

Technical Soaring



The Technical and Scientific Journal of The Soaring Society of America and
Oganization Scientifique et Technique du Vol a Voille

MANAGING EDITOR

Rob Sjostedt

OSTIV EDITOR

Ladislav Smercek, Jr.

SSA TECHNICAL PANEL

CHAIRMAN,

SSA TECHNICAL BOARD

Stephen Northcraft

DESIGN AND CONFIGURATION

Mark Maughmer

AERODYNAMICS

Dan Somers

METEOROLOGY

Harry Senn

STRUCTURES AND MATERIALS

Ed Crawley

INSTRUMENTATION

AND EQUIPMENT

John Hansman

FLIGHT TESTING

Einer Enevoldson

TOWPLANES AND

LAUNCH SYSTEMS

E.J. Indrebo

OSTIV REPRESENTATIVE

Bernald S. Smith

AIRWORTHINESS TECHNICAL

STANDARDS

Al Blackburn

OSTIV

PRESIDENT,

Dr. Manfred E. Reinhardt

CHAIRMAN,

TECHNICAL SECTION

Dipl. Ing. Winfried M. Feifel

CHAIRMAN,

SCIENTIFIC SECTION

METEOROLOGICAL PANEL

Dr. H Trimmel

CHAIRMAN,

SAILPLANE DEVELOPMENT

PANEL

Prof. Dr. Ing. Piero Morelli

CHAIRMAN,

TRAINING AND SAFETY PANEL

Bill Scull

©1997 The Soaring Society of America
All Rights Reserved
ISSN# 0744-8996

OSTIV SECTION

OSTIV Remarks by Manfred Reinhardt 2

Optimizing Figure-8 Soaring for Hill
and Wave Lift by W.A. O'N. Waugh 3

Design and Windtunnel Test Results of a Flapped
Laminar Flow Airfoil for High-Performance Sailplane
Applications by L M.M. Boermans and A. van Garrel 11

Standards For Sailplane Fatigue Testing Load
Programs and Evaluation by J. Gedeon 18

The OSTIV Sailplane Development Panel . by W.G. Scull 23

SSA SECTION

Practical Forecasting of Thermal
Soaring Weather by Jim Wang 27

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

Technical Soaring is published quarterly by the Soaring Society of America, Inc., P.O. Box E, Hobbs, NM 88241 (505) 392-1177. Subscription price for SSA members is \$24.00 (four issues per year) in the U.S., Canada and Mexico; for other foreign countries—\$27.00 per year. Subscription for non members of the SSA is \$30.00 per year.

First class or airmail can be arranged for an extra fee. Subscribers should send change of address notices to the above Hobbs box number, being sure to mention *Technical Soaring*.

Submitted papers will be subjected to a technical review before being accepted for publication. Manuscripts should be sent complete with illustrations and cover letter to: Rob Sjostedt, 1544 Blue Heron Way, Oregon, W153575.

Papers submitted for consideration by OSTIV should be sent to: Mr. Ladislav Smercek, Jr., Dept. of Aerospace Engineering, University of Glasgow, University Avenue, Glasgow-G12 8QQ Great Britain.