

Session Details

Monday, 3 May	Session A
10:30 am to noon	Controls over Disturbance Regime: Contemporary Analyses
	Session Chairs: M. Fukuda and F. S. Chapin

- 10:30 Keynote. M.D. Flannigan, K.A. Logan, B. J. Stocks, B.D. Amiro and J.B. Todd. Fire and Climate Change in the 21st Century
- 11:00 F. Stuart Chapin, III, La'ona DeWilde, Paul Duffy, T. Scott Rupp, A. David McGuire, Eric Kasischke, Dan Mann, D. Verbyla, Sarah Trainor, and Monika Calef. Scale-dependency of human-fire interactions in the Alaskan boreal forest
- 11:20 Angus Shand and René I. Alfaro. Disturbance of the boreal forest of British Columbia by the spruce budworm
- 11:40 Maureen V. Duane, Olga N. Krankina, Sean Healey, Julia Kuzminykh, Warren Cohen. Temporal and Regional Patterns of Disturbance in the St. Petersburg Region, Russia

Posters

- AP1. D. Bachelet, J. Lenihan, R. Neilson, R. Drapek. Simulating the response of natural ecosystems and their fire regimes to climatic variability
- AP2. Monika P. Calef, A. David McGuire, T. Scott Rupp. Human impacts on fire in the Western Arctic: a statistical assessment at the regional scale
- AP3. Jean-Noël Candau and Richard A. Fleming. Landscape-scale spatial distribution of spruce budworm defoliation in relation to bioclimatic conditions
- AP4. La'ona DeWilde, F. Stuart Chapin, III, T. Scott Rupp, and David Verbyla. Human impacts on fire regime in interior Alaska
- AP5. Sergey Farber, Vladimir Sokolov, Anatoly Shvidenko. Estimating the disturbance of forest ecosystems
- AP6. Masami FUKUDA, Kouji NAKAU, Hiroshi HAYASAKA, Keiji KUSHIDA, Toshihisa HONMA, Junichi KUDOH, Anatoly I. SUKHININ, Vladimir S. SOLOVYEV, and Sergey

TASHCHILIN. Improvement of Siberian Forest Detection Algorithm using NOAA Images and Ground Truth Data

AP7. Hiroshi Hayasaka, and Keiji Kimura. Forest Fires and Climate in Alaska and Sakha.

AP8. Jenny H. Hewson, Simon Trigg, Tatiana Loboda, Ivan A. Csiszar, Amber J. Soja.
Validation of AVHRR-derived fire maps of Eastern Russia

AP9. B. Kochtubajda, M.D. Flannigan, K.A. Logan, J. R. Gyakum, and A. Way. Lightning-initiated fire disturbances in the Northwest Territories and responses to future climate change

AP10. Daniel Mann, Scott Rupp, and Paul Duffy. Understanding the links between climate, fire, and vegetation: a field- and model-based approach

AP11. Robert A. Ott, Marc A. Lee, William E. Putman, Dr. Owen K. Mason, Gordon T. Worum, and David N. Burns. Patterns and Processes of Bank Erosion Along the Entire Tanana River, Interior Alaska

AP12. Puzachenko Mikhail Y. Landscape determination of windfalls in south taiga on Valdai Hills

AP13. K.J. Ranson, K. Kovacs, and V.I. Kharuk. The spatial and temporal relationship of land cover thermal anomalies and anthropogenic features in the Mid-Siberian landscape

AP14. Kevin Riordan, Laura Bourgeau-Chavez, James Slawski, Orest Kawka, Mike Medvecz, and Seth Ames, and Jennifer Allen. Improving Fire Danger Indices in Alaska through the Incorporation of Spatially Distributed Fuel Moisture Data from Satellite Radar Imagery

AP15. Anatoly I. Sukhinin. Aerospace monitoring of wildfires in Central Siberia

Monday, 3 May

Session B

1:30 to 3:00 pm

Controls over Disturbance Regime: Long-term Perspectives

Session Chairs: F. S. Chapin and M. Fukuda

1:30 Keynote. Sheng Hu, Jason Lynch,, Linda Brubaker, Willy Tinner, Phil Higuera, and Ben Clegg. How Climate Influences the Fire Regime of the Alaskan Boreal Biome: The Holocene Perspective

2:00 Slava I. Kharuk, Maria Dvinskaya, and Kenneth J. Ranson. Wildfires in the larch forests:

frequency and trends

- 2:20 Yves Bergeron, Christopher Carcaillet, Dominic Cyr, Sylvie Gauthier, Christelle Hély, and Mike Flannigan. Holocene changes in fire frequency in North-Western Quebec
- 2:40 Torre Jorgenson and Thomas Osterkamp. Response of Boreal Ecosystems to Varying Modes of Permafrost Degradation in Alaska

