



Accident to the CENTRAIR – 101A Pégase
registered **F-CHEL**
on Tuesday 10 June 2025
at Valavoire

Time	Around 15:00 ¹
Operator	Aéroclub international de Sisteron
Type of flight	Local
Persons on board	Pilot
Consequences and damage	Pilot fatally injured, glider destroyed
This is a courtesy translation by the BEA of the final report on the safety investigation. As accurate as the translation may be, the original text in French is the work of reference.	

Collision with terrain, slope soaring²

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on the glider's FLARM computer and statements.

The pilot helped several gliders take off from Sisteron Vaumeilh aerodrome. He then carried out a towed take-off at 13:52 (see **Figure 1**, point **1**). He released the cable at an altitude of around 1,500 m four minutes later (point **2**).

The pilot then used the uplifts in various areas within glide distance of Sisteron aerodrome. At 14:45, at an altitude of 1,700 m, he headed for Jouère mountain tracking above the ridges. He then slope soared in the direction of the south-east slope of this mountain before turning around and using an uplift from 14:52 to 14:56, spiralling overhead the mountain top.

He next headed again to the south-east slope of Jouère mountain and carried out a right-hand turn (see **Figure 2**, points **3**, **4**, **5** and **6**).

The glider collided with the terrain close to the last point recorded by the on-board computer (point **6**).

A glider pilot flying close by saw pieces of wreckage along the ridge and contacted by radio, a person on the ground at La Motte-du-Caire glider aerodrome. The alert was then transmitted to the Air Rescue Coordination Centre using the aeronautical emergency number 191.

¹ Except where otherwise indicated, the times in this report are given in local time.

² The glossary of abbreviations and acronyms frequently used by the BEA can be found on its [website](http://www.bea.aero).

