THE ROYAL AERONAUTICAL SOCIETY

Australia Branches at: Canberra, Sydney, Melbourne and Adelaide. President: R. J. YATES, CEng, FRAeS. Hon. Secretary: B. A. J. SCOLES, FRAeS, 191 Royal Parade, Parkville, Victoria 3052.

Zimbabwe Branches at: Bulawayo, Gweru and Harare

President: M. D. A. van OLST, CEng, MRAeS. Hon. Secretary: Mrs. MARGARET HEAP, Assoc RAeS, 84 Broadlands Rd, Emerald Hill, Harare.

New Zealand Branches at: Auckland, Wellington, Palmerston North, Christchurch, Hamilton and Blenheim.

President: Gp. Capt. G. B. GILMORE, MRAeS. Hon. Secretary: M. MILSOM, BP New Zealand Ltd, 20 Custom House Quay, Wellington.

Southern Africa President: D. R. SPRING, MRAeS. Hon. Secretary: N. A. H. BARRAUD, MRAeS, PO Box 27335, Sunnyside, Republic of South Africa, 0132.

Bedford

President: A. B. HAINES, FRAeS.

Chairman: A. M. McVITIE. Hon. Secretary: G. I. PAULEY, Aircraft Research Assoc. Ltd., Manton Lane, Bedford MK41 7PF. Tel: 0234 50681.

Belfast President: Sir PHILIP FOREMAN, CBE, FRAeS.

- Chairman: L. L. MCHUGHES, MRAeS. *Chairman:* L. L. MCHUGHES, MRAeS. *Hon. Secretary:* W. GORDON, MRAeS, Dept. of Mech. Eng., College of Technology, College Square East, Belfast BT1 6DJ. *Tel:* Work 0232 227244. Home —
- 0232 710370.

Birmingham and Wolverhampton President: J. LENHAM, MRAeS. Chairman: E. ALBRECHT, MRAeS. Hon. Secretary: W. G. MORRIS, 16 Benson Ave, Goldthorn Park, Wolverhampton WV4 5HB. Tel: Work — W'ton 783361. Ex. 328. Home — W'ton 230132 330139.

Boscombe Down

- President: Air Cdre. G. C. WILLIAMS, AFC, MRAeS, RAF Chairman: B. RAMSDALE, BSc, CEng. FRAeS
- Hon. Secretary: Wg. Cdr. R. WOOD, CEng, MRAeS, RAF, ATG(A), Armament Division, A&AEE Boscombe Down, Salisbury SP4 0JF. Tel: 0980 Doot To 4000 23331. Ex. 2403.

Bristol

President: H: METCALFE, FRAeS,

Chairman: P. J. ALLARD, MRAeS Hon. Secretary: D. C. GREENMAN, MRAeS, Aero-dynamics Dept, No 7 Drawing Office, British Aerospace Aircraft Group, Filton House, Bristol BS99 7AR. Tel: 0272 693831. Ex. 464.

Brough

President: M. EDWARDS, FRAeS.

President: M. EDWARDS, HARS. Chairman: E. J. SOLMAN, AMRAES. Hon. Secretary: G. ROE, TEng(CEI), AMRAeS, Tech-nical Dept, British Aerospace, Kingston-Brough Division, Brough, Humberside HU15 1EG. Tel: Work — 0482 667121. Ex. 5531. Home — 0482 706610.

Cambridge President: Professor W. A. MAIR, CBE, FRAeS. Chairman: N. A. J. HARRY, FRAeS. Hon. Secretary: J. MOSELEY, AMRAeS, 6 Cooks Drove, Earith, Huntingdon, Cambridge PE17 3QG.

Chester

President: R. GRIFFITHS, FRAeS.

President: R. GRIFFLIRS, FRAES. Chairman: V. W. CLARKSON, MRAeS. Hon. Secretary: J. R. YOUNG, AMRAeS, British Aero-space, Hatfield Chester Division, Broughton, Chester. Tel: 0244 535333.

Christchurch

President: M. COBHAM, OBE, FRAeS. Chairman: R. C. GODWIN, FRAeS.

Hon. Secretary: C. H. GOOM, MRAeS, British Aerospace, Weybridge Bristol Division, Bourne-mouth (Hurn) Airport, Christchurch, Dorset. Tel: 0202 571133. Ex. 10.

Coventry

President: J. B. ROBERTS, FRAeS.

Aeronautical Journal November 1983

Chairman: A. J. WEBBER, MRAeS. Hon. Secretary: R. I. RATCLIFF, Assoc. RAeS, 23 Babbacombe Rd, Styvechale, Coventry CV3 5PE. Tel: 0203 413779.

