
3. Ballooning

Discipline 3.1: Hot Air Balloons

Event Description

The modern successors of the balloon flown by the Montgolfier Brothers in 1783, hot air balloons have no means of propulsion. Competitions consist of precision tasks, where pilots use the winds at different altitudes to navigate towards set goals and targets. Their pilots must therefore exercise particular skills to analyse weather conditions, observe natural features, and make the best use of burning propane gas to control their altitude. Launches are particularly spectacular, with balloons painting amazing and colourful pictures in the sky.

Venue

- *Location:* Main venue (grassy areas between runways at an airport), or farmers' fields in close proximity to the main venue.
- *Air Space Requirements:* ATC clearance from ground to 10'000 ft ASL during flight operations. 40 km operating radius from launch point.
- *Event Site:* Large, short-cut grass field able to accommodate all balloons at a time. A surface of at least 25 x 25 m is required for each balloon. The area for at least 100 meters downwind must be clear of power lines, streetlights and other high obstructions. A separate airport entrance/exit is required for balloon chase vehicles.
- *Timing:* Periods of calm winds. Preferably in the morning (Sunrise +30 to +120 minutes) and/or late in the afternoon (Sunset -120 minutes).

Competitors

- *Competitor type:* Individuals
- *Team Composition:* 4 (1 pilot, 1 crew chief, 2 chase crews)
- *Number of entrants:* 15 pilots
- *Support personnel:* 59 (including local staff for technical assistance, crew chiefs and chase crews)
- *FAI – CIA Referees:* 10 (3 of them – the Jury- are shared with Gas Balloon event)

Duration

- *Practice Days:* at least 1
- *Competition days:* 4 + 1 final round
- *Reserve Days:* 1 - 2
- *Time per round:* 2 to 3 hours per flight; shortly after balloons have been launched, the venue should be rapidly available for setting up other events.

Technical Equipment specifically required for this event

- Equipment of launch and target site (fencing, poles, flags, etc.)
- Propane and refuelling equipment
- Competition equipment (markers, targets, banners, etc.)
- GPS loggers and radios
- Competition maps
- Scoring and tracking software
- Communication equipment for Officials (cell phones)
- Vehicles for Officials (rental and fuel)
- Contingency and miscellaneous

Estimated Operational Budget

(For 5 flights, i.e. 4 competition flights/1 final)

- Propane: USD 9'000.-
- Technical equipment as listed above: USD 18'600.-
- (Propane cost for each additional flight: USD 1'800.-)

Notes:

This budget does not include the costs for venue, infrastructure, logistics, accommodation, volunteers and technical equipment required for conducting/ presenting the events, or for interacting with the public (see Appendix section 'Technical Equipment').