



**Accident** to the S.T.R.A. CB 15 CRYSTAL  
registered **F-CBCJ**  
on Wednesday 31 July 2024  
at Sigloy

Time	Around 16:25 <sup>1</sup>
Operator	Les Planeurs d'Orléans
Type of flight	Competition
Persons on board	Pilot
Consequences and damage	Pilot 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.	

**Loss of control during a field landing, collision with  
vegetation, during a competition flight**

**1 HISTORY OF THE FLIGHT**

*Note: the following information is principally based on statements, OGN<sup>2</sup> data, the glider's FLARM and the navigation application used by the pilot.*

The pilot was taking part in a competition organized by the club. The aim of the task was to carry out a roughly 150 km circuit course, departing from Orléans - Saint-Denis-de-l'Hôtel aerodrome, passing close to three points situated at Châteauneuf-sur-Loire, Châtillon-Coligny and Malesherbes with the arrival situated 5 km from the departure aerodrome (see **Figure 1**).

The pilot carried out a winched take-off at 15:24 from runway 23 of Orléans - Saint-Denis-de-l'Hôtel aerodrome (see **Figure 2**, point **1**).

<sup>1</sup> Except where otherwise indicated, times in this report are given in local time.

<sup>2</sup> The glossary of abbreviations and acronyms frequently used by the BEA can be found on its [web site](#).

