Report

Organization Scientifique et Internationale du Vol à Voile (OSTIV)
International Scientific and Technical Gliding Organisation
www.ostiv.org

Rolf Radespiel, President

International Gliding Commission
Plenary on 1-2 March 2024
Toulouse

Braunschweig, February 2024

Report on the activities of OSTIV for the period 1 March 2023 to 1 March, 2024

1. Overview of OSTIV Board Operations

Extended Board of OSTIV:
President: Prof. Dr. Ing. Rolf Radespiel, Germany
Vice-President: Prof. Dr. Mark Maughmer, USA
Members: Prof. Dr. Zafer Aslan, Turkey; Dr. Goetz Bramesfeld, Canada; Dipl.-Ing. Michael Greiner, Germany; Dr. Judah Milgram, USA; Richard Carlson, USA; Dr. Ing. Lukas Popelka, Czech Republic; Ir. Gerard Robertson, New Zealand.

The Journal "Technical Soaring (TS)" is an Online Journal, appearing quarterly. TS is downloaded from http://journals.sfu.ca/ts/index.php/ts . Chief Editor is Dr. Kurt Sermeus, Canada.

Note that the TS issues of the last 12 months are only accessible by login. This is a privilege of members only. Non-members can download TS from the 13th month after publishing.

The Board worked on means to improve the outreach of OSTIV. These are
- most of previous OSTIV publications are now digitalized,
- free membership to students,
- establishing joint technical sessions sponsored by OSTIV and AIAA on sailplane research and technology, to be held annually as part of the AIAA Aviation Conference.

2. Panel meetings

The ***Sailplane Development Panel (SDP)***, chaired by Michael Greiner, had its last annual meeting on 19 September 2023 at the premises of EASA in Cologne, Germany. The meeting was held as a hybrid conference and attended by around 25 engineers from 9 countries. Items discussed were:

- overview on future activities by EASA related to safety, particularly the topic of rigging gliders, and future safety campaigns with gliding federations in Europe
- feedback by SDP to EASA on various proposed amendments of CS 22
- report from the SDP working group on Crashworthiness of Cockpits: This group works into three directions: 1) spine breaking loads, 2) Advanced crashworthiness

Address: OSTIV c/o TU Braunschweig,
Institute of Fluid Mechanics
Hermann Blenk Str. 37
D-38108 Braunschweig, Germany

Phone: +49 531 39194250
e-mail president@ostiv.org

Bank: Deutsche Bank AG
D-38108 Braunschweig, Germany
Bic code: DEUTDEDB270
IBAN code: DE33 2707 0024 0345 8999 00

standard, 3) Evaluation of recent crash tests. Resulting from the work into the direction 2), Martin Volck has drafted an OSTIV passive safety standard (OPSS), that could serve as a non-mandatory standard of passive safety for those who are willing to offer their customers a safer product. The present draft has already drawn interest by competition pilots and sailplane manufacturers.

- report from the SDP working group on flutter. Three group meetings have been held. The status of flutter substantiation has been reviewed, and shortcomings of present formulation in CS22 were identified. Establishment of technical standards are ongoing. A new wording for CS22.629 was drafted. The group reminds on the altitude effect on flutter and the need to demonstrate safety at high altitudes. The group suggests to make the altitude problem aware to the pilots, e.g. by flight manual table. This is regarded as sufficiently matured practice. The work group intends to close their work by archiving their results.
- Report from the working group on electric propulsion.

Next SDP meeting will take place in August 2024.

The Training and Safety Panel (TSP), chaired by Richard Carlson, met on 1 and 2 December 2023 online. The TSP meeting discussed a range of items:

- reports on accident statistics and safety related activities by the national representatives within OSTIV
- future collaborative OSTIV activities on Safety Management Programs for glider pilots
- Joint work with the International Gliding Commission (IGC) on improving safety during international gliding competitions. One important dimension of future improvement of safety during competitions concerns the need for relevant statistical data that could guide the proactive development of means for improving gliding safety. This is very important as complex interactions of competition rules, competition organization, daily flight operations during competitions as well as the high ambitions of competing pilots appear to create particular hazards. The International Gliding Commission (IGC) and OSTIV TSP have begun a joint initiative to identify the most important hazards in competition flying. The first meeting took place as a joint workshop on 4 March 2023, where Richard Carlson, Henrik Svensson, and Rolf Radespiel represented OSTIV while the IGC Board, IGC Competition Stewards, former Competition Directors, and competition pilots were also present. The workshop identified mid-air collisions as the dominating single hazard for severe accidents in international competition flying. In order to analyse the sensitivities of the related risks with respect to a large number of contributing factors, the workshop recommended to analyse existing and future flight data using igc-files from competition flight-recording. We think that OSTIV can well take up this technical task. We intend to use and develop further an existing flight proximity analysis software for this purpose. TU Braunschweig has made first contacts to the software developer and to a number of practitioners in competition flying and competition organizing. TU Braunschweig presently seeks to involve students of Aerospace Engineering to perform practical work for such analysis We think that these activities should be broadened and strengthened as part of future TSP activities.

The Meteorological Panel (MP), chaired by Prof. Dr. Zafer Aslan, had its last meeting on 16 and 17 February 2024 in a hybrid meeting format that took place at University of Kyrenia, Cyprus. The Meteorological Panel performed significant efforts to increase its outreach by organizing part of this Panel Meeting as training sessions. This format aims at attracting young scientists and newcomers to the topics of the work by the Panel. Lectures on a variety of subjects were presented, that included big data analysis, weather forecasting, characterization thermals, characterization of waves, effects of climate change.

4. OSTIV Congress

The XXXVI Congress of the International Scientific and Technical Organisation for Gliding (OSTIV) will take place from 19-23 August 2024 in Uvalde, Texas along with the 38th FAI World Gliding Championships 2024 (18m, 20m, Open, 14 August - 1 September 2024). The Congress will be organized as a hybrid event. Meeting rooms will be provided by the Southwest Texas Junior College, which is located close to the airport. The Congress Organizer will provide an online means of Congress participation in addition.

The Call for Presentations from the XXXVI OSTIV Congress are available at

https://www.ostiv.org/congress/congress-events/congress-details/xxxvi-congress.html

Interested practitioners of gliding present at the38th FAI World Gliding Championships are invited to attend presentation session and individual presentations of the Congress. Stay tuned to read more about the presentation program at OSTIV's website as the date of the Congress is approached.

I would like to close this report by thanking IGC members for their continuous interest and support. I will be present at the IGC-Plenary in Toulouse. I look forward to meeting with people interested in the work of OSTIV.

Rolf Radespiel