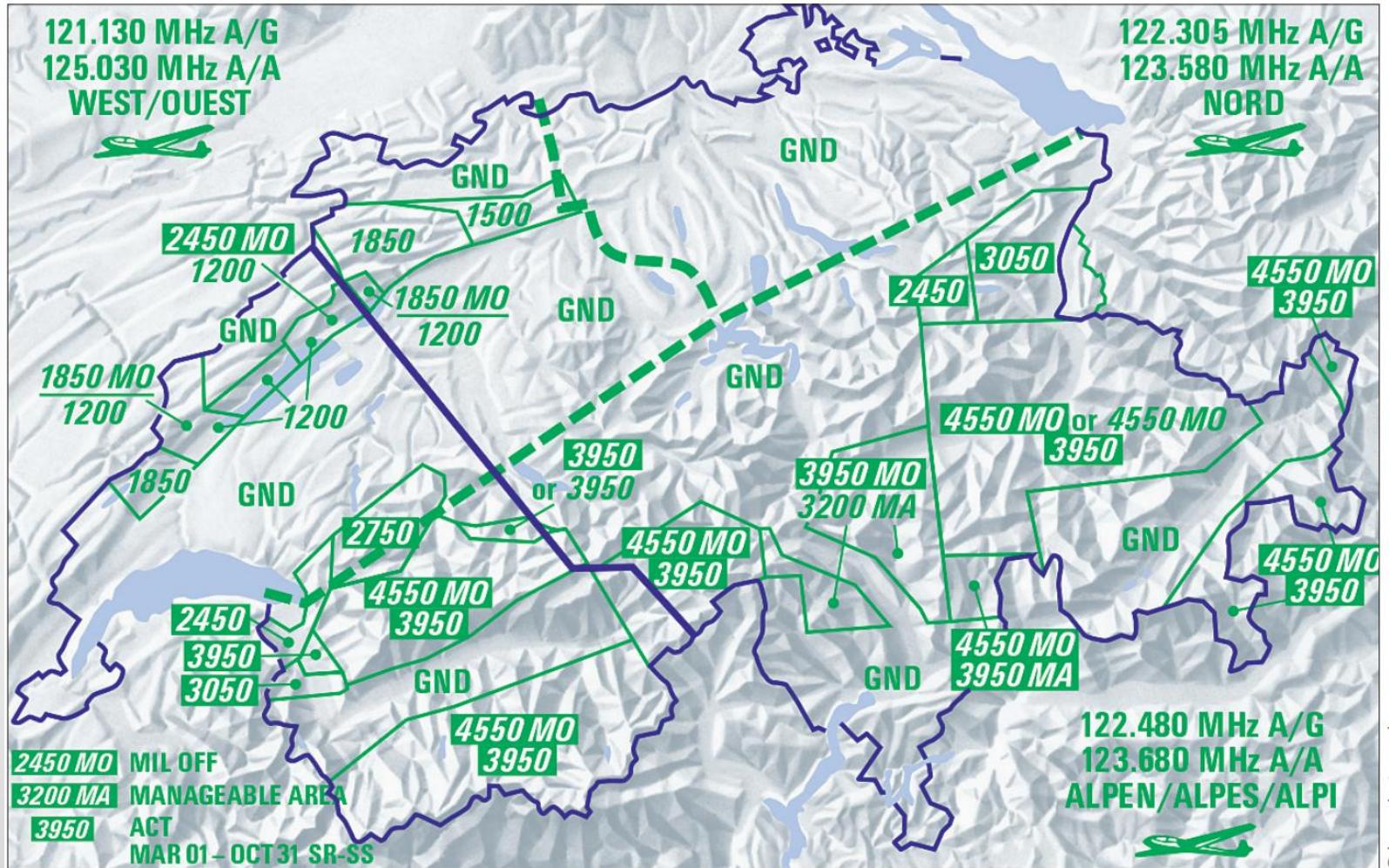
# RESTRICTED Airspaces – LS-R

Special rules apply:

- LS-R red: flying prohibited when active
  - Activation: DABS/NOTAM
- LS-R green (for gliders): reduced cloud distances

