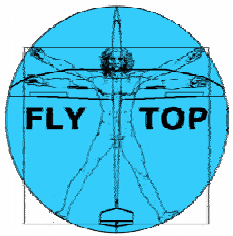


Improving Safety in Competitions



FLYTOP trainings

- **Club Training**

**Leaders
1.5 days**

**Club Training
2 days**

**Refresher
1 day**

- **Flight Instructor Training**

**Teaching
Flight Safety
2 days**

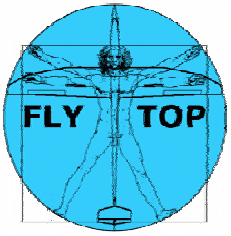
**Clinic for
Flight Safety
1 day**

- **FLYTOP-Trainer Training**

Module1

Module2

Module3

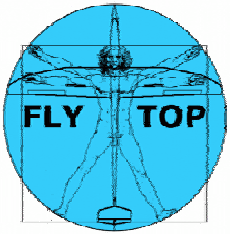


Central Idea

- **Do not focus on teaching pilots!**
 - **Teach the club (= system)!**
-
- **For details ask Barbara**
 - **or me during the next days**

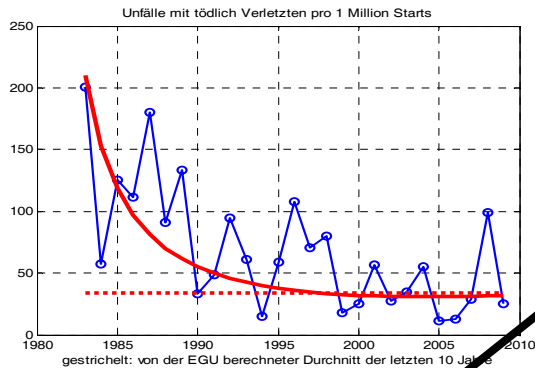


B.Hofer, FAA Switzerland



What do we teach a club?

