Competition Training

Aims

Goals:

- Promote and teach cross-country flight
- Enhance flying skills
- Improve Cross Country speeds
- Improve Cross Country Speeds
- Encourage participation in national contests

Approach

- Build on successful mentoring programs
- Practical demonstrations, utilizing lead and follow and mentoring

Aims

- To promote the advanced aspects of gliding and improve the current gliding skills, measured by (cross-country performance), club ladder, interclub league and RAFGSA regional competition.
- To each achieve the individual cross-country tasks set.
- Oh! and to have safe fun doing it!

HAVE YOU GOT THE

FACTOR

SITE BRIEF


Start/Finish Line
© 2011 Infoterra Ltd & Bluesky
©2010 Google
Imagery Date: 4/21/2007
1999
50°48'50.63" N 1°12'15.41" W elev 8 m
Eye alt 1.18 km


REQUIREMENT

Cross Country Training

Imagine if we sent people on first solo with a only a 50/50 chance of being successful.

Yet we send people cross country with only that level of expected success.

We have the depth in skill, instructors, aircraft and motivation for the unique opportunity to do genuine advanced training for all our members.

This lecture is a guide to the required training intended to be achieved and available for all, to be flown this year to produce more successful cross countries.

Assets and Opportunity!

- Each year there are 19 weekends which make up the cross country season.
- So 38 days potentially but realistically only 28 days produce conditions suitable for cross countries of variable quality. Minus those days when the gliders are away at comps. So perhaps 24 days, a year!
- 40 members are silver or gold qualified sharing the LS8 and Discus! So lucky to do 2 cross countries a year. (of variable quality!)
- So it will take 20 years to complete the training tasks before you might enter your first competition!
- Fortunately with so many private owners (17) and several qualified members who no longer wish to do solo cross countries this ratio significantly reduces but it should amplify the need to use these 2 gliders effectively whenever we can and use the DUO as a cross country training asset, not a passenger revenue stream. The only useful ballast is lots of water!
- No point using the Ferrari for shopping, nor flying the LS8 or Discus's on a 30 minute local soaring flight when the weather is good for a 300 km+!
- This year good days will be identified and emailed by Friday with a guide of the weekends tasks, to those wishing to participate in Team Cranwell. We meet at 0800 to get all the kit out so that the routine instructional flights and local soaring can start by 0900. Task aircraft should be available for all until 30 minutes before a planned aero-tow launch on task, to give time to water it and load the task. Sign up now for what you want to try and achieve this year, from silver C to 750km.

Welcome to Advanced/Comp Flying training with the experienced instructors available

- You need. Skill to fly – Practice.
- Knowledge of the air picture – Read the Sky
- Make timely decisions.
- You will learn to fly in a completely different way.
- For competition flying you also need a knowledge of the competition rules and that you recognize that you are flying in a race!
- Understand the instrument and string indication, the LX and shortcomings.
- Understand and recognize the many different weather patterns of the sky ahead as they change.
- There is a lot of benefit from flying with an instructor cross country. It is not about the flying but looking out and understanding what you see.

Competition Flying

- Competition gliding is not a question of being lucky or unlucky or chasing after everyone else (leach) but reading the good air, avoiding the bad air and making timely speed efficient decisions.

- Each pilot will be busy making his own decisions depending on many things, trying to be the fastest with the energy lines, or lack of, available. In other words the thermal sky is purely physics!

- Participation in the Club Ladder is a good guide to your personal performance and improvement.

The Next Step

- To learn the skills to go beyond local soaring with more than a 50/50 chance of making it around a 150-500 km task. To maintain your concentration, comfort and confidence for more than 3 hours and be able to read the sky.
- Field landings and what to do (- including your willing crew)
- Navigation
- LX Nav – IPAQ, other aids and radio
- Altimeter settings and what they mean
- Turning point needs for badge claims, record claims and techniques for competition including Enhanced option fixed course and AAT's
- Good days
- Sea breezes
- Streeting days
- Windy days
- Wave days
- Blue days
- Spread-out days
- Managing showers and thunderstorms
- Survival days
- Hilly terrain
- Airspace!
- Competition rules
- Lead and follow - Team/pairs flying
- Racing
- Non of which is learnt in a couple of 10 minute circuits but could be achieved in 20 dual and 20 solo flights!

What you don’t know?

- How do you determine if a day is going to be good?
- How the met man knows how high cloud base and how strong thermals will be?
- Do you understand thermals?
- What does up on the variometer mean?
- How often have you seen the ‘birth’ of a thermal cloud?
- How do you find a thermal?
- As the cloud base moves up, why are thermals further apart?
- Is Humid air heavier than Dry air?
- On a thermic day, what determines the development of thermals and the vertical structure (movement) of the air?
- Is understanding sink important?
- Where is sink. Is it only dependant on the strength of the thermals?
- Would you like to fly a Grand Prix competition task from Cranwell?

