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RECORD 1988/23

BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS

PROGRAM & INFORMATION

INTERNATIONAL WORKSHOP & SYMPOSIUM
SEISMIC PROBING OF CONTINENTS & THEIR MARGINS

BMR PUBLICATIONS COMPACTUS
(LENDING SECTION)



1-8 JULY 1988, CANBERRA

The lower half of the cover features a large green rectangular area. In the center, there are several overlapping yellow geometric shapes, primarily parallelograms and trapezoids, arranged in a way that suggests a stylized mountain range or a series of seismic wave pulses. On the left and right sides of this green area, there are white, jagged lines representing seismic waveforms. The text "Australia 1788-1988" is printed in white at the bottom center of the green area.

Australia
1788-1988

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International Workshop and Symposium
SEISMIC PROBING OF CONTINENTS AND THEIR MARGINS
1 - 8 JULY, 1988, Canberra, Australia.

PROGRAM AND INFORMATION

Bureau of Mineral Resources, Geology & Geophysics, Canberra, Australia.



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ORGANIZING INSTITUTIONS

The International Workshop and Symposium "Seismic Probing of Continents and their Margins" has been jointly organized by the following institutions in Australia:

- The Specialist Group on Solid-Earth Geophysics of the Geological Society of Australia.
- The Bureau of Mineral Resources, Geology and Geophysics of the Australian Department of Primary Industry and Resources.
- The Research School of Earth Sciences of the Institute of Advanced Studies, Australian National University.

The conference is sponsored internationally by:

- Working Group 6 of the Inter-Union Commission on the Lithosphere (ICL).
- The Commission on Controlled Source Seismology of the International Association of Seismology and Physics of the Earth's Interior (IASPEI).

FINANCIAL SUPPORTERS

The organisers wish to acknowledge and thank the following financial contributors to the conference without whom it would not have been possible to organise such a meeting in Australia.

- The International Association of Seismology and Physics of the Earth's Interior.
- The Inter-Union Commission on the Lithosphere.
- The Australian Academy of Science.
- The Canberra Community Development Fund
- Qantas Airways Ltd
- Australian Airlines
- CSR Oil & Gas Div.

ACKNOWLEDGEMENTS

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ORGANIZING COMMITTEE

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WORKSHOP TIMETABLEFORENOON, FRIDAY 1 JULYHuxley Lecture Theatre

- 09.00 Opening - Prof. K. Fuchs, Chairman, Inter-Union Commission on the Lithosphere.
- 09.20 Matthews, D.H. & the BIRPS Group, 12000 km of BIRPS: highlights and plans.
- 09.45 Okaya, D., T. Henyey, T. McEvilly, P. Malin & R. Clayton, CALCRUST acquisition and processing of deep crustal seismic profiles.
- 10.10 Brown, L.D., T.L. Pratt & T.M. Hearn, COCORP supercomputing.
- 10.35 Morning tea/coffee
- 11.10 Damotte, B., ECORS experience on explosive versus vibrators multi-offset seismic recording, - a few examples.
- 11.35 Brocher, T.M. & P.E. Hart, Direct comparison of dynamite and vibroseis methods for deep crustal reflection studies in the southwestern Basin and Range.
- 12.00 Goleby, B.R., & B.L.N. Kennett, Methods for improving the resolution of deep seismic reflections.
- 12.25 Lunch

AFTERNOON, FRIDAY 1 JULYHuxley Lecture Theatre

- 13.30 Phinney, R.A., K. Roy-Chowdhury, S. Kong, K. Hansen & J. Leven, Coherency techniques in processing crustal reflection data.
- 13.55 Marthelot, J-M., & M. Bano, Signal separation by coherence estimation: application to the ECORS data.
- 14.20 Peddy, C., Amplitude-with-offset studies of the lower crust on BIRPS synthetic-aperture deep seismic reflection data.
- 14.45 Greenhalgh, S.A., I.M. Mason & C.C. Mosher, Tau-p tri-axial polarisation analysis of deep seismic refraction/reflection data.
- 15.10 Afternoon tea/coffee
- 15.35 Luschen, E., P. Hubral, & K. Fuchs, Shear wave exploration of the crust beneath the Black Forest, Southwest Germany.
- 16.00 Dahl-Jensen, T., Static corrections on crystalline bedrock.
- 16.25 Fuchs, K., K.-J. Sandmeier, & B. Nolte, Anisotropy in crust and upper mantle - observations and models.
- 16.50 Discussion Period
- 17.20 End of day's proceedings
- 17.30 Drinks at Burgmann College

