



IDC7 Program Overview: Orals



17th AUGUST

18:30-20:30 **WELCOME RECEPTION**

20:00-21:00 **WORK MEETING (Committee Members and Conveners)**

18th AUGUST

ORALS OF THE DAY

Timing	Name	Title	Convener(s)
8:30-8:50	Rixiang ZHU Mingguo ZHAI Richard ERNST	OPENING REMARKS	Peng PENG
8:50-9:20	Henry HALLS	Paleomagnetism of metamorphosed Sudbury dykes, Canada: relevance to a theory of crustal shortening across the Grenville collisional orogen	Keynote
9:20-9:50	Mingguo ZHAI	Late Paleoproterozoic-Neoproterozoic multi-rifting events accompanied by four stages of magmatism in the North China Craton and their geological significance	Keynote
9:50-10:20	Guochun ZHAO	Assembly, accretion and break-up of the Paleo-Mesoproterozoic Columbia (Nuna) supercontinent: records in the North China Craton	Keynote
10:20-10:45		Group Photo and Coffee Break (Posters)	
		Session 1. Regional maps/reviews of dyke swarms and related units	
10:45-11:15	Richard ERNST	Guidelines for Preparing Comprehensive Regional Mafic Dyke Swarm Maps	Keynote Rajesh SRIVASTAVA,
11:15-11:45	Nasrddine YOUBI	Morocco, North Africa: a Dyke Swarm Bonanza!	Keynote Yusheng WAN
11:45-12:00	Michael WINGATE	Updated digital map of mafic dyke swarms and large igneous provinces in Western Australia	Invited
12:00-13:00		Lunch Break	
13:00-13:30		Poster Session	

13:30-13:45	Dmitry GLADKOCHUB	Proterozoic dyke swarms of the Siberian craton and their geodynamic implications	Invited	
13:45-14:00	Peng PENG	1:2500 000 Map of Precambrian dyke swarms and related units in North China	Invited	
14:00-14:15	Anil KUMAR	Evidence for a Neoproterozoic LIP Remnant in the Singhbhum craton, eastern India: implications to Vaalbara supercontinent	Invited	
14:15-14:30	Zakaria HAMIMI	Mapping the dyke swarms of the Eastern Desert, Egypt	Invited	
14:30-14:45	Massinissa AMARA	Mapping the dyke swarms of the Eglab-Yetti region, southwestern Algeria.	Invited	Rajesh SRIVASTAVA, Yusheng WAN
14:45-15:00	Craig MAGEE	Lateral magma flow in mafic sill-complexes	Oral	
15:00-15:15	Amiya K. SAMAL	Neoproterozoic-Palaeoproterozoic mafic dyke swarms from the Singhbhum granite complex, Singhbhum craton, eastern India: implications for identification of large igneous provinces and their	Oral	
15:15-15:30	Evgenii MIKHALSKII	Mafic dykes in Rauer Islands and Vestfold Hills (East Antarctica): a geochemical and Nd isotopic comparison arguing against their correlation	Oral	
15:30-15:45	Yongmin SHI	Petroleum geological map of igneous rocks in the basins of China and adjacent areas	Oral	
15:45-16:00		Coffee Break (Posters)		
		Session 6. Emplacement mechanism of dykes		
16:00-16:30	Eleonora RIVALTA	Mechanical modeling of dike propagation: methods, recent results and links to geophysics	Keynote	
16:30-17:00	Andrew BUNGER	Swarm Theory, Hydraulic Fracturing, and the Emergence of Natural Spacing within Dyke Swarms	Keynote	
17:00-17:15	Guiting HOU	Mechanics of mafic dyke swarms and breakup of supercontinent	Invited	Guiting HOU, Elson Paiva de OLIVEIRA & Wilson TEIXEIRA
17:15-17:30	Nan ZHANG	The long-wavelength mantle structure, and the supercontinent evolution since the Paleozoic	Invited	
17:30-17:45	Camilo ARISTIZABAL	Relationship between the Vitória-Ecoporanga Dyke Swarm and the Vitória Structural High, Brazil	Oral	
17:45-18:00	Wei TIAN	3-D seismic imaging and morpho-tectonical interpretation of saucer-like dykes of the Tarim flood basalt province, NW China	Oral	
18:00-18:15	Qianwen FENG	The spatial-temporal distribution patterns of dyke swarms in Central Asia and their tectonic significance: case studies in Eastern Tianshan and Western Junggar	Oral	
18:15-18:30	Shuai SUN	Mechanism of Zhongtiao aulacogen related to breakup of Columbia supercontinent	Oral	
18:30-20:30		Dinner		