Lead & Follow Brief

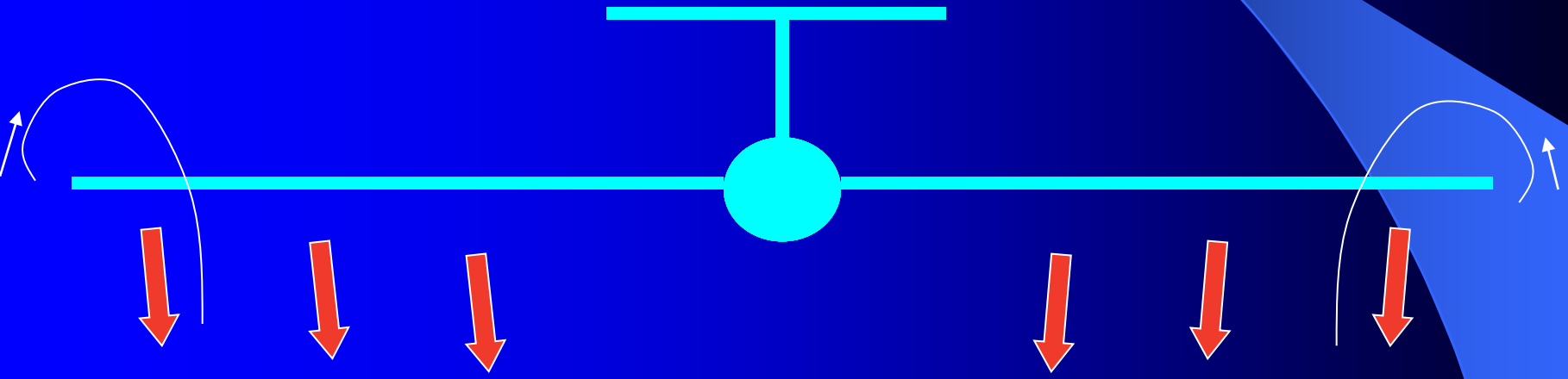
Lead and Follow

- As it implies must simply but strictly follow using the same thermals, leaving on the same turn, cruising at the same speeds, on the same tracks.
- Must allow the leader freedom to turn in either direction or to pull up/push down whenever he desires by following the procedures.
- The number 2 always misses the leader!
- Leader never wants to have to stop and look for you or have to wait because you have done something different!
- So – Keep up! And then on each glide / cruise, work out the leaders reason behind each decision. For example you may find you leaving the thermal before the natural top. If you get left behind then the leader will stop at top of the next thermal.

Lead and Follow

Where to follow?