Posters

- BP1. M.E. Edwards and B.P. Finney. Long-term interactions of climate and disturbance in the boreal forest of Alaska-Yukon
- BP2. Ed Berg, David Henry, and Andrew De Volder. Warming climate and spruce bark beetle outbreaks: a 250-year record from the Kenai Peninsula and the Kluane region of the Yukon Territory
- BP3. Philip Higuera, Linda Brubaker, Pat Anderson, Feng Sheng Hu, Ben Clegg, Tom Brown, Scott Rupp. Paleo Investigations of Climate and Ecosystem Archives (PICEA): Holocene climate-vegetation-fire interactions in the southern Brooks Range, Alaska
- BP4. Jason A. Lynch, Feng Sheng Hu, and Andrea Hui. Does Vegetation Mediate the Fire-Climate Relationships in Boreal Regions?

Monday, 3 May

Session C

3:30 to 5:00 pm

Responses of Boreal Forests to Climate: Historical/Spatial Perspectives

Session Chairs: E.A. Vaganov and C. Wirth

- 3:30 Keynote. Valerie A. Barber, Glenn Patrick Juday, Martin Wilmking. Landscape-scale growth response of Alaska boreal tree species to climate
- 4:00 Valeri S. Mazepa. Climate change and stand density in the upper treeline ecotone in the Polar Ural Mountains for the last millennium
- 4:20 E.H. (Ted) Hogg and Ross W. Wein. Impacts of drought on forest growth and regeneration following fire in the southwestern Yukon, Canada

4:40 N. Tchebakova, E. Parfenova, and G. Rehfeldt. Impacts of climate change on the distribution of species (*Larix spp.* and *Pinus sylvestris*) and their climatypes in central Siberia

Posters

CP1. Leonid Agafonov. The Ob River flow and tree growth: dendrochronological view

CP2. A. S. Alekseev, A.R. Soroka. Scots Pine Growth Trends at its Northernmost and Moderate Extent in Boreal zone: Comparative Analysis

CP3. Colin M. Beier, Glenn P. Juday, and Paul E. Hennon, David D'Amore, A. David McGuire and F.S. Chapin III. Dendroclimatology of declining *Chamaecyparis nootkatensis* (Yellow Cedar) forests in Southeast Alaska

CP4. Martin-Philippe Girardin, and Jacques Tardif. Relationship between tree growth and the atmospheric vertical profile in the boreal Plains of Manitoba, Canada

CP5. Slava I. Kharuk, Maria Dvinskaya, and Kenneth J. Ranson. Evidence of larch dominated communities response to the climate trends

CP6. Anastasia A. Knorre, Eugene A. Vaganov. Evaluation of annual productivity in the most sensitive forest ecosystems using annual layer structures of plants

CP7. Lloyd, Andrea H., Alexis E. Wilson, R. Matthew Landis, and Christopher L. Fastie. Population dynamics of black and white spruce in the southern Brooks Range, Alaska

CP8. Alexander A. Onuchin, Michael A. Korets and Vasiliy Goryaev. Spatial Patterns of Air Temperature Trends in Central Yakutia

CP9. M. Sano, F. Furuta and T. Sweda. Effect of Volcanic Eruptions on Temperature and Tree Growth in Kamchatka

CP10. Raimo Sutinen, Mari Hagberg, Eija Hyvönen, Vesa Juntunen, Markku Päänttjä, Ari Teirilä, and Marja-Liisa Sutinen. Soil-driven constraints of tree species in Finnish-Lapland

Tuesday, 4 May

Session D

8:30 to 10 am

Responses of Boreal Forests to Climate: Stand-level Perspectives

Session Chairs: S. Linder and C. Wirth

- 8:30 Keynote. Achim Grelle, Timo Vesala. The effect of extreme winters on Boreal forest carbon balance
- 9:00 A.G. Barr, T.A. Black, J.H. McCaughey, H.H. Neumann, K. Morgenstern, N. Kljun, T. Griffis, E.H. Hogg, Z. Nestic. Climatic Controls on the Carbon and Water Budgets of a Boreal Aspen Forest in Central Canada, 1994-2003
- 9:20 Naishen Liang, Yasumi Fujinuma, and Gen Inoue. Partitioning NEE using multichannel automated chamber systems
- 9:40 R.W. Ruess. Linking fine root dynamics with ecosystem carbon cycling in black spruce forests of interior Alaska