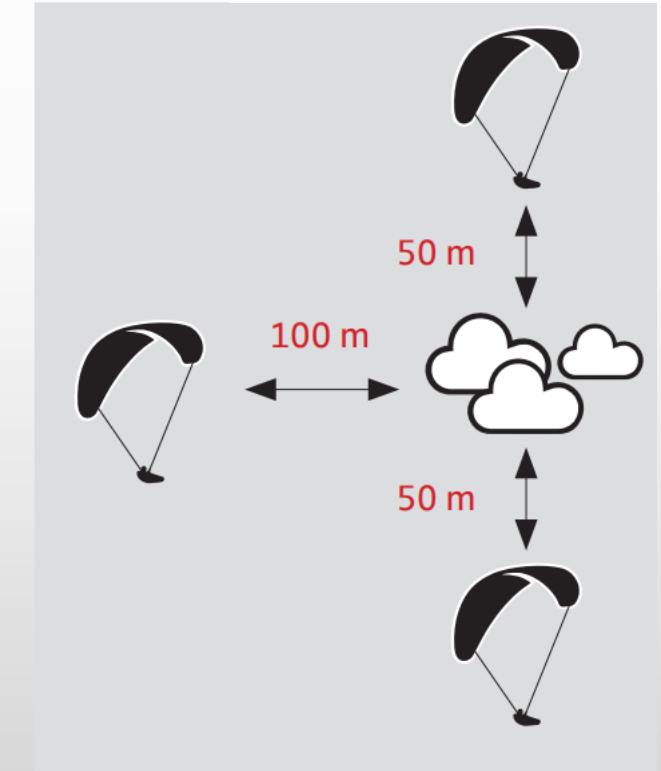
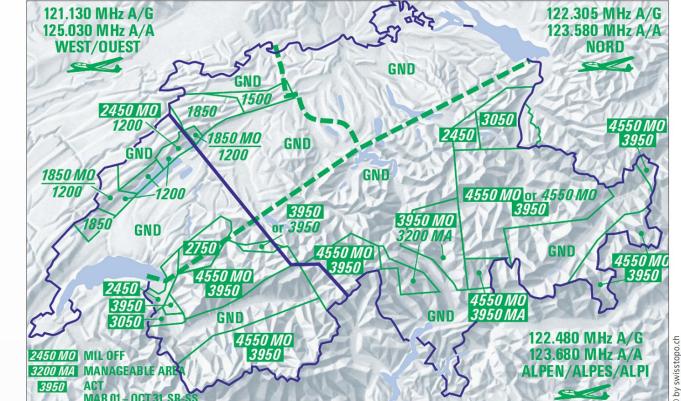


# Airspaces – LS-R for gliders



# Airspaces – LS-R for gliders

- Active from March until end of October
- Info: GLDK and VFR-Manual
- Shorter cloud distance rules
- MA: Active during MIL-OFF, During mil-on: can be activated upon request (ask the appropriate authority)



# Airspaces – LS-D

DANGER AREA

Activation: DABS/NOTAM

You can fly in legally, BUT...



# Airspaces – How to do on the exam?

1. Where am I? (North or South from the separation line)
2. MIL-ON or MIL OFF? (not relevant for „north”)
3. Which airspace am I? (G, E, D, C)
4. Visibility: (below 3050m – 5km, above 3050m 8km)
5. Cloud distance: LS-R green? Or G/E/C/D?
6. Can I fly there???

Which values for visibility and distance from clouds apply generally on Wednesdays at 14.30 in the Alps at 800 m AGL / 3'800 m AMSL? visibility / horizontal distance / vertical distance



a) 8.0 km / 1.5 km / 300 m



b) 5.0 km / 1.5 km / 300 m



c) 5.0 km / 100 m / 50 m



d) 1.5 km and ground visibility / out of clouds / out of clouds

# Real altitude? Correcting QNH

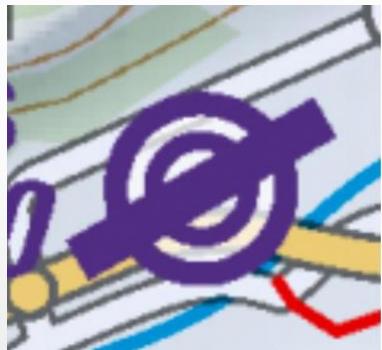
>1037	+200 m	1010-1019	0
1032-1036	+150 m	1005-1009	-50 m
1026-1031	+100 m	1000-1004	-100 m
1020-1025	+50 m	994-999	-150 m
1010-1019	0	<993	-200 m

QNH correction table

Standard atmosphere: 1013.2 hPa at MSL

# Distances – from runways (without or inactive CTR)

Aerodrome (civil / military)