Flight Safety = Learning

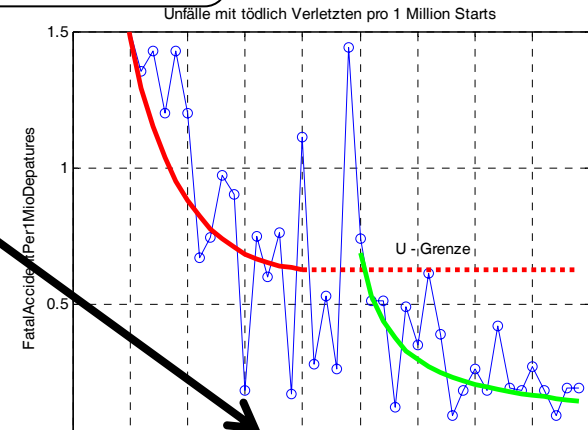


traditional

from accidents

REAKTIV

improves
rules/ SOPs

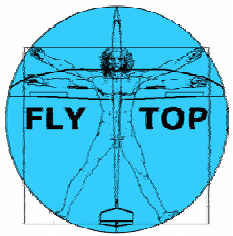


modern

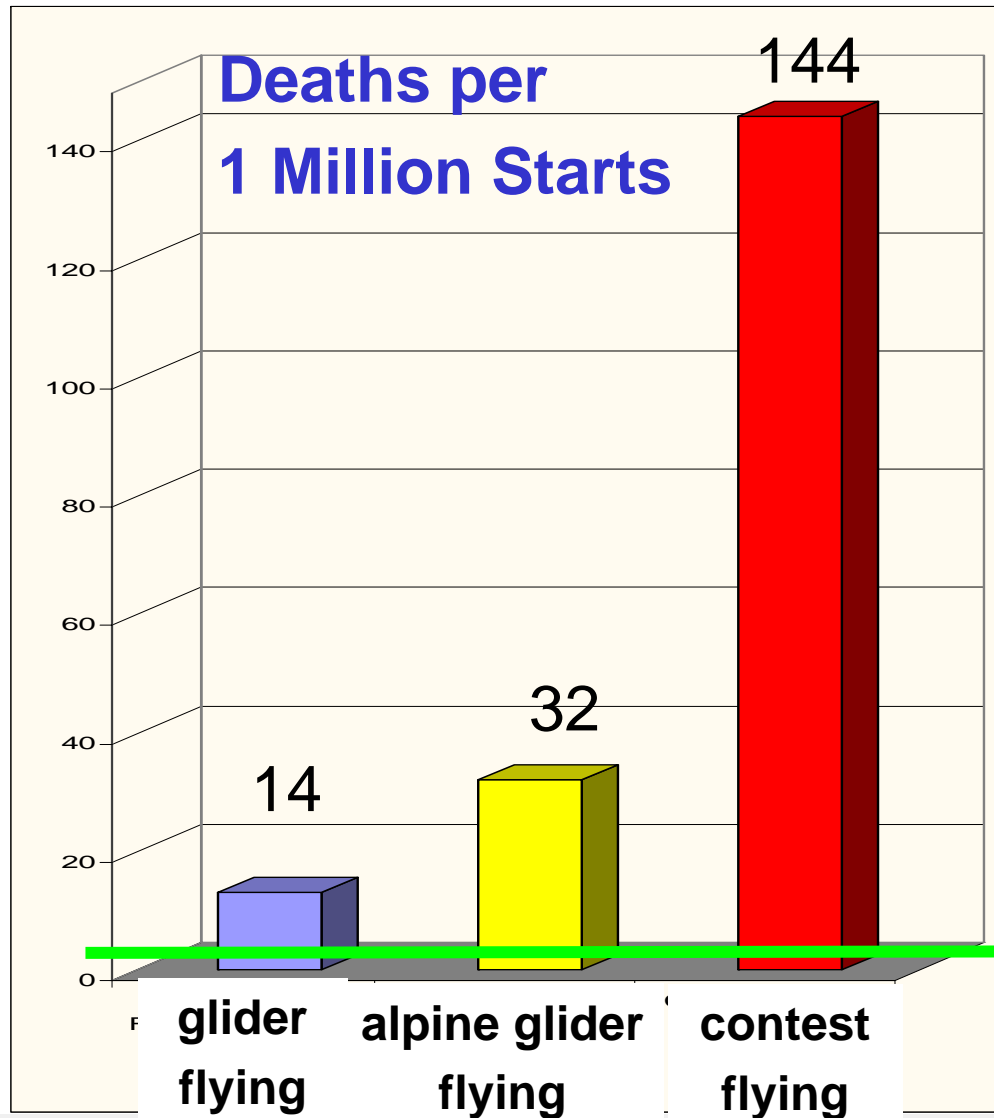
from errors

PROAKTIV

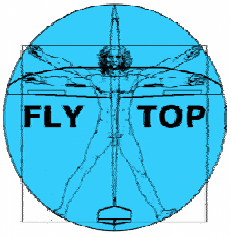
Training of the
system = club



How Safe is Flying in Competitions?



acceptable risk level:
1 fatality per 1 Mio starts

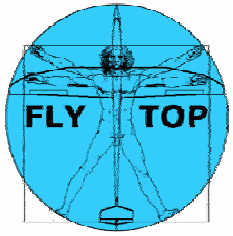


Deadly Accidents in Switzerland

- Jan to August 2012: 5 glider pilots dead
- 2 of 5 during a competition

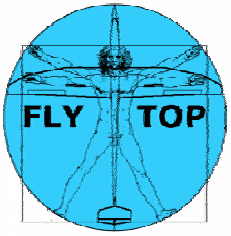


- So something should be done



How about You?

- Please raise Your hands
- Are You flying competitions?
- Are You a member of a flying club?