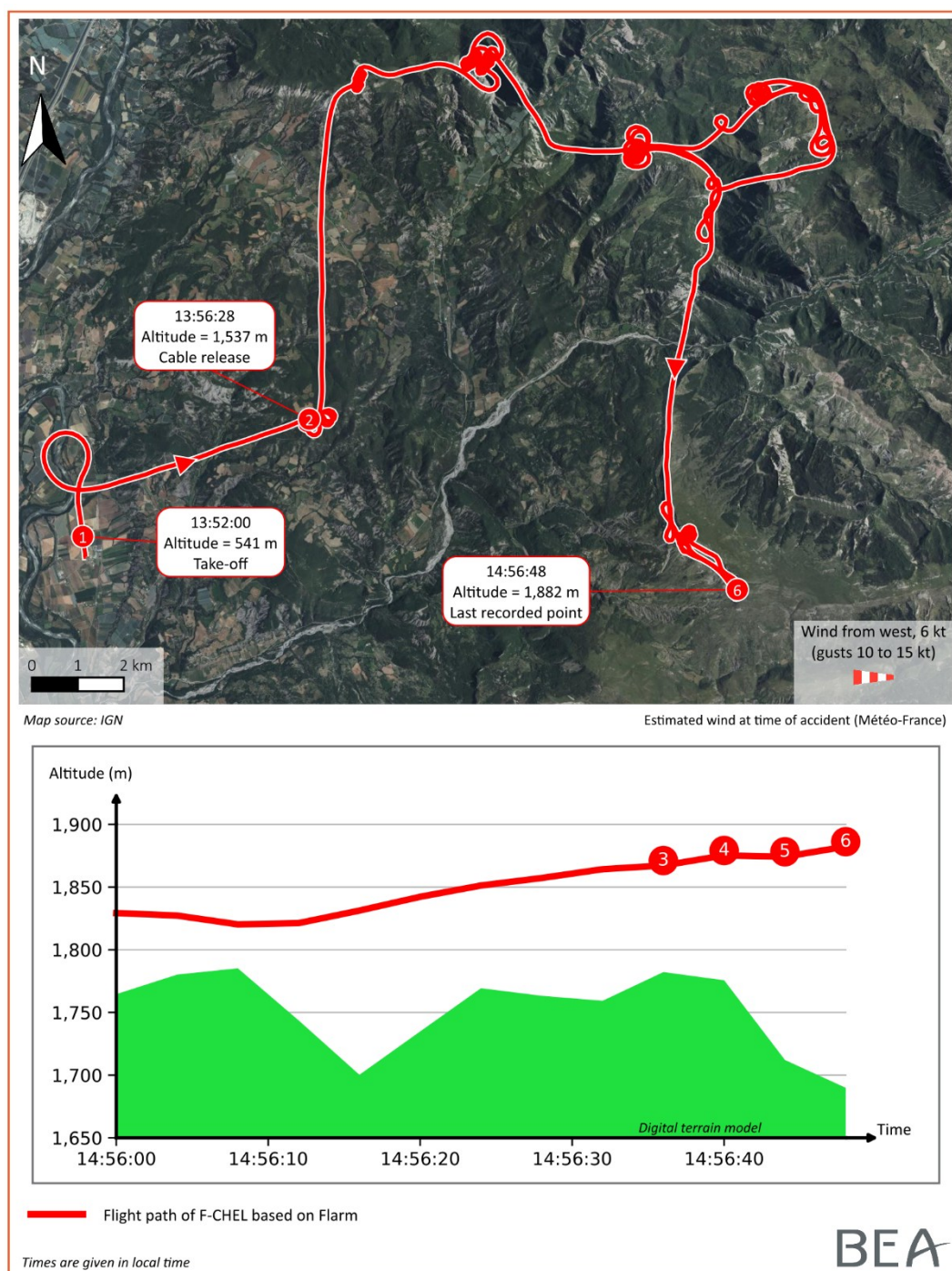


Figure 1: flight path of F-CHEL

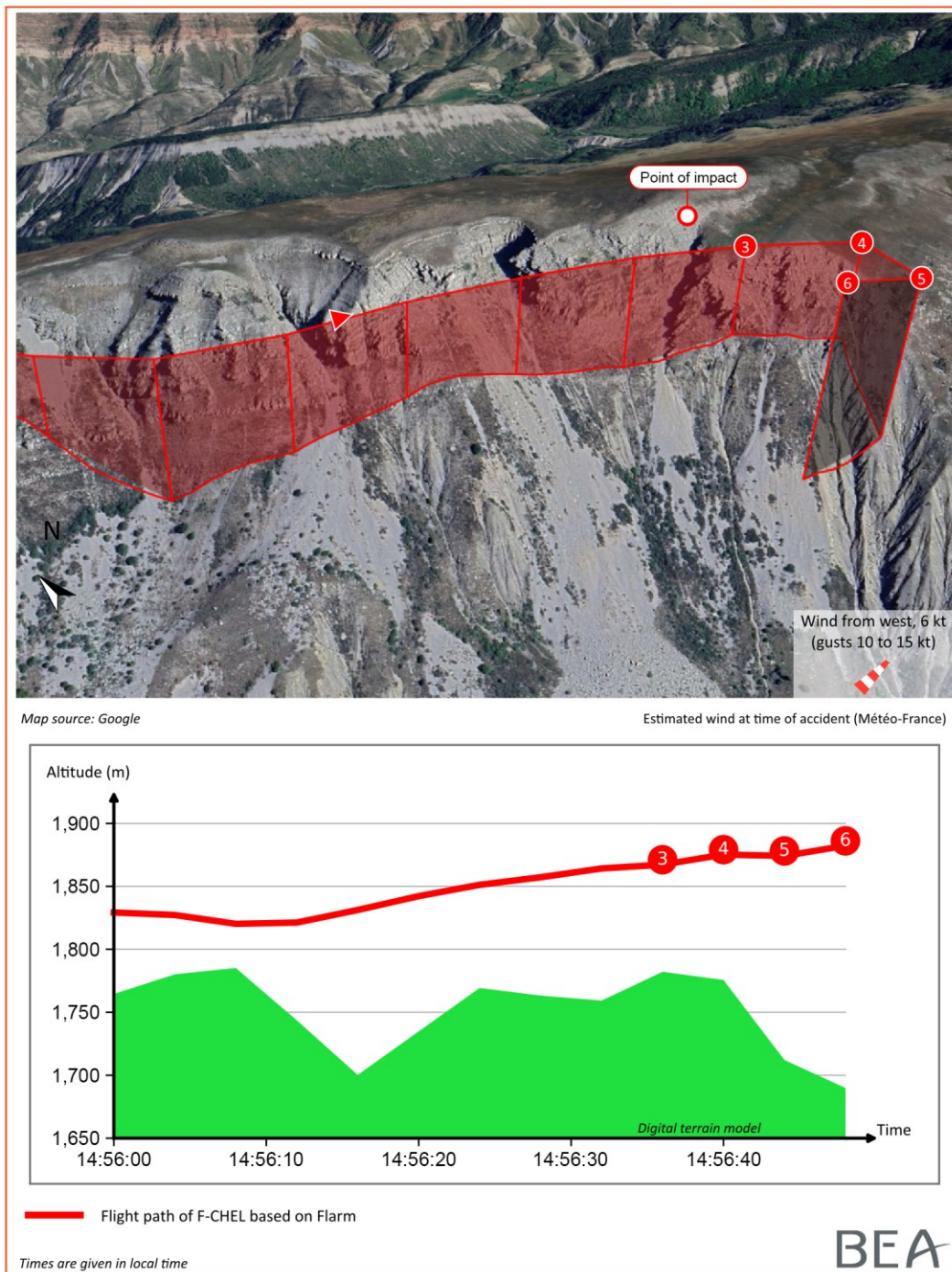


Figure 2: end of flight path of F-CHEL

2 ADDITIONAL INFORMATION

2.1 Site and wreckage

The glider wreckage was found close to Dormeilleuse ridge; the point of impact was at an altitude of around 