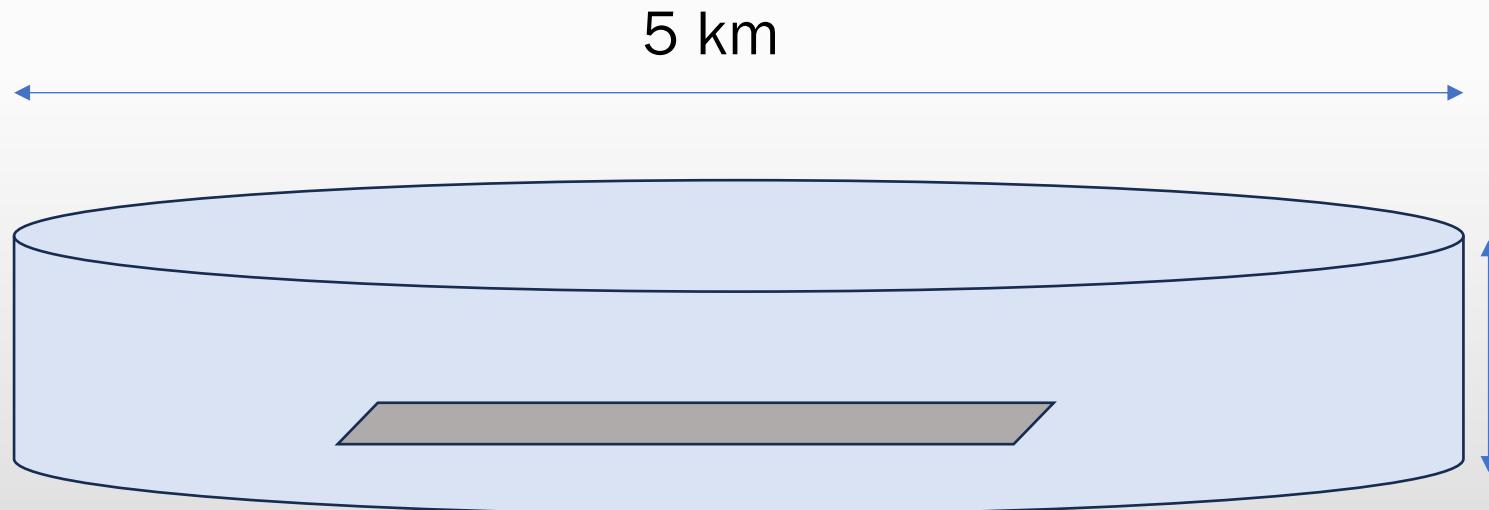


Heliport

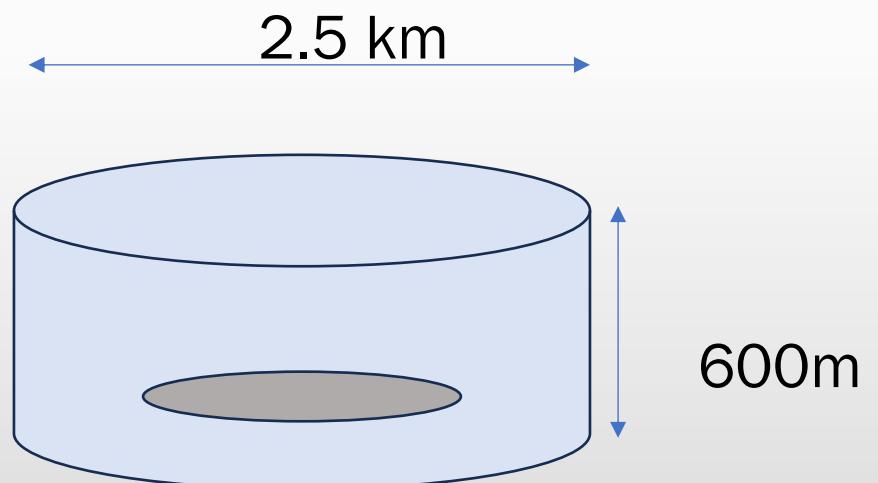


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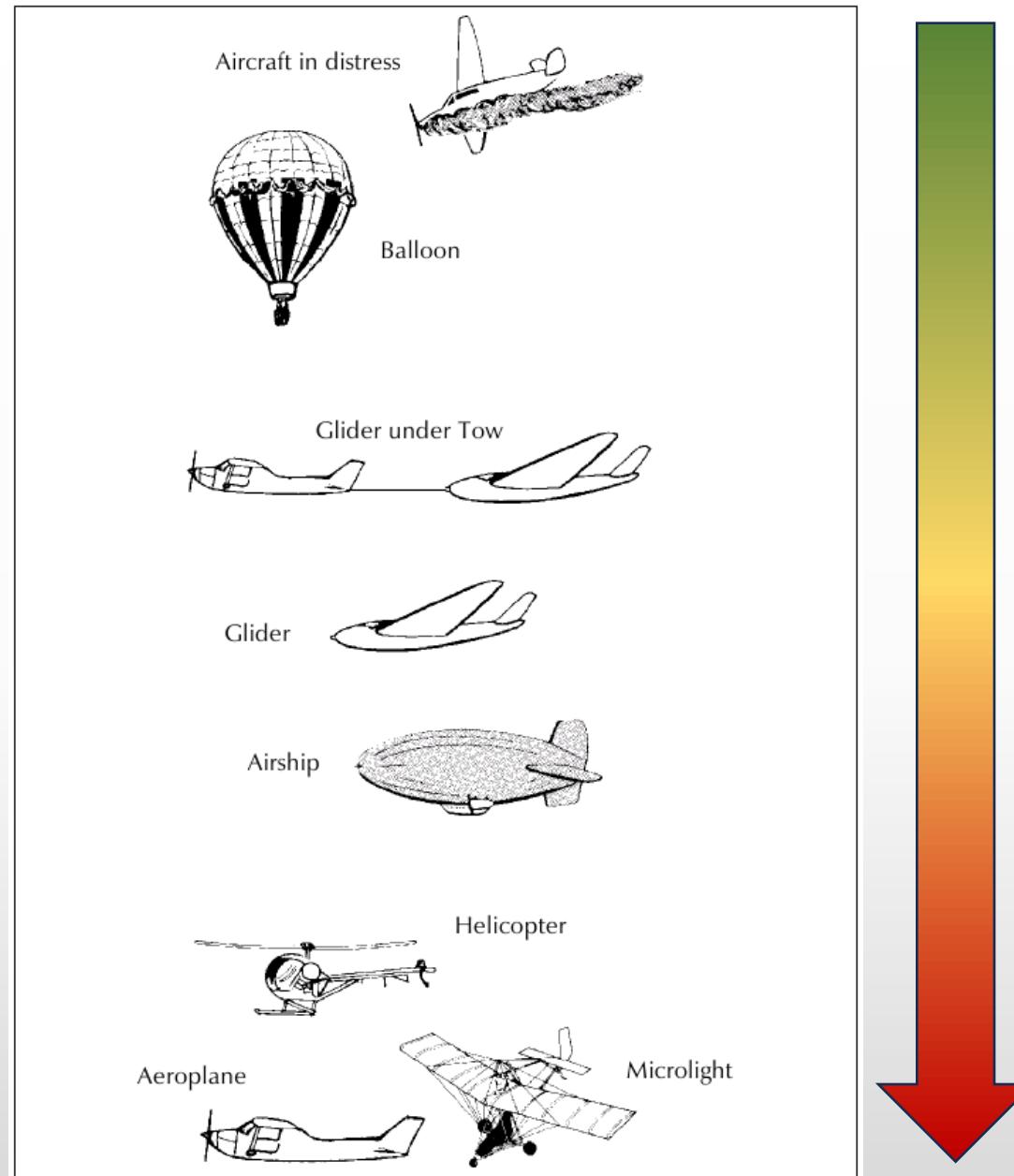
Aerodrome (civil / military(MIL-ON))