FORENOON, SATURDAY 2 JULYHuxley Lecture Theatre

- 09.00 Hardy, R.J.J., Continental margins and multiple reflections.
 09.25 Mutter, J.C., P. Buhl, Deep seismic reflection imaging of continental margins developed from wide-aperture CDP profiling.
 09.50 Enachescu, M.E., & N. Baker, Acquisition and processing of marine deep seismic reflection data collected offshore Newfoundland, east coast Canada.
 10.15 Hajnal, Z., I. Kesmarky & A. Overton, Reflection survey on Hobson's Choice Ice Island, Arctic Ocean.
 10.40 Morning tea/coffee
 11.10 Kravis, S., M.F. Coffin & R. Whitworth, Deep seismic studies of the Tasman Sea Basin - technical aspects.
 11.35 Morgan, J.V., P.J. Barton, C.N. Prescott, G.D. Spence, S.R. Fowler, R.S. White, G.K. Westbrook, A.N. Bowen & M.H.P. Bott, Seismic, gravity, and magnetic profiles over the Hatton Bank (northwest U.K.) passive margin: the importance of acquiring a large and diverse geophysical dataset.
 12.00 Mereu, R.F. & D. Epili, Pg Shingles: Results from the GLIMPCE onshore refraction data.
 12.25 Lunch

AFTERNOON, SATURDAY 2 JULY.Huxley Lecture Theatre

- 13.30 Wright, C., T. Barton, A. Spence, B. Goleby & D. Pfister, The interpretation of expanding spread reflection profiles: examples from central and eastern Australia.
 13.55 Totterdell, I.J., & M.R. Warner, Determining lower crustal seismic velocities from long-offset reflection data.
 14.20 Fluh, E.R., Piggy-back recording of Vibroseis signals during the BELCORP/DEKORP survey through the Rhenish Massif.
 14.45 Bock, G., Converted waves: examples from the crust and upper mantle.
 15.10 Afternoon tea/coffee
 15.35 Davis, P.M., H. Dahlheim, U. Achauer, H.M. Iyer & K.H. Olsen, Teleseismic tomographic determination of lateral variation in velocity of the crust and upper mantle beneath the East African and Rio Grande Rifts.
 16.00 Drake, L.A., Inversion of Love and Rayleigh waves.
 16.25 Discussion Period
 16.50 End of presentations for the day

SUNDAY 3 JULY

There is no formal scientific programme on this day.

It is suggested that those who are so inclined gather for lunch at some convivial location and if there is enough interest, an informal afternoon tour of the Canberra region can be arranged. This would take in some of the places where Australian wildlife can be viewed, etc.

An announcement will be made at the scientific sessions on Saturday 2 July regarding the details of arrangements.

FORENOON, MONDAY 4 JULYHuxley Lecture Theatre

- 09.00 Cook, F.A., & K.C. Coflin, Three-dimensional imaging of crustal structure in the northwestern Canadian Arctic.
- 09.25 Milkereit, B., A.G. Green, M.W. Lee, W.F. Agena, & C. Spencer, Pre- and post-stack migration and image enhancement techniques: application to GLIMPCE reflection data.
- 09.50 Mooney, W.D., K.F. Priestly, G.A. Thompson, R.B. Smith, & the PASSCAL Basin and Range Working Group, PASSCAL Basin and Range lithospheric seismic experiment, northwestern Nevada, U.S.A.
- 10.15 Gibson, B. & A. Levander, CMP stacked images of randomly heterogeneous targets.
- 10.40 Morning tea/coffee
- 11.10 Gao, S-H., & B.L.N. Kennett, Modelling reflections from the deep crust in three dimensions.
- 11.35 Oliver, R., J.-J. Wagner, L. Levato, S. Sellami, L. du Bois, & J. Besnard, Pseudo 3-D study using crooked lines from the Swiss Alpine Profiles PNR-20.
- 12.00 Liu, Q. & H. Fan, The ray-matrix method of synthetic seismograms for different source and receiver structures.
- 12.25 Lunch