Posters

- DP1. Chiara A. R. Corradi. Carbon dioxide and methane exchange of a north-east Siberian sedge wetland
- DP2. Allison L. Dunn, Steven C. Wofsy, Carol C. Barford. The long-term carbon balance of a mature black spruce forest in Manitoba, Canada: Sensitivity to temperature, precipitation, and soil moisture
- DP3. Eugénie Euskirchen, Kurt S. Pregitzer, Jiquan Chen. Carbon fluxes during three snow-free seasons in a young jack pine ecosystem
- DP4. Marianne Hall, Mats Råntfors, Sune Linder, Göran Wallin. The Effect of Elevated [CO₂] and Temperature on Respiration and Photosynthesis in Developing Shoots of Boreal Norway Spruce
- DP5. Heikki Hänninen, Pasi Kolari, Eero Nikinmaa, Frank Berninger, and Pertti Hari. Seasonal development of Scots pine under climatic warming: effects on photosynthetic production
- DP6. J. Kurbatova, N. Vygodskaya. CO₂ fluxes in southern taiga of European Russia
- DP7. A.P. Maksimov, A.V. Kononov, and T.C. Maximov. Photosynthesis of larch in permafrost area

DP8. Per Olsson, Peter Högberg, and Sune Linder. Fertilisation in boreal forest increases biomass production, but reduces autotrophic and heterotrophic soil respiration

DP9. Michelle Slaney, Jane Medhurst, Sune Linder, Göran Wallin. Spring Phenology of Norway spruce at ambient and elevated [CO₂] and temperature

DP10. Svein Solberg, Dan Aamlid, Ole Einar Tveito. Norway spruce needle-fall and the effect of warm and dry weather

DP11. G.G. Suvorova. Photosynthetic productivity of three coniferous species in Baikal Siberia

DP12. N. Vygodskaya, J. Kurbatova, A. Varlagin. Effects of spring conditions on net ecosystem CO₂ exchange between atmosphere and unmanaged uneven-age spruce forests in South-European taiga

Tuesday, 4 May	Session E
10:30 am to noon	Responses of Boreal Forests to Climate: Landscape-level Perspectives
	Session Chairs: S. Linder and M.J. Apps

10:30 Keynote. David Paré, Robert Boutin, and Guy R. Larocque. Is the soil carbon cycling of fire-avoider balsam fir stands less resistant to warming than that of fire-adapted black spruce stands? A case study along a climatic transect in eastern Canada

11:00 Faith Ann Heinsch, John S. Kimball, Maosheng Zhao, Sinkyu Kang, and Steve Running. Verification of satellite Gross and Net Primary Production estimates at several boreal sites

11:20 Heiner Flessa, Andrej Rodionov, Oleg Kazansky, and Georg Guggenberger. Soil organic carbon storage and net-CH₄ fluxes in a catchment of the forest tundra ecotone in Siberia: Effects of permafrost distribution

11:40 Anatoly Prokushkin, Irina Gavrilenko, Stanislav Prokushkin, Anatoly Abaimov, Andrey Samusenko, Larisa Gluschenko. Climatic factors influencing fluxes of dissolved organic carbon in a continuous permafrost Siberian watershed

Posters

EP1. David D'Amore, Paul Hennon, and Adelaide Johnson. Evaluating the influence of soil temperature, hydrology, and chemistry on yellow-cedar mortality in Southeast Alaska

EP2. Georg Guggenberger, Masayuki Kawahigashi, Klaus Kaiser, Karsten Kalbitz, Heiner Flessa, and Andrej Rodionov. Dissolved organic matter composition and biodegradability in small tributaries along a latitudinal gradient from central taiga to forest tundra, Siberia.

EP3. Hong Jiang, Yanli Zhang, Michael J. Apps. Spatial pattern and sensitivity to climate change of ecosystem carbon stock in Boreal Forest Transect Case Study (BFTCS) of Canada

EP4. Evan S. Kane, David W. Valentine, Edward A.G. Schuur. Soil carbon stabilization along productivity gradients in interior Alaska

EP5. M.B. Lavigne, G. Goodine and R. Boutin. Stem respiration relationships with growth and temperature vary among sites and years

EP6. E.C. Packee, C. Rosner, T. Malone and C-L. Ping. Alaska black spruce: ecophysiology and climatic change

EP7. C.L. Ping, E.C. Packee, P. Borden, T. Malone, and N. Zaman. The physical environment, morphology and carbon stocks of soils in upland black spruce forest, Interior Alaska

EP8. Changhui Peng, Xiaolu Zhou, and Qinglai Dang. Predicting Boreal Forest Growth and Yield under a Changing Climate: A Case Study in the Lake Abitibi Model Forest of Ontario, Canada

EP9. C. Rosner, E.C. Packee, J.D. Shaw, T. Malone, C. L Ping. Alaska Black Spruce Productivity: Baseline Data, Site Quality and Stand Characteristics

EP10. David L. Verbyla. Assessment of the MODIS Leaf Area Index Product in Alaska

EP11. J.G. Vogel and D.W. Valentine. Influence of topography on carbon cycling and allocation in mature black spruce forests in interior Alaska

