

# **Proposal to the IGC Plenary Meeting 2011 - Canada**

## **On the use of GPS height for Silver or Gold badge claims**

Flight evidence is now almost exclusively based on the data output from an FR or position recorder, and the OO retains little ability to interpret the evidence on an .igc file. Position evidence is precise, altitude evidence is somewhat less so, while pilot input flight data is subject to input error and the idiosyncrasies of certain flight recorders. The OO ought to retain the same ability to homologate flight claims that they had in the days of the camera and barograph, particularly for badge flights, which is by far the bulk of their work.

The ability to use Commercial off the Shelf (COTS) GPS position recorders was introduced in the 2009 Sporting Code to further encourage badge flying by allowing the use of these readily available and inexpensive units. However, the range of position recorder models and their use by pilots is considerably limited by the Annex to Chapter 4, which now excludes the use of GPS height evidence except for flight continuity. As many GPS recorders on the market have no pressure sensor, a separate barograph has to be installed for a flight, presenting a considerable disincentive to COTS position recorder use.

For badge flights, one requires evidence that a "general" performance level has been exceeded, not a "specific" level flown by a given pilot as for a record. A Silver height gain of 2000m often occurs, for example, and it is unreasonable not to accept GPS height data for a gain that is so far in excess of the requirement. GPS height ought to be acceptable provided that an error limit is introduced that ensures reasonable certainty for a gain of height for the altitude badge, or an allowed loss of height for a distance leg.

Of course, there is a probability that a rare "outlier" high GPS error during a flight would result in an occasional claim being passed that would not occur if pressure altitude evidence was available. But camera evidence was never absolute either when OOs interpreted position close to a sector boundary. Accepting the occasional claim having an excessive GPS height error is more than offset by the global benefit to badge pilots of allowing the use of many more simple GPS units that are on the market, while eliminating the need for a separate barograph installation. The current requirement is illustrative of "the perfect is the enemy of the good". As an aside, the use of GPS height data has been in effect by the CIVL for badges and records since 2004

## **Proposal**

1. That the Chapter 4 Annex of the Sporting Code be modified to allow the use of GPS height evidence for Silver and Gold badge flights.
2. That the Sporting Code committee, with GFAC, establish an acceptable height error margin; for example, no more than 600m loss of height on a distance flight, and an excess of at least 400m over the required gain of height for an altitude flight.