AFTERNOON, MONDAY 4 JULY

- 13.30 Sambridge, M.S., & B.L.N. Kennett, 3-D structure of southeastern Australia - a nonlinear inversion of regional traveltimes.
- 13.55 Evans J.R. & H.M. Iyer, Active source high-resolution 3-dimensional imaging of Newberry and Medicine Lake volcanoes, Cascade Range.
- 14.20 Minshull, T.A., & R.S. White, Imaging fluids on seismic profiles across the Makran accretionary prism.
- 14.45 Kissling, E., Three-dimensional crustal structure in Yellowstone, Wyoming, by inversion, of local earthquake data.
- 15.10 Afternoon tea/coffee
- 15.35 Gibson, B. & A. Levander, Seismic reflections from randomly heterogeneous targets and the interpretation of wide-angle common shot gathers.
- 16.00 Roy-Chowdhury, K., R.A. Phinney, & J. Pan, Consequences of multiple scales of layering for the crustal seismic response.
- 16.25 Hobbs, R.W., & the BIRPS Group, Determining the physical properties of the crust.
- 16.50 Summing up
- 17.20 End of Workshop.

TUESDAY 5 JULY

07.30 Field Excursion to the Tumut Trough departs.

FORENOON

Melville Hall

10.00 - 12.30 Posters may be set up and viewed.

AFTERNOON

Melville Hall

14.00 - 16.30 Posters may be set up and viewed.

EVENING

22.00 Return of Excursion bus to Canberra.

SYMPOSIUM TIMETABLE

FORENOON, WEDNESDAY 6 JULY

Huxley Lecture Theatre

- 09.00 Opening - Prof. R. W. R. Rutland, Director, Bureau of Mineral Resources, Geology and Geophysics, Canberra.
- 09.20 Brown, L., Expanding frontiers for deep reflection profiling: deeper, faster, older, brighter, farther.
- 09.45 Hirn, A., and the ECORS Scientific Party, Crustal thickening in mountain ranges: wide-angle and vertical seismics through the Alps and Pyrenees.
- 10.10 Mutter, J.C., R.L. Larson & D. Falvey, Mechanisms of lithospheric deformation and magmatism during rifting: a deep seismic study of the N.W. Australian margin.
- 10.35 Morning tea/coffee

Interior Convergent Terranes and Fold Belts.

Huxley Lecture Theatre

- 11.00 Hall, J., G. Quinlan, Deep crustal fabrics and deformation styles from reflection profiles of the Appalachian/Caledonide system.
- 11.20 Bois, C., P. Choukroune, A. Nicolas, B. Pinet & M. Cazes, Contribution of deep seismic profiling to the study of major geodynamic problems in France and adjacent areas.
- 11.40 Reichert, G. & DEKORP Research Group, Results of deep-seismic reflection investigations in the Rhenish Massif.
- 12.00 Pharaoh, T. & R.A. Chadwick, Lower crustal heterogeneity beneath Britain from deep seismic reflection data.
- 12.20 Mueller, St., Lithospheric structure and deep-reaching processes beneath the Alps.
- 12.40 Lunch

Active and Passive Margins

Florey Lecture Theatre

- 11.00 Davey, F.J. & T. Stern, Crustal seismic measurements across the convergent plate boundary, North Island, New Zealand.
- 11.20 Barton, P.J., T.R.E. Owen, R.S. White, & J.S. Collier, The deep structure of the continental margin of East Oman.
- 11.40 Keen, C.E., W.A. Kay, & B.J. Todd, Deep structure and evolution of a transform margin determined from deep seismic reflection data.
- 12.00 Gudlaugsson, S.T., J.I. Faleide, S. Fanavoll, R.G. Rossland, & B. Johansen, Crustal structure and tectonics of the western Barents Sea - results from deep seismic reflection and refraction experiments.
- 12.20 Clowes, R.M., R.D. Hyndman, C.J. Yorath, & E.E. Davis, The structure and tectonic history of the western Canadian subduction zone.
- 12.40 Lunch