EP12. K.M. Walter, D.A. Draluk, S.A. Zimov, F.S. Chapin III. The significance of methane ebullition from North Siberian thermokarst lakes

EP13. John Yarie and Bill Parton. Potential changes in the carbon dynamics due to climate changes measured in the past two decades

EP14. Reiner Zimmermann, Kyle C. McDonald, and Tobias Mette. Seasonal variation and site climatic control of boreal tree transpiration - A comparison of Alaskan and Siberian conifers

EP15. Reiner Zimmermann and Norbert Etzrodt. Water consumption estimates of pristine forests in Western- and Central Siberian landscape mosaics

Tuesday, 4 May

Session F

1:30 to 3 pm

Responses of Boreal Forest to Disturbance: Structure and Demography

Session Chairs: C. Wirth and E.D. Schulze

- 1:30 Keynote. Olga N. Krankina, Richard A. Houghton, Mark E. Harmon, David Butman. Successional Change in Forest Biomass: The Impact of Climate and Disturbance Regime
- 2:00 Jill Johnstone and Eric Kasischke. Patterns of tree establishment in relation to burn severity in a recently-burned black spruce forest, central Alaska
- 2:20 Vernon J. LaBau. An overview of University of Alaska research on the Spruce Bark Beetle infestation, Kenai Peninsula, Alaska, 1997-2002
- 2:40 Glenn Patrick Juday, Scott Rupp, John Zasada, Valerie Barber. The ecological niche and persistence strategy of white spruce in the western North American boreal forest

Posters

FP1. Susan G. Conard, Peter Tsvetkov, Galina A. Ivanova, Douglas J. McRae. Impacts of Fire Severity and Fire Behavior on Mortality of *Pinus sylvestris* in Pine Forests of Central Siberia

FP2. Paul Duffy, Scott Rupp, and Daniel Mann. Quantifying the spatial variability of burn severity in interior Alaska

FP3. W.B. Guan, J.Y. Cai, F.X. Su, C.P. Li, Z.P. Fan. The theory and model of the protective eco-field around a shelterbelt

FP4. T.L. Hillis, Lance Schmidt and R.L. Case. Disturbance and the Emergence of Landscape Pattern: Implications of Climate-related Influences in the Boreal Forest, Northwest Territories

FP5. Hong Jiang, Yanli Zhang. The dynamics of boreal forest landscape pattern under fire and pest disturbances in Alaska

FP6. E. I. Kuzmenko, V.A. Snytko. Influence of fires and large cuts on structure forests of the southern taiga forests in mid-Siberia

FP7. Chunping Li, Wenbin Guan, Xinhua Zhou, Fanxing Su. On fractal dimensional structure of a shelterbelt: definition and model of fractal geometry dimension

FP8. D. N. Oreshkov. Stem Pest Species Composition and Population Densities in *Pinus sylvestris* Stands of Central Siberia after wildfires of varying fireline intensity

FP9. Vernon S. Peters, Ellen S. Macdonald, Mark R. T. Dale. The importance of initial versus delayed regeneration of White Spruce in boreal mixedwood succession

FP10. Yury Ph. Rozhkov. Use of GIS Technologies in Monitoring of Climatic Changes of Wood Ecosystems of South-West Yakuta (Russia)

FP11. Olga Yu. Rozhkova. The Analysis of Climatic Changes in Boreal Woods of Southwest Yakutia for the Centenary Period

FP12. Vera A. Ryzhkova, Michael A. Korets, Vyacheslav P. Cherkashin. Estimation of Forest Current State and Dynamics Using GIS

FP13. N. Vygodskaya, F. Tatarinov, J.Kurbatova, D. Kozlov, Y. Bochkarev, M. Pusachenko, A.Varlagin, M. Abrazko and E.-D. Schulze. Effects of extreme soil moisture events on mortality and annual growth of spruce trees in South-European taiga

Tuesday, 4 May

Session G

3:30 to 5 pm

Responses of Boreal Forests to Disturbance: Carbon Dynamics

Session Chairs: E.D. Schulze and E.A. Vagonov

3:30 Keynote. Michelle C. Mack, Katheen K. Treseder,, Kristen L. Maines, Jennifer W.

