

MONDAY 4 SEPTEMBER AEM 2023				
9:00:00 AM	9:10:00 AM	Welcome to participants and opening comments	Andrew Fitzpatrick	SESSION
9:10:00 AM	9:30:00 AM	Welcome to Country	TBA	
AEM SYSTEMS 1				
				Chair ANDREW FITZPATRICK
9:30:00 AM	9:50:00 AM	Design of BIPTM: an airborne B field IP and TEM system	James Macnae	AEM Systems
9:50:00 AM	10:10:00 AM	Helitem2 – System Updates for Broadband AEM Data	Duane Griffith	AEM Systems
10:10:00 AM	10:30:00 AM	New helicopter-borne TEM system HorizOND for effective exploration	Alexey Trusov	AEM Systems
10:30:00 AM	11:00:00 AM	MORNING TEA		
AEM SYSTEMS 2				
				Chair AARON DAVIS
11:00:00 AM	11:20:00 AM	The Development of the TEMPEST AEM System	Andy Green	KEYNOTE
11:20:00 AM	11:40:00 AM	The last five years of Tempest System Development	Teo B Hage	AEM Systems
11:40:00 AM	12:00:00 PM	TEMPEST electromagnetic transmitters with multiple loops and multistep waveforms	Andrew Sunderland	AEM Systems
12:00:00 PM	12:20:00 PM	Noise Considerations for TEMPEST Data	Peter Wolfram	AEM Systems
12:20:00 PM	1:20:00 PM	LUNCH		
AEM DATA PROCESSING 1				
				Chair ANDREW KING
1:20:00 PM	1:40:00 PM	Perspectives on AEM processing for geophysical exploration in Canada and worldwide	Magdel Combrinck	KEYNOTE
1:40:00 PM	2:00:00 PM	Estimating noise in AEM data	Aaron Davis	AEM Data Processing
2:00:00 PM	2:20:00 PM	Supervised stacking to improve the signal-to-noise ratio of AEM data	Pierre-Alexandre Reninger	AEM Data Processing
2:20:00 PM	2:40:00 PM	Analysis of the self-interference model and compensation methods in airborne electromagnetics	Evgeny Karshakov	AEM Data Processing
2:40:00 PM	3:10:00 PM	AFTERNOON TEA		
REGIONAL DATA ACQUISITION, CALIBRATION AND INTERPRETATION				
				Chair LISA WORRALL
3:10:00 PM	3:30:00 PM	Reconciling the previously incompatible through the continental scale AusAEM survey	Yusen Ley-Cooper	Regional Data Acquisition, Calibration and Interpretation
3:30:00 PM	3:50:00 PM	Australian continental-scale multilayered chronostratigraphic interpretation of airborne electromagnetics	Sebastian C.T. Wong	Regional Data Acquisition, Calibration and Interpretation
3:50:00 PM	4:10:00 PM	The HydroGeosITe for AEM mapping: characterization through joint inversion of AEM, ground EM and DCIP data	Alessandro Signora	Regional Data Acquisition, Calibration and Interpretation
4:10:00 PM	4:30:00 PM	Free AEM data over NSW, Australia	Astrid Carlton	Regional Data Acquisition, Calibration and Interpretation
4:30:00 PM	END			

TUESDAY 5 SEPTEMBER

AEM DATA PROCESSING 2

9:00:00 AM	9:20:00 AM	Lessons learned from a decade of AIP modelling	Andrea Viezzoli	Chair JAMES MACNAE AEM Data Processing
9:20:00 AM	9:40:00 AM	A Forward Model Study to Investigate 25, 12.5 and 6.25Hz AEM System responses to IP and SPM Effects in the Regolith	Rodney Paterson	AEM Data Processing
9:40:00 AM	10:00:00 AM	Joint Inversions of AEM modelling AIP effects: Helicopter-borne, Ground IP and Fixed-Wing systems	Francesco Dauti	AEM Data Processing
10:00:00 AM	10:20:00 AM	Modelling induced polarization effects in frequency-domain data	Dmitry Khliustov	AEM Data Processing

10:20:00 AM 10:50:00 AM MORNING TEA

MINERAL SYSTEM STUDIES

				Chair MAGDEL COMBRINCK
10:50:00 AM	11:10:00 AM	Use of Airborne Electromagnetics for Mineral Exploration and Mining	Katherine McKenna	KEYNOTE
11:10:00 AM	11:30:00 AM	Some comparisons of AEM systems for specific mineral exploration problems	Michael Whitford	Mineral system studies
11:30:00 AM	11:50:00 AM	Going the extra mile - Julimar, a case study from Western Australia	Camilla Sorensen	Mineral system studies
11:50:00 AM	12:10:00 PM	An Airborne Heterodyne Sulphide Exploration Test at Kempfield	James Macnae	Mineral system studies
12:10:00 PM	12:30:00 PM	The Valen Prospect: It's SPM,... No it's not,...Yes it is!.. No wait....	Tim Munday	Mineral system studies