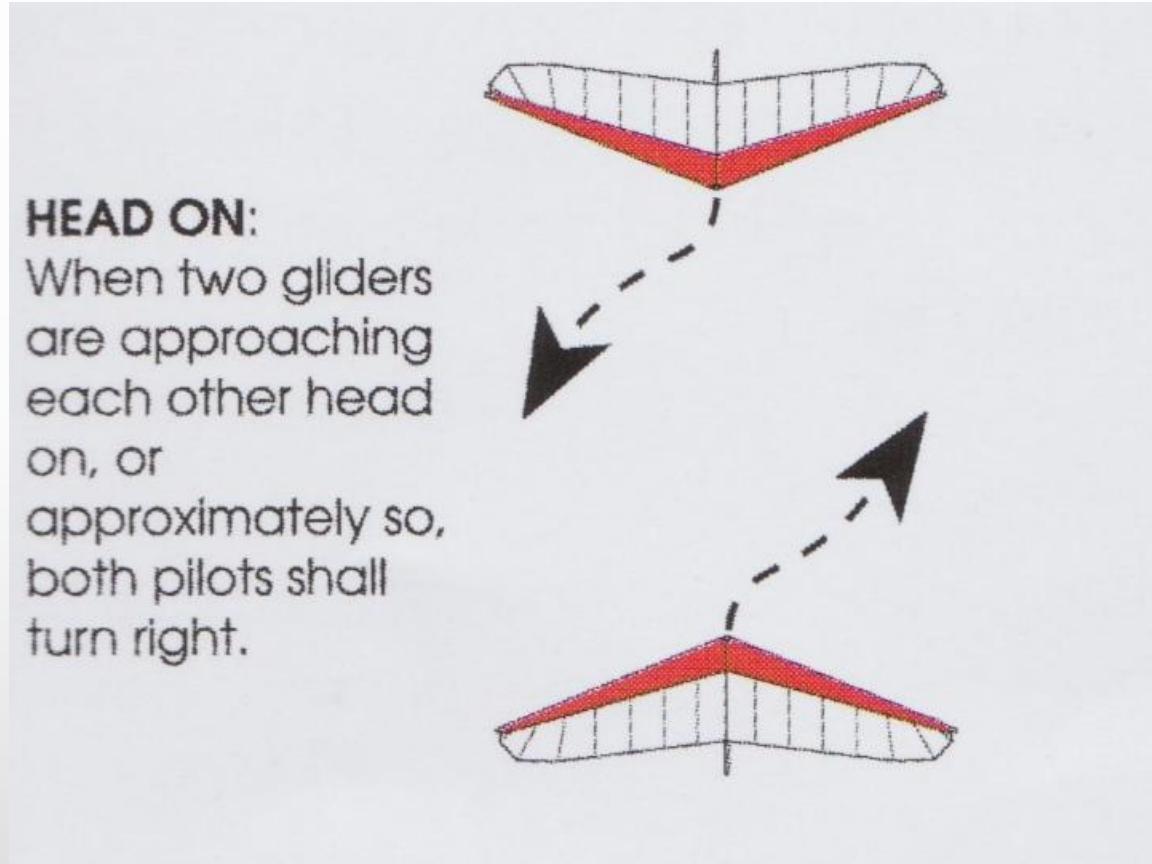
Heliport



# Air priorities

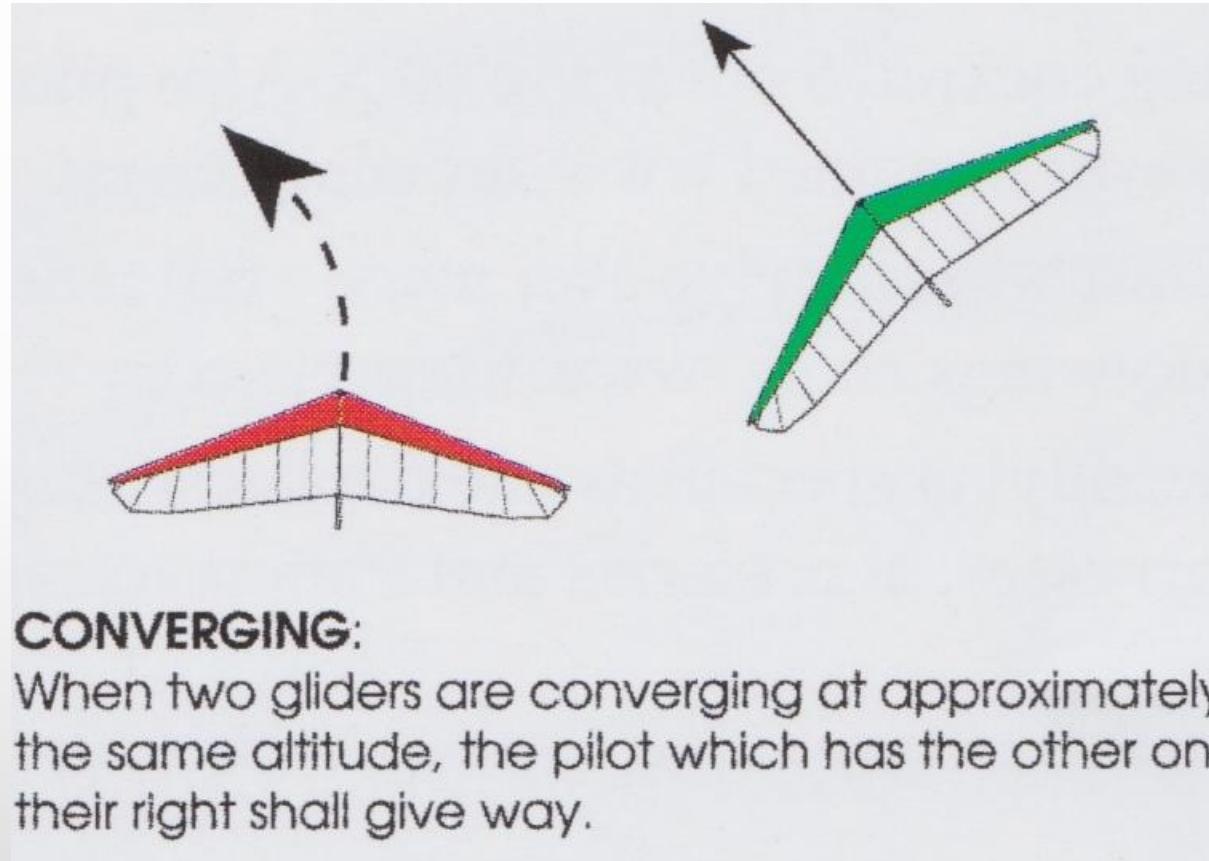