Harden, Edward A. G. Schuur, James T. Randerson, and F. Stuart Chapin, III. Effects of

fire and plant species composition on plant biomass, carbon and nitrogen pools, and aboveground net primary productivity in interior Alaska

4:00 Christian Wirth, Ernst-Detlef Schulze, Natalja Ovchinnikova, Pjotr Ermolenko, Jeremy Lichstein, and Steve Pacala. Understanding post-fire succession and associated carbon dynamics in Siberian dark taiga using data-analysis and model simulation

4:20 R. Kelman Wieder, Kimberli Scott and Katherine Kamminga. Post-fire CO₂ Flux from Alberta Bogs along a Chronosequence of Time-since-fire

4:40 Olga Shibistova, Galina Zrazhevskaya, Sergey Verkhovets, Svetlana Evgrafova, Alexey Panov, Artem Ilyin, Daniil Zolotukhin, and Ernst-Detlef Schulze. Forest floor mass and soil respiration rates during reforestation after clear-cutting for a Central Siberian *Pinus sylvestris* stands

Posters

GP1. Brian W. Benscoter, R. Kelman Wieder, and Dale H. Vitt. Responses of carbon accumulation to microtopography and fire: complex interactions in boreal peatlands

GP2. Jennifer W. Harden, Merritt R. Turetsky, Kristen L. Manies, and Jon Carrasco. Organic soils of the north: A legacy of climate-fire interactions?

GP3. Larry Hinzman, William 'Bob' Bolton, John Gallagher, Kevin Petrone, Kenji Yoshikawa. Hydrological Interactions with Wildfires in Regions of Discontinuous Permafrost

GP4. Michael K. Hoeting, Nancy J. Luckai, Dr. David M. Morris. Incorporating new field and laboratory calibration values into the CENTURY Soil Organic Matter Model: Relevance to Climate Change Modelling

GP5. Eric Kasischke, Jennifer Hewson, Scott Goetz, Jennifer Small, Jill Johnstone, Simon Trigg, and Nancy French. Interpretation of the carbon storage consequences of changes in satellite-observed NDVI in a fire-disturbed boreal forest

GP6. Knut Kielland, Roger Ruess, Jack McFarland, Karl Olson, and Tom Green. Rapid cycling of organic nitrogen in taiga forest soils

GP7. Natal'ya Kirichenko. Dry Matter and Elements Flows in Siberian Moth Populations

GP8. Keiji Kushida, Alexandre P. Isaev, Gen Takao, Trofim C. Maximov, and Masami Fukuda. Remote sensing of forest floor and upper layer LAI evaluated with IKONOS satellite in east Siberian taiga

GP9. Kathy J. Lewis, R. Douglas Thompson, Lori M. Trummer. Growth response of spruce infected by *Inonotus tomentosus* in South-Central Alaska and interaction with spruce beetle

GP10. Heping Liu, Lisa Welp, James Randerson. Interannual variability of growing-season CO₂ exchange in boreal ecosystems following fire disturbance in interior Alaska

GP11. Danilo Mollicone, Frederic Achard, Svetlana Scherbina, E-Detlef Schulze. Determining natural fire effect on forest carbon balance by landscape change detection analysis. Study case of Central Siberian pristine *Pinus sylvestris* forest

GP12. Akira Osawa, Nahoko Kurachi, Yojiro Matsuura, and Ross W. Wein. Carbon budget of dense jack pine forests: a chronosequence study in Northwest Territories, Canada

GP13. E.D. Schulze, C. Czimczik. The dynamics of black Carbon in Siberian Forest

GP14. Edward A.G. Schuur, Michelle C. Mack, James T. Randerson, and Susan E. Trumbore. Does fire stimulate heterotrophic respiration and carbon loss in Alaskan boreal forest?

GP15. M.R. Turetsky, R. K. Wieder, D. H. Vitt, J. Harden, K. L. Manies, B. Amiro, J. Bhatti. Disturbance and C sequestration in boreal peatlands

GP16. Kimberly P. Wickland, Robert G. Striegl, and Jason C. Neff. Soil respiration and CH₄ fluxes in a black spruce forest and adjacent thermokarst wetlands in interior Alaska

Wednesday, 5 May Session H

8:30 to 10 am Responses of Boreal Forests to Fire Severity

Session Chairs: S.G. Conard and T. Karjalainen

8:30 Keynote. Douglas J. McRae, Susan G. Conard, Galina A. Ivanova, Valery A. Ivanov. Impacts of Fire Severity on Carbon Balance in Boreal Pine Forests of Central Siberia

9:00 Eric Kasischke and Jill Johnstone. Fire-Climate Feedbacks on Surface Fuel Consumption and Soil/Temperature Moisture in Black Spruce Forests in Interior Alaska

- 9:20 Anatoly I. Sukhinin, Susan G. Conard, Douglas J. McRae, Viacheslav A. Bychkov and Olga A. Slinkina. Remote sensing of fire intensity and burn severity in *Pinus sylvestris* forests of Central Siberia
- 9:40 Scott J. Goetz, Edward Hyer, Jennifer Small, Jennifer Hewsen, Eric Kasischke. Remote sensing and modeling of boreal forest regrowth dynamics
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Posters