12:30:00 PM 1:30:00 PM LUNCH

GEOLOGICAL SETTINGS AND MINERAL SYSTEMS 1

				Chair JAMES REID
1:30:00 PM	1:50:00 PM	Enhanced Weathering and Oxidation Modelling in Coals by Integration of ATEM Results with Standard Coal Geoscience Data at Peak Downs Mine, Queensland, Australia	Geoffrey Peters	Geological Settings and Mineral systems
1:50:00 PM	2:10:00 PM	Investigating volcanic systems via multi-scale electromagnetic imaging	Paul A Bedrosian	Geological Settings and Mineral systems
2:10:00 PM	2:30:00 PM	AEM imagery down to one kilometer depth: New constraints for geological and hydrogeological modeling in volcanic contexts	Pierre-Alexandre Reninge	Geological Settings and Mineral systems
2:30:00 PM	2:50:00 PM	ZTEM Airborne Natural Field EM-Magnetics and Mineral Targeting Results over the Berg Porphyry Copper Project, near Houston, British Columbia.	Jean M Legault	Geological Settings and Mineral systems
2:50:00 PM	3:10:00 PM	Passive and active airborne electromagnetics – separate and combined technical solutions and applicability	Alexander Prikhodko	Geological Settings and Mineral systems

3:10:00 PM 3:40:00 PM AFTERNOON TEA

UAVS

				Chair LINDSEY HEAGY
3:40:00 PM	4:00:00 PM	Geotechnical ground investigations with a small airborne TEM prototype system	Andi Pfaffhuber	KEYNOTE
4:00:00 PM	4:20:00 PM	Developing a fully airborne drone TEM system	Nicklas S. Nyboe	UAV's
4:20:00 PM	4:40:00 PM	An early time semi-airborne loop source TEM system	Esben Auken	UAV's

#REF! END

WEDNESDAY 6 SEPTEMBER

9:00:00 AM	9:20:00 AM	SESSION		
9:20:00 AM	9:40:00 AM			
9:40:00 AM	10:00:00 AM			
10:00:00 AM	10:20:00 AM			
10:20:00 AM	10:50:00 AM			
10:50:00 AM	11:10:00 AM			
11:10:00 AM	11:30:00 AM			
11:30:00 AM	11:50:00 AM			
11:50:00 AM	12:10:00 PM			
12:10:00 PM	12:30:00 PM			
12:30:00 PM	1:30:00 PM	LUNCH		
HYDROLOGY / HYDROGEOLOGY 1				Chair RICHARD KELLET
1:30:00 PM	1:50:00 PM	BGR helicopter-borne frequency-domain EM – past, present, future	Bernhard Siemon	KEYNOTE
1:50:00 PM	2:10:00 PM	AEM survey of the Neretva Delta (Croatia): a case study for hydrogeology	John Moilanen	Hydrology/hydrogeology
2:10:00 PM	2:30:00 PM	AEM-derived watersheds in crystalline domain under volcanic cover	Damien Ciolczyk	Hydrology/hydrogeology
2:30:00 PM	2:50:00 PM	Quantifying salinity in the layered coastal aquifers underlying and adjacent to Delaware Bay USA using AEM-derived resistivity	Lyndsay Ball	Hydrology/hydrogeology
2:50:00 PM	3:10:00 PM	Using regional airborne electromagnetic conductivity data to characterise surface water groundwater interaction in the Cooper Creek floodplain in arid central eastern Australia	Neil J Symington	Hydrology/hydrogeology
3:10:00 PM	3:40:00 PM	AFTERNOON TEA		
HYDROLOGY / HYDROGEOLOGY 2				Chair YUSEN LEYCOOPER
3:40:00 PM	4:00:00 PM	An AEM experience in Northern Italy. Innovative and multidisciplinary approach for a modern groundwater and land management	Matteo Gisolo	Hydrology/hydrogeology
4:00:00 PM	4:20:00 PM	Integration of airborne transient electromagnetic models with ground geophysics and borehole data for groundwater mapping in Hawkes Bay region, New Zealand	Richard Kellett	Hydrology/hydrogeology
4:20:00 PM	4:40:00 PM	System-scale airborne electromagnetic surveys in the lower Mississippi River Valley support multidisciplinary applications	Burke Minsley	Hydrology/hydrogeology
4:40:00 PM	5:00:00 PM	California's Statewide AEM Surveys: Project Implementation and Next Steps	Katherine Dlubac	Hydrology/hydrogeology
5:00:00 PM	END			