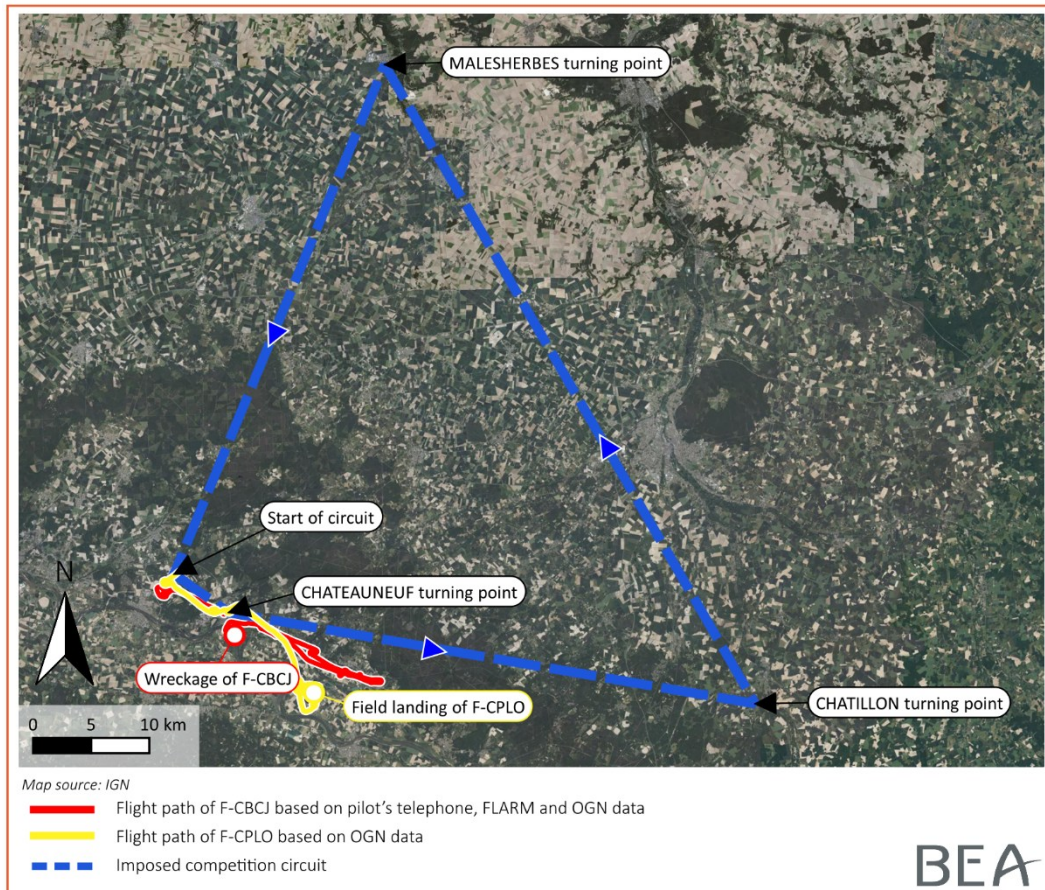


Figure 1: competition circuit course

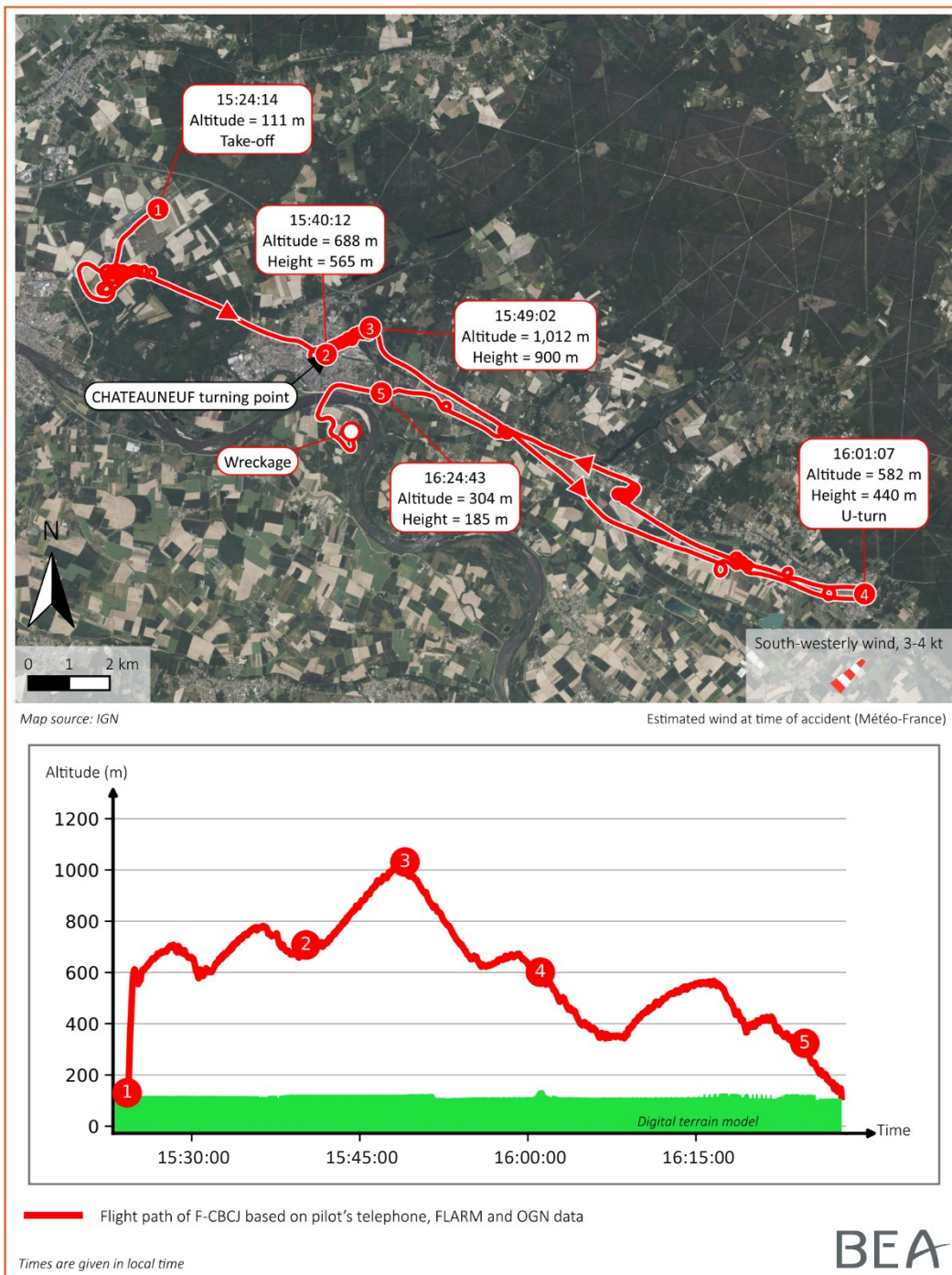


Figure 2: flight path of F-CBCJ

The pilot managed to gain altitude and pass the first turning point at an altitude of around 700 m (point 2) at the same time as the pilot of the glider registered F-CPLO, who was also taking part in the competition. He used the lifts close to the turning point until he reached an altitude of 1,000 m (point 3).

