

CONTENTS

The global distribution of air traffic at high altitudes, related fuel consumption and trends.	1
By H.-G. Nüber and A. Schmitt	
Fuel consumption and emissions of air traffic.	12
By Hans-Peter Reichow	
Hydrogen technologies for future aircraft.	23
By Carl-Jochen Winter	
Pollutant emissions of existing and future engines for commercial aircrafts.	43
By H. Grieb and B. Simon	
Constituents and transport properties of the atmosphere above and below the tropopause.	84
By Peter Fabian	
The atmospheric chemical effects of aircraft operations.	96
By Paul J. Crutzen and Christoph Brühl	
Sensitivity of stratospheric ozone to present and possible future aircraft emissions.	107
By Donald J. Wuebbles and Douglas E. Kinnison	
Possible climatic effects of contrails and additional water vapour.	124
By H. Grassl	
Determination of contrails from satellite data and observational results.	138
By U. Schumann and P. Wendling	
An investigation of the climatic effect of contrail cirrus.	154
By K. N. Liou, S. C. Ou and G. Koenig	
Index of Contributors	170