AFTERNOON, WEDNESDAY 6 JULYInterior Convergent Terranes and Fold Belts.Huxley Lecture Theatre

- 13.45 Choukroune, P., A. Hirn, F. Roure, and the ECORS Pyrenees team, The Pyrenees from deep seismic data - a finite model and its evolution.
- 14.05 Hurich, C.A., S. Deemer & Y. Kristofferson, Deep structure of the southern Norwegian Caledonides: A possible link between the Scandinavian and British Caledonides.
- 14.25 Monger, J.W.H. & R.M. Clowes, Evolution of Cordilleran crust in western Canada.
- 14.45 Polino, R., and the ECORS/CROP Group, The CROP/ECORS Western Alps seismic geotraverse.
- 15.05 Posgay, K., C. Hegedus, & Z. Timar, Deep seismic investigations of the lithosphere in Hungary.
- 15.25 Afternoon tea/coffee

Active and Passive MarginsFlorey Lecture Theatre

- 13.45 Williamson, P.E., S. Kravis, D.A. Falvey, & the NW Australian Study Group, Crustal structure across the Exmouth Plateau region.
- 14.05 Lee, C.S., N.F. Exon, & J.B. Willcox, Transtensional evolution of the Otway and Sorell Basins off southeastern Australia.
- 14.25 Coffin, M.F., R. Whitworth, S. Kravis & C. Johnston, Deep seismic reflection studies of the conjugate southeast Australia and Lord Howe Rise margins: preliminary results.
- 14.45 De Voogd, B., C.E. Keen & W. Kay, Inherited structures, deep fault geometry, and basin structural styles in eastern offshore Canada.
- 15.05 Teyssier, C., J. Pershing, & K. Kleinspehn, Stratotectonic palaeo-stress analysis of Spitsbergen Central Basin: implications for basin development and relative plate motion.
- 15.25 Afternoon tea/coffee

AFTERNOON, WEDNESDAY 6 JULYInterior Convergent Terranes and Fold Belts.Huxley Lecture Theatre

- 15.45 Harrington, H.J., Eastern Australia - Geological introduction to studies by the Explosion Seismic Group.
- 16.05 Leven, J.H. & D.M. Finlayson, Mid-crustal dynamics controlling basin formation: examples from the Devonian sub-basins in western Queensland.
- 16.25 Finlayson, D.M., K.D. Wake-Dyster, J.H. Leven, H.J. Harrington, & R.J. Korsch, Crustal terranes east of the Nebine Ridge across Phanerozoic eastern Australia.
- 16.45 Heney, T. & P. Malin, Evidence for Mesozoic subduction in southwestern U.S. from seismic reflection profiling and regional geological synthesis.
- 17.05 Fisher, M.A., T.M. Brocher, W.J. Nokleberg, G. Plafker, & G.L. Smith, Seismic reflection image of the lower crust of the northern part of the Chugach Terrane, Alaska: preliminary results of a survey for the Trans-Alaska Crustal Transect (TACT).
- 17.25 End of session for the day

Active and Passive MarginsFlorey Lecture Theatre

- 15.45 Enachescu, M.E., Seismic probing of the Newfoundland continental margin (east coast Canada): extent of the Mesozoic rift system.
- 16.05 Stern, T., & F.J. Davey, Lithospheric flexure as seen in seismic reflection data: examples from plate boundaries within New Zealand and Antarctica.
- 16.25 Shimamura, H., & T. Iwasaki, Different subduction structures in active margins near Japan revealed by OBS detailed refraction studies.
- 16.45 Moriya, T., Recent studies for upper crustal structure as derived from explosion seismic observations in Japan.
- 17.05 Zehnder, C.M., & J.C. Mutter, Deep seismic and geochemical evidence for rift-induced magmatism during breakup of the N. Atlantic.
- 17.25 End of session for the day

EVENING, WEDNESDAY 6 JULY

- 19.00-21.30 Drinks and view posters at Melville Hall
- 20.00 The Global Geoscience Transects Project: a progress report. -- J.W.H. Monger.