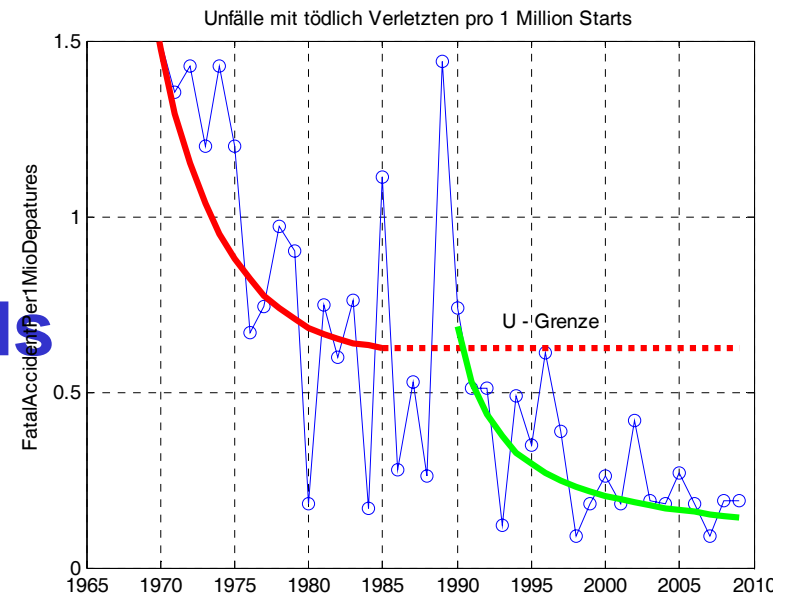
Main Message

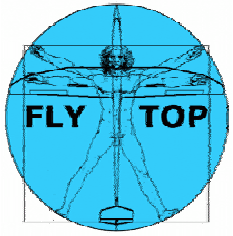
Nowadays pilots, instructors, officials,
bureaucrats, competition directors,...
are

usually uneducated and untrained in

• **modern, proactive flight safety methods!**

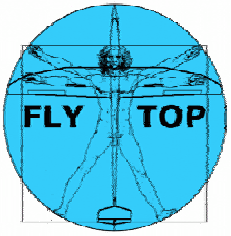
- It is proven that the
- implementation of
- proactive safety methods
- brings down the risk by
- at least a factor of 10!





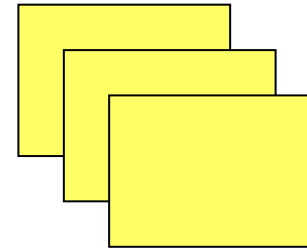
Imagine

- You are a pilot at a competition
- This is the first briefing
- In the rules for the competition You have read:
- **Six percent for safety:**
- Each competitor shall be given up to 6% additional points to the daily score based on his participation in proactive safety actions.
- Details will be announced at first briefing.

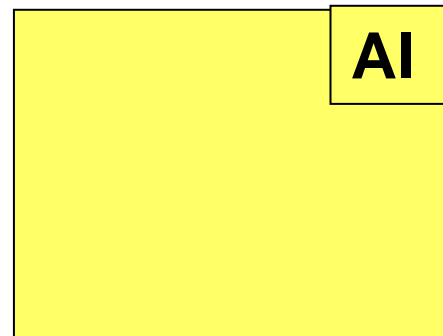


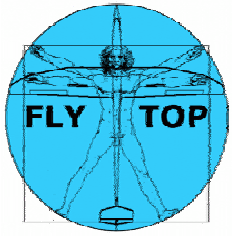
Yellow cards

- By now you should have
- At least one Yellow card:



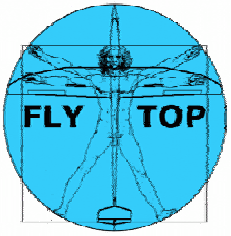
- Please sign each card with your Call Sign
- For example:





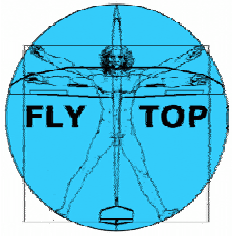
On each card

- Safety relevant observations, remarks, events
- **What could make this competition safer?**
- **Example:**
 - Every tow plane should be marked such that towed pilots could read their call signs
- **One remark per one card!**