Cranwell

President: Air Vice Marshal R. C. F. PEIRSE. Chairman: Wg. Cdr. D. W. HILLER, MRAeS. Hon. Secretary: Flt. Lt. M. S. MASON, RAF College, Cranwell, Sleaford, Lincs NG34 8HB. Tel: 0400 61201.

https://doi.org/10.1017/S0001924000019746 Published online by Cambridge University Press

Derby President: J. O. KEIR, FRAeS.

Chairman: J. BUSH, FRAeS.

Hon. Secretary: D. P. HARPLEY, AMRAeS, Rolls-Royce Ltd, East Midlands Airport, Derby DE7 2SA. Tel: 0332 811216

Dublin

President: R. W. O'SULLIVAN, FRAeS. Chairman: Capt S. J. P. LYTTLE.Hon. Secretary: J. CONNERNEY, Eng. Wing, Air Corps, Baldonnel, Co. Dublin. Tel: 592493. Ex. 28.

Gatwick President: A. T. PUGH, FRAeS. Chairman: T. J. PATRICK, MRAeS. Hon. Secretary: G. BOYLING, BCal, Caledonian House, Crawley, West Sussex RH10 2XA.

Glasgow President: Dr. A. W. BABISTER, MRAeS. Chairman: T. J. GOODWIN, AMRAeS. Hon. Secretary: F. FRENCH, MRAeS, 27 Bourtree Road, Hamilton ML3 8QA. Tel: 03552 20200. Ex. 163.

Gloucester and Cheltenham President: Sir ROBERT HUNT, HonFRAeS. Chairman: K. BEST, FRAeS.

Hon. Secretary: M. CHANCE, MRAeS, Dowty Rotol Ltd. Cheltenham Rd, Gloucester. Tel: 0452 712424.

Halton

- President: Gp. Capt. M. J. EVANS, ADC, CEng, MRAeS, RAF.
- Chairman: Wg. Cdr. J. B. EMERY, OBE, CEng, MRAeS, RAF
- Secretary: Sqn. Ldr. P. G. HISCOCK, RAF, Elec-trical Training Squadron, RAF Halton, Bucks HP22 5PG. Tel: 0296 623535. Ex. 315.

Hatfield

- President: M. J. GOLDSMITH, FRAeS.
- Chairman: F. W. VANN, FRAES. Hon. Secretary: K. GREEN, MRAeS, Repair Drawing Office, British Aerospace, Hatfield Chester Division, Hatfield, Herts. Tel: 07072 62345. Ex. 89.

Isle of Wight

- President: M. J. BRENNAN, FRAeS. Chairman: R. L. WHEELER, MRAeS. Hon. Secretary: N. MAY, Technical Office, British Hovercraft Corporation Ltd, East Cowes, Isle of Wight. Tel: 098-29 4121.

London Airport President: Sir JOHN KING, Assoc. RAeS. Chairman: P. J. CRAWFORD, MIMechE, FSLAET. Hon. Secretary: J. D. BROWN, MRAeS, British Airways, Room A123, Technical Block A(5356), London (Heathrow) Airport, Hounslow, Middx TW6 2JA. Tel: 01-750 5603.

Loughborough

- President: Professor D. J. JOHNS, FRAeS.
- Chairman: S. JAMIESON. Hon. Secretary: L. E. WOODFIELD, AMRAeS, Transport Technology Dept, Loughborough University of Technology, Loughborough, Leics. LE11 3TU. Tel: Loughborough 63171. Ex. 470.

Manchester

- President: N. V. BARBER.
- Chairman: J. PEDLEY, AMRAeS. Hon. Secretary: W. JAMES, MRAeS, British Aerospace, Manchester Division, Woodford, Stockport, Cheshire SK7 1QR. Tel: Office: 061 439 5050. Ex. 170.

Medway President: P. A. HEARNE, FRAeS.

- Vice President: M. MOULTON, CEng, MRAeS.
- Acting Chairman: I. F. COOPER, CEng, MRAeS. Hon. Secretary: F. H. WOOD, MRAeS, c/o Marconi Avionics Ltd, Airport Works, Rochester, Kent. Tel: 0634 44400.

Preston

- President: F. E. ROE, FRAeS.
- Chairman: A. G. BARNES, MRAeS. Hon. Secretary: J. R. HUNTINGTON, MRAeS, British Aerospace, Warton Division, Warton Aerodrome, Preston. Tel: (0772) 633333 Ex. 60.

Prestwick

President: R. McINTYRE, FRAeS. Chairman: V. B. M. McLEONARD, MBE, AMRAeS, Hon. Secretary: I. McDONNELL, FRGS, AMRAeS, Auchairne, Ballantrae, Ayrshire. Tel: 046 583 344.