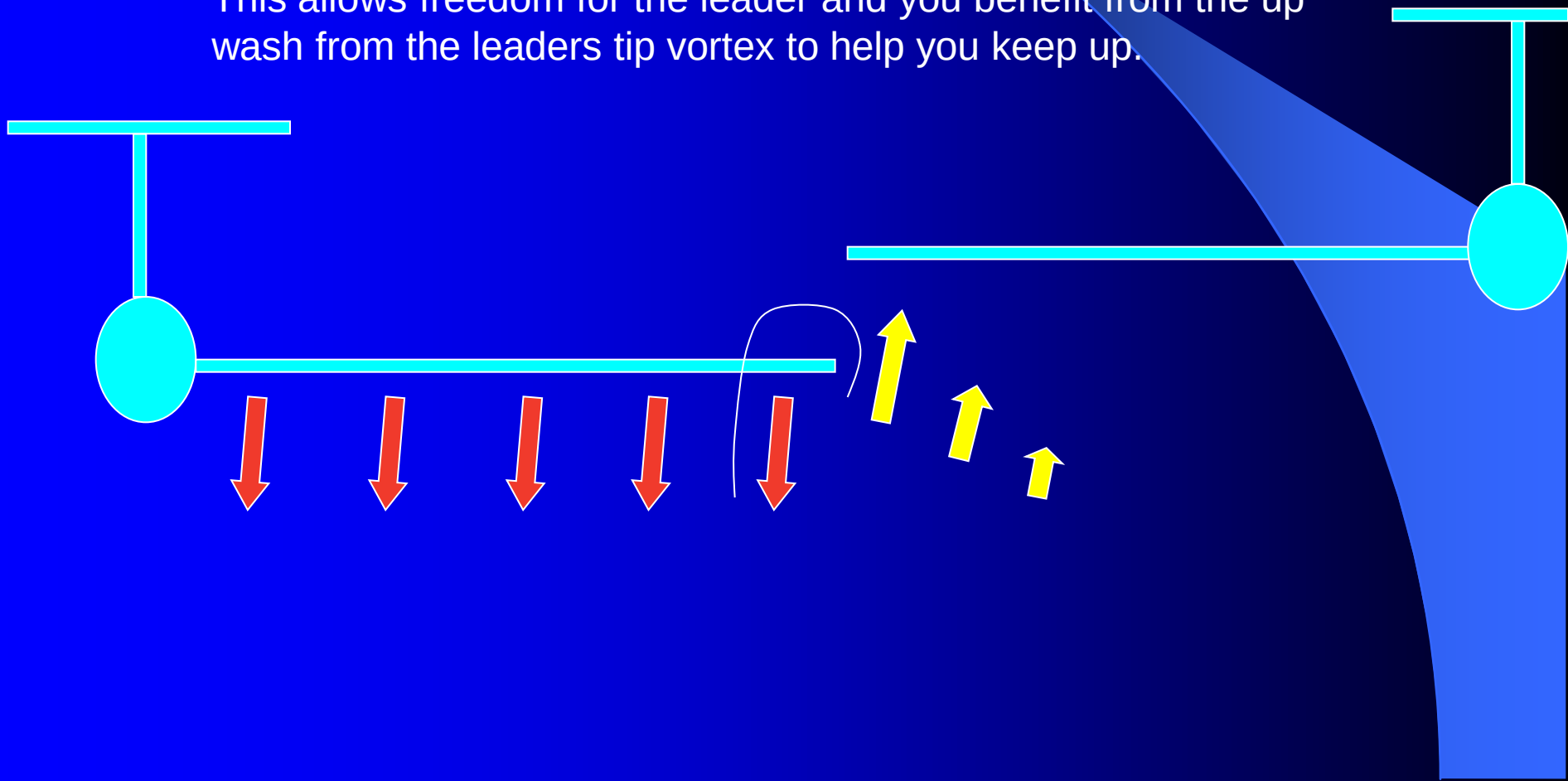
Not exactly behind, as you will lose performance flying in the leaders downwash.



Lead and Follow

About 10 to 20 seconds behind and half a wing span out is good.

This allows freedom for the leader and you benefit from the up wash from the leaders tip vortex to help you keep up.



