

*The original of the Final Report was issued in the Slovak language.
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AVIATION AND MARITIME INVESTIGATION AUTHORITY
Námestie slobody 6, P.O.BOX 100
810 05 Bratislava

FINAL REPORT

on safety investigation of an aviation accident

of gliders type **LS8-18**

registration marks **LY-GOT** and **SP-3893**

Reg. No: **SKA2018002**

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The investigation of occurrence has been conducted pursuant to Art. 18 of the Act No. 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts and in accordance with the Regulation (EU) No. 996/2010 of the European Parliament and of the Council on investigation and prevention of civil aviation accidents and incidents, governing the investigation of civil aviation accidents and incidents.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Aircraft Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, incident and to prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of occurrence in question have an informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other accidents and incidents with similar causes.

A. INTRODUCTION

| | |
|--------------------|---|
| Glider type: | LS8-18 |
| Registration mark: | LY-GOT, competition identification sign P2 (hereinafter referred to as "P2") |
| Operator/Owner: | Kūno kultūros ir sporto departamentas / Kauno apskrities aviacijos sklandymo klubas |



| | |
|--------------------|---|
| Glider type: | LS8-18 |
| Registration mark: | SP-3893, competition identification sign A (hereinafter referred to as "A") |
| Operator/Owner: | Przemyslaw Bartczak |



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Operation type: General aviation/sports and recreational flying
15 m class - maximum take-off weight of the glider 525 kg

Take-off site: Prievidza / LZPE aerodrome
Flight phase: manoeuvring in an upward flow

Place of collision of the gliders: N 49°08'47"; E 018°36'49"
"P2" glider crash site: N 49°09'60"; E 018°37'21"
"A" glider crash site: N 49°08'45"; E 018°36'58"

Accident date and time: 14 April 2018, 12:57

Note: All time data in this report is reported in UTC time.

B. INFORMATIVE SUMMARY

On 14 April 2018, during a flight day of the international Flight Challenge Cup-Gliding 2018 Prievidza (hereinafter referred to as "FCC Gliding 2018"), during the fifth competition discipline and in the phase of manoeuvring in a common upward flow, two competition gliders type LS8-18, competition identification signs "**A**" and "**P2**", collided in the area near Lietavská Svinná - Babkov.

Both pilots left the gliders in emergency, used their parachutes and safely landed without injury.

After the collision, the gliders fell in a wooded area and were damaged after the fall.

After reporting occurrence, the airport director/FCC Gliding 2018 organizer activated emergency units and reported the air accident to the Aviation and Maritime Investigation Authority of the Ministry of Transport and Construction of SR.

The following person was set up to investigate the causes of the air accident:

Ing. Igor BENEK

The Report has been issued by:

Aviation and Maritime Investigation Authority
of the Ministry of Transport and Construction of the Slovak Republic.