1,860 m at the top of a slope of scree. The rear section of the fuselage, the tail plane and the root and tip of the right-hand wing were found on the scree. The complete left-hand wing was found on the grass plateau.

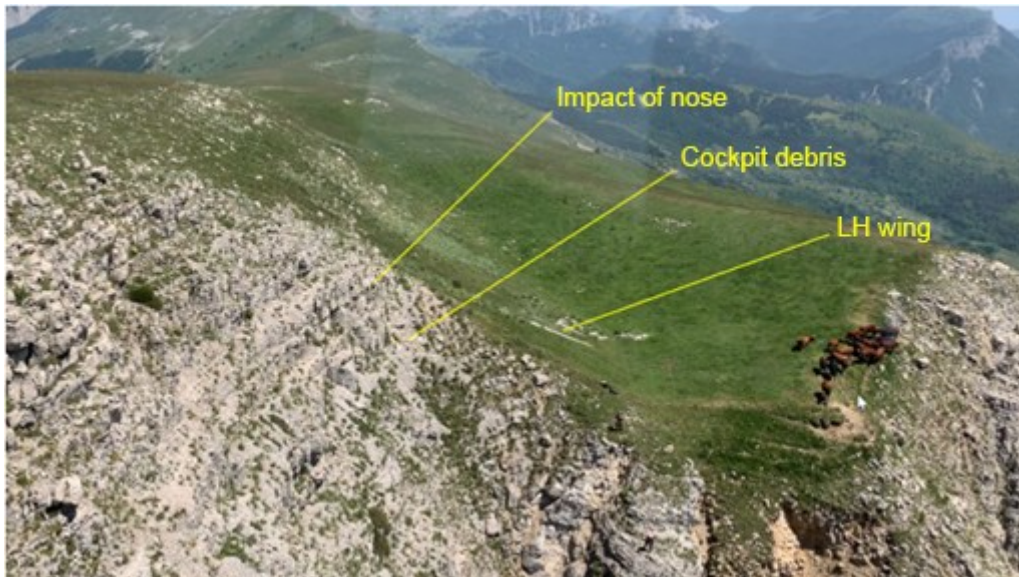


Figure 3: overall view of accident site (source: BEA)