FORENOON, THURSDAY, 7 JULYHuxley Lecture Theatre

- 08.30 Warner, M.R., Basalts, water or shear zones in the lower crust?
- 08.55 Fountain, D.M., Seismic properties of lower continental crust based on laboratory measurements: The Kapuskasing Uplift example.
- 09.20 Etheridge, M.A., Crustal fluids and their role in interpreting deep seismic data.
- 09.45 Sobolev, S., & A.Y. Babeiko, Theoretical predictions of the seismic structure for the lower crust of different chemical compositions.
- 10.10 Morning tea/coffee

Extensional Terranes and RiftsHuxley Lecture Theatre

- 10.30 Hauser, E.C. Reflection Moho at 50 km (16 s) beneath the Colorado Plateau on COCORP deep reflection data.
- 10.50 Catchings, R. Crustal and upper mantle structure beneath large basalt-covered plateaus and extensional areas of the north-western United States: implications for lithospheric extensional processes.
- 11.10 Klemperer, S.L., & the BIRPS Group, Reflection signatures of Palaeozoic terrane accretion on BIRPS data.
- 11.30 Smith, C.A., & the BIRPS Group, GRID - 3-dimensional mapping of crust and mantle reflections, north of Scotland.
- 11.50 Pinet, B. & B. Colletta, Probing into extensional sedimentary basins.
- 12.10 Stein, A.M., & D.J. Blundell, Basement control upon the structural styles of sedimentary basins, NW Scotland, U.K.
- 12.30 Lunch

Crustal Compositions and ProcessesFlorey Lecture Theatre

- 10.30 O'Reilly S.Y., W.L. Griffin, B.D. Johnson & N.J. Pearson, The integration of seismic, magnetic, thermal and petrologic data for cratonic and non-cratonic lithosphere in Australia.
- 10.50 Chroston, P.N., Seismic characteristics of two exhumed sections of the continental crust: the Kohistan Volcanic Arc (N. Pakistan), and the Lofoten Archaean suite (N. Norway).
- 11.10 Sandmeier, K.-J., F. Wenzel, & K. Fuchs, Constraints on the petrological composition of the lower crust from modelling compressional and shear-waves.
- 11.30 Wagner J.-J., F. Barblan, R. Chessex, S. Sellimi, & A. Zingg, Physical properties of the deep alpine crust.
- 11.50 Reston, T.J., Modelling lower crustal structure.
- 12.10 Roots, W.D., A correlation between seismic reflection, magnetic anomaly and basement structural patterns in the chaotic areas of spreading-formed basins.
- 12.30 Lunch

AFTERNOON, THURSDAY 7 JULY

13.45

Posters displays at Melville Hall

Authors of poster papers will be at their posters throughout the afternoon to explain posters and answer questions.