C. MAIN PART OF REPORT

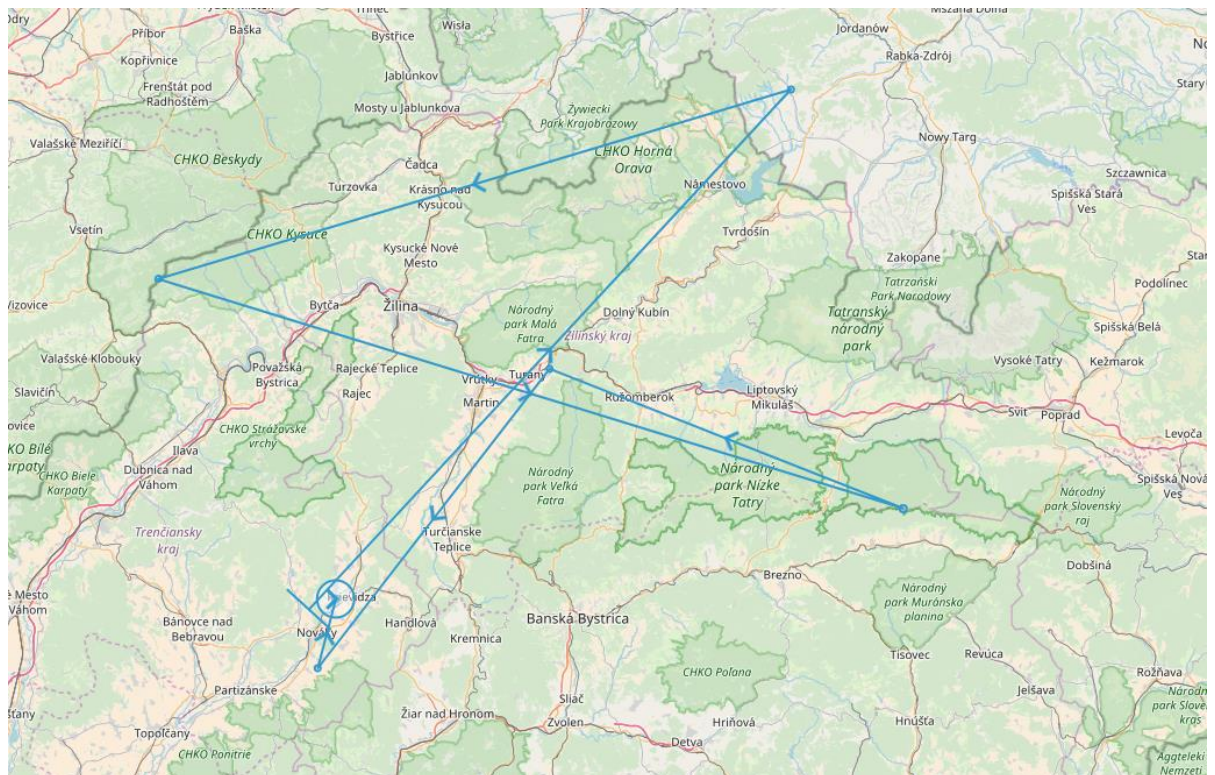
1. FACTS
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

1. FACTUAL INFORMATION

1.1 History of the flight

On 14 April 2018 during the daily FCC Gliding 2018 briefing, the pilots were made familiar with the weather situation and the occupancy of the airspace, and they received a flight plan of the competition flight from the organizer of FCC Gliding 2018.

For the 15 m class, the route of the flight had been specified as follows: Dolina – Zubrzica Gorna – Makytká – Heľpa – Krpeľany – Bystričany – Prievidza.