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		Session 2. The role of giant dyke swarms in reconstruction of supercontinents/ paleocontinents: progress, problems and potential		
8:30-9:00	David EVANS	Advancing beyond May 1971: How do we deal with the possibility of complicated dyke geometries, long-lived LIPs, and contrasting basement geological provinces?	Keynote	
9:00-9:30	Sergei PISAREVSKY	Paleomagnetic data and dyke swarms geometries – important tools for Precambrian paleogeographic reconstructions	Keynote	Richard ERNST, Shihong ZHANG
9:30-9:45	Baochun HUANG	Paleomagnetic evidence for tectonic setting of Paleoproterozoic dyke swarms in the North China Craton, China	Invited	
9:45-10:00	Steven DENYSZYN	Geochemistry and Geochronology of Circumferential Dykes of the Franklin LIP: A Rotated Perspective on Plate Reconstruction	Invited	
10:00-10:15		Coffee Break (Posters)		
10:15-10:30	Shihong ZHANG	Age recalibration of the Xiaofeng dykes, south China, and its implications for true polar wander at ~820 Ma	Invited	
10:30-10:45	Nataliya LUBNINA	Late Paleoproterozoic paleogeography of Baltica and Laurentia: New paleomagnetic data from 1.80–1.75 Ga mafic intrusions of Fennoscandia and Sarmatia	Oral	
10:45-11:00	Richard ERNST	Distribution and U-Pb ages of newly recognized regional-scale dyke swarms of the Leo Man craton	Oral	Richard ERNST, Shihong ZHANG
11:00-11:15	Charmaine McGregor	ID-TIMS U-Pb Geochronology of the Tayatea Dyke Swarm of Australia: Identifying Tasmania's Nearest Neighbours in the Proterozoic	Oral	
11:15-11:30	Ravi SHANKAR	Palaeomagnetic study on a 1765 Ma dyke swarm from Singhbhum Craton: Implications to the Mesoproterozoic Nuna supercontinent and the geomagnetic field in light of recent paleomagnetic data from diabase dykes of Finland	Oral	
11:30-11:45	Johanna SALMINEN	Palaeomagnetic and Rockmagnetic behaviour of dykes from Hyderabad Granitic Region, part of Eastern Dharwar Craton, Southern India	Oral	
11:45-12:00	Madhusudan RAO			
12:00-13:00		Lunch Break		
13:00-13:30		Poster Session		
		Session 5. Petrology, geochemistry and petrogenesis of dykes		
13:30-14:00	Yigang XU	Two Permian Large Igneous Provinces in China: their characteristics and formation mechanism	Keynote	Peng PENG, Yigang XU
14:00-14:15	Xian-Hua LI	Mid-Neoproterozoic anorogenic basaltic rocks in South China: A synthesis	Invited	
14:15-14:30	Alexandra STEPANOVA	The 2405 Ma and 2310 Ma mafic dyke swarms in the Karelian craton: age, chemical and Sr-Nd isotope composition, and tectonic setting	Oral	
14:30-14:45	Alexandra STEPANOVA	Mafic dyke records of Paleoproterozoic mantle plume activity in the Karelian craton: U-Pb baddeleyite/zircon geochronology and Sr-Nd isotopic data	Oral	