Titles of Poster Papers

- Bock, G., S-wave usage in shallow refraction seismics.
- Cull, J.P., C.D.N. Collins & G.S. Lister, Digital recording and seismic profiles in Bass Strait.
- Dahl-Jensen, T., D. Dyrelus, C. Hurich, Y. Kristoffersen, J. Lindgren & H. Palm, First deep seismic results from the Scandinavian Caledonides.
- Davies, G.F., Mantle upwelling, lithospheric thinning and rifting.
- Dawson, P.B. & H.M. Iyer, Velocity structure of the crust and upper mantle beneath the Long Valley Caldera, California.
- De Voogd, B. & K. Dickie, Analysis of deep reflections in a three-dimensional Earth.
- Dyment, J., J.C. Sibuet & B. Pinet, Deep structure of the Celtic Sea and Western Approaches: a discussion about the formation of basins.
- Enachescu, M.E., The tectonic and structural framework of the eastern Newfoundland continental margin.
- Faleide, J.I., S.T. Gudlaugsson, & R. Jackson, Deep seismic transects across the sheared western Barents Sea continental margin.
- Finckh, P., & E. Kissling, & the Swiss Working Group for Reflection Seismology, Deep reflection seismic traverses across the Swiss Alps.
- Frost, E. & D. Okaya, Regional crustal extension in southwestern U.S.: Seismic geometries of core complexes, extensional basins, and detachment faults.
- Goleby, B.R., C. Wright, B.L.N. Kennett, R.D. Shaw, & K. Lambeck, The Central Australian Deep Seismic Transect.
- Green, A.G., and others, Deep reflection profiling across high grade metamorphic terranes.
- Green, R.W.E., J. Borchers, & Theron, W., A PC based, portable, continuous seismic recording system.
- Gudlaugsson, S.T., J.I. Faleide, S. Fanaudl, K.G. Rossland, & B. Jhansen, Crustal structure of the western Barents Sea from deep seismic reflection profiles.
- Hardy, R.J.J., R.W. Hobbs, & M.R. Warner, Seismic event labelling.
- Hawman, R.B., D.A. Walker, R. Carbonell, R.H. Colburn, S.C. Key, S.B. Smithson, R.A. Johnston, W.D. Mooney, R.B. Smith, & G.L. Thompson, P & S wave velocity structure of the crust beneath the northwestern Basin and Range, U.S.A.: 1-D and 2-D Inversion of wide angle travel-time data from the 1986 Nevada PASSCAL experiment.
- Hearn, S.J., Network computing concepts in seismic data analysis.
- Henvey, T.L., P.C. Leary & T.V. McEvilly, VSP and CDP profiles of the upper crust from the Cajon Pass deep scientific borehole site - a joint DOSECC/CALCRUST experiment.

- Heney, T.L., B.Ambos, R. Lawson, M. Spongberg, P.E. Malin, E. Goodman, J. Crowell & L. Silver, Preliminary crustal structure of the western Mojave Desert, Tehachapi Mountains and southern San Joaquin Valley, California (CALCRUST Reflection Profiling Corridor III).
- Hobbs, R.W., D. Scheirer, & the BIRPS Group, How near surface geology affects the imaging of the lower crust.
- Hurich, C.A., & the Norwegian Lithosphere Group, Norwegian Deep Seismic Project; deep seismic profiling in Norway.
- Juhlin, C., G. Rissler-Akesson, & D. Dyrelus, Results from surface and borehole investigations during the Deep Gas Drilling Project in the Siljan impact structure.
- Kaila, K.L., P.R.K. Murty, V.K. Rao, & N Venkateswarlu, Deep seismic soundings in the Godavari rift valley, India.
- Kaufman, S., and the COCORP staff, The COCORP transects.
- Kay, W.A., C.E. Keen, B. De Voogd, & K. Dickie, The modern margin of eastern Canada: deep seismic reflection profiling.
- Keen, C.E., Marillier, F., P. Durling, & W.A. Kay, Deep seismic reflection lines from the Canadian Appalachians.
- Kissling, E., and the Swiss Working Group for reflection seismology, Deep reflection seismic traverses across the Swiss Alps.
- Klemperer, S.L., & the BIRPS Group, Six parallel crossings of the Iapetus suture, Palaeozoic lower crustal reflectors traced for 900 km along strike.
- Lee, C.S., J.F. Marshall, & D.C. Ramsay, Controls on episodic basin development in the North Perth Basin, Western Australia.
- Levander, A., & A. Meltzer, Wide angle and vertical incidence seismic data in the central California margin.
- Leven, J.H., P. Stuart-Smith, M. Rickard, & K.A.W. Crook, A deep seismic survey across the Tumut Trough, southeastern Australia.
- Liu, Q. & Y. Lu, A procedure for determining the velocity structure of the lithosphere from broadband teleseismic P waveforms.
- Mereu, R.F., B. Dunn & J. Brunet, An efficient method for sending a large seismic section from a mainframe computer to a dot matrix printer located at a remote site.
- Moriya, T., Recent studies for upper crustal structure as derived from explosion seismic observations in Japan.
- Okaya, D., T. Henyey & E. Frost, Deep crustal imaging in southwest U.S. using industry seismic profiles.
- Owen, T.R.E. & P.J. Barton, The Cambridge digital seismic system for land and marine use.
- Peddy, C., & D. Scheirer, How much do background noise levels affect what we see on deep seismic reflection profiles.
- Pinet, B., & B. Doligez, Deep structure and numerical modelling of the Viking Graben, North Sea.
- Reichert, C. & the DEKORP Research Group, Results of DEKORP investigations.
- Roy-Chowdhury, K., & R.A. Phinney, Reprocessed seismic sections: a tour through eastern U.S.A.
- Scott-Robinson, R.A. & D.J. Blundell, Mobil Survey, southern North Sea, for BIRPS.
- Seman, M.R., R.A. Young, & B.J. Evans, Modelling of steeply dipping reflections aids CMP processing: the Darling Fault, Western Australia.
- Shaw, R.D., B.R. Goleby, K. Lambeck, B.L.N. Kennett, & C. Wright, Tectonic evolution of the central Australian region.