He then headed towards the second point. As the glider was losing altitude, the pilot turned around at an altitude of around 600 m (point 4). On approaching Châteauneuf-sur-Loire, he was at an altitude of around 300 m (point 5) which he considered too low to continue the flight.

He therefore decided to land in a field that he had previously identified to the south of the town (see **Figure 3**, shown in blue). During the landing pattern (points **6**, **7** and **8**), he lost control of the glider which collided with vegetation.

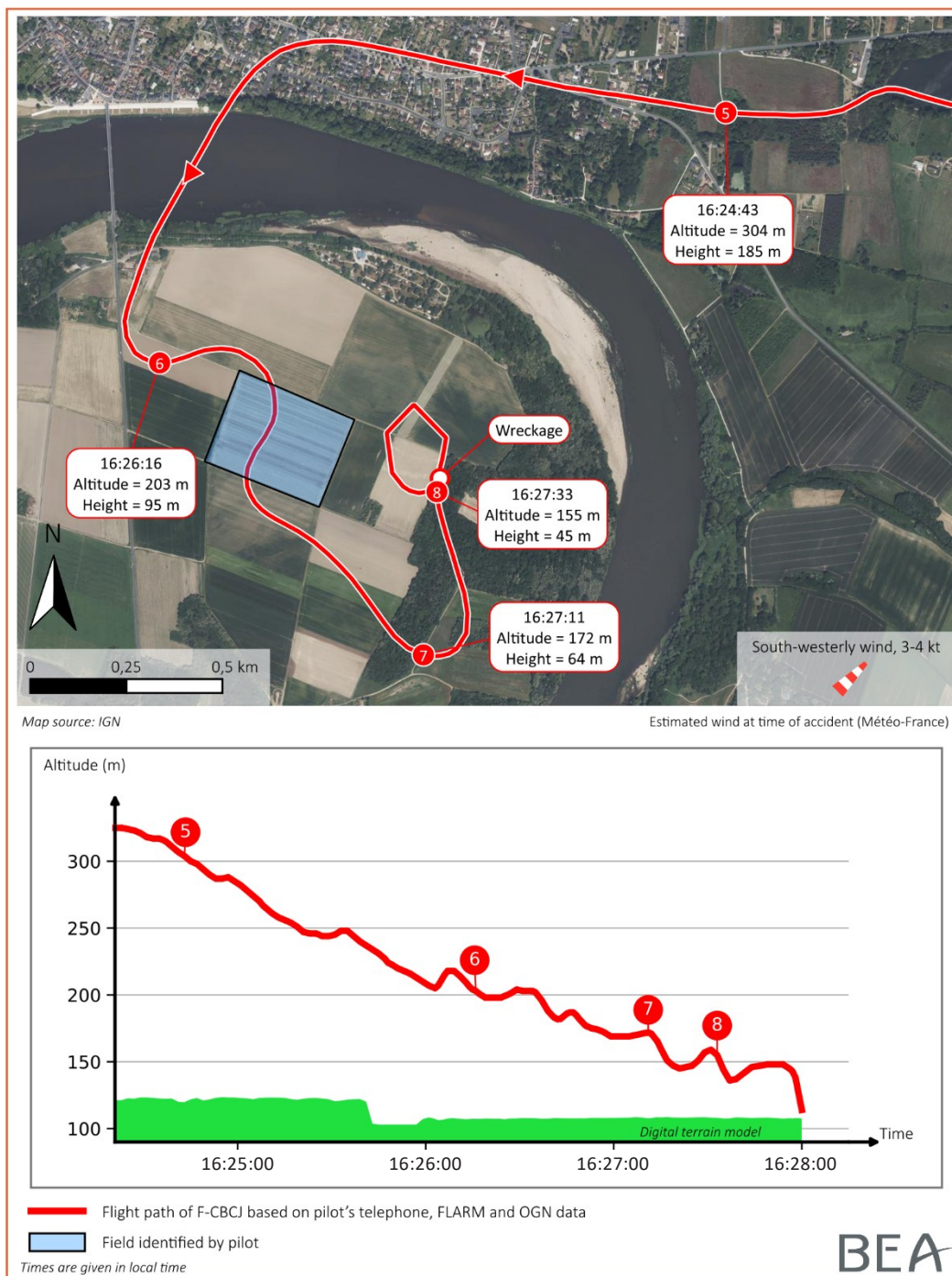


Figure 3: end of flight path of F-CBCJ

## 2 ADDITIONAL INFORMATION

### 2.1 Glider information

The Crystal is a single-seat glider of a laminated composite structure. According to the flight manual, the stall speed was 76 km/h for the glider's wing loading on the day of the accident. The maximum lift-to-drag ratio is approximately 41 to 110 km/h. The recommended approach speed is 90 km/h.

### 2.2 Pilot information

The 59-year-old pilot held a Sailplane Pilot Licence (SPL) issued in 2011. He also held an aeroplane Private Pilot Licence PPL(A) obtained in 2012.

He had logged a total of 215 glider flight hours, including 38 hours in 2023 and 4 hours in 2024. He had flown 3 hours on the Crystal in 2023 and had carried out three short flights on the Crystal in the previous 30 days, lasting 7 minutes, 28 minutes and 15 minutes respectively. During this period, he had also carried out a dual control flight for 1 hour on the ASK21 and a flight of 2 hours on the Pégase.

### 2.3 Meteorological information

Météo-France estimated the meteorological conditions in the zone of the accident as being: variable wind between 150° and 250° of 3 kt, visibility greater than 10 km, few clouds at 4,700 ft, broken clouds at 21,000 ft and temperature 34°C.

### 2.4 Site and wreckage

The wreckage was complete and grouped together. It was situated at the edge of a wood. There were no marks in the vegetation beyond a restricted area around the wreckage.



Figure 4: accident site (source: BEA)

The examination of the wreckage and in particular, the continuity of the control linkages, found that all the ruptures observed were sudden and consecutive to the accident.

The airbrakes were found fully extended on both wings. A few branches were found inside the left-hand airbrake (see **Figure 5**). The right-hand airbrake was blocked in its maximum deflection due to the ruptures and deformation of the wing structure in this area.



Figure 5: left-hand wing airbrake and landing gear (source: BEA)