14:45-15:00	Junyong LI	Neoproterotic magmatism related to lithospheric delamination: implications from three episodes of mafic dykes and associated granitoids in the Pengguan Complex, western Sichuan Province, Yangtze Block	Oral	Peng PENG, Yigang XU
15:00-15:15	Xinping WANG	Petrogenesis of the 2115 Ma Haicheng mafic sills from the Eastern North China Craton: Implications for an intra-continental rifting	Oral	
15:15-15:30	Tahseenullah KHAN	Geochemistry and tectonic settings of felsic dykes in the Neoproterozoic Nagar Parkar igneous complex, SE Sindh, Pakistan	Oral	
15:30-15:45	Coffee Break (Posters)			
15:45-16:00	Fengfeng ZHANG	Zircon and apatite U-Pb geochronology and geochemistry of the mafic dykes in the Shuangxiwu area, northwestern Zhejiang Province: constraints on the initial time of Neoproterozoic rifting in South China	Oral	
16:00-16:15	Karsten OBST	Mafic dykes on Bornholm (Denmark) as indicators of Precambrian to Permian extensional events at the SW margin of the Fennoscandian Shield	Oral	Yigang XU, Peng PENG
16:15-16:30	Tatiana DONSKAYA	Age and geochemical characteristics of major mafic dyke swarms in the southern part of the Siberian craton	Oral	
16:30-17:00	Simon JOWITT	Session 8. Links to mineralization and resources Large Igneous Provinces, Their Giant Mafic Dyke Swarms, and Links to Metallogeny	Keynote	
17:00-17:15	Shuan-hong ZHANG	Formation of the giant Bayan Obo deposit by ca. 1.3 Ga carbonatitic magmatism and its link with continental rifting in the Columbia supercontinent	Invited	Guochun ZHAO, Richard Ernst
17:15-17:30	Hong-liang LI	Preliminary Study on the Metallogenic System of Mafic Large Igneous Provinces (MLIPs)	Oral	
17:30-17:45	PRESENTATIONS OF THE IDC8 CANDIDATES			Richard ERNST, Peng PENG
18:30-21:30	CELEBRATION IN HONOUR OF PROF HENRY HALLS			
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Session 4. Geochronology of dyke swarms				
8:30-9:00	Michael HAMILTON	Minto Large Igneous Province: a 2.00 Ga mafic magmatic event in the eastern Superior craton based on U-Pb baddeleyite geochronology and paleomagnetism	Keynote	Xianhua LI, Michael TD WINGATE
9:00-9:15	Ulf SÖDERLUND	Geochronology of mafic intrusions	Invited	
9:15-9:30	Qiuli LI	Accessory minerals SIMS U-Th-Pb dating for kimberlite and Lamproite	Invited	
9:30-9:45	Mimmi K.M. NILSSON	New U-Pb ages for mafic dykes of SE Greenland	Oral	
9:45-10:00	Wilson TEIXEIRA	Key dolerite dyke swarms of Amazonia: U-Pb constraints on supercontinent cycles and geodynamic connections with global LIP events through time	Oral	

