



## “Processing and inversion of SkyTEM “, March 2012 program

### 1<sup>st</sup> day

9.00 - 9.15	<b>Introduction</b>	NF
9.15-10.00	<b>Overview 1: The SkyTEM systems</b>	KIS/EA
10.00-10.15	<b>Workflow – from raw data to final inversions</b>	NF
10.15-10.30	<b>BREAK</b>	
10.30-11.00	<b>Overview 2: Data import and data types</b> Import of SkyTEM data types: Geometry file, SPS-data, SKB-data, line numbers	CS
11.00 - 11.20	<b>Exercise 1: Data import</b>	JP (CS)
11.20- 11.50	<b>Lecture A: TEM responses</b>	NF
11.50-12.45	<b>LUNCH</b>	
12.45-13.30	<b>Overview 3: Setup of processing, GPS, altitude ...</b> Setup of GPS and Altitude, and Pitch/roll processors Function at the SkyTEM edit plot window Manuel altitude editing.	NF
13.30 - 14.15	<b>Exercise 2: Processing setup: GPS, altitude, Pitch/roll</b>	JP (NF)
	<b>BREAK</b>	
14.30 - 15.15	<b>Overview 4: 1. step processing of voltage data</b> Setup of the voltage data processor Evaluation using the SkyTEM edit window	NF
15.15 -16.00	<b>Exercise 3: Voltage data processing – processor</b>	JP (NF)



**2<sup>nd</sup> day**

<b>8.30 - 9.00</b>	<b>Lecture B: Data patterns to cull – strategy</b> Coupling examples, what to delete ?	CS
<b>9.00 – 10.00</b>	<b>Exercise 3 (continue): Voltage data processing –manuel</b>  BREAK	JP (CS)
<b>10.15 - 10.45</b>	<b>Lecture C: Inversion</b> Inversions Scheme The configuration settings	EA
<b>10.45 - 11.20</b>	<b>Overview 5: Inversion setup (SCI, LCI)</b> Inversion setup, start model, constraints, scaling of constraints, and section setup	CS
<b>11.20 – 12.00</b>	<b>Exercise 4: Inversion setup</b>  Lunch	CS (JP)
<b>13.00 – 13.30</b>	<b>Lecture D: Data averaging contra model recognition</b> Resolution using smooth models Constraints setup	NF
<b>13.30 - 14.30</b>	<b>Overview 7: Evaluation of inversion results</b> Thematic maps for data and inversion quality control Evaluation of the inversion results by line	NF
<b>14.30 - 14.45</b>	<b>BREAK</b>	
<b>14.45-15.45</b>	<b>Exercise 5: Evaluation of inversion results</b>	JP (NF)
<b>15.45- 16.00</b>	<b>Discussion</b>	NF JP



## **Literature**

Vejledning og kravspecifikation for SkyTEM-målinger, processering og inversion.

[http://www.hgg.geo.au.dk/rapporter/Vejledning\\_SkyTEM.pdf](http://www.hgg.geo.au.dk/rapporter/Vejledning_SkyTEM.pdf)

Auken, E., A. V. Christiansen, J. A. Westergaard, C. Kirkegaard, N. Foged, and A. Viezzoli, 2009, An integrated processing scheme for high-resolution airborne electromagnetic surveys, the SkyTEM system: *Exploration Geophysics*, 40, 184-192.

<http://www.hgg.geo.au.dk/pdf/2009/Auken2009.pdf>

Sørensen, K. I. and Auken, E., 2004, SkyTEM - A new high-resolution helicopter transient electromagnetic system: *Exploration Geophysics*, 35, 191-199.

[http://www.hgg.geo.au.dk/pdf/2004/SkyTEM\\_Paper.pdf](http://www.hgg.geo.au.dk/pdf/2004/SkyTEM_Paper.pdf)