# Air priorities



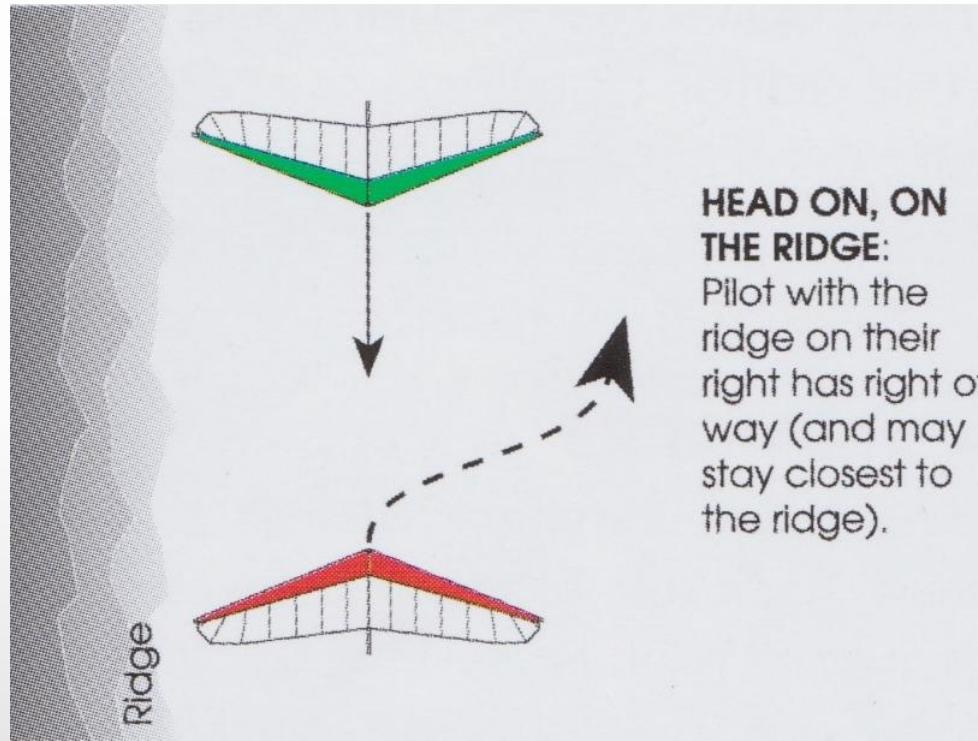
Free airspace: both gliders alter to the right