10:00-10:15	Coffee Break (Posters)			
10:15-10:30	Lingsen ZENG	Elusive Cenozoic Metamorphism in mafic dike swarms within the Tethyan Himalaya, Southern Tibet	Oral	Xianhua LI, Michael TD WINGATE
10:30-10:45	Michiel DE KOCK	Constraining the timing of the Molopo Farms Complex emplacement and provenance of its country rock	Oral	
10:45-11:00	Chong WANG	Tectonic environments of the Yan-Liao Rift during Earth's Middle Age (1.7~0.75 Ga): Evidence from mafic dyke swarms in Eastern Hebei, North China	Oral	
11:00-11:15	Zhuang LI	Geochronological Framework and Geodynamic Implications of Mafic dykes in the Liaodong Peninsula, North China Craton	Oral	
11:15-11:30	Ashley GUMSLEY	The timing of the Palaeoproterozoic Great Oxidation Event using dykes, sills and volcanics of the Ongeluk large igneous province, Kaapvaal Craton	Oral	
11:30-11:45	Herve WABO	Geochronological, geochemical and paleomagnetic clues for existence of a ~2.1Ga dyke generation in the Mashishing area, South Africa	Oral	
11:45-12:00	Linlin LI	Petrology and geochronology of monzonite porphyry intruding in Xiong'er volcanic rocks in Xiaoshan area, western Henan Province	Oral	
12:00-12:10	VOTE THE NEXT IDC			Peng PENG, Richard ERNST
12:00-13:00	Lunch Break			
13:00-13:30	Poster Session			
	Session 3. Mapping of dykes using remote sensing techniques: such aeromagnetic data, LANDSAT, radar, etc			
13:30-14:00	Alexander CRUDEN	High spatial resolution mapping of dykes using Unmanned Aerial Vehicle (UAV) photogrammetry: new insights on emplacement processes	Keynote	Steve DENYSZYN, Jinghui GUO
14:00-14:15	Rajesh Kumar SRIVASTAVA	Mapping the dyke swarms emplaced within the different Archean cratons of the Indian Shield using Google™ Earth images and ArcGIS™ techniques	Invited	
14:15-14:30	Gregory DERING	An elevated perspective: Dyke-related fracture networks analysed with UAV photogrammetry	Oral	
14:30-14:45	Kiran MISRA	Emplacement of Dyke Swarms, Cretaceous Volcanism and Development of Petroliferous Basins in and around Peninsular India	Oral	
14:45-15:00	Nina Ni	Integrating Landsat 8 and Corona KH-4B imagery to semi-automatically extract dyke geometries in Kuluktag region, Xinjiang	Oral	
15:00-15:15	Coffee Break (Posters)			
	Session 7. Dyke swarms and planetary bodies			
15:15-15:45	Amanda NAHM	Cerberus Fossae, Mars: The case for dike intrusion-related formation and modification	Keynote	Richard ERNST,
15:45-16:00	Amanda NAHM	Graben on the lunar nearside: Do dikes lie beneath?	Invited	Ulf SÖDERLUND

16:00-16:15	Richard ERNST	Giant Circumferential Dyke Swarms on Earth: Possible Analogues of Coronae on Venus and Similar Features on Mars	Oral	
Session 9. Miscellaneous: Synplutonic mafic dykes and alkaline dykes, etc.				
16:15-16:45	Christina Yan WANG	Origin of mafic-ultramafic layered intrusions and hosted Fe-Ti-V oxide deposits in the Emeishan LIP, SW China	Keynote	Christina Yan WANG, Shuanhong ZHANG
16:45-17:00	Debapriya ADHIKARY	Petrography and geochemistry of new finding alkaline lamprophyre dyke in eastern margin of the Eastern Dharwar Craton, near Khammam, Telangana, India	Oral	
Session 10. Oceanic Dike Complexes: Sea Floor Spreading, Oceanic Plateaus, or Juvenile Arcs?				
17:00-17:30	Tim KUSKY	The significance of sheeted dike complexes in ophiolites	Keynote	Tim KUSKY, Jeffrey KARSON
17:30-17:45	Jeffrey KARSON	Sheeted Dike Complexes in Contemporary Oceanic Crust: Implications for Spreading Processes and the Interpretation of Ophiolites	Invited	
17:45-18:00		BEST AWARDS ANNOUNCEMENT OF THE IDC8 ORGANIZER		Peng PENG, Richard ERNST
18:30-20:30		Dinner		

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IDC7 Program Overview: Posters



Note: posters will be presented in the same room (hall) with the orals.

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POSTERS OF THE DAY

Session 1. Regional maps/reviews of dyke swarms and related units

- P18-01 **Elena DEMONTEROVA** Mafic, ultramafic and carbonatitic dykes in the southern Siberian Craton with age of ca 1 Ga: Remnants of a new large igneous province?
- P18-02 **Ksenia DOKUKINA** Mesoarchean Gridino Mafic Dykes Swarm of the Belomorian Eclogite Province of the Fennoscandian Shield (Russia)
- P18-03 **Richard ERNST** Map of Mafic Dyke Swarms and Related Units of Russia and Adjacent Regions
- P18-04 **Amiya K. SAMAL** Does geochronology of few dykes of a swarm are true representative of all dykes of the same magmatic event?: Constraints from the geochemistry and Google™ earth Image–ArcGIS™ studies of the Paleoproterozoic mafic dyke swarms of the eastern Dharwar craton,
- P18-05 **Ravi SHANKAR** Dyke Map Of Indian Cratons
- P18-06 **Wilson TEIXEIRA** Precambrian dykes in the São Francisco Craton revisited: geochemical-isotopic signatures and tectonic significance
- P18-07 **Nasrddine YOUBI** Refining the stratigraphy of the Taghdout Group by using the U-Pb Geochronology of the Taghdout Sill (Zenaga inlier, Anti-Atlas, Morocco)