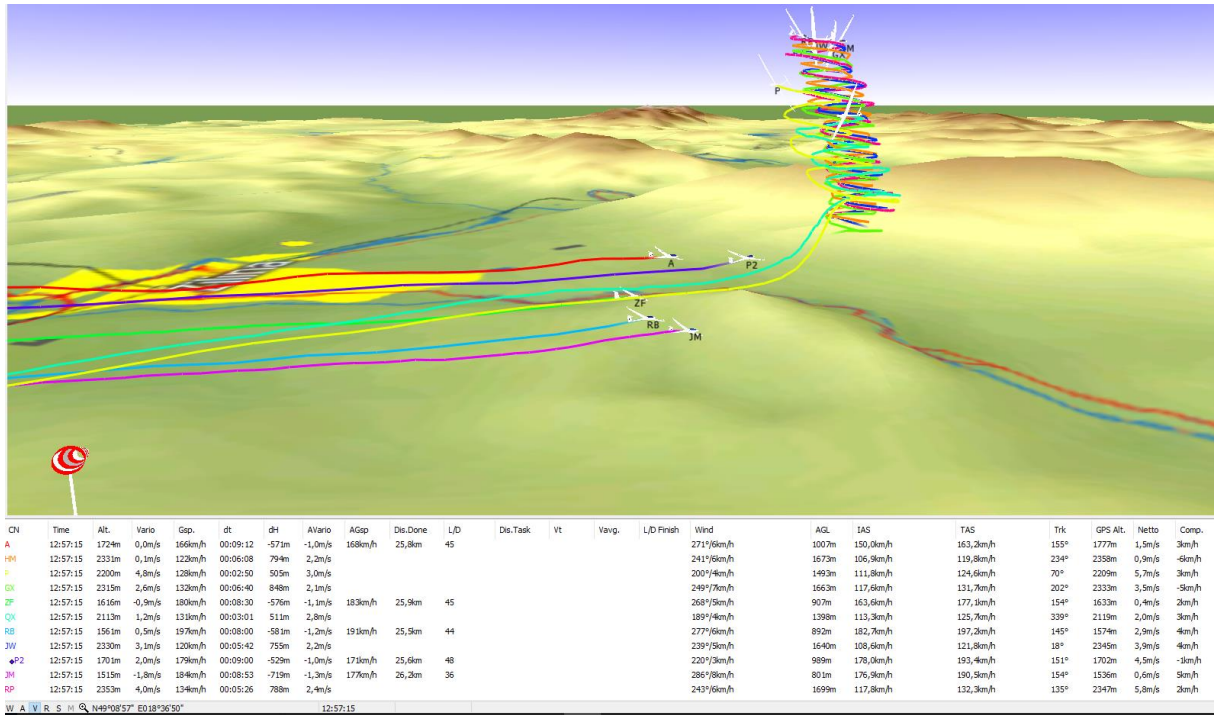


At 09:36:30 the "P2" glider took off.

At 09:49:30 the "A" glider took off.

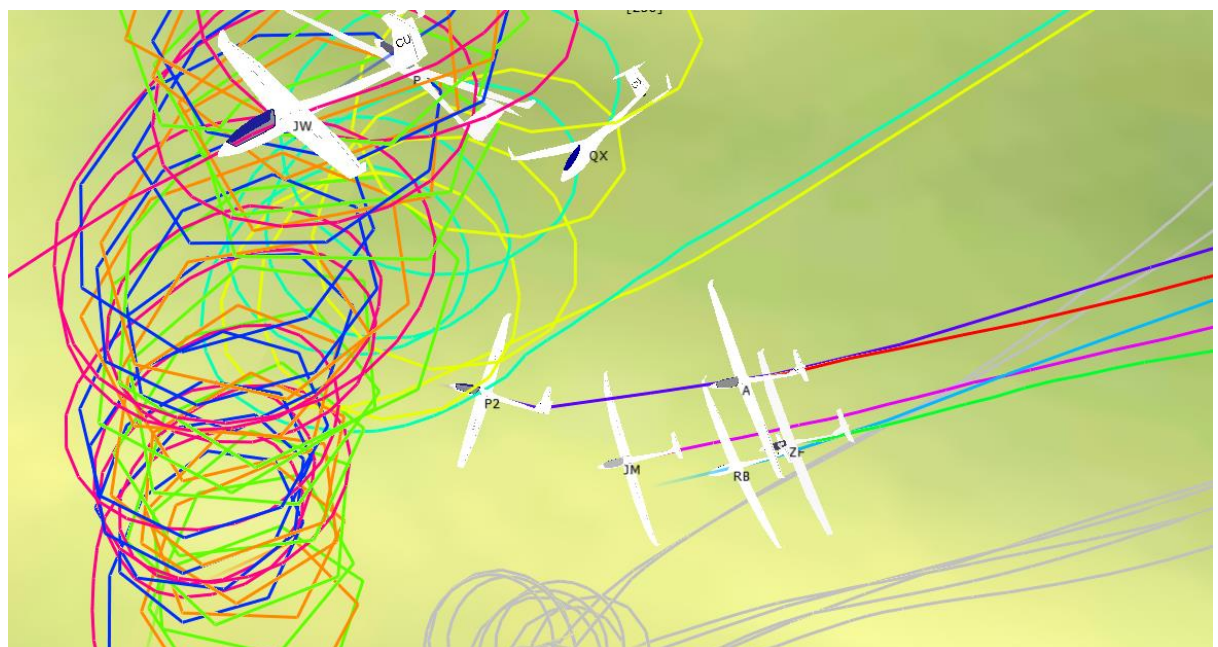
During the third leg of the route, Makytká – Heľpa, heading 150°, at 12:57:15, a group of gliders (registration marks LY-GOT/"P2", SP-3893/"A", LY-6M2/ZM, D-KCRB/RB, YU-4466/ZF) joined other gliders (registration marks SP-3724/RP, D-KUNT/HM, OK-3370/JW, OK-7000/GX, YU-4467/P, OK-2992/QX) which were manoeuvring in a common upward flow in a right turn.