# Air priorities



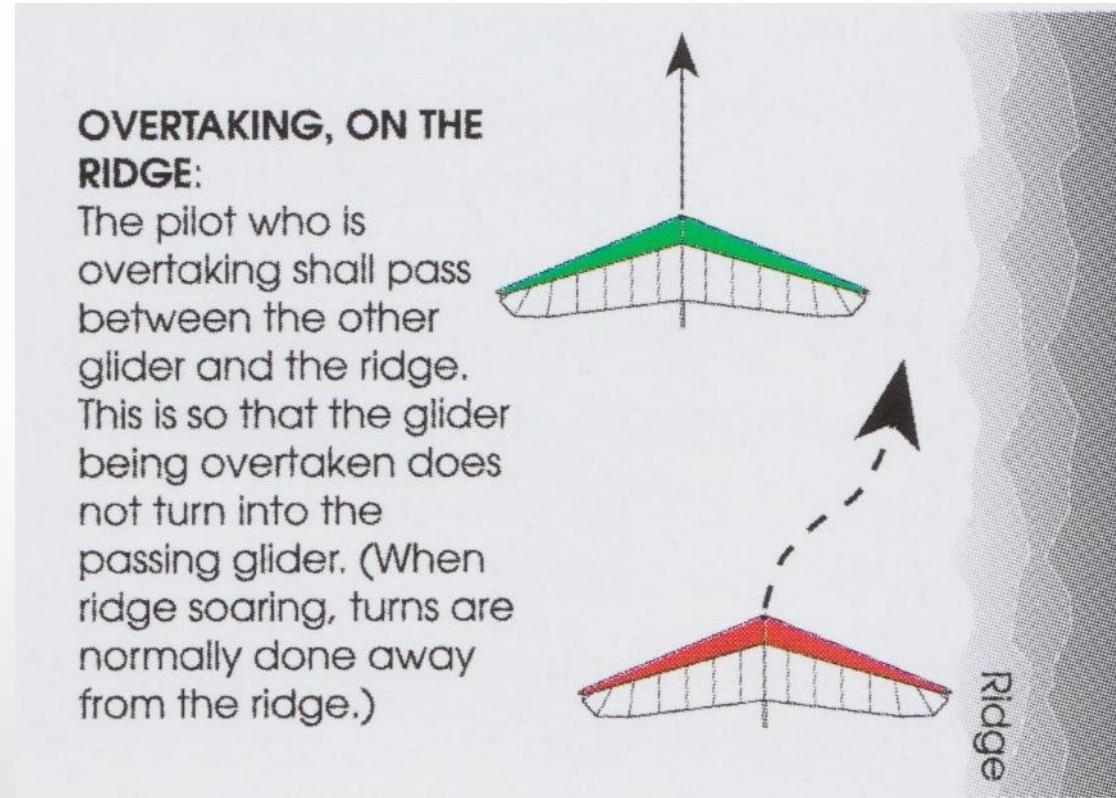
Who approaching from the right has right of way

# Air priorities



Next to terrain: The glider with the slope to the left must alter course to the right