- HP1. Stephen Baker, Irina Beskaravainaja, and Anna Bogorodskaja. Soil Respiration Rates of Scotch Pine Forest Burn Sites in Central Siberia
- HP2. Stephen Baker, Wei Min Hao, and Sherri Dingley. Emissions of Trace Gases for Forest Fires in Central Siberia
- HP3. Balshi, M., Verbyla, D., McGuire A.D. Evaluating the influence of historical wildfire scars and climate on regional NDVI changes in Alaska
- HP4. I.N. Bezkorovainaya, P.A. Tarasov, and E.N. Krasnoshekova. Postfire Ecological Conditions of Soils in *Pinus sylvestris* Stands of Central Siberia
- HP5. Nancy H.F. French and Charles E. Olson, Jr. Remote Sensing Estimates of Albedo at Fire-disturbed Boreal Forest Sites
- HP6. Jamie Hollingsworth, Marilyn D. Walker, Justin Epting, Isla Myers-Smith. Hierarchy of observations from the survey line fire on the floodplain of the Tanana River in Interior Alaska
- HP7. A.V. Ivanov, V.A. Ivanov, K.P. Koutsenogii, V.I. Makarov, Y.N. Samsonov, T.V.Churkina. Aerosols Composition from Wildfires burning in *Pinus sylvestris* Stands of Central Siberia
- HP8. G.A. Ivanova, D.J. McRae, V.A. Ivanov, E.A. Kukavskaya, N.N. Volosatova. Forest Fuels in Central Taiga *Pinus sylvestris* Stands of Central Siberia
- HP9. G.A. Ivanova, V.D. Perevoznikova, N.M. Kovaleva and S.G.Conard. Living Ground Cover Changes after Fires of Varying Intensity in *Pinus sylvestris* Stands of Central Siberia

HP10. Yongwon Kim and Noriyuki Tanaka. Effect of Soil Temperature on the fluxes of CO₂, CH₄, and N₂O in Boreal Forest, Central Alaska

HP11. Heping Liu, J.T. Randerson, J. Lindfors, F.S. Chapin. Changes in the surface energy budget following fire in boreal ecosystems of interior Alaska: an annual perspective

HP12. D.J. McRae, J-Z. Jin, A.I. Sukhinin, S.G. Conard, G.A. Ivanova, and T.W. Blake. Infrared characterization of the inherent variability in boreal forest fires

HP13. I. H. Myers-Smith, I.H., A. D. McGuire, J. W. Harden and F. S. Chapin. Carbon exchange along a soil moisture gradient after fire.

HP14. Overduin, P. P., Yoshikawa, K., Harden, J., Bolton, W. R., Kane, D. L. The impact of wildfire on the thermal and hydrological properties of boreal forest floor

HP15. David Valentine and Tim Quintal. Fire decreases soil heterotrophic respiration in two contrasting black spruce stands

HP16. L.A. Viereck, N.R. Werdin, K. Yoshikawa, and P. C. Adams. Effect of wildfire and fireline construction on the annual depth of thaw in a black spruce-permafrost forest in interior Alaska: a 33-year record

Wednesday, 5 May Session I

10:30 am to noon Management of the Boreal Forest

Session Chairs: T. Karjalainen and S.G. Conard

10:30 Keynote. Graham Stinson, Werner A. Kurz, Sally Tinis, Dennis Paradine, and Don Leckie. Spatially-explicit Carbon Budget Analysis of a Managed Boreal Forest Landscape

11:00 Oleg Chertov, Alexander Komarov*, Alexey Mikhailov. Evaluation of different silvicultural regimes by the results of forest simulation modeling

11:20 D.T. Janzen, C.H. Bois, P. Sanborn, M.J. Jull, R.D. Wheate, A.L. Fredeen. Identifying Impacts of Forest Management on Carbon Stocks and Sequestration

11:40 Ye.K. Kisilyakhov, J.C. Brissette, I.V. Kosov, S.T. Eubanks, E.N. Valendik, R.J. Lasko, S.V. Verkhovets, and A.Yu. Lantukh. Role of Fire in Restoring Boreal Conifer Stands Killed by Siberian Moth

Posters

IP1. Janice Dawe. Exchange of technical information on forest management in Alaska

IP2. Nancy Fresco. An interdisciplinary approach to investigating current and potential carbon sequestration in the boreal forest of Interior Alaska: modeling biological, economic, and sociopolitical variables

IP3. Jeff S. Graham and Tricia L. Wurtz. Lodgepole pine and Siberian larch: the debate over planting non-native trees in interior and southcentral Alaska

IP4. S.L. Luke, E.E. Prepas, N.J. Luckai, T.T. McCready. The Forested Watershed and Riparian Disturbance (FORWARD) Vegetation Project

IP5. F. Raulier, P.Y. Bernier, David Pothier and C.-H. Ung. Linking the disturbance regime to the applicability of growth and yield tables for the estimation of merchantable volume in black spruce stands of Quebec, Canada

IP6. Douglas D. Smart, Thomas F. Paragi, Gordon T. Worum, and Dale A. Haggstrom. Preliminary evaluation of vegetation change on a large prescribed burn in Alaska.