Session 6. Emplacement mechanism of dykes

- P18-08 **Ksenia DOKUKINA** Model forming of Mesoarchean Gridino mafic dyke swarm during subduction
- P18-09 **Richard ERNST** Pit chains belonging to radiating graben-fissure systems on Venus: Model for formation during lateral dyke injection
- P18-10 **Huiru XU** Magnetic fabric studies of Xiong'er volcanic rocks in southern margin of the North China Craton and its implications
- P18-11 **Leili izadi KIAN** Noncoaxial progressive deformation of pegmatoid dykes, Sanandaj sirjan zone, Iran
- P18-12 **Leili izadi KIAN** Microstructure Analysis of Syntectonic Dykes in NW of Alvand pluton,
- P18-13 **Jie LI** Cretaceous stress fields Evolution and Its Geodynamic Implications in Jiaolai Basin, Northern China

P18-15	Ge MIN	Mechanism of the formation of the East African rift system
P18-17	Eleonora RIVALTA	Mechanical modeling of dike pathways in the crust: effect of layering and surface loads
P18-18	Xuan YU	Dynamic controls on the formation of mantle plume beneath the South China Sea region
P18-19	Huatian ZHANG	Global Mesozoic and Cenozoic Rift Systems: Constrain on the Tectonic Setting of Mafic Dyke Swarms
P18-20	Chunfang ZHENG	Evolution of the Nanhua-Sinian rifts in the Tarim block
P18-21	Ashraf TORKIAN	Petrography and tectonic setting of dykes in the granitoid intrusive, South to East-Qorveh (Kurdistan province), Iran

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Session 2. The role of giant dyke swarms in reconstruction of supercontinents/ paleocontinents: progress, problems and potential

P19-01	Yebo LIU	Palaeomagnetic investigation of mafic dykes in the southwestern Yilgarn Craton, Western Australia
P19-02	Elson OLIVEIRA	Tectonic implications of the combined use of tectonomagmatic geochemical discrimination diagrams and indicators of magma flow sense in mafic dykes
P19-03	Zhaowei ZHANG	Neoproterozoic magmatism in the northern margin of the Tarim Craton: implications for Rodinia reconstruction

Session 5. Petrology, geochemistry and petrogenesis of dykes

P19-04	Maria Helena Bezerra Maia de HOLLANDA	Evidence of an Early Cretaceous giant dyke swarm in northeast Brazil (South America): a geodynamic overview
P19-05	Sana El GHILANI	Environmental implication of subaqueous lava flows from a continental Large Igneous Province: examples from the Moroccan Central Atlantic Magmatic Province (CAMP)
P19-06	Naresh GHOSE	Mineralogical study of almandine-hercynite-muscovite-ilmenite hornblendite dykes from the southern margin of the Gondwana graben at Richughuta in Palamau District of the Eastern Indian shield
P19-07	Fanxi LIAO	Geochemistry and geochronology of the high-Mg gabbro dykes from Quanji Massif: implications for the amalgamation of Tarim Block in NW China and assembly of the Rodinia supercontinent
P19-08	Liang MA	A possible mechanism to thin lithosphere of the North China Craton: Insights from Cretaceous mafic dikes in the Jiaodong Peninsula
P19-09	Pratheesh Prabhakaran NAIR	Role of multi-generation dyke emplacements in Moyar-Bhavani Shear Zone, South India