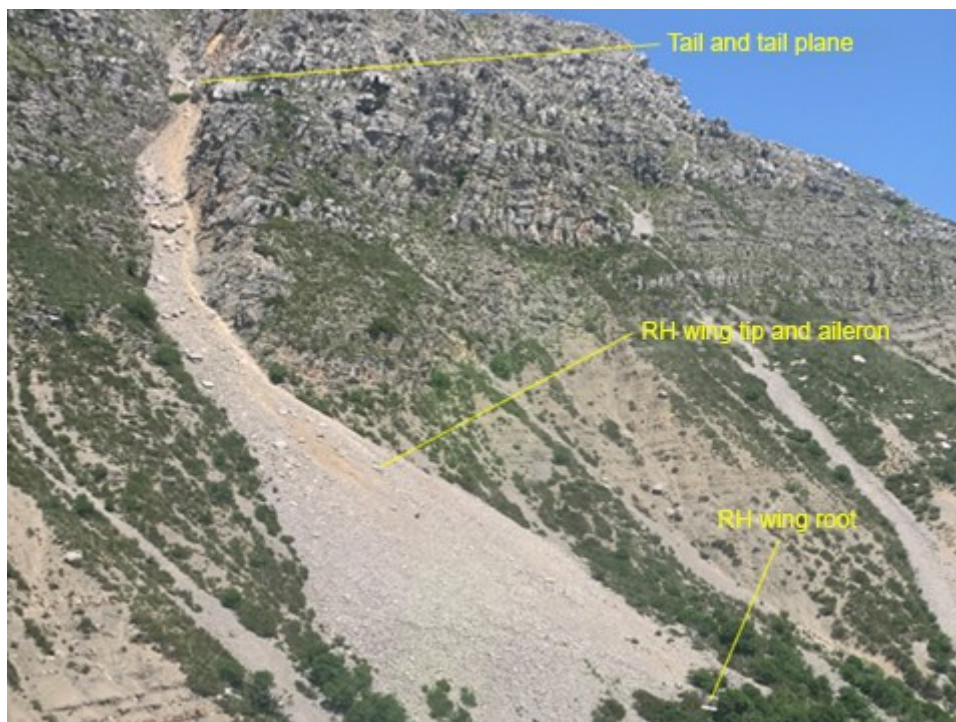


Figure 4: partial view of accident site (source: BEA)

The examination of the wreckage made it possible to determine that at the time of the impact:

- the glider was complete and all the controls were continuous;
- the glider collided with the terrain with high energy;
- it is probable that the nose and the right-hand wing collided with the terrain before the left-hand wing;
- the canopy closing system was in the closed position;
- the pilot had at least his lap belt fastened;
- a bottle of oxygen was installed in the glider, however no supplemental oxygen delivery device was found on board.

The examination of the wreckage did not reveal any technical failure which could explain the accident.

2.2 Meteorological information

The general situation was anticyclonic and the associated weather was dry.

Météo-France estimated that the weather conditions close to the accident site at around 15:00 were:

- westerly wind of 6 kt with gusts of 10 to 15 kt;
- presence of light turbulence;
- visibility between 8 and 10 km with the presence of fine particles (smoke particles from the fires in Canada) giving the sky a milky appearance;
- a temperature of 19°C;
- no significant uplifts and no downdrafts.

2.3 Hypoxia and supplemental oxygen in gliders

As the altitude increases, the partial pressure of oxygen in the air inhaled by a pilot decreases, resulting in a reduction in the quantity of oxygen carried to the organs. When the organs do not receive a sufficient quantity of oxygen for their needs, they find themselves in a situation of hypoxia which impairs their operation on a more or less lasting basis. Hypoxia can lead to a progressive impairment of physical and mental abilities. The French glider pilot manual³ specifies that signs of hypoxia can appear as low as 1,500 m.

In part-SAO (Sailplane Air Operations), amended Regulation (EU) 2018/1976⁴ specifies that, *“The pilot-in-command shall ensure that all persons on board use supplemental oxygen whenever he or she determines that, at the altitude of the intended flight, lack of oxygen might result in impairment of their faculties or harmfully affect them.”* (SAO.OP.150).

The [Safety in Mountain Flying](#) guide, available on the CNVV website, recommends using a supplemental oxygen delivery system from an altitude of 1,500 m.

In the Safety Lessons General Aviation section of its website, the BEA identified the “Pilot Incapacitation” theme in its 2021, 2022 and 2024 reviews of glider occurrences.

2.4 Pilot information

The 79-year-old pilot held a glider pilot licence obtained in 1984 (converted into a SPL in 2018) along with motor glider (TMG), towed take-off and self-launch take-off ratings. The pilot held an LAPL medical certificate issued on 27 June 2023 with the VML limitation (requirement to wear suitable optical correction in flight to correct defective distant, intermediate and near vision/pair of spare glasses in cockpit).

He had logged 1,890 glider flight hours (including 1,690 hours as pilot-in-command), of which 4 hours in the three months preceding the accident.

³ Manuel du pilote vol à voile, Collectif, 15th issue 2024, published by Cépaduès.

⁴ Commission implementing regulation of 14 December 2018 laying down detailed rules for the operation of sailplanes ([Version in force on the day of the accident](#)).

The anatomical-pathological examination revealed the presence of chronic pulmonary lesions described as major, as well as moderately calcified coronary arteries. In the region of 1,500-3,000 m where the use of oxygen is simply recommended, the cardiovascular system, when it is healthy, compensates for the reduction in the partial pressure of oxygen by increasing the respiratory rate, the heart rate and the coronary artery calibre. When the lung is diseased and the coronary arteries are too rigid to dilate, particularly in this age group where the rapidly-reached maximum heart rate is lower than in younger subjects, compensation may not be sufficient to prevent hypoxia at these relatively low altitudes. A person's judgement and precision of actions can then be notably impaired.