Southampton

- President: Professor G. M. LILLEY, FRAeS. Chairman: C. WISE.
- Hon. Secretary: S. W. D. WOLF, BSc, AMRAeS, Dept. of Aeronautics and Astronautics, The University, Southampton, Hants. SO9 5NH. Tel: 0703 559122. Ex. 2303

Southend

President: A. J. BROOKE-WALDER, MRAeS. Chairman: P. R. GROUT, AMRAeS.

Hon. Secretary: D. M. GLADSTONE, MRAeS, 36 Brooke House, Town Square, Basildon, Essex SS14 1HX. Tel: Basildon 284621; Work: 22861. Ex. 290.

- Stevenage President: T. G. KENT, CBE, CEng, MRAeS.
- Chairman: C. H. MARTIN, CEng, FRAeS. Chairman: C. H. MARTIN, CEng, FRAeS. Hon. Secretary: M. F. RICKETT, AMRAeS, British Aerospace, Dynamics Group, Gunnels Wood Rd, Stevenage, Herts. SG1 2AS. Tel: 0438 3456. Ex. 325.

Swindon

- President: W. GILLESPIE, CEng, MRAeS. Chairman: G. N. M. GINGELL, CEng, MRAeS.
- Hon. Secretary: Sgn. Ldr. J. J. D. RICHARDSON, CEng, MRAeS, RAF, Support Engineering Squadron, RAF Brize Norton, Oxon. Tel: 0993 842551. Ex. 562.

Weybridge President: J. T. STAMPER, FRAeS

OVERSEAS BRANCHES

Petaling Jaya, Selangor.

Chairman: Dr. K. L. LEGG, FRAeS.

Citairman: Dr. N. L. LEGG, FRAES.
Act. Hon. Secretary: J. R. ADDERSLEY, MRAeS, MBAC, c/o Civil Aviation Dept, 10/F, United Centre, 95 Queensway, Hong Kong. Tel: Office: 5-297518.
Ex. 260. Home: 3-7219441.

Awang, MRAeS. Hon. Secretary: R. H. STEVENS, 3 Jalan, 22-55

General Datuk ARIFF bin Datuk

367

Hong Kong

Malaysia

Chairman:

Chairman: M. W. SALISBURY, MRAeS. Hon. Secretary: A. M. DOBSON, MRAeS, British Aerospace, Weybridge Bristol Division, Weybridge, Surrey. Tel: 97 45522. Ex. 6945.

Hon. Secretary: P. J. BAKER, MRAeS, Programme Directorate Lynx, Westland Helicopters Ltd, Yeovil, Somerset. Tel: 0935 75222. Ex. 2624.

Yeovil President: Sir Basil BLACKWELL, FRAeS. Chairman: V. A. B. ROGERS, FRAeS.

CONFERENCE PROCEEDINGS AVAILABLE FROM THE ROYAL AERONAUTICAL SOCIETY

SURFACE MAIL AND PACKING £1.50

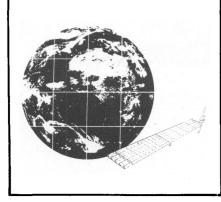
			11100		
			£		
1973	16/17 May	Spring Convention. 2nd Flight Simulation Symposium	5.00		
1974	20/21 February	Application of Electrical Control to Aircraft Propulsion Systems	5.00 12.00		
1974	24/28 March	2nd International Symposium on Air Breathing Engines, Sheffield			
1974	15/16 May	Spring Convention. Review of Precision Resources & Their Effect on Air			
		Transport	5.00		
1975	24/27 March	8th International Aerospace Instrumentation Symposium, Cranfield	13.00		
1975	14/17 April	Lightning & Static Electricity Conference, Culham			
1975	20 November	The Future of the Airship: A Technical Appraisal			
1977	12 January	Application of Modern Gyro Technology			
1977	7 February	Manpowered Flight — The Way Ahead			
1977	30 May, 1/2 June	15th Anglo-American Conference in London — The Place of Aviation in Society	15.00		
1978	11 January	Telemetry Systems	5.00		
1978	1 February		5.00 4.00		
1978		Practical Crop Protection			
	5 April	Airborne Integrated Data Systems			
1978	19 April	Extending the Scope of Flight Simulation	6.00		
1978	17/18 May	Spring Convention — People, Motivation and Productivity	15.00		
1978	5/7 December	Energy and Aerospace	15.00		
1979	6 February	3rd Manpowered Symposium	7.00		
1979	14 February	(1) The Theme of Helicopters in Agricultural Aviation ((2) Chemical Safety Aspects	6.00		
1979	16/17 May	Spring Convention. Aerospace Electronics in the Next Two Decades	15.00		
1980	6 February	Helicopter Transmissions	5.00		
1980	7 February	Design for Military Aircraft Operability	5.00		
1980	13 February	Role of Aircraft in the Agricultural Strategy in the Year 2000	6.00		
1980	20 March	Digital Avionics — Promise and Practice	6.00		
1980	14/15 May	Spring Convention. Long-Life Aircraft Structures	15.00		
1980	26/28 August	RAeS/Financial Times. Aerospace into the '80s & Beyond	30.00		
1981	14 January	Trends in Missile Guidance Design Concepts	7.00		
1981	25 February	The European Aviation Scene — A Review for the '80s	7.00		
1981	10 March	RAeS/RINA. Airships & Their Maritime Applications	7.00		
1981	19 March	Energy Management & its Impact on Avionics	7.00		
1981	7/8 April	Experiences & Future Needs of Civil & Military Flight Simulator Users	15.00		
1981	20/21 May	Spring Convention. European Collaborative Projects	15.00		
1982	13 January	Direct Broadcasting by Satellite in Europe	10.00		
1982	24/26 March	Forward Swept Wing Aircraft, Bristol	30.00		
1982	30 March	Managing the Design Production Interface	8.00		
1982	6/7 April	Flight Simulation — Avionic Systems & Aero-Medical Aspects	15.00		
1982	27 April	Certification of Avionic Systems	10.00		
1982	12/13 May	Spring Convention. Air Traffic Management — Current Problems and	10.00		
	.2, 10 110,	Future Concepts	10.00		
1983	18 January	Testing for Space and Weapon Products	15.00		
1983	19 January	Planning Airline Fleet Composition	6.00		
1983	23 March	The Impact of Lasers on Avionic Systems	3.00		
1983	11/12 May	Spring Convention. How to Design and Make Aerospace Products Which	0.00		
		Work, Sell and Make a Profit	15.00		
			10.00		
		· · · · · · · · · · · · · · · · · · ·	4000		