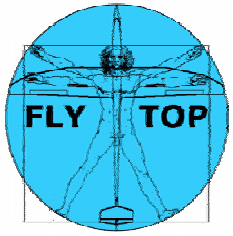
Rules of the Game

- During the next three (flying-) days of the competition you are asked to fill out such safety observation cards
- The Safety Officer (me) will be the only person that reads these cards
- The Safety Officer (me) will evaluate, if the remark is a valid proactive safety observation
- If you hand in at least 6 valid cards you will get 6% additional competition points



Valid Remarks

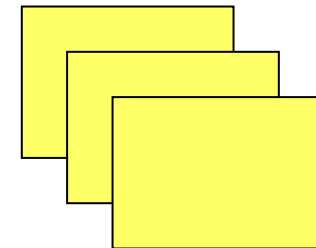
- Remarks on the yellow cards are valid if they concern a
- **specific, observable, safety relevant Issue of the competition, which can be effectively influenced by a concrete measure of the competition's organization**
- Counter example: “Bad weather”
- Good example: “ tell tow pilot of plane XXX to fly faster during tow”

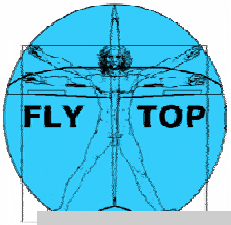


Practical Experiments: 1)



- **Competition in Fuessen , Bavaria/Germany**
- **35 Gliders**
- **May 26th – Jun 2nd 2012**
- **During the**
- **First 3 days:**

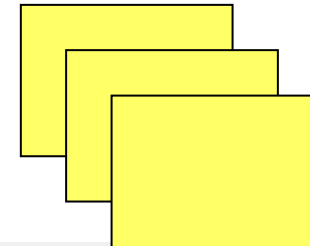


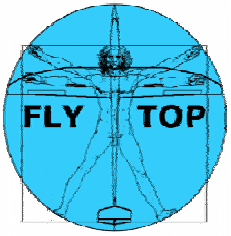


Practical Experiments: 2)



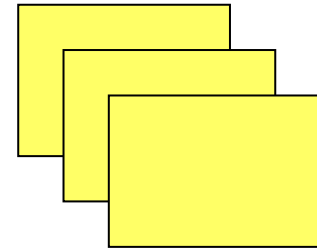
- **Alpine Flying Camp
Muenster/ upper Rhone
valley**
- **39 Gliders**
- **Jul 28th – Aug 4th 2012**
- **During the**
- **First 3 days:**




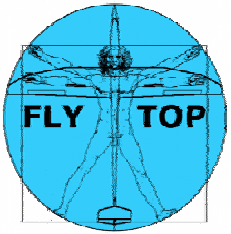


Measuring Safety

- From prior experiments we know:
- On each flying day
- every pilot can recognize
- without big efforts detect
- 3 safety relevant observations:

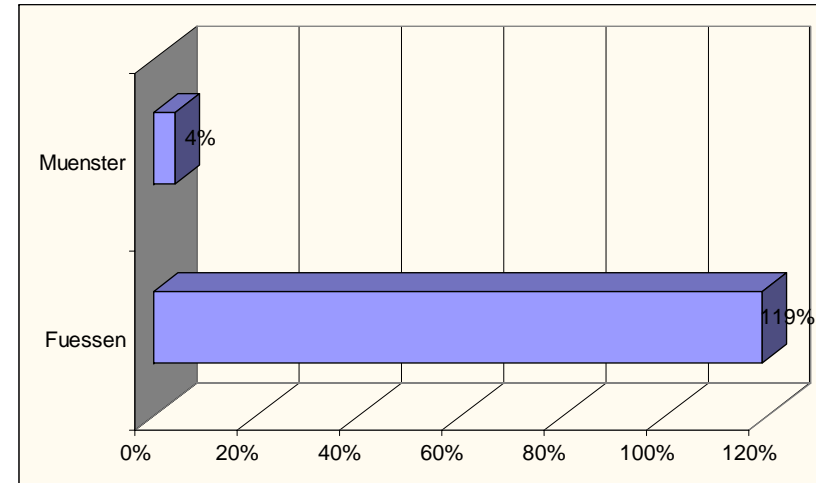


- Let this be define a proactive safety level of 100%
- For example in Fuessen: 35 pilots*3 days = 105  = 100%