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At 12:57:23 the pilot of the "P2" glider was the first one to initiate a manoeuvre with a right turn at an altitude of **1,785 m**; position N 49°08'48", E 018°36'58". At that time, the "A" glider was 350 m far from the "P2" glider.

At 12:57:27 the pilot of the "A" glider was the second one to initiate a manoeuvre with a right turn at an altitude of **1,794 m**, position N 49°08'54", E 018°36'56", with a horizontal separation of 320 m.



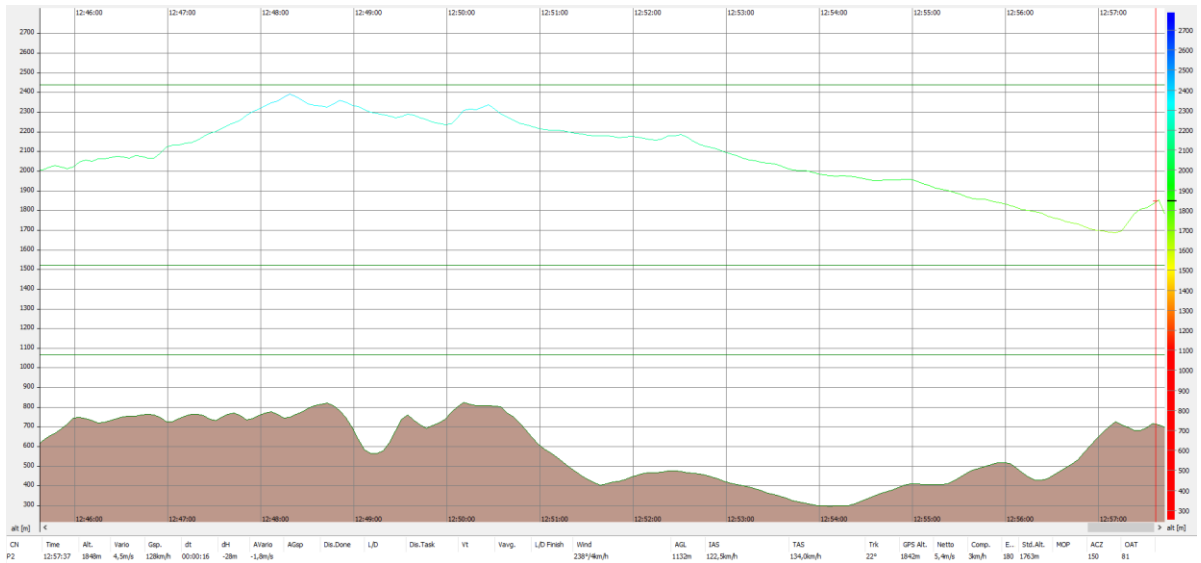
During the right turn, the pilot of the "A" glider got above the "P2" glider in the upward flow and subsequently lost visual contact with it.

At 12:57:37 the gliders approached each other so closely that they collided in the right turn; position N 49°08'47", E 018°36'49".