September 1983

Price



Editor-in-Chief L.G. NAPOLITANO University of Naples



Space technology has now progressed from the initial phase of exploration to encompass four major areas of utilization which have reached varying degrees of development:

* Telecommunications

* Monitoring Earth's resources and environment

* Using the space environment to further scientific research into natural phenomena and the production of new products and techniques

* Fulfilment of mankind's energy needs

This progress, however, has created significant and steadily increasing information gaps between developers and users of space technology, between system designers and specialists, between policy makers and suppliers. The journal will provide the much needed information-bridge between these parties. The journal will offer surveys, trend analyses, strength and weakness assessments, cost-benefit analyses and will also cover legal aspects and social implications. The journal's emphasis will be on practical applications, system's performance and factual information.

Subscription Information

Published quarterly Annual subscription (1984) Two-year rate (1984/85)

US\$100.00 US\$190.00

EARTH-ORIENTED APPLICATIONS OF SPACE TECHNOLOGY

An International Journal

Editor-in-Chief: L G NAPOLITANO, Institute of Aerodynamics, University of Naples, P. Le Tecchio, 80-80125 Naples, Italy

A selection of papers

APPLE—Indian experimental geostationary communication satellite, U R RAO & R M VASAGAM.

Analysis of the 23 November, 1980 earthquake as a design basis for satellite emergency communication, G BERRETTA *et al.*

SARSAT: A satellite aided search and rescue system for location of distress radio beacons, D LUDWIG *et al.* Economy of small reusable LEO satellite platforms, D E KOELLE.

The potential evolution of the Space Transportation System, I BEKEY. Shuttle uprating and the evolution into derivative vehicles, F L WILLIAMS. Impact of space development on educational motivation, H I THORSHEIM & K K DYBDAL.

Manned space stations—a perspective, J H DISHER.

Satellite servicing from the shuttle orbiter, R L KLINE & R J ADORNATO.

Environmental enhancement of the oceans by increased solar radiation from space, J KLASSI.

Annual survey of spacelight safety systems: 11th supplement survey period: July 1980-June 1981, N E BROWN & J W BROWN.

Towards a grand strategy for the species, M A G MICHAUD.

The development of satellite communications and its socio-economic implications, A LEBEAU.

FREE SPECIMEN COPIES AVAILABLE ON REQUEST Advertising rate card available on request. Back issues and current subscriptions are also available in microform. Prices are subject to change without notice. Journal prices include postage and insurance. Sterling prices are available to UK and Eire customers on request. **Pergamon Press**

Headington Hill Hall, Oxford OX3 0BW, UK Fairview Park, Elmsford, New York 10523, USA

3A/7/11.82

This publication is available in microform.

NID 2 1127 134 WEIVERSITY DIGROFILMS INVENIATI	NUL 1979 906, 113 NO 3 9064	1440, 100, 2202 E trais, 000, 5	
University			

University Microfilms International

(name of publication)

Name _____ Institution _____

Street

City_____

State _____ Zip ____

300 North Zeeb Road Dept. P.R. Ann Arbor, Mi. 48106 U.S.A. 30-32 Mortimer Street Dept. P.R. London W1N 7RA England