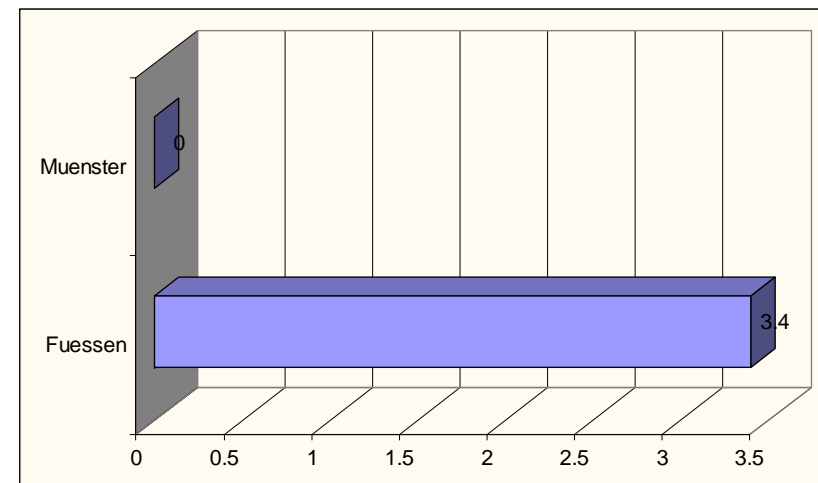


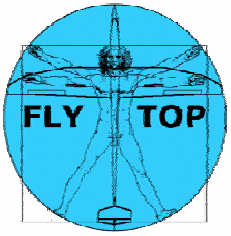
Results

- **Safety Level:**
- **Muenster vs Fuessen**
- **4% vs 119 %**
- **Remember 3 fatalities during 10 prior days!**



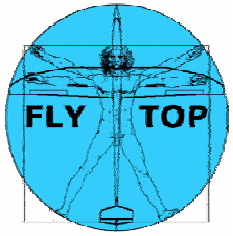
- **Median number of per pilot & day**
- **Muenster vs Fuessen**
- **0 vs 3.4**





What made the Difference?

- 1. “6% for safety rule” published in advance**
- 2. Immediate Reward: 6% competition points in Fuessen**
- 3. Education and Training in Proactive Safety in Fuessen**

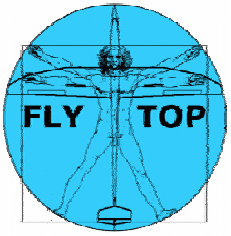


Training

- Prior to the Competition the
- Competition Director
- and in particular the Safety Officers