These elements and the position of the controls in the cockpit could indicate that the airbrakes were fully extended before impact<sup>3</sup>.

If the landing gear was extended, it is possible that it retracted during the impact with the ground (see **Figure 5**).

## 2.5 Statements

### 2.5.1 Statement from pilot

The pilot indicated that from the beginning of the week onwards, he had been participating in a race organized by the club, the “Novice Cup”. In previous years, he had already flown circuit courses and had won some legs several times. The weather conditions the first two days were adverse and only local aerodrome flights had been possible.

The pilot explained that the day of the occurrence, he and another participant had managed to reach an altitude of around 900 m and passed the first turning point in parallel. He indicated that after this first point, he headed towards the second point. After flying for a little over half an hour, he decided to turn around. He encountered small lifts on the return path but they were not sufficient and the glider continued to descend.

The pilot stated that on approaching Châteauneuf-sur-Loire, the glider was at an altitude of around 400 m which he considered too low for trying to find lifts and reach the departure aerodrome. He decided to land in a field south of Châteauneuf-sur-Loire.

The pilot explained that he adopted a speed of roughly 80 km/h to minimize the energy on landing. As he was preparing to turn for the final approach, he felt turbulence and started flying a spiral to try and gain altitude again. The glider finally descended and the pilot continued his spiral to try to carry out a very short approach, starting from the downwind leg, thinking that he was offset and too close to the field to land directly. The glider then lost altitude. The pilot explained that it was such a large drop, he let the stick move forward. The glider continued to have a slight nose down attitude. At the last moment, the pilot pulled on the stick and the glider “crashed” into the woods.

The pilot thought that if there had been no competition, he would probably not have started a circuit course but would have carried out a local flight instead.

<sup>3</sup> The pilot indicated that he had extended the landing gear and had not extended the airbrakes.

The pilot indicated that he had never carried out a field landing before. He specified, however, that he had no apprehension about carrying one out. He thought that he took a certain pride in having always managed to get back to the aerodrome.