# Air priorities

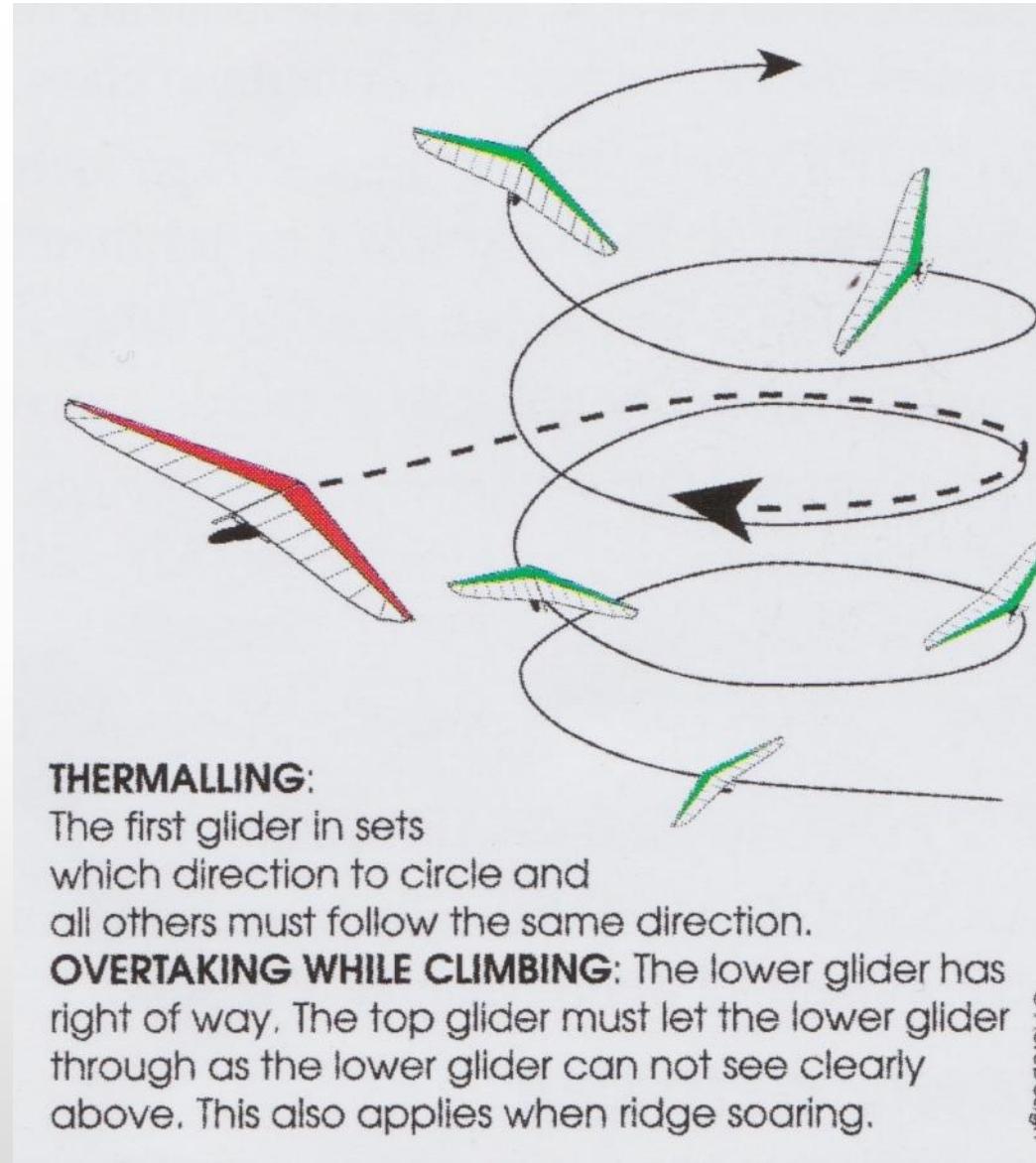


Overtaking next to a slope: **Prohibited in CH**

# Air priorities

Thermalling: firt one decide!!!

Birds ☺



# Air priorities

Landing: lower glider has right of way, but should not cut in front of another glider which is on final approach.

EMERGENCY LANDING of the other pilot: give a way if its possible to do safely



# Exam

- Hang glider / Paraglider / Rigid wing
- Papers for the pract. Exam:
  - Training control sheet
  - Proof of insurance
  - Logbook
  - (ID card)
- Min. flights: (PG: 50, HG: 30, RW:20)
- Min. flying sites: (PG:5, HG:3, RW:3)
- Glider: must be recognised by SHV, airworthiness test (exc. RW), all markings
- Max time between theory and practical: 36 months
- Rewrite theory exam after failure: 12 days waiting time
- Practical exam: 2 flight tasks (3 flights allowed)
- Complaint about the exam conformity/regulations: Swiss Federal Administrative Court (in 30 days)

# Exam - tasks

- START: 5p check, 3 phasis take-off, (reverse take-off)
- FLIGHT:
  - 2 circle right (PP1)
  - 1 left – 1 right circle (PP2)
  - Pitching
  - Rolling
  - Stabilised side collapse
  - Ear, 90° to the left, then 90° to the right
  - Ear with speed-bar
- LANDING: 5sec final, into a 34m diameter circle OR 60x15m or 45mx20m

# How to fly in reality?

- Planning (Segelflugkarte, SHV-Airspaces)
- Blind calls to TMA and CTR HX
- Radio (aeronautical radiotelephony license through BAZL)



# Night flight?

- Lights
- Military?
- Rega
- Flight Plan
- [Official wrap-up \(SHV\)](#)



# Abreviations

- VFR: Visual Flight Rules (only allowed for PG and HG)
- IFR: Instrument Flight Rules (equipment + permission)
- GND: GrouND
- GLDK: Glider Map (Segelflugkarte)
- AMSL: Altitude above Mean Sea Level
- AGL: Altitude aboge Ground (Level)
- AWY: Airway FL: Flight Level (FL30 = 900m, FL100 = 3050m, FL150 = 4550m, FL190 = 5950m)
- AIP: Pilots' Handbook of CH (general info for CH airspace users)
- HX: Non specific operating hours (activation at anytime possible)
- ICAO: International Civil Aviation Authority
- BAZL / OFAC: Federal Office for Civil Aviation
- GLDK (GLDC): Glider map (Segelflugkarte): topo + LS-R +...
- NOTAM: Notice to Airmen: weekly summary for VFR aviation
- DABS: Daily Airspace Bulletin Switzerland: latest airspace status, dangers, TMA, CTR
- FIZ: Flight information zone (entry only after establishment of radio contact on the appropriate frequency)
- RMZ: Radio Mandatory Zone (entry only with CONSTANT radio monitoring and blind transmissions on the appropriate frequency)

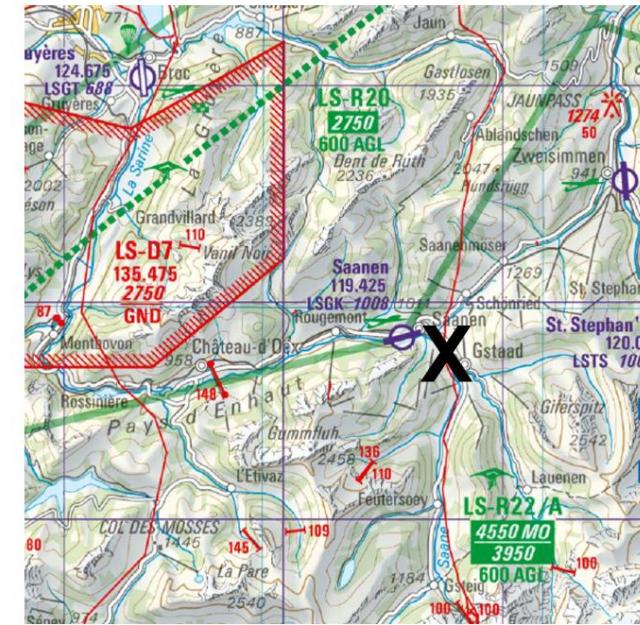
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3. Which airspace am I (altitude)? (G, E, D, C)
4. Any special active airspaces? (LS-R, LS-D)
5. Visibility: (below 3050m – 5km, above 3050m 8km)
6. Cloud distance: LS-R green? Or G/E/C/D?
7. Can I fly there???