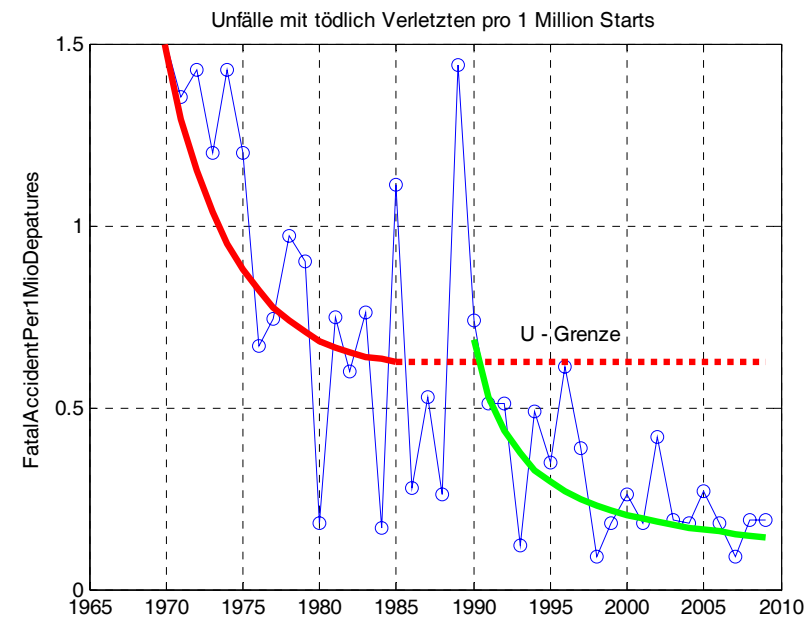


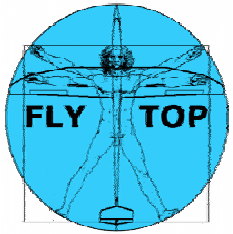
received intensive training in modern methods of flight safety



FLYTOP Training Program for Fuesen

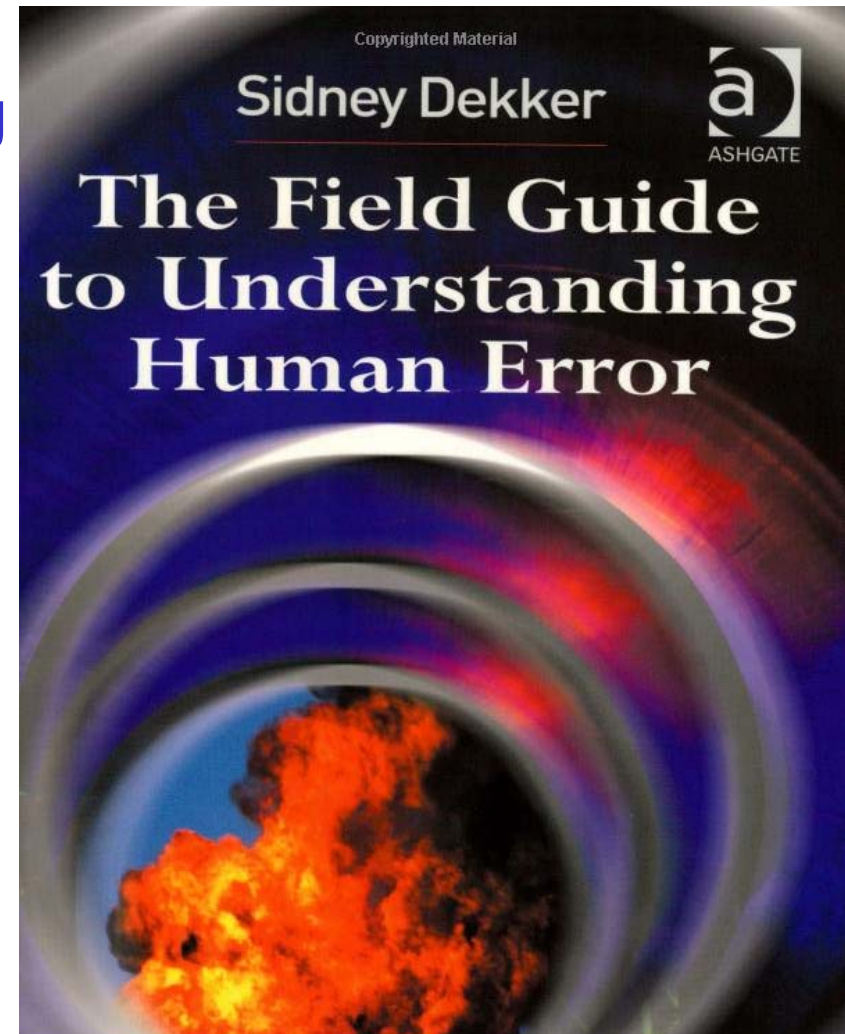
- **Pilots: 3 hours** training in modern safety concepts
- **Syllabus:**
- **Proactive vs**
- **reactive methods**
- **Error management**
- **Systemic approaches**
- **Training of the system**