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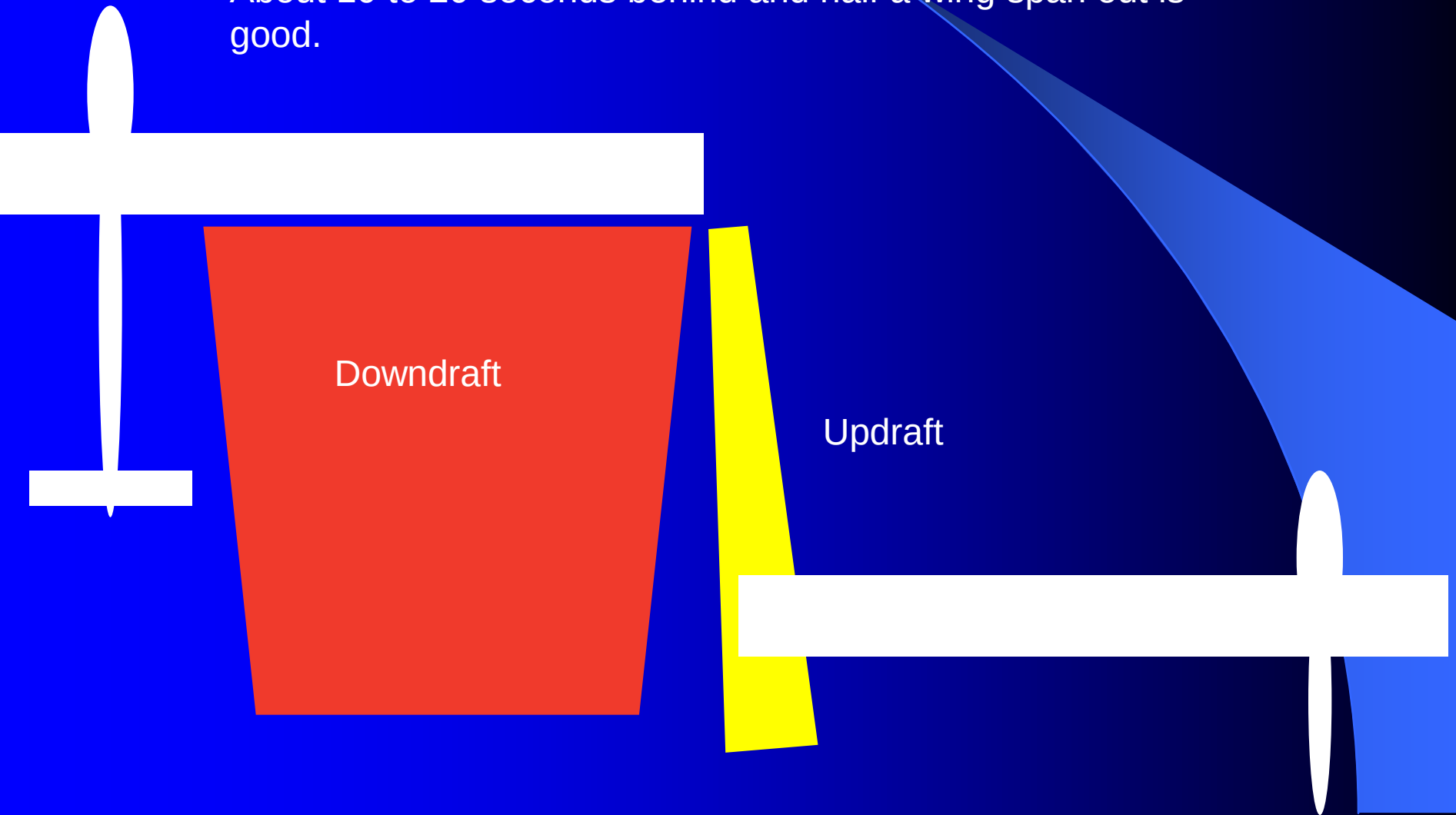
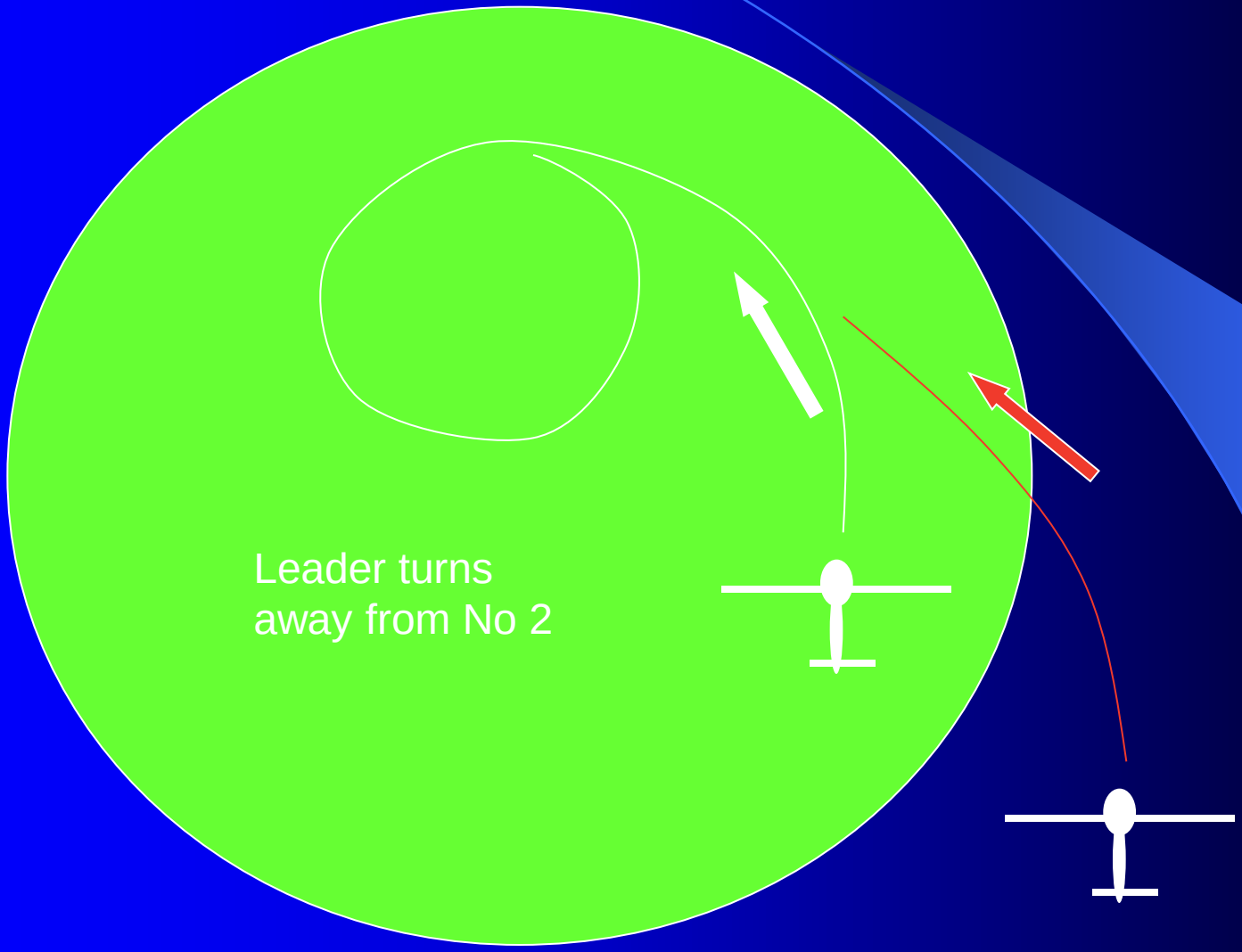


