# The Northern Hemispheric Carbon Sink - Facts and Fiction -

## Symposium program

### Monday, May 29th

12:00-14:00	Registration & sandwiches
14:00-14:15	Welcome & logistics
14:15-15:00	Martin Heimann "On the history of the Northern Hemisphere sink"
15:00-15:30	Peter Rayner  "Assessing the evidence for negative climate/carbon-cycle feedbacks in the Northern Hemisphere"
15:30-16:00	Scott Denning "The Northern Hemisphere carbon sink in the 21st century: Diagnosis and Prediction"
16:00-16:30	Coffee break
16:30-17:00	Philippe Ciais "A 50 years long NH sink analysis"
17:00-17:30	Roger Francey "The imprint of equatorial turbulence variations on background CO2 levels"
17:30-18:00	Ralph Keeling "Atmospheric evidence for increasing 13C discrimination of land photosynthesis"
18:00-18:15	Discussion I
18:15-19:30	Buffet dinner
19:30-20:30	Milestones in NH sink research

Get-together - chat & relax

# Tuesday, May 30th

09:00-09:30  Dave Schimel "The Northern Hemisphere and tropical sinks and carbon-climate feedbacks through the lens of OCO-2"  09:30-10:00  Christian Rödenbeck "Climatic control of interannual variations in the NH carbon sink quantified from atmospheric CO2 data"  10:00-10:30  Andrew Watson "Constraints from the ocean"  10:30-11:00  Coffee break  11:00-11:30  Niki Gruber "Recent variations and trends in theocean carbon sink: Implications for the land carbon sink"  11:30-12:00  Laure Resplandy "Redistribution of global carbon fluxes based on ocean heat constraints"  12:00-12:30  Jorge Sarmiento "The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our understanding of NH carbon sinks"  12:30-13:30  Lunch & Group photo  13:30-14:00  Douglas Wallace "The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30  Fortunat Joos "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00  Sue Trumbore "Constraints on the NH carbon sink from 14C data"  15:00-15:30  Discussion II  15:30-16:00  Coffee break + Posters  16:00-16:30  Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere" "Cploring models of the global radiocarbon inventory in the terrestrial biosphere" "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric sink for carbon dioxide"		
"Climatic control of interannual variations in the NH carbon sink quantified from atmospheric CO2 data"  10:00-10:30 Andrew Watson "Constraints from the ocean"  10:30-11:00 Coffee break  11:00-11:30 Niki Gruber "Recent variations and trends in theocean carbon sink: Implications for the land carbon sink"  11:30-12:00 Laure Resplandy "Redistribution of global carbon fluxes based on ocean heat constraints"  12:00-12:30 Jorge Sarmiento "The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our understanding of NH carbon sinks"  12:30-13:30 Lunch & Group photo  13:30-14:00 Douglas Wallace "The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30 Fortunat Jos "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00 Sue Trumbore "Constraints on the NH carbon sink from 14C data"  15:00-15:30 Discussion II  15:30-16:00 Coffee break + Posters  16:00-16:30 Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	09:00-09:30	"The Northern Hemisphere and tropical sinks and carbon-climate feedbacks through
"Constraints from the ocean"  10:30-11:00	09:30-10:00	"Climatic control of interannual variations in the NH carbon sink
11:00-11:30  Niki Gruber  "Recent variations and trends in theocean carbon sink: Implications for the land carbon sink"  11:30-12:00  Laure Resplandy  "Redistribution of global carbon fluxes based on ocean heat constraints"  12:00-12:30  Jorge Sarmiento  "The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our understanding of NH carbon sinks"  12:30-13:30  Lunch & Group photo  13:30-14:00  Douglas Wallace  "The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30  Fortunat Joos  "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00  Sue Trumbore  "Constraints on the NH carbon sink from 14C data"  15:00-15:30  Discussion II  15:30-16:00  Coffee break + Posters  16:00-16:30  Heather Graven  "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  Victor Browkin  "Slow carbon sink processes in the northern high latitudes"  17:00-17:30  Graham Farquhar  "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	10:00-10:30	
"Recent variations and trends in theocean carbon sink: Implications for the land carbon sink"  11:30-12:00  Laure Resplandy "Redistribution of global carbon fluxes based on ocean heat constraints"  12:00-12:30  Jorge Sarmiento "The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our understanding of NH carbon sinks"  12:30-13:30  Lunch & Group photo  13:30-14:00  Douglas Wallace "The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30  Fortunat Joos "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00  Sue Trumbore "Constraints on the NH carbon sink from 14C data"  15:00-15:30  Discussion II  15:30-16:00  Coffee break + Posters  16:00-16:30  Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00  Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30  Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	10:30-11:00	Coffee break
"Redistribution of global carbon fluxes based on ocean heat constraints"  12:00-12:30	11:00-11:30	
"The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our understanding of NH carbon sinks"  12:30-13:30	11:30-12:00	
13:30-14:00 Douglas Wallace "The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30 Fortunat Joos "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00 Sue Trumbore "Constraints on the NH carbon sink from 14C data"  15:00-15:30 Discussion II  15:30-16:00 Coffee break + Posters  16:00-16:30 Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	12:00-12:30	"The Southern Ocean carbon fluxes inferred from robotic floats, and how this may influence our
"The breathing of the ocean in the Labrador Sea: Early results from a 'Deep Tower Observatory'"  14:00-14:30 Fortunat Joos  "Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00 Sue Trumbore  "Constraints on the NH carbon sink from 14C data"  15:00-15:30 Discussion II  15:30-16:00 Coffee break + Posters  16:00-16:30 Heather Graven  "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin  "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar  "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	12:30-13:30	Lunch & Group photo
"Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from observational constraints"  14:30-15:00	13:30-14:00	
"Constraints on the NH carbon sink from 14C data"  15:00-15:30 Discussion II  15:30-16:00 Coffee break + Posters  16:00-16:30 Heather Graven     "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin     "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar     "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	14:00-14:30	"Carbon sinks: Insights from glacial-interglacial changes in N2O emissions and from
15:30-16:00 Coffee break + Posters  16:00-16:30 Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	14:30-15:00	
16:00-16:30 Heather Graven "Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	15:00-15:30	Discussion II
"Exploring models of the global radiocarbon inventory in the terrestrial biosphere"  16:30-17:00 Victor Brovkin "Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	15:30-16:00	Coffee break + Posters
"Slow carbon sink processes in the northern high latitudes"  17:00-17:30 Graham Farquhar  "A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	16:00-16:30	
"A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric	16:30-17:00	
	17:00-17:30	"A plant physiologist's view of the Dole Effect" or "The role of vegetation in the atmospheric

# Wednesday, May 31th

09:00-09:30	Markus Reichstein "Trends and variability in NH C-cycle: A bottom-up view"
09:30-10:00	Peter Cox "Emergent constraints on the sensitivity of the NH carbon sink to CO <sub>2</sub> and climate"
10:00-10:30	David McGuire "Progress towards understanding the magnitude of the permafrost carbon feedback"
10:30-11:00	Coffee break
11:00-11:30	Steven Sitch "Modelling northern hemispheric carbon sink using DGVMs: Lessons learnt from the Carbon Cycle Model Linkage Project and beyond"
11:30-12:00	Pierre Friedlingstein "History and future of the NH land sink"
12:00-12:30	Discussion: Future directions in NH sink research
12:30-13:15	Lunch
13:15-15:00	Guided tour through the institute (optional)
15:00	End of symposium