The vertical profile shows that the pilot flew for one hour at an altitude of between 1,500 m and 2,000 m. The combination of impaired physiological conditions and demanding flight conditions may have constituted an insurmountable effort for the pilot to stay in good safe conditions.

2.5 Statements

On the day of the accident, a regional championship was being held at La Motte du Caire private aerodrome⁵. Several pilots who were taking part in it were flying in the sector of the accident at the same time; they indicated that the aerological conditions were mediocre, that it was very hot, the air was stable, with pure thermal lifts⁶ difficult to use and requiring tight spirals with a steep bank. They also indicated that it was difficult to manage to climb higher than the ridges and as a result, it was necessary to fly low, close to the terrain and with little margins.

They added that the visibility conditions were degraded by the presence of a sort of mist causing visual discomfort and making visual detection of the other gliders difficult.

A pilot had crossed F-CHEL in slope soaring flight a few seconds before its collision with the terrain. He specified that he had not observed any turbulence or strong uplifts or downdrafts close to the accident site.

⁵ La Motte-du-Caire aerodrome is situated 5 NM north-east of Sisteron - Vaumeilh aerodrome.

⁶ So called "pure" thermal lifts are uplifts which are not shown by a cumulus. They are more difficult to locate.

3 CONCLUSIONS

The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation.

Scenario

The day of the accident, the aerological conditions were not particularly favourable for gliding. The pilot used the uplifts in several zones, which allowed him to hold a flight altitude of around 1,800 m, without any significant uplift.

After a flight time of around one hour, he headed towards Jouère mountain and tried to use several uplifts without managing to significantly gain altitude. He then headed towards the south-east slope of Jouère mountain, in slope soaring flight and lower than the main ridge.

The recorded flight path showed that a right-hand turn was carried out while slightly gaining altitude. The glider then collided with the terrain at a point twenty metres lower than the last recorded position.

The pilot probably lost control during this turn. The investigation showed that the pilot was suffering from pulmonary and coronary diseases likely to reduce his ability to adapt to slope soaring conditions at more than 1,500 m.

Safety lessons

Slope soaring: technical and physiological requirements

It is usual practice for a glider to use thermal and dynamic lift close to the terrain. Slope soaring is a phase where the safety margins are reduced and particularly calls on the pilot's attention and cognitive resources.

The height at which the glider flies and its proximity with the terrain does not always allow the pilot to regain control of the glider should there be an unforeseen incident.

This subject is regularly identified in the BEA's annual feedback in the form of [safety lessons](#).

The [Safety in mountain flying guide](#) sets out fundamental recommendations for the mountain flying technique. In particular, it addresses the techniques of flying near the terrain and aerological traps. This guide recommends holding a minimum speed of 1.45 Vs in flight close to the terrain and gives recommendations about using a slope:

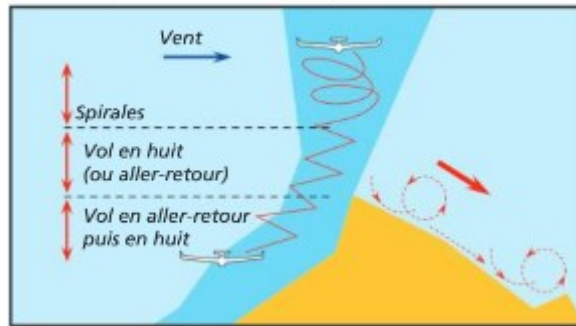


Figure 5: techniques for using a slope according to height over terrain
(source: FFVP Safety in mountain flying)

It also gives the precautions to be taken when the aerology obliges the pilot to spiral under the ridge in order to climb.

Furthermore, it warns that, *“The evolution of the air masses in mountains is complex. Local phenomena, linked to the shapes of mountains, and to the interactions between winds, valley breezes, the nature of the ground, the influence of the sea, different climatic areas etc. are sometimes more important than the general meteorological situation. This results in situations that evolve unpredictably and sometimes for the worse.”*

The efforts of attention required by this environment and this piloting technique, the rapid gain in altitude in mountainous terrain and other contextual factors such as heat place a physiological strain on the pilot. A pilot’s ability to withstand such demanding conditions can be compromised by the normal effects of ageing as well as by certain medical conditions, whether or not they are directly related to ageing.

The BEA investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liabilities.