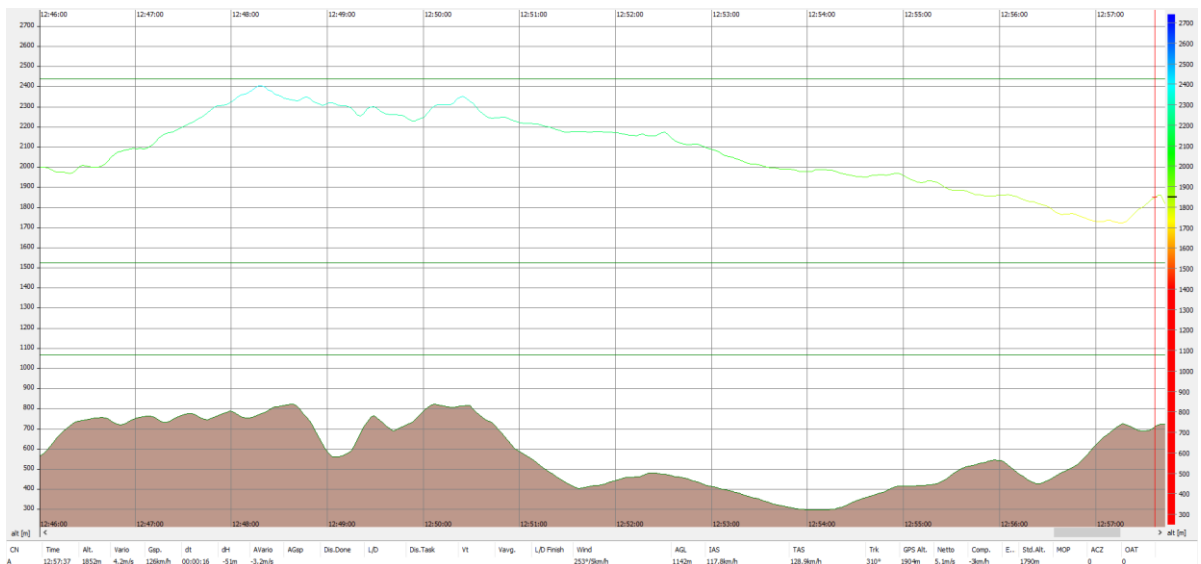
Being 4 m above the "P2" glider, the "A" glider's left wing hit the left wing of the "P2" glider at an altitude of 1,850 m; 710 m above the terrain.

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"P2"



"A"



The gliders became uncontrollable; the pilots left their cabins in emergency and used their parachutes.

The organizer of FCC Gliding 2018 cancelled the competition day for the 15 m class.

Time period: Day

Flight rules: VFR

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1.2 Injuries of persons

| Injury | Crew | Passengers | Other persons |
|---------|------|------------|---------------|
| Fatal | - | - | - |
| Serious | - | - | - |
| Minor | - | - | - |
| None | 2 | - | - |

1.3 Damage to the gliders

The "A" glider was destroyed in the aviation accident.



The "P2" glider was destroyed in the aviation accident.



1.4 Other damage

No circumstances have been reported to the Aviation and Maritime Investigation Authority which might lead to any other claims for compensation of damage against a third party.

1.5 Personnel information

"A" glider pilot:

Citizen of the Polish Republic, aged 47;
Holder of a valid SPL glider pilot license issued by Urząd Lotnictwa Cywilnego on 4 March 2014. The SPL holder was exercising his entitlements resulting from the pilot license in accordance with Article FCL.230.S, while he had met the recency requirements specified in Article FCL.140.S

Flight experience:

total flight hours: 3,750 hours
flight hours during the last 30 days: 20 hours

Medical certificate class 2 with marked validity until 28/03/2019.

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"P2" glider pilot:

Citizen of the Republic of Lithuania, aged 24;
Holder of a valid SPL glider pilot license issued by the Civilinės aviacijos administracija on 15 June 2010. The SPL holder was exercising his entitlements resulting from the pilot license in accordance with Article FCL.230.S, while he had met the recency requirements specified in Article FCL.140.S

Flight experience:

total flight hours: 1,300 hours
flight hours during the last 30 days: 20 hours

Medical certificate class 2 with marked validity until 30/04/2023.