THURSDAY 7 SEPTEMBER				
INDIGENOUS ENGAGEMENT				
				Chair TIM MUNDAY
9:00:00 AM	9:20:00 AM	Indigenous Knowledge and Methodologies to Inform Science and Data Capture	Bradley Moggridge	KEYNOTE
9:20:00 AM	9:40:00 AM	Round Table discussion on approaches to indigenous engagement/involvement with Airborne EM acquisition & application	Paul Bedrosian, Yusen Ley Cooper, Maiwenn Herpe, Tim Munday	
POSTER SESSION				
				N/A
9:40:00 AM	10:00:00 AM	POSTER SESSION		
10:00:00 AM 10:30:00 AM MORNING TEA				
ML & AI: JOINT INVERSION				
				Chair ANDI PFAFFHUBER
10:30:00 AM	11:00:00 AM	Deep Learning for the Inversion of Airborne EM Data	Eldad Haber	ML&AI, Joint Inversion
11:00:00 AM	11:20:00 AM	Automated data processing of a large-scale airborne time-domain electromagnetic survey by a deep learning expert system	Muhammad Rizwan Asif	ML&AI, Joint Inversion
11:20:00 AM	11:40:00 AM	Finding Geology Structures in Depth Sections from Airborne Geophysics: Automatic workflows	Simge Ayfer	ML&AI, Joint Inversion
11:40:00 AM	12:00:00 PM	Airborne magnetics as structural guide in the 3D inversion of Airborne EM data	Carsten Scholl	ML&AI, Joint Inversion
12:00:00 PM	12:20:00 PM	Thoughts on layered inversions	Andrew King	ML&AI, Joint Inversion
12:20:00 PM 1:20:00 PM LUNCH				
OPEN SOURCE CODES				
				Chair KATHERINE MCKENNA
1:20:00 PM	1:40:00 PM	Advances in open-source software for 3D electromagnetics using SimPEG	Lindsey J Heagy	KEYNOTE
1:40:00 PM	2:00:00 PM	Closing the gap between galvanic and inductive methods: EEMverter, a new 1D/2D/3D inversion tool for Electric and Electromagnetic data with focus on Induced Polarization	Gianluca Fiandaca	Open Source Codes
2:00:00 PM	2:20:00 PM	HiQGA: Open source deterministic and probabilistic AEM inversion	Anandaroop Ray	Open Source Codes
2:20:00 PM	2:40:00 PM	Toward Open Science: Introducing the Geophysical Survey (GS) Data Standard and GSPy Toolbox	Stephanie R James	Open Source Codes
2:40:00 PM	3:00:00 PM	EEMstudio: an open-source freeware QGIS plugin for processing, modelling and inversion of electric and electromagnetic data	Nicole Anna Lidia Sullivan	Open Source Codes
3:00:00 PM 3:30:00 PM AFTERNOON TEA				
CLOSE OF WORKSHOP				
				Chair ANDREW FITZPATRICK
3:30:00 PM	3:45:00 PM	Paper awards		
3:45:00 PM	4:05:00 PM	Next Venue - 9th International Workshop		
4:05:00 PM	4:25:00 PM	Closing Remarks		
4:25:00 PM		END OF WORKSHOP		

POSTERS**Title**

Using airborne electromagnetics to improve depth to bedrock estimates in Wisconsin

Adaptive correction for airborne electromagnetic measurements

Airborne electromagnetics: dealing with the aircraft speed

Targeting epithermal Au-Ag using helicopter TDEM, magnetic, and radiometric data at Lawyers Project, North-Central BC, Canada.

Beyond conductive targets: Characterizing lithium-prospective lacustrine evaporite mineral systems of North America's Basin and Range Province with regional-scale AEM

Airborne electromagnetic imaging for critical-minerals resource assessment

An overview of SkyTEM surveys in New Zealand: data acquisition, community engagement, and results from Northland

Automated integration of AEM data, VES and borehole logs

TEMPEST Data System Bandwidth Comparisons

AEM base frequency and depth of investigation

Combined ground-UAV TDEM survey over gold prospect in Baikal-Patom Highlands (eastern Russia) with detection of AIP and Vladislav Kaminski

Author

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Evgeny Karshakov

Evgeny V. Karshakov

Jean M Legault

Lyndsay Ball

Paul Bedrosian

Maiwenn Herpe

Stefano Galli

Nirocca ND Devkurran

Magdel Combrinck