

High-latitude processes

09.00 – 09.15

The Physical Transport of carbon into the Southern Ocean interior

Jean-Baptiste Sallee, Richard Matear (Hobart/AUS)

09.15 – 09.30

Survey of air-ice-ocean carbon dioxide exchanges over Arctic sea ice

Berhard Heinesch (Gembloux/F), Bruno Delille (Liège/F), Jean-Louis Tison (Bruxelles/B), Nicolas-Xavier Geilfus (Liège/F), Gauthier Carnat, Tim Papakyriakou (Winnipeg/US), Hajo Eicken (Fairbanks/US)

09.30 – 09.45

Oceanic CO₂ sink : the contribution of the marine cryosphere

Bruno Delille (Liège/F), Martin Vancoppenolle (Louvain-la-Neuve/F), Bronte Tilbrook, Delphine Lannuzel (Hobart/AUS), Véronique Schoemann, Sylvie Becquevort (Bruxelles/B), Nicolas-Xavier Geilfus (Liege/F), Gauthier Carnat (Winnipeg/US), Alberto Borges (Liege/F), Daniel Delille (Banyuls sur mer/F), Christiane Lancelot, Lei Chou (Bruxelles/B), Gerhard Dieckmann (Bremerhaven/DE), Jean-Louis Tison (Bruxelles/B), Gauthier Carnat (Winnipeg/US)

Southern ocean

09.45 – 10.00

Climate modulation of the carbon increase observed in southern mode waters

Claire Lo Monaco, Andrew Lenton, Nicolas Metzli (Paris/F), Marta Alvarez (Esportes/ES), Christian Brunet, Catherine Pierre, Virginie Racapé (Paris/F)

10.00 – 10.15

Assessment of the air-sea CO₂ fluxes in the Southern Pacific Ocean estimated from CARIOCA drifters and ship measurements.

Leticia Barbero, Jacqueline Boutin, Liliane Merlivat (Paris/F), Stewart C. Sutherland, Taro Takahashi (Palisades/US), Rik Wanninkhof (Miami/US)

10.15 – 10.30

Net biological and gross oxygen production in the Drake Passage region

Karel Castro Morales (Norwich/UK), Michael Bender, Nicolas Cassar (New Jersey/US), Jan Kaiser (Norwich/UK)

11.00 – 11.15

Long-term Variation of Oceanic Carbon Dioxide and Possible Acidification in the Indian Sector of the Southern Ocean

Gen Hashida (Tokyo/JP), Takakiyo Nakazawa, Shuji Aoki (Sendai/JP), Shin-ichiro Nakaoka (Ibaraki/JP), Takashi Yamanouchi (Tokyo/JP), Hisayuki Yoshikawa-Inoue (Sapporo/JP), Shinji Morimoto (Tokyo)

11.15 – 11.30

Variability of the carbon dioxide system in the Scotia Sea during austral summer

Elizabeth Jones, Dorothee Bakker (Norwich/UK), Hugh Venables (Cambridge/UK), Nick Hardman-Mountford (Plymouth/UK), Andy Watson (Norwich/UK), Angus Atkinson (Cambridge/UK)

11.30 – 11.45

Invasion of anthropogenic CO₂ into the Weddell Sea on decadal scale and related acidification

Judith Hauck, Mario Hoppema (Bremerhaven/DE), Richard Bellerby (Bergen/NO), Christoph Völker, Dieter Wolf-Gladrow (Bremerhaven/DE)

11.45 – 12.00

A rapid transition from ice covered CO₂-rich waters to a biologically mediated CO₂ Sink in the eastern Weddell Gyre

Dorothee C.E. Bakker (Norwich/UK), Mario Hoppema (Bremerhaven/DE), Walter Geibert (Bremerhaven/DE, Edingburgh/UK), Michael Schröder (Bremerhaven/DE), Hein J.W. De Baar (Den Hoorn/NL)

12.00 – 12.15

Death of Antarctic Marine Calcifying Plankton Linked to High CO₂ Waters

Ben McNeil (Sydney/AUS), Colm Sweeney (Boulder/US), Robert Collier (Portland/US)

Modeling studies

12.15 – 12.30

Quantifying the influence of different iron sources on ocean biogeochemistry and atmospheric carbon dioxide

Alessandro Tagliabue (Gif sur Yvette, Paris/F), Laurent Bopp (Gif sur Yvette/F), Olivier Aumont (Plouzané/F), Jean-Claude Dutay (Gif sur Yvette/F)

12.30 – 12.45

The role of Southern Hemisphere westerlies in the ocean carbon cycle: from the Last Glacial Maximum to the recent past.

Laurent Bopp (Gif sur Yvette/F), Corinne Le Quéré (Norwich/UK), Andrew Lenton (Paris/F), Alessandro Tagliabue (Gif sur Yvette/F)

12.45 – 13.00

Glacial greenhouse-gas fluctuations controlled by ocean circulation changes

Andreas Schmittner (Corvallis/US), Eric Galbraith (Princeton/US)