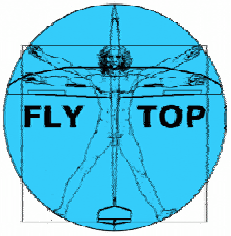




FLYTOP Training Program for Fuessen

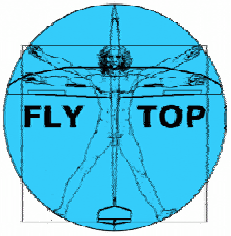
- **Competition Director and Safety Officers:**
- **2 days** intensive training program in
- **Syllabus:**
- **Proactive methods**
- **Error management in systems**
- **Non Technical Skills (NOTECHS)**
- **Managing Clubs and**
- **other aviation systems**
- **See also:**





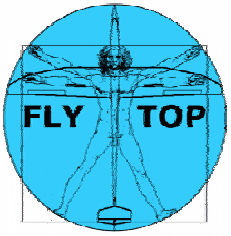
Reactions of the Pilots

- **35/36 =97% of the pilots wanted that FLYTOP-Competition should be continued in the next competition**
- **65% of the pilots wanted the 6% for safety rule included in the competition rules.**



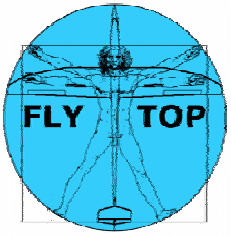
Effects for the Competition

- Immediate response (actions) to many of the pilots observations
- Examples: marking of the tow pilots, marking of a safety strip
- List of ToDos for preparing the next competition
- “relief” function for the competition managers
- 100 eyes see more than 2 !



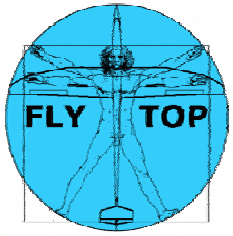
Summary

- 6% for safety rule should include
- proactive safety behaviour
- 6 safety cards on 3 flying days easy to fulfill
i.e
- Participation in proactive safety is sort of a
basic requirement like having his
documents ready
- **HOWEVER**



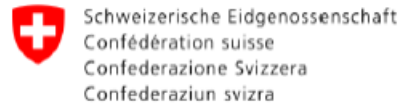
In order that things work

- Education and training in modern proactive safety methods is required!
- In particular for
- **Competition Directors & Safety Officers**
- (ca 10 hrs = 1.5 days of training)
- also at least a basic training for all pilots



Our Sponsors

- **BAZL (= FAA Switzerland)**



Eidgenössisches Departement für
Umwelt, Verkehr, Energie und Kommunikation UVEK
Bundesamt für Zivilluftfahrt BAZL
Abteilung Sicherheit Flugbetrieb

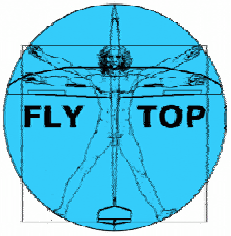
- **Aeroclub Switzerland**



- **Insurance Company**



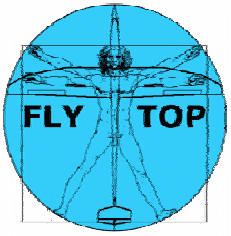
- **Made our coming to UVALDE possible**



FLYTOP Team who made all this possible

- Alfred Ultsch
- Regina Ultsch
- Barbara Hofer
- Jens Eisenreich
- Herbert Lehner





Questions, Remarks?

- 6% for safety behaviour of pilots
- FLYTOP can teach You and in particular the systems (competitions, clubs, flying camps,...)
how to make glider flying safer
- However, this teaching takes substantial time: min. 2 days