- Shimamura, H., & T. Kanazawa, Instrumental developments in Japanese OBS (Ocean Bottom Seismographs).
- Smith, C.A., & the BIRPS Group, Mantle reflections mapped in 3-dimensions.
- Smithson, S.B., R.B. Hawman, R.M. Berg, R.A. Black, J.R. Cozzens, K. Gohl, M.T. May, L.J. Mayrand, M.A. Speece, P.J. Taucher, M.E. Templeton, D.P. Wang, D. Zhang, Contrasting crustal structure.
- Stagg, H.M.J., J.B. Wilcox, & H.L. Davies, Extension, compression, and the formation of the central Great Australian Bight Basin.
- Sugiharto, S., S.A. Greenhalgh, & C. Wright, Tomographic reconstruction of upper crustal velocity variations in the Arunta Block, central Australia.
- Symonds, P.A., P.J. Davies, C.J. Pigram, & D.A. Feary, Deep structure of the Townsville Trough, northeast Australian continental margin.
- Wake-Dyster, K.D., D.M. Finlayson, J.H. Leven, H.J. Harrington, & D.W. Johnstone, A crustal transect across Phanerozoic eastern Australia in southern Queensland.
- Warner, M.R., Absolute reflection coefficients from deep reflectors.
- White, N., & the BIRPS Group, Extension and subsidence of the continental lithosphere using regional seismic reflection profiles from the North Sea.

17.30 Finish poster presentations at Melville Hall

EVENING, THURSDAY 7 JULY

Canberra Club, West Row, Civic.

- 19.00 Pre-dinner drinks.
- 19.30 Conference dinner.

FORENOON, FRIDAY 8 JULYHuxley Lecture Theatre

- 08.30 Green, A., A. Davidson, J. Percival, B. Milkereit, R. Parrish, F. Cook, W. Cannon, D. Hutchinson, G. West & R. Clowes, Origin of deep crustal reflections: Results from seismic profiling across high grade metamorphic terranes in Canada.
- 08.55 White, R.S., Magmatism at continental rifts and margins.
- 09.20 Keen, C.E., Marillier, F. and the Lithoprobe East Working Group, Three dimensional geometry of the Canadian Appalachians from deep seismic reflection data.
- 09.45 Jackson, I., R.L.Rudnick, S.Y. O'Reilly & C. Bezant. Laboratory wave velocity measurements and the constitution of the continental lithosphere.
- 10.10 Morning tea/coffee