1.6 Information about the gliders

Type: **LS8-18**
Registration mark: **SP-3893 / "A"**
Serial number: 8134
Year of manufacture: 1997
Manufacturer: Rolladen Schneider Flugzeugbau GmbH

Total flight hours after manufacture: 1,824 hours

Certificate of airworthiness No. 3893 issued by Urząd Lotnictwa Cywilnego of the Polish Republic on 13 October 2014. Airworthiness verification was conducted on 28 March 2018 and it is valid until 28 March 2019. As of the airworthiness verification day, the glider had flown 1,804 hours.

The maximum take-off weight was not exceeded and its was set at 503 kg.

Type: **LS8-18**
Registration mark: **LY-GOT / "P2"**
Serial number: 8173
Year of manufacture: 1997
Manufacturer: Rolladen Schneider Flugzeugbau GmbH

Total flight hours after manufacture: 1,717 hours

Certificate of airworthiness No. 01814 issued by the Civilinės aviacijos administracija of the Republic of Lithuania on 4 March 2014. Airworthiness verification was conducted on 19 May 2017 and it is valid until 18 May 2018. As of the airworthiness verification day, the glider had flown 1,574 hours.

The maximum take-off weight was not exceeded and its was set at 514 kg.

1.7 Meteorological information

The weather had no impact on the occurrence of the aviation accident.

1.8 Aids to navigation

N/A.

1.9 Communications

The gliders were equipped with on-board communication radio sets enabling two-way radio contact at every moment of the flight with all aeronautical stations.

1.10 Information about the aerodrome

LZPE is a public international airport with irregular traffic. It is located 2.5 km at 245° from Prievidza railway station.

The grass RWY - 22R (04L) - is 950 m long and 85 m wide; the 22L (04R) runway is 950 m long and 115 m wide. The RWY's altitude above sea level is 853 ft / 260 m. Its frequency is 122.155 MHz.

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1.11 Flight recorders and other recording devices

The gliders were equipped with a calibrated electronic on-board flight recorder GNSS-FR (Global navigation satellite system flight recorders), a type approved for IGC FAI to confirm gliders' performances by the International Gliding Commission.

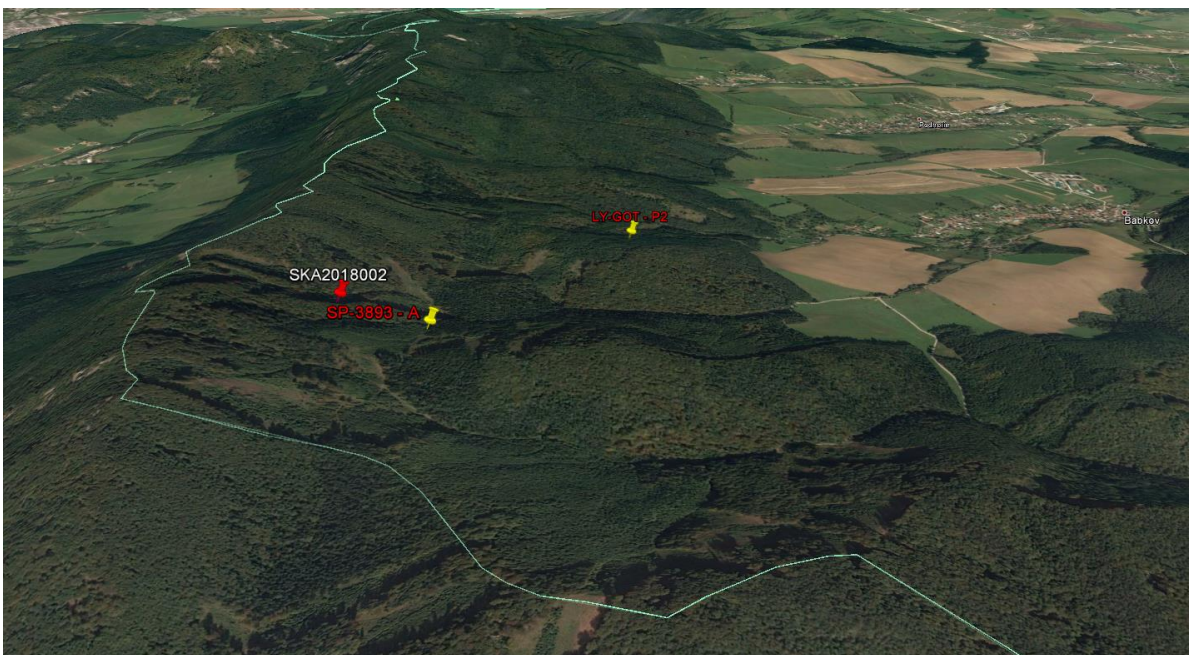
The recorders were evaluated and the Naviter See You programme was used for flight calculation.