Thursday, 6 May	Session J
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8:30 to 10 am	Regional and Global Implications for the Climate System I
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	Session Chairs: A. Shvidenko and A.D. McGuire)
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8:30 Keynote. Roger Dargaville, Philippe Peylin and Philippe Ciais. Constraining atmospheric CO₂ inversions with terrestrial biosphere parameters

9:00 Kyle C. McDonald, John S. Kimball, Maosheng Zhao, Eni Njoku, Reiner Zimmermann and Steven W. Running. Satellite remote sensing of pan-boreal growing season and terrestrial net primary production: observed trends and variability

- 9:20 C. T. George, F. Gerard, C. Rowland, H. Balzter, I. McCallum, and A. Shvidenko. The Fire Regime in Central Siberia in 1990-2003 and its Impact on Emissions of Major Greenhouse Gases
- 9:40 Trofim Maximov, Han Dolman, Micheil van der Molen, Ayal Maximov and Alexander Kononov. Regional peculiarities of carbon cycle in permafrost forests ecosystems.
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Posters

- JP1. E. Banfield, J. Bhatti, S. Kull and M.J. Apps. Impact of Stand-replacing Windthrow Events on the Carbon Budget of Boreal Forests in Canada
- JP2. P. Bernier, B. Amiro, J. Bhatti, A. Cameron, M. Lavigne, I. Morrison, T. Trofymow, and T. Varem-Sanders. Carbon stocks in mature and disturbed forests across the Canadian Landscape
- JP3. John S. Kimball, Maosheng Zhao, Kyle C. McDonald and Steve Running. Satellite observations of variability in boreal terrestrial Net Primary Production
- JP4. D.N. Kozlov, M.Yu.Puzachenko,, M.V. Fediaeva, T.V.Orlov, Yu.G.Puzachenko. Map-making of a boreal forest condition on the basis of multi-band scanner image (Landsat) and large-scale digital model of a relief
- JP5. S. Maksyutov, D. Rukhovich, A. Peregon, N. Gorina, E. Kozin, Y. Polischuk. Soil and vegetation GIS data for West Siberia.
- JP6. Vjacheslav Rozhkov. Soil Map Layers In Russian Landscape GIS
- JP7. Vladimir Stolbovoy. Soils for ? ircumpolar Analysis
- JP8. Amber J. Soja, Paul W. Stackhouse Jr., Herman H. Shugart, Anatoly I. Sukhinin, and Susan G. Conard. Estimates of total direct carbon emissions from Siberia for 1998 through 2002
- JP9. Lisa R. Welp and James T. Randerson. Boreal Forest Disturbance-Induced Changes in the Oxygen Isotopic Composition of Atmospheric CO₂ at High Northern Latitudes
- JP10. Kenneth C. Winterberger and Willem W. S. van Hees. The development of a forest and forest biomass map for Alaska using data mining and a decision tree modeling approach

JP11. Xiangming Xiao, David Hollinger, Qingyuan Zhang, Stephen Boles, John Aber, and Berrien Moore. Quantifying seasonal dynamics and inter-annual variation of gross primary production of boreal forests in 1998 – 2002

JP12. Dmitri G. Zamolodchikov, Anatoly A. Utkin. The effects of forest exploitation on carbon pools and fluxes of Russian Forests.

JP13. Yanli Zhang, Hong Jiang, Michael J. Apps. Estimating the spatial pattern of biomass in boreal forests unified multiple approaches

Thursday, 6 May Session K

10:30 am to noon Regional and Global Implications for the Climate System II

Session Chairs: A.D. McGuire and A. Shvidenko

10:30 Keynote. Werner A. Kurz, Juha Metseranta, Graham Stinson, Greg Rampley and Michael J. Apps. Probability distributions of future carbon balances in Canada's boreal forest

11:00 Anatoly Shvidenko, Sten Nilsson, Ian McCallum. Climate-disturbance interactions in boreal forests of Northern Eurasia.

11:20 B.D. Amiro, A.G. Barr, T.A. Black, S.D. Chambers, F.S. Chapin III, M.L. Goulden, M. Litvak, H. Liu, J.H. McCaughey, A. Orchansky, and J.T. Randerson. The impact of fire on the surface energy balance: potential climate feedbacks

11:40 Wolfgang Lucht, Sibyll Schaphoff, Birgit Schröder, and Christian Beer. Present and future of boreal zone carbon balances using a Dynamic Global Vegetation Model, climate change simulations and satellite data

Posters

KP1. Johan Bergh, Michael Freeman, and Jouni Räisänen. Effects of Climate Change on Net Primary Production in Nordic forests – An Analysis Based on Regional Climate Scenarios.

