

Technical Soaring



The Scientific, Technical and Operational Journal of
the Organisation Scientifique et Technique Internationale du Vol à Voile
(International Scientific and Technical Organization for Soaring)

Volume 48, Number 3

July — September 2024

EDITOR-IN-CHIEF

Dr. Kurt Sermeus

ASSOCIATE EDITORS

Prof. Dr. John J. Bird — *USA*

Prof. Dr. Bruno Neining — *Switzerland*

Co-Chairs, Scientific Section and Meteorological Panel

Prof. Dr. Mark Maughmer — *USA*

Chair, Technical Section

Dr. Michael Greiner — *Germany*

Chair, Sailplane Development Panel

Richard Carlson — *USA*

Chair, Training and Safety Panel

Prof. Dr. Goetz Bramesfeld — *Canada*

OSTIV PRESIDENT

Prof. Dr. Rolf Radespiel

Germany

OSTIV VICE PRESIDENT

Prof. Dr. Mark Maughmer

USA

MEMBERS OF THE OSTIV BOARD

Prof. Dr. John J. Bird — *USA*

Prof. Dr. Goetz Bramesfeld — *Canada*

Richard Carlson — *USA*

Dr. Michael Greiner — *Germany*

Dr. Judah Milgram — *USA*

Dr. Lukáš Popelka — *Czech Republic*

Murray Stimson — *Australia*

Copyediting

Em. Prof. Dr. Edward Hindman

Typesetting

Ali Askari

Journal Online Manager and Archivist

Dr. Kurt Sermeus

© 2024 Organisation Scientifique et Technique Internationale
du Vol à Voile
All rights reserved
ISSN 0744-8996

From the Editor 33

Novel Variometer for Gliders using Global Navigation Satellite System and Inertial Navigation System data

Maximilian Betz, Klaus Schaefer, Andreas Weskamp 34

Technical Soaring (TS) documents recent advances in the science, technology and operations of motorless aviation.

TS is published quarterly by the Organisation Scientifique et Technique Internationale du Vol à Voile (International Scientific and Technical Organization for Soaring, OSTIV), c/o TU Braunschweig, Institute of Fluid Mechanics, Hermann-Blenk Str. 37, D-38108 Braunschweig, Germany. E-mail: president@ostiv.org; URL: www.ostiv.org.

Subscription is restricted to OSTIV members but material can be submitted by anyone. Annual dues are €25 for Individual/Local Club Membership; €80 for Scientific/Technical Organization/Library Membership and €250 for Active Members (National Aero Club Members of FAI). Students under 25 years of age may join free of charge.

Submitted research papers will be peer-reviewed. Guidelines for preparation and submission of manuscripts can be found in this issue and on the OSTIV website in the 'editor' section.

TS is online (full-color) at journals.sfu.ca/ts/. Back issues, from Vol. 1, No. 1 to the current issue are online. OSTIV members have complete access to *TS* online; non-members may access titles and abstracts. Members should contact the webmaster, ts-support@ostiv.org, for access.

The name *Technical Soaring* and its cover layout are fully rights-protected and belong to the Soaring Society of America; they are used by permission.

Open Access Policy

Reader Rights. For the first twelve months following publication, only OSTIV members may download material. After twelve months, free download to all.

Reuse Rights. No reuse for the first twelve months, after which material may be reused in other works only with permission of the authors of the article.

Copyrights Authors retain copyright to the basic material. OSTIV retains copyright to the published version. Works that are inherently in the public domain will be noted as such on their title pages.

Author posting rights Authors may not post copies of their articles on websites until twelve months after publication, except for posting on a ResearchGate account owned by the author. After twelve months, author may distribute freely by any means and post to third-party repositories. Authors may distribute individual copies of their articles at any time.

Archiving. Authors may archive their own papers on the web and in Open-Access archives as follows. The version of the paper as first submitted to *Technical Soaring* may be archived at any time. (This will not disqualify the manuscript from publication in *TS*.) The version as published may be archived in Open-Access archives starting twelve months following publication. OSTIV may archive papers as published at any time.

Machine Readability After twelve months, article full text, metadata, and citations may be crawled or accessed without special permission or registration.