Spacing

- The reason for 10-20 seconds is simple. Firstly it hopefully means that you won't lose sight of him.
- It takes about 25 seconds to do a 360 once established in a thermal so cutting the corner slightly when turning in behind the leader means that you end up directly opposite so each are both in sight.
- It also becomes clear whether you are going to climb or 'S' turn.

Lead and Follow



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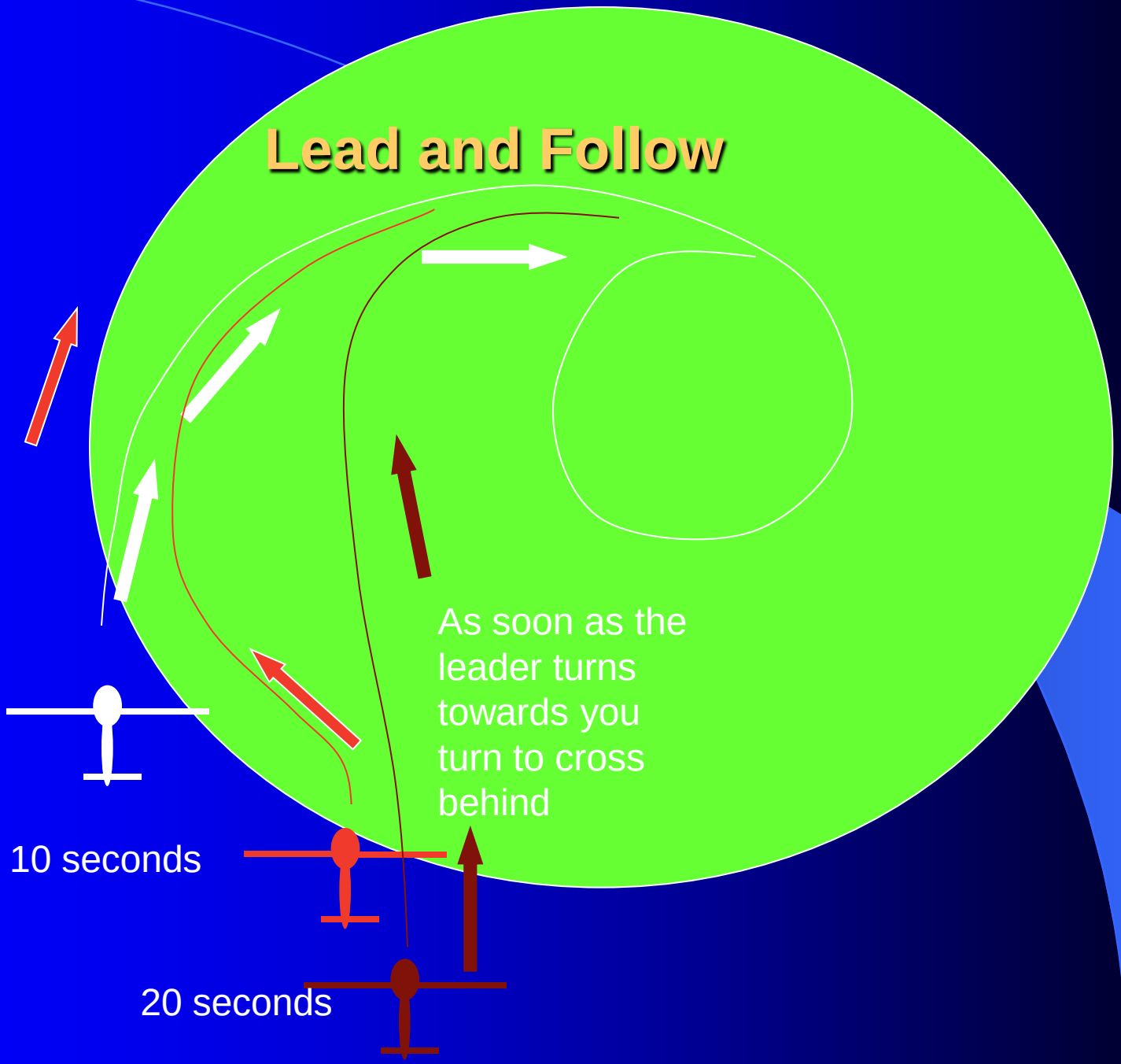

