

Hydrology

H-1	Observation on water cycle and land-atmosphere interaction in eastern Siberia	
	Tetsuo OHATA (Hokkaido Univ.)	93
H-2	Observation on solid precipitation evaluation and land surface process in Arctic coast	
	Tetsuo OHATA (Hokkaido Univ.)	94
H-3	Variations of heat, water and CO ₂ cycles in the permafrost region in Interior Alaska.	
	Yuji KODAMA (Hokkaido Univ.)	95

Title: Observation on water cycle and land-atmosphere interaction in eastern Siberia

Discipline: Hydrology

Field leader: Tetsuo OHATA

Institution: Frontier Observational System for Global Change/Institute of Low Temperature Science, Hokkaido Univ.

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Programme: FORSGC/Water Cycle Division & "Study on water cycle and land-atmosphere interaction & "

Principal Investigator: Tetsuo OHATA

Proj. Period: 2000 -

Institution: Frontier Observational System for Global Change/Institute of Low Temperature Science, Hokkaido Univ.

Co-research Institution & Scientist (out of JPN): Permafrost Institute: A. Fedorov, Institute of Biological Problems of Cliolithzone: T. Maximov, State Hydrological Institute: V. Vuglinski

Planned field activity

Invest. Area: Tiksi, Tynda, Yakutsk

Field Period: throughout the year

Logistics: Tower meteorological observation system, Thermo-hydro measurement of ground surface layers, runoff measurement

Description: [purpose] Clarify the heat/water exchange process of multi- spatial scale at tundra, flat taiga and mountainous taiga of Lena River drainage in eastern Siberia, and construct and develop various atmosphere/land surface physical models.

[outline] Construct the meteorological/hydrological network with the research area, and make measurement of representative surface and also arrange the network so that area evaluation can be made. In addition to the automatic instruments, manual observations are adopted.

Participants: Hironori Yabuki, Yuji Kodama, Yoshiyuki Ishii, Junpei Kubota, Kazuyoshi Suzuki, Takeshi Ohta

Field activity of previous year

Invest. Area:

Field Period:

Logistics:

Description:

Number of participants:

* See "Japanese Arctic Research Directory in 2001" P. 106

Title: Observation on solid precipitation evaluation and land surface process in Arctic coast

Discipline: Hydrology

Field leader: Tetsuo OHATA

Institution: Institute of Low Temperature Science, Hokkaido University

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Programme: FORSGC Water Cycle Division Project & quot; Study on solid precipitation evaluation and land surface process in Arctic coast

Principal Investigator: Tetsuo OHATA

Proj. Period: 2000 -

Institution: Frontier Observational Research System for Global Change (FORSGC)

Co-research Institution & Scientist (out of JPN): Water Environment Research Center, Alaska University: Daqing Yang

Planned field activity

Invest. Area: Barrow (Alaska)

Field Period:

Logistics: Various raingauges, AWS, Snow particle counter at observatory

Description: [purpose] To develop correction method of solid precipitation with gauges under strong wind conditions considering blowing snow, and to examine the heat/water flow process under blowing snow.

[outline] Set the standard and various precipitation gauges at a field site outside of Barrow, along with AWS and Snow Particle Counter and measure them by manual observation.

Participants: Konosuke Sugiura (FORSGC)

Field activity of previous year

Invest. Area:

Field Period:

Logistics:

Description:

Number of participants:

Title: Variations of heat, water and CO₂ cycles in the permafrost region in Interior Alaska.

Discipline: Hydrology

Field leader: Yuji KODAMA

Institution: Institute of Low Temperature Science, Hokkaido University

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Programme: Yukon Water and Energy Budget Experiment

Principal Investigator: Nobuyoshi ISHIKAWA

Proj. Period: 1999 - 2003

Institution: Institute of Low Temperature Science, Hokkaido University

Co-research Institution & Scientist (out of JPN): University of Alaska: L.D. Hinzman

Planned field activity

Invest. Area: Caribou Porker Creek Research Watershed (Alaska)

Field Period: Jul. - Aug. 2002

Logistics: Meteorological and hydrological Observations in the field

Description: (purpose) Runoff mechanism and estimations of CO₂ flux at the experimental watershed in summer.

(outline) Chemical analysis of rain, soil water, ground water and river water, and measurements of CO₂ flux by eddy correlation method

Participants: Y. Kodama, Y. Ishii, Y. Okada

Field activity of previous year

Invest. Area: CPRW, Yukon river, Gulkana Gl.

Field Period:

Logistics: Meteorological and hydrological Observations in the field

Description: Measurements of soil moisture profiles, heat balance, CO₂ flux on the vegetated surface and runoff.

Number of participants: 15

* See "Japanese Arctic Research Directory in 2001" P. 107