The gliders were equipped with FLARM (Traffic and Collision Warning for General Aviation) type equipment, displaying any nearby traffic with both visual and acoustic warning of the approaching traffic.

1.12 Wreckage and impact information

"P2" glider crash site: N 49°09'60"; E 018°37'21"

"A" glider crash site: N 49°08'45"; E 018°36'58"



1.13 Medical and pathological findings

N/A.

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1.14 Fire

None.

1.15 Survival aspects

It was not necessary to perform any investigation or rescue with SAR equipment.

1.16 Tests and research

No tests or expert examination of the glider parts was necessary.

1.17 Organizational and management information

Flight activities were performed in accordance with aviation regulations valid in the territory of the Slovak Republic and local rules.

FCC Gliding 2018 was organized in accordance with the FAI Sporting Code, General Part, Section 3, Chapter 5, Gliding.

1.18 Additional information

In Bulletin 1 SK, the organizer of FCC Gliding 2018 stated the following: when registering for FCC Gliding 2018, the competitors shall declare insurance of their gliders against any damage to third parties, which is in the liability of the National Aero Club registering the competitor. Insurance against any damage to third parties covers competition flying and its amount has been determined by EU regulations or by insurance regulations of the state in which the glider has been registered.

1.19 Useful or effective investigation techniques

Common investigation methods were applied.

2. ANALYSIS

Pilots' activities

When flying gliders in a common upward flow, pilots need to pay constant attention and keep checking their position with regard to other gliders.

The "A" glider pilot was the second one to start turning right with a horizontal separation of 350 m behind the "P2" glider, with the probable intention of overtaking him. During the right turn he got above the "P2" glider in an upward flow; he subsequently lost visual contact with the "P2" glider as a result of covering it with a lower part of the "A" glider cabin.

The "A" glider pilot did not realize how serious the situation was and he continued turning right until the wings of the gliders collided and the gliders fell down after the pilots had left the cabins in emergency.

3. CONCLUSIONS / Causes of accident

3.1 Findings

Pilots

- According to the documentation submitted, they had valid flight qualifications for the particular glider category;
- They had sufficient flight experience to perform competition flights.

Gliders

- The gliders had valid documentation and did not demonstrate any malfunction prior to the accident;
- Prior to the critical flight, the gliders had fulfilled the conditions of airworthiness;
- The gliders were destroyed in the accident;
- Nobody was injured in the accident.

3.2 Causes of the air accident

- Collision of the gliders in an upward flow in a right turn;
- Incorrect position of the "A" glider in turning with regard to the pilot's field of vision.

4. SAFETY RECOMMENDATIONS

Based on the safety investigation of the causes of the aviation accident

of gliders type **LS8-18**
registration marks **SP-3893** and **LY-GOT**

which occurred on 14 April 2018, it is our recommendation for the

National Aero Club of the Slovak Republic:

to make a detailed analysis of the air accident with aircrew during regular winter training, emphasizing the importance of following all procedures and rules with regard to giving way when lining up, circling, leaving upward flows and avoidance during the flight.

In Bratislava, on 2 May 2018