Program (Draft Oct. 22, 2007)

El´gygytgyn Lake Workshop

(November 2 and 3, 2007, University of Cologne)

Nov. 1st, Thursday

18:30 Icebreaker (in the Institute of Geology and Mineralogy)

Nov. 2nd, Friday

9:00 Welcome and Instructions
(Martin Melles)

9:15 Summary of past activities
(Julie Brigham-Grette)

9:45 The importance of Lake El´gygytgyn for Arctic and Global Climate Modeling
(Rob Deconto)

Scientific Presentations (Modern Settings and Seismic Results)
1st Morning Session - Chair: Martin Melles

10:00 Weather and ice dynamics
(Matt Nolan, Olaf Juschus, Julie Brigham-Grette)

10:15 Modern hydrology and sediment transport
(Grisha Fedorov, Matt Nolan, Julie Brigham-Grette, Olaf Juschus , Andreas Dehnert)

10:30 Three-dimensional sediment architecture in Lake El´gygytgyn as revealed from seismic surveys
(Catalina Gebhard, Frank Niessen, Conny Kopsch)

10:50 Coffee break

Scientific Presentations (Lake Sediment Records)
2nd Morning Session - Chair: Laurie Brown

11:10 Old core PG1351 from central Lake El´gygytgyn
(Julie Brigham Grette, Martin Melles, Pavel Minyuk)

11:30 New cores Lz1029 and Lz1024 from central Lake El´gygytgyn
(Olaf Juschus, Martin Melles, Norbert Nowaczyk, Peter Rosen, George Svann, Marcus Christl)

11:50 Core Lz1024 from central Lake El´gygytgyn – pollen and inorganic data
(Pavel Minyuk, Anatoly Loshkin, Patricia Anderson)

12:00 The results and promise of emerging molecular indicators of climate change at Lake El´gygytgyn
(Steve Petsch, Julie Brigham-Grette, Kenna Wilkie, Sabine Hanisch)

12:15 Sediment gravity transport and its impact on distal sediment records in Lake El´gygytgyn
(Martin Melles, Olaf Juschus, Catalina Gebhard)

12:30 Lunch break (organized at the University canteen close by)

Scientific Presentations (Lake-level and Catchment History, Impact Rocks)
1st Afternoon Session - Chair: Pavel Minyuk

14:00 Lake-level changes in the El´gygytgyn impact crater
(Olaf Juschus, Julie Brigham-Grette, Olga Glushkova, Maxim Pavlov)

14:15 Permafrost sediments in the lake surroundings
(Georg Schwamborn, Grisha Fedorov, Olga Glushkova etc.)

14:30 Proposed procedures for studying impactite drill cores at El´gygytgyn Lake impact crater
(Christian Koeberl)

14:50 Coffee break

Presentations and Discussions (Data, Publications, Public Outreach)
2nd Afternoon Session - Chair: Christian Koeberl

15:10 Field documentation and sample management
(Ronald Conze)

15:25 Data sharing and publication policy
(Julie Brigham-Grette, Martin Melles, Pavel Minyuk, Christian Koeberl)

15:45 Public relations and outreach
(Martin Melles, Julie Brigham-Grette, Pavel Minyuk, Christian Koeberl)

16:00 Plenary discussions covering topics such as
- needs and organization of field documentation
- core handling, subsampling protocols, and core storage
- sample management and distribution
- sample moratorium
- data sharing and publication policy
- public relations

Poster Session (Past Science and Future Scientific Interests)
1st Part: 17:00 – ca. 18:30 in the lobby in front of the lecture room

20:00 Dinner in a restaurant downtown
(departure 19:30 with guides from Cologne at the institute and the hotels)

Nov. 3rd, Saturday

from 8:30 Coffee (during entire Poster Session)

Poster Session (Past Science and Future Scientific Interests)
2nd Part: 8:30 – 10:00 in the lobby in front of the lecture room

Presentations and Discussions (Analytical Interests)
Morning Session - Chair: Martin Melles

10:00 Interests on permafrost cores
(Hans Hubberten, Georg Schwamborn, Grisha Fedorov, Dimitri Bolshiyanov, Lutz Schirrmeister, etc.)

10:15 Geochronology (e.g, OSL, paleomagnetic, cosmogenic nuclides, tephras, stable isotopes)
(Norbert Nowakzyk, Steve Forman, Pavel Minyuk, Frank Preusser, Laurie Brown, Martin Melles, Julie Brigham-Grette, etc.)

10:30 Biological proxies (e.g., pollen, diatoms, biomarkers)
(Steve Petsch, Patricia Anderson, Anatoli Loshkin, Marianna Cherepanova, Jeff Snyder, Sabine Hanisch, Kenna Wilkie, etc.)

10:45 Geochemistry (organic, inorganic, stable isotopes)
(Volker Wennrich