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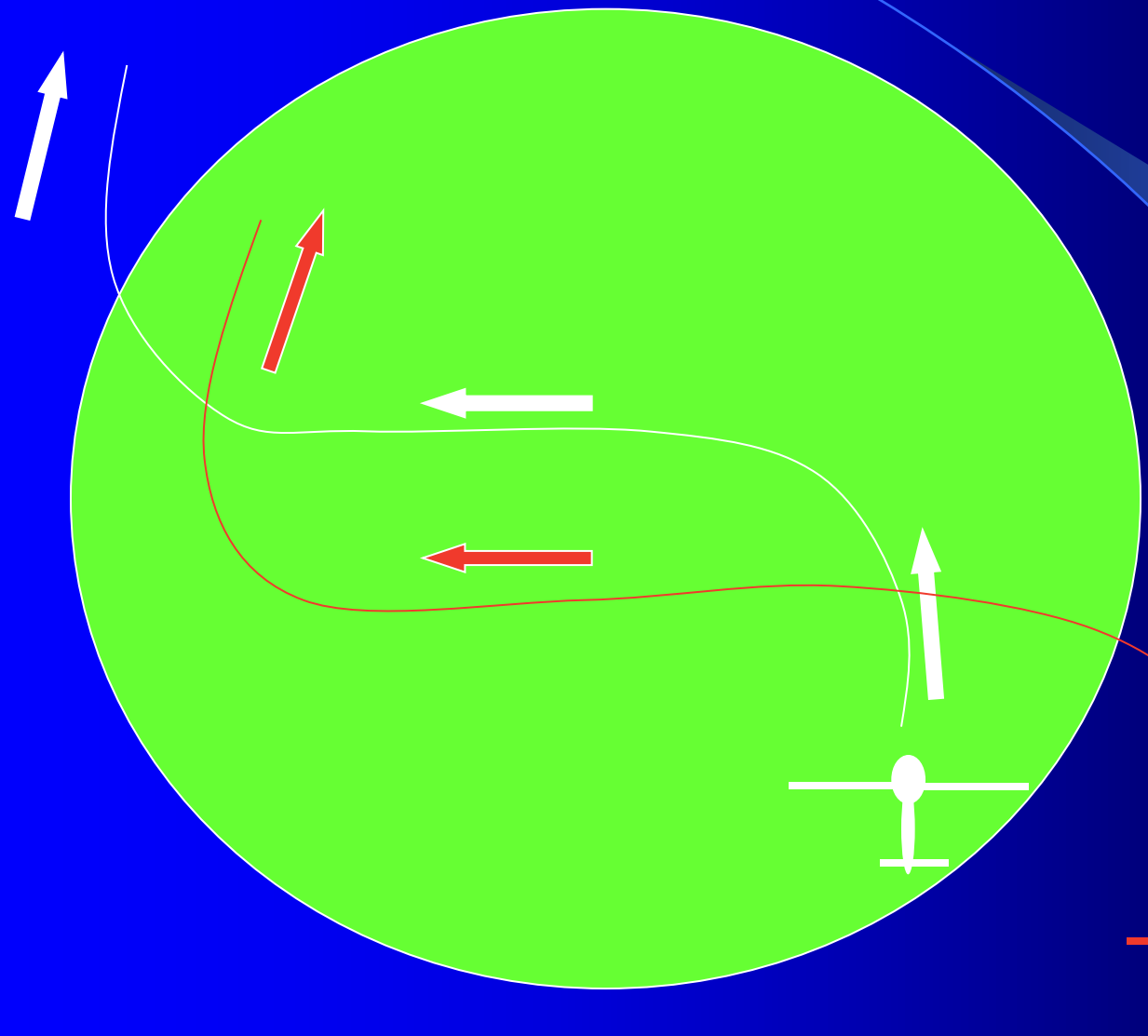
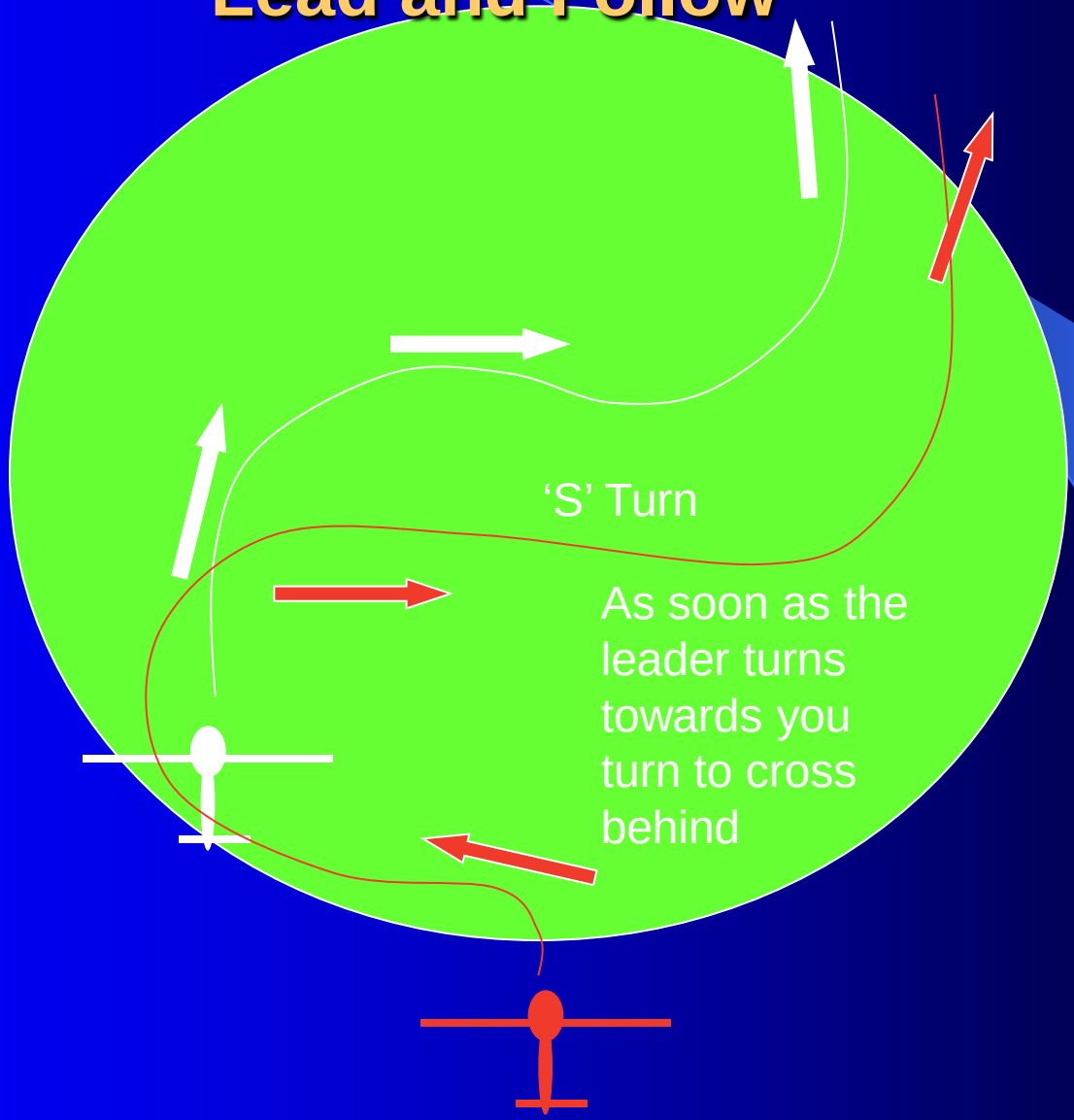


