Technical Soaring



The Technical, Scientific and Operational Journal of Organisation Scientifique et Technique Internationale du Vol à Voile *and* The Soaring Society of America, Inc.

EDITORS

Dr. Ing. Ladislav Smrcek - OSTIV Rob Sjostedt - SSA Prof. Dr. Mark Maughmer

OSTIV

PRESIDENT

Prof. Ir. L.M.M. Boermans

The Netherlands

VICE PRESIDENT

Dipl. Ing. Christoph Kensche Germany

MEMBERS OF THE BOARD

Dipl. Ing. John Ashford - Australia Prof.Dr. Ward Hindman - USA Prof. Dr. Mark Maughmer - USA Ian Oldaker - Canada Dr. Ing. Michael Rehmet - Germany Dr. Hermann Trimmel - Austria

> CHAIRMAN, TECHNICAL SECTION Prof. Dr. Mark Maughmer

CHAIRMAN, SCIENTIFIC SECTION METEOROLOGICAL PANEL

Dr. Hermann Trimmel

CHAIRMAN, SAILPLANE DEVELOPMENT PANEL Dr. Ing. Michael Rehmet

CHAIRMAN, TRAINING AND SAFETY PANEL Ian Oldaker

SSA

CHAIRMAN OF THE BOARD

Dianne Black - Nixon

Publications Staff
Mark Maughmer, Bernald Smith
Layout/Printing - Fremont Printing
Fremont, CA 94538 - USA
Distribution - Roadrunner Mailing Service
Fremont, CA 94538 - USA

© 2007 Organisation Scientifique et Technique Internationale du Vol à Voile All rights reserved ISSN# 0744-8996

A High-Performance Sailplane Airfoil with Variable Upper-Surface Contour	
Gotz Bramesfeld, Peter Wierach,	
Christian Uckert, Reiner Kickert	
Critical Flutter Speed of Sailplanes Calculated for	
High Altitude: Examples of Computation	**
Wojciech Celestyn Chajec 44	O P
Alleviating Capabilities of the Sailplane Structure	***
Wieslaw Stafiej	other
ALPTHERM-A PC-based Model for Atmospheric	
Convection over Complex Topography	
Olivier Liechti, Bruno Neininger	oth

Volume 29, Number 2 Printed January 2007

The objective of *Technical Soaring* is to document recent advances in the science, technology and operational aspects of motorless aviation.

Technical Soaring is published quarterly by Organisation Scientifique et Technique Internationale du Vol à Voile (OSTIV); Kluyverweg 1; NL-2629 HS Delft; The Netherlands; tel: +31.15.278.6387; fax: +31.15.278.3533; email: <l.m.m.boermans@lr.tudelft.nl.> Subcription is restricted to OSTIV members only. Rates/calendar year, based upon surface bulk delivery, are Euro45 for Individual & Local club membership; Euro80 for Library, Scientific/Technical Membership and Euro250 for Active Members (National Aero Club Members of FAI). First class or airmail delivery may be arranged for an extra fee. Submitted papers will be subjected to a technical, scientific and/or operational review before being accepted for publication. Manuscripts should be sent in electronic format, complete with illustrations and cover letter.

Material from OSTIV members should be sent to Prof. Ward Hindman; Earth & Atmospheric Sciences Dept., The City College of New York; Convent Ave. at 138 th Street; New York, NY 10031; USA. email: <hindman@sci.ccny.cuny.edu>. Material from SSA should be sent to Rob Sjostedt, 31 Salinas, Foothill Ranch, CA 92610 - USA; email: <robsjo@aol.com>

The name *Technical Soaring*, its cover layout and the SSA logo are fully rights-protected and belong to SSA; they are used by pemission.