KP2. Jing M. Chen, Weimin Ju, Brian Amiro, and Dave Price, and Josef Cihlar. Updating Forest Stand Age Through Remote Sensing and Incorporating Disturbance in Spatially Explicit Carbon Cycle Modeling

KP3. B.S. Petropavlovsky. Boreal forests: ecology and opportunities for mathematics-cartographical modeling.

KP4. Puzachenko Mikhail Y., Puzachenko Yuri G. Severtsov, Denial N. and Orlov Timothy V. Modelling power of organogenic soil horizon for forested and bogged soils in south taiga moraine landscapes

KP5. Tatiana S. Sazonova, Vladimir E. Romanovsky, and Sergei S. Marchenko. The Effect of the Forest Fires on the Spatial and Temporal Dynamics of the Permafrost within the East-Siberian Transect.

KP6. Q. Zhuang, J.M. Melillo, D.W. Kicklighter, B.S. Felzer, A. Sokolov, R.G. Prinn, A.D. McGuire, P. Steudler, and S. Hu. The relationship of global warming potentials to methane and carbon dioxide exchanges in northern high latitudes estimated with a process-based biogeochemistry model.

Thursday, 6 May	Session L
1:30 to 3 pm	Biodiversity of the Boreal Forest
	Session Charis: M.J. Apps and F.S. Chapin

- 1:30 Keynote. Heikki Henttonen. Change in the population cycles of small rodents in northern Fennoscandia: Forestry or climate change?
- 2:00 Richard (Skeeter) Werner. Effects of Fire on Species Diversity of Bark Beetles and Wood Borers in Boreal Forests
- 2:20 Teresa N. Hollingsworth and Marilyn D. Walker. The biodiversity of black spruce communities in interior Alaska in a changing climate: The interaction between vegetation, disturbance, and carbon
- 2:40 Nina N. Pologova. Ecological Condition in Natural Old Cedar Forest in the Middle Taiga of Western Siberia
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Posters

LP1. Nancy Fresco. The importance of temporal heterogeneity and the role of older stands in the boreal forest of Interior Alaska: a literature review

LP2. Wenbin Guan, Minsheng Ye, Keming Ma, Guohua Liu, Jianan Wu, and Xilin Wang. Analysis on β diversity of plant communities in the arid valley of the upper reaches of Minjiang river

LP3. Barbara L. Illman, Kenneth F. Raffa, Richard A. Werner, and Brian Aukema. Spruce Beetle-Fungal Complexes as Agents of Disturbance in Alaskan Forests: Intrinsic and Extrinsic Factors Affecting Resilience and Scale of Population Eruption

LP4. Charles Racine and Torre Jorgenson. Regional Boreal Forest Vascular Plant and Landscape Diversity in Interior Alaska

LP5. I.V. Tikhonova. Individual related with sex variability of tree sensitivity to climate in pine populations in the South of Middle Siberia

LP6. Amy L. Wiita, Tricia L. Wurtz. Morel Mushroom Industry Potential in Alaska

LP7. Tricia L. Wurtz, Jeffrey Conn, Michael Shephard and Stephen D. Sparrow. Movement of non-native *Melilotus* and *Vicia* species along Alaska's road and river networks

Thursday, 6 May	Session M
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3:30 to 5 pm	Sustainability of the Boreal Forest
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	Session Chairs: F.S. Chapin and M.J. Apps
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3:30 Keynote. Vlassova T.K., Suliandziga P.V. Indigenous people's observations and perceptions of climate and environmental changes in boreal forests

4:00 Sarah F. Trainor, Paul Baer, F.S. Chapin III, Henry Huntington, David Natcher, Rosamond Naylor, Erika Zavaleta. Human Factors in the Alaskan Fire Regime: Comparing Economic, Subsistence and Ecological Values of Fire

4:20 Alexander Sheingauz. Eastern Russia: Do Production Fluctuations Influence on Potential of Transition to Sustainable Forest Management?

4:40 D.A. Straussfogel. Proposed Integrative Framework for Considering Regional Livelihoods in Boreal Forest Ecosystems

Posters

MP1. D. Amarsaikhan and M. Sato. Guidelines for Establishing a Decision Support System for Biodiversity Management in Eastern Khuvsgul Region, Mongolia

MP2. D. Amarsaikhan and M. Sato. Integration of RS and GIS for Sustainable Forest Management

MP3. Scott Bates and Andriy Boyar. Preliminary Ecological-Economic Assessment of Forest Use By Residents of the Tanana Valley Watershed, Interior Alaska

MP4. Vladimir Sokolov. Disturbance and Climate Change as Major Drivers of Dynamics of Siberian Forests