‘S’ Turn

Leader turns away from No 2

Lead and Follow

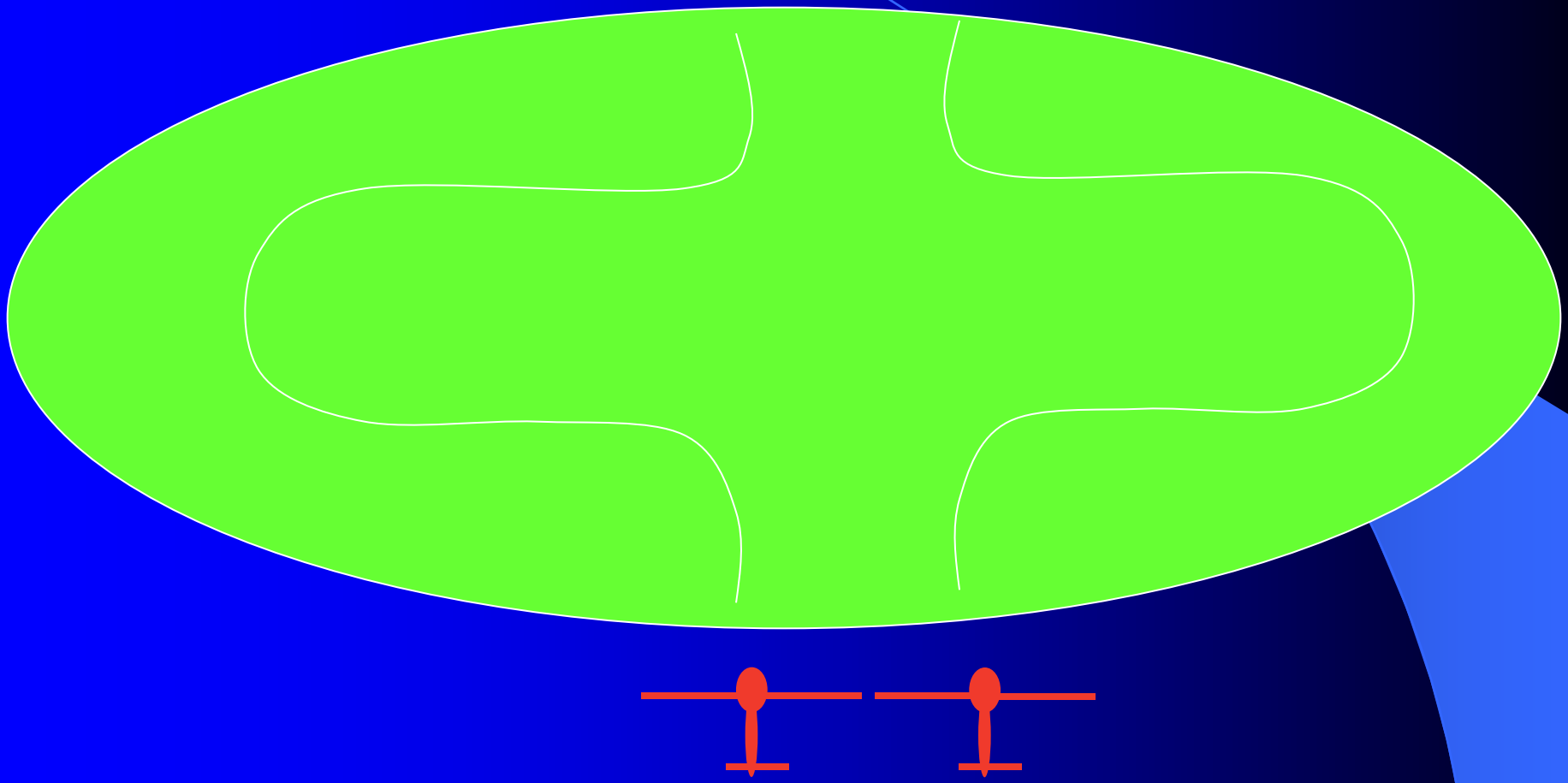


‘S’ Turns

- The purpose of ‘s’ turns is to confirm the real strength of the thermal that you are brushing against. Hitting rising air coupled with a lifting wing is generally not enough information.
- Turning hard against the rising wing will give a true indication of the thermal power and a decision is made after 90 degrees of turn whether to continue the turn and climb or reverse and run on.
- The penalty on a loss of ground speed is significant. It is only used as an addition to energy when cruising slow down wind.
- Flying into a head wind the height gained on a rejected thermal is often completely lost accelerating back up to cruise.

Blue day

Town, hills or obvious hot spot on a blue day



Ideally you will be flying abeam each other at similar heights and the idea is to share the search area for any thermal or the best thermal (and call if climbing). If you don't call don't expect help in any future competition.

Catching up!

- One of the basic concepts about being the fastest, most efficient, is to fly at the correct speed for the next thermal. We can't be sure just how strong it is but can make an educated guess.
- On the other hand the pilot who is lagging can be told how strong it is and he can then fly more efficiently or even stop to climb in an earlier stronger thermal missed be the leader/s.
- In this way the group can fly more strongly as a team or use for example a sacrificial lamb that can be sent ahead to give information for the team to use. You can also do this in a leap frog way if the weather is very changeable on track.
- The sacrificial lamb must fly aggressively or will get caught by the second thermal and the team benefit reduced.

Radio Calls

- Due to the limited radio frequencies and busy chat on a good day it will be appreciated that so far little if any radio calls are necessary. If you do use calls then they must be simple, short and clearly understood as to the meaning.