Which general rules apply for hang gliders and paragliders without special permission at the location marked with an X at 1500 m AMSL on a Thursday at 10:00 in July?

# Exam simulation

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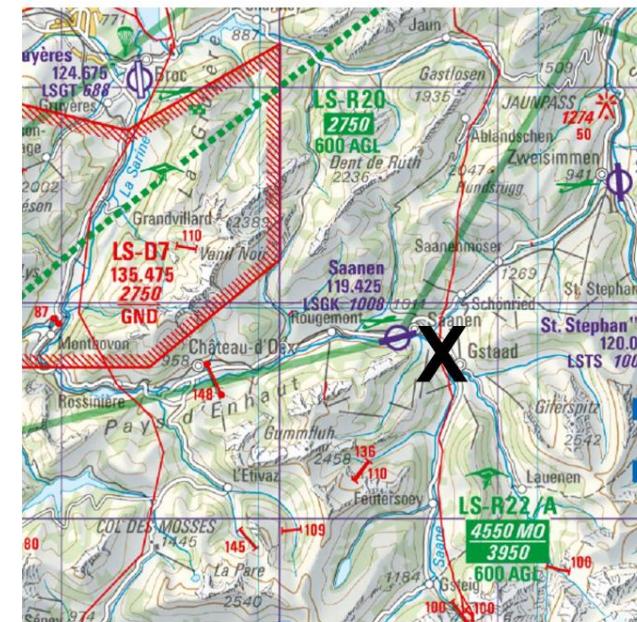


- a) Maximum height 4550 m AMSL, minimum visibility 8 km, distance to clouds 1500 m horizontal / 300 m vertical
- b) Maximum height 3950 m AMSL, minimum visibility 8 km, distance to clouds 1500 m horizontal / 300 m vertical
- c) Maximum height 3050 m AMSL, minimum visibility 1.5 km, out of clouds, ground visibility
- d) Flying is prohibited

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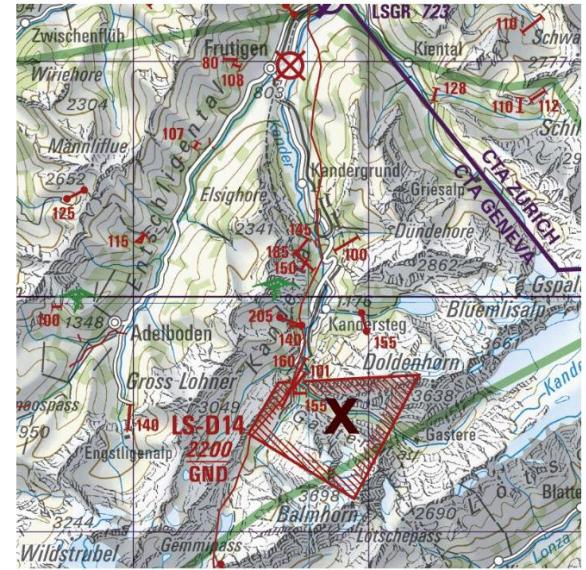


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Which rules apply for hang gliders and paragliders at the location marked with an X at 2800 m AMSL (~1200 m AGL) on a Monday at 15:00 in April when, according to DABS, LS-D14 (red) = active?



a) Maximum height 4550 m AMSL, minimum visibility 8 km, distance to clouds 1500 m horizontal / 300 m vertical, flying below 2200 m AMSL is prohibited

b) Maximum height 3950 m AMSL, minimum visibility 5 km, distance to clouds 1500 m horizontal / 300 m vertical, flying below 2200 m AMSL is life-threatening

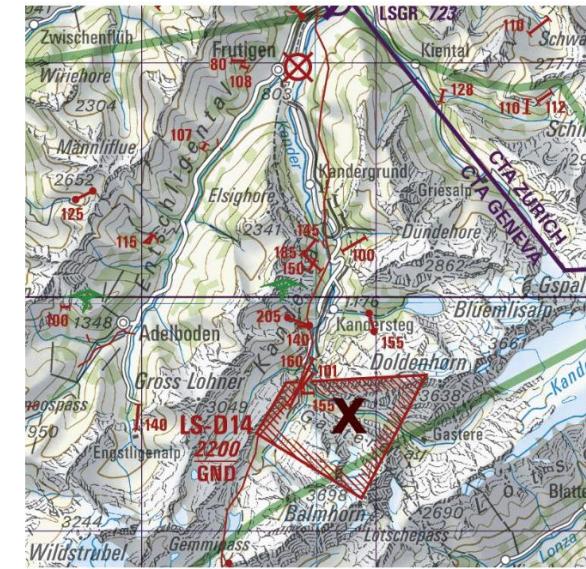
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Which rules apply for hang gliders and paragliders at the location marked with an X at 2800 m AMSL (~1200 m AGL) on a Monday at 15:00 in April when, according to DABS, LS-D14 (red) = active?

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