### **2.5.2 Statement from pilot of glider registered F-CPLO, participating in competition**

The 66-year-old pilot had been flying gliders for around ten years and had totalled approximately 800 flight hours.

According to this pilot, this type of competition is a good opportunity for flying outside the local area, with the option of a field landing always being possible; the organization was in place for it (car, trailer, etc.) and field landings are therefore part of the exercise.

With respect to the occurrence flight, after the winched take-off, two of the three pilots (the pilot of F-CBCJ and himself) managed to reach an altitude of 900 m and thought that they could start the circuit course.

He rapidly saw that the weather conditions were not sufficiently good to continue the flight and he was forced to carry out a field landing. He carried out a standard landing pattern. He was quite composed about it, it was the third time he had landed off the aerodrome.

### **2.5.3 Statement from instructor, competition organizer**

The competition organizer explained that the “Novice Cup” was solely a club competition. Four pilots had entered it. The aim was to organize a cup to teach participants (and the organizers) how to prepare and carry out a circuit course in the scope of a competition.

The competition organizer indicated that due to the weather conditions, the first day had been a training day. The second day, the gliders had stayed in the local area of the aerodrome. The third day, the day of the accident, the circuit course had been presented even if the probability of completing it was small.

The organizer indicated that the pilots took off at 15:30. According to him, the two pilots took off and decided on their own, to start the circuit course. He explained that he had not opened the starting line. For the start of a task, there is normally a 20-min wait and an announcement of the start time. He indicated that the weather conditions were not favourable enough for completing the circuit course and the departure too late. He also indicated that there was no formal cancellation of the task on the circuit frequency. He did not continue to monitor the frequency used by the pilots.

## **2.6 Field landing**

The glider pilot manual<sup>4</sup> recommends above flat land, that the pilot select a suitable field for landing as soon as the glider's height passes below 400 or 500 m. Once the field has been identified, the pilot can attempt to gain altitude within the limits of the local flight cone. It is recommended to stop any spiral at a height of less than 200 m.

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<sup>4</sup> Manuel du pilote vol à voile, Collectif, 15th issue 2024, published by Cépaduès.

The manual recommends carrying out an L-shaped landing pattern (PTL). It warns pilots about the common mistake of flying the L-shaped landing pattern too tight for fear of losing sight of the chosen field. This leads to final turns that are too low, or final approaches that are short or too high. The manual also strongly advises against doing a 360° if the pilot considers that he is too high, as this would cause him to lose sight of the terrain and place him in a dangerous situation. It states that it is preferable to extend the base leg beyond the axis of the final approach and then resume a base leg on the other side followed by a final turn, without ever losing sight of the ground.

Furthermore, the speed to adopt for a field landing is 1.3 times the stall speed, i.e. about 90-100 km/h for all the single-seat gliders in the club, to which the gust effect is to be added.

### 3 CONCLUSIONS

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

#### Scenario

The pilot was taking part in a competition organized by the club. After two days during which no circuit course had been flown due to adverse weather conditions, the day's programme was presented to the participants. Three pilots took off and two of them started the circuit course without an actual announcement of the start of the race or its cancellation.

During the flight, seeing that he could not hold a sufficient height, the pilot turned around. On the return leg, he realised that he would not be able to reach the departure aerodrome and decided to land in a field that he had identified. When he took this decision, the glider was at a height of around 200 m.

The pilot opted for a speed 10 to 20 km/h below the recommended speed in order to reduce the energy on landing. At the end of the base leg of the landing pattern that he wanted to carry out, when he was at a height of less than 50 m, the pilot felt turbulence. He then changed his strategy and tried to gain altitude by spiralling. The glider stalled and the pilot was not able to regain control. The glider collided with vegetation and then the ground.

#### Contributing factors

The pilots started the circuit course without the start of the race being officially given. As there was no formal cancellation of the task, they continued their flight thinking that the competition was still running. This may have encouraged them to continue their cross-country flight although the weather conditions were not favourable.

The pilot carried out a field landing at a low height compared with the recommended height. The change of strategy – marked by a final attempt to gain altitude – may be linked to the pilot's overconfidence in his ability to continue the flight and to his lack of esteem of a field landing.

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