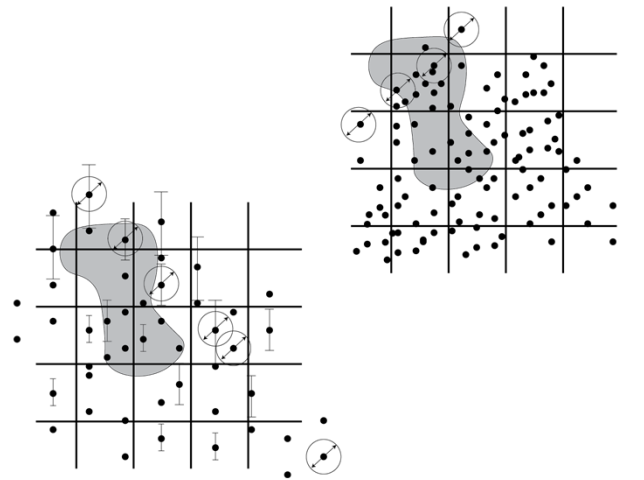
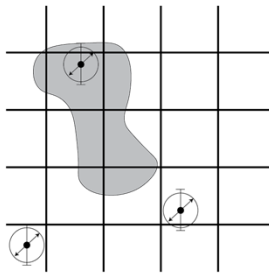
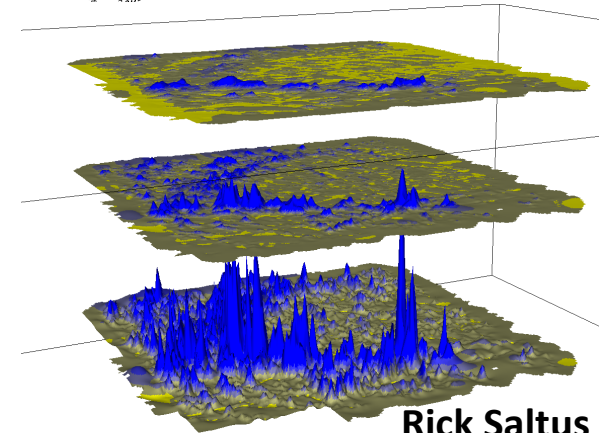
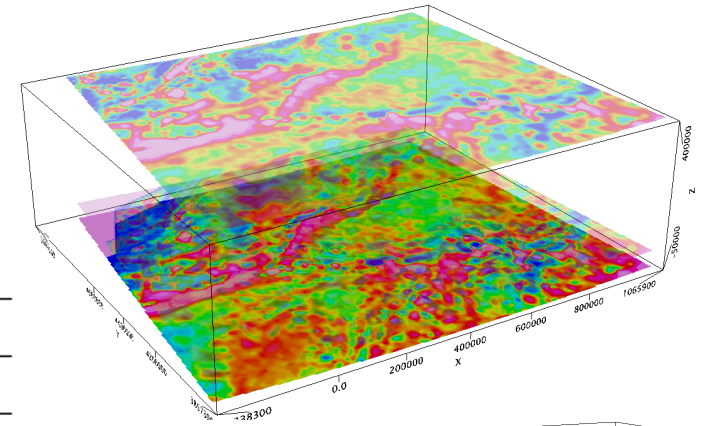


Uncertainty Estimation for Magnetic Maps

*All maps are wrong, some maps are useful -
but without uncertainty estimates,
we don't know the difference*



Data distribution
Nav errors
Meas errors
Source variations



Error/Uncertainty	Spatial Scales
• Satellite-based crustal field commission error (E_{sat})	$300 \text{ km} < L < 2,500 \text{ km}$
• Intermediate scale crustal field error (E_{int} , unsampled)	$L_S < L < 300 \text{ km}$
• Survey, gridding and compilation errors (E_{dat})	$L_{GC} < L < L_S$
• Small scale crustal field omission error (E_{oms})	$L < L_{GC}$

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*Cooperating research by
Sander Geophysics, Ltd