P19-10	Qi QI	Geochronology, Geochemistry and Tectonic Significance of Dike Swarms in Beishan, Gansu
P19-11	Anup K SINHA	Mafic dykes swarms from the Chhotanagpur Gneiss Complex, Singhbhum craton, eastern India
P19-12	Rajesh Kumar SRIVASTAVA	Petrogenesis and tectonic significance of an early Paleoproterozoic high-Mg boninite-norite-diorite suite of rocks from the Bastar craton, central India
P19-13	Zahra MOURABIT	The Beni Bousera Peridotite (Rif Belt, Morocco): A Subsolidus Evolution Interpretation
P19-14	Yaying WANG	Multiple phases of mafic magmatism in Gyangze-Kangma area: Implications for the tectonic evolution of eastern Tethyan Himalaya
P19-15	Xinping WANG	Nature of three episodes of magmatism (2181 Ma, 2115 Ma and 1891 Ma) in the Liaohe rift of North China: implications for tectonic evolution
P19-16	Jinbao YANG	Geochemistry and petrogenesis of Cretaceous adakitic dykes from Eastern Cathaysia Block
P19-17	Shuyan YANG	Genetic relationship of the 1780-1760 Ma dykes and the coeval volcanics in the Lvliang area, North China
P19-18	Peng PENG	Large-scale segregation of immiscible liquids in the feeding dykes to produce bimodal volcanics: an example from the 1780 Ma Taihang dyke swarm

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Session 3. Mapping of dykes using remote sensing techniques: such aeromagnetic data, LANDSAT, radar, etc

P20-01 **Massinissa AMARA** Mapping the dyke swarms of the Eglab-Yetti region, southwestern Algeria.

Session 4. Geochronology of dyke swarms

P20-02 **Boris BELYATSKY** U-Pb SHRIMP-II baddeleyite and zircon dating of the Early Proterozoic Monchegorsk Layered Mafite-Ultramafite Complex (Kola Peninsula): evidence of synchronous magmatism

P20-03 **Jean Pierre TCHOUANKOUE** Evidences for Late Paleozoic and Mesozoic basaltic magmatism in Southwestern Cameroon and implications for correlations between the Gulf of Guinea in Africa and Northeast Brazil

P20-04 **Yiping ZHANG** Geochronology and Tectonic implications of diabase intruded into Xiangshan Group in the southeastern Alxa Block, NW China

P20-04+1 **Camilla Stark** In situ SHRIMP U-Pb geochronology and geochemistry of mafic dykes in the Yilgarn Craton, Western Australia and Bunger Hills, East Antarctica

Session 7. Dyke swarms and planetary bodies

P20-05	Daniel MÈGE	The Ophir Chasma Dyke Swarm: description and implications for the genesis of the Valles Marineris northern troughs
P20-06	Daniel MÈGE	On Mars, location and orientation of dykes exposed along the Valles Marineris walls reveal expected and unexpected stress fields
P20-07	Daniel MÈGE	The Ogaden Dyke Swarm: Red Sea rifting continued in the Somalia Plate?
P20-08	Richard ERNST	Comparison of Venusian Coronae with Giant Circumferential Dyke Swarms on Earth
P20-09	Richard ERNST	Radiating Dyke Swarms in the BAT Region on Venus: A Study From the Helen Planitia Quadrangle
Session 9. Miscellaneous: Synplutonic mafic dykes and alkaline dykes, etc.		
P20-10	Nadezda SUSHCHEVSKAYA	Genesis and distribution of ultra-alkaline magmatism within the East Antarctic associated with the Kerguelen plume activity
P20-11	P. Ramesh Chandra Phani1	Regolith Geochemical Studies in Kimberlitic Terrain: A case study from Lattavaram Kimberlite Cluster, Eastern Dharwar Craton, Southern India
Session 10. Oceanic Dike Complexes: Sea Floor Spreading, Oceanic Plateaus, or Juvenile Arcs?		
P20-13	Hao DENG	A sheeted dike complex in the Proterozoic Miaowan Ophiolite Complex on the northern Yangtze Craton: recording seafloor spreading
P20-14	Hao DENG	A Neoproterozoic subduction polarity reversal event in the North China Craton: evidence from 2.5 Ga mafic dikes and coeval granites

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