

THE LITHOPROBE CELEBRATORY CONFERENCE:

"From Parameters to Processes – Revealing the Evolution of a Continent"
October 12 - 15, 2004 Toronto, Ontario, Canada

Final Program and Associated Social Events [Includes Session Chairs]

Tuesday, October 12, 2004

19:00 – 22:00 Welcoming Reception – Centennial Ballroom, Inn Avenue East, Toronto	on the Park, 1100 Eglinton
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Wednesday, October 13, 2004

09:00 – 12:15	MEDIA MORNING CHAIR: Hugh Morris, Padre Resources, Delta, BC
08:30 - 09:00	Pressroom and conference area opens. Posters can be put up throughout morning
09:00 - 09:20	INTRODUCTION: A New View of the Continent Beneath Our Feet: LITHOPROBE's Scientific, Economic and Social Benefits Ron Clowes, Director, LITHOPROBE, U. of British Columbia, Vancouver, BC
09:20 – 09:40	The NSERC perspective on LITHOPROBE Janet Walden, VP, Research Partnerships Program, NSERC, Ottawa, ON LITHOPROBE and the Geological Survey of Canada: A productive partnership Murray Duke, Director-General, Minerals and Regional Geoscience Branch, GSC Ottawa, Ottawa, ON A Few Words from the Original LITHOPROBE Steering Committee
09:40 – 09:55	William Fyfe, U. of Western Ontario, London, ON The Ancient Earth: Development of the Canadian Shield, the oldest parts of North America – building a continental foundation from 4000 to 2500 million years ago John Percival, GSC Ottawa, Ottawa, ON
09:55 – 10:10	The Middle Earth I: Ancient oceanic crust in the middle of the Prairies and formation of the Canadian Shield 2000 to 1800 million years ago David Corrigan, GSC Ottawa, Ottawa, ON
10:10 – 10:25	The Middle Earth II: A Himalayan-scale mountain range through southern Ontario and Quebec – colliding continents enlarge proto-North America from 1100 – 1000 Ma Andrew Hynes, McGill U., Montreal, QC
10:25 – 10:45	BREAK

10:45 – 11:00	The Late Earth I: The story of the Appalachians – Opening and closure of ocean basins and the arrival of south American and African pieces in Atlantic Canada Cees van Staal, GSC Ottawa, Ottawa, ON
11:00 – 11:15	The Late Earth II: The story of the Canadian Cordillera – British Columbia grows westward and the Rocky Mountains are formed during the period 200 – 50 Ma Fred Cook, U. of Calgary, Calgary, AB
11:15 – 11:30	LITHOPROBE and the Mining Industry: Diamonds, Earth's mantle and the roots of continents Herman Grutter, Mineral Services Canada, North Vancouver, BC
11:30 – 11:45	LITHOPROBE and the Petroleum Industry: New contributions to regional geological frameworks and exploration for oil and gas deposits Gary Taylor, Past-president, Canadian Society of Exploration Geophysicists, Calgary, AB
11:45 – 12:00	LITHOPROBE and the International Community – a Canadian project, considered the best of its kind in the world, influences scientific approaches in other countries Maarten J. de Wit, U. of Cape Town, South Africa
12:00 – 12:15	"The Big One!": Megathrust earthquakes and LITHOPROBE on the west coast – contributions to understanding of seismic hazards Roy Hyndman, GSC Pacific, Sidney, BC
12:15 – 13:10	LUNCH at Ontario Science Centre; POSTER viewing
13:10 – 16:50	THE EARLY EARTH – ESTABLISHING THE CRATONS
13:10 - 14:50	CHAIR: Bill Davis, GSC Ottawa, Ottawa, ON
13:10 – 13:50	Recombining the fragmented structure and memory of cratons Maarten J. de Wit, U. of Cape Town, South Africa
13:50 – 14:20	The Slave craton from on top: The crustal view Wouter Bleeker, GSC Ottawa, Ottawa, ON
14:20 – 14:50	The Slave craton from underneath: The mantle view Alan Jones, Dublin Inst. Adv. Studies & GSC Ottawa
14:50 – 15:20	BREAK
15:20 - 16:50	CHAIR: Gordon West, U. of Toronto, Toronto, ON
15:20 – 15:50	The Superior craton – What have we learned from geological, geochemical and geochronological studies? Lessons on the development of the Archean Earth and processes involved Herb Helmstaedt, Queen's U., Kingston, ON
15:50 – 16:20	The Superior craton – What have we learned from reflection, refraction, teleseismic, magnetotelluric and heat flow studies? Lessons on development of the Archean Earth and processes involved Don White, GSC Ottawa, Ottawa, ON
16:20 – 16:50	Orogenic framework for the Superior Province: Dissection of the "Kenoran Orogeny" John Percival, GSC Ottawa, Ottawa, ON