Extensional Terranes and RiftsHuxley Lecture Theatre

- 10.30 Malin, P.E., E.D. Goodman, T.L. Henyey, E.L. Ambros, D.A.Okaya & T.V. McEvilly, The crustal evolution of the southern San Joaquin - Tejon Embayment from CALCRUST seismic reflection and refraction profiling.
- 10.50 White, N.J., The nature of extension in the North Sea.
- 11.10 Holbrook, W.S., R. Catchings, W.D. Mooney, C. Jarchow, & G. Thompson, Combined wide-angle and near-vertical incidence seismic profiling of the lithosphere in the northwestern Basin and Range province, Nevada, U.S.A.
- 11.30 McCarthy, J., S.P. Larkin & G.S. Fuis, Crustal structure of the Basin and Range Province and adjacent transition zone in central Arizona, U.S.A., from seismic refraction and wide-angle reflection profiling: implications for continental extension.
- 11.50 Tomek, C., T. Korab, I. Ibrmajer, A. Biely, J. Lexa, & L. Dvorakova, Deep reflection traverses in the West Carpathians.
- 12.10 Wright, J.A., & J. Hall, Anomalous crustal structure from deep seismic profiling in the Karoo Basin, Botswana.
- 12.30 Lunch

Precambrian TerranesFlorey Lecture Theatre

- 10.30 Korsch, R.J., The tectonics of central Australia: the 1985 BMR seismic experiments.
- 10.50 Wright, C., B.R. Goleby, C.D.N. Collins, & T. Barton, Deep seismic profiling in central Australia
- 11.10 Goleby, B.R., B.L.N. Kennett, R.D.Shaw, C. Wright, & K. Lambeck, Results from deep seismic reflection profiling in the Precambrian Arunta Block of central Australia.
- 11.30 Nelson, D., T. Pratt, L. Brown, R. Culotta, M. Giguere, E. Hauser, S. Kaufman, J. Oliver and J. Zhang, Proterozoic stratified sequences of the southern North American continent.

- 11.50 Behrendt, J.C., D.R. Hutchinson, A. Trehu, W. Cannon, M.W. Lee, C.R. Thornber, A. Green, B. Milkereit & C. Spencer, Seismic reflection (GLIMPCE) evidence of deep crustal intrusions and magmatic underplating associated with the Midcontinent Rift System of North America.
- 12.10 Fluh, E.R., Ch. Walther, & U. Luosto, Crustal structure along the POLAR profile in northern Finland.
- 12.30 Lunch

AFTERNOON, FRIDAY 8 JULY

Extensional Terranes and Rifts

Huxley Lecture Theatre

- 13.45 Goodwin, E., D. Okaya, & G. Thompson, Piggyback seismic reflection data from the Basin and Range - Colorado Plateau transition zone, western USA.
- 14.05 Faleide, J.I., S.T. Gudlaugsson, R. Jackson, A.M. Myhre & O. Eldholm, Deep seismic transects across the sheared western Barents Sea continental margin.
- 14.25 Frost, E. & D.Okaya, Regional crustal extension in southwestern U.S.: Seismic geometries of core complexes, extensional basins, and detachment faults.
- 14.45 Enachescu, M.E., Seismic probing of the eastern Newfoundland continental margin (east coast Canada): continental - ocean transition zone.
- 15.05 Afternoon tea/coffee

Precambrian Terranes

Florey Lecture Theatre

- 13.45 Cook, F.A. & K.C.Coflin, Seismic reflection crustal structure in the northwestern Canadian Arctic.
- 14.05 Pratt, T.L., R. Culotta, E. Hauser, K.D. Nelson, L.D. Brown, J.E. Oliver, & S. Kaufman, COCORP profiling of the eastern midcontinent of North America: Proterozoic layered rocks and the western Grenville Province.
- 14.25 Juhlin, C., Interpretation of the reflections in the Siljan Ring area based on the results from the Gravberg-1 borehole.
- 14.45 Kaila, K.L., P.R.K.Murty, V.K. Rao, & N. Venkateswarlu, Deep seismic soundings in the Godavari rift valley, India.
- 15.05 Afternoon tea/coffee

Huxley Lecture Theatre

- 15.25 Fountain, D.M., Controls of underplating and metamorphism in extensional terrains.
- 15.50 Clowes, R.M., Canadian Lithoprobe, a scientific update: new images of the continental crust.
- 16.15 Meissner, R., T. Wever & DEKORP Research Group. DEKORP's new lines: aspects of Variscan tectonics.
- 16.40 Discussion Period
- 17.30 End of Symposium