Thursday, October 14, 2004

08:20 - 14:00	THE MIDDLE EARTH – STITCHING THE CRATONS AND OTHER EVENTS
08:20 - 10:00	CHAIR: David Symons, U. of Windsor, Windsor, ON
08:20 - 09:00	Progressive proterozoic growth of southern Laurentia by magmatic stabilization of lithosphere, and preservation of proterozoic suture scars in the modern-day lithosphere Karl Karlstrom, U. of New Mexico, Albuquerque, NM
09:00 – 09:30	Probing the Lithosphere of the Wopmay orogen Fred Cook, U. of Calgary, Calgary, AB
09:30 – 10:00	The Trans-Hudson and East Alberta orogens of western Canada – geophysical characteristics of complex collisional processes and delineation of the Sask craton Zoli Hajnal, U. of Saskatchewan, Saskatoon, SK
10:00 – 10:30	BREAK
10:30 - 12:00	CHAIR: Aphrodite Indares, Memorial U., St. John's, NL
10:30 – 11:00	Evolutionary Tectonic Development of the Trans-Hudson orogen - a tale of three cratons, a large ocean, accretionary and collisional tectonics David Corrigan, GSC Ottawa, Ottawa, ON
11:00 – 11:30	Evolution of the Southeastern Churchill Province and development of the Torngat orogen in northeastern Labrador – results from extensive geological and geophysical studies Jeremy Hall, Memorial U., St. John's, NL
11:30 – 12:00	The ascendency of a late paleoproterozoic and mesoproterozoic tectonic dynasty: An eastern Laurentian perspective Charlie Gower, Geological Survey Mines and Energy, St. John's, NL
12:00 – 13:00	LUNCH at Ontario Science Centre; POSTER viewing
13:00 - 14:30	CHAIR: Sandra Barr, Acadia U., Wolfville, NS
13:00 – 13:30	Architecture and tectonic evolution of the Grenville Province: Part of a hot wide orogen that developed over 200 M.y. on the southeastern margin of Laurentia <i>Toby Rivers, Memorial U., St. John's, NL</i>
13:30 – 14:00	The Grenville orogen of Ontario and New York – A Himalayan-Scale Mountain Belt: Significance of along-strike variations Sharon Carr, Carleton U., Ottawa, ON
14:00 – 16:40	THE LATE EARTH – YOUNG OROGENIC BELTS (I)
14:00 – 14:30	The Northern Appalachian orogen – From rifting and ocean opening to accretion of oceanic terranes and collisional events Cees van Staal, GSC Ottawa, Ottawa, ON
14:30 15:00	BREAK
15:00 - 16:00	CHAIR: Paul Williams, U. of New Brunswick, Fredericton, NB
15:00 – 15:30	The northern Canadian Cordillera - a synthesis of new geological and geophysical results for the Yukon and surrounding areas Jim Mortensen, U. of British Columbia, Vancovuer, BC
15:30 – 16:00	The evolving Cordilleran lithosphere Fred Cook, U. of Calgary, Calgary, AB
16:00 – 17:30	POSTER SESSION [with refreshments]

19:00 – 23:00	<i>LITHOPROBE</i> Banquet — Centennial Ballroom, Inn on the Park, 1100 Eglinton Avenue East, Toronto
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Friday, October 15, 2004

08:30 - 09:30	THE LATE EARTH – YOUNG OROGENIC BELTS (II)	
08:30 - 10:00	CHAIR: John Waldron, U. of Alberta, Edmonton, AB	
08:30 - 09:00	Probing the Cordilleran lithosphere with mafic lavas and mantle xenoliths Don Francis, McGill U., Montreal, QC	
09:00 – 09:30	Some recurring themes in Cordilleran orogenic evolution: Tectonic heredity, tectonic wedging, and retrograde mantle flow Ray Price, Queen's U., Kingston, ON	
09:30 - 12:00	PROCESSES IN EARTH – HOW THE PLANET WORKS (I)	
09:30 – 10:00	An 1800-km cross section of the lithosphere through the northwestern North American plate: Lessons from 4.0 billion years of Earth's history Fred Cook, U. Calgary, Calgary, AB	
10:00 - 10:30	BREAK	
10:30 - 12:00	CHAIR: Charlotte Keen, GSC Atlantic, Dartmouth, NS	
10:30 – 11:00	Geodynamical modeling of collisional orogens: from small-cold to large-hot orogens and applications to LITHOPROBE problems Chris Beaumont, Dalhousie U., Halifax, NS	
11:00 – 11:30	Coupled mantle-crust dynamics and its relevance for tectonic processes – Effect of mantle dynamics and properties on lithospheric structure Russ Pysklywec, U. Toronto, Toronto, ON	
11:30 – 12:00	Metamorphic-tectonic interactions in large hot orogens: Lower crustal flow in the central Gneiss Belt, western Grenville Province Becky Jamieson, Dalhousie U., Halilfax, NS	
12:00 – 13:00	LUNCH at Ontario Science Centre; POSTER viewing	
13:00 – 14:00	PROCESSES IN EARTH – HOW THE PLANET WORKS (II)	
13:00 - 14:30	CHAIR: Henry Halls, U. of Toronto, Toronto, ON	
13:00 – 13:30	Precambrian mafic magmatism: An overview Larry Heaman, U. of Alberta, Edmonton, AB	
13:30 – 14:00	Secular changes in tectonic evolution and the growth of continental lithosphere Tom Skulski, GSC Ottawa, Ottawa, ON	
14:00 – 16:00	THE RESOURCEFUL EARTH – SUSTAINING AND ENDANGERING LIFE ON THE PLANET	
14:00 – 14:30	Enhancing base metal exploration through seismic reflection studies adapted for the crystalline rock environment David Eaton, U. Western Ontario, London, ON	
14:30 – 15:00	BREAK	
15:00 - 16:30	CHAIR: Walter Mooney, US Geological Survey, Menlo Park, CA	
15:00 – 15:30	Diamonds and kimberlite intrusions – contributions from LITHOPROBE and related geophysical, geochemical and petrological studies <i>David Snyder, GSC Ottawa, Ottawa, ON</i>	
15:30 – 16:00	Giant earthquakes beneath Canada's west coast Roy Hyndman, GSC Pacific, Sidney, BC	
16:00 – 16:30	LITHOPROBE - A legacy of benefits to Canada Ron Clowes, Director, LITHOPROBE, U. of British Columbia, Vancouver, BC	
16:30 – 18:00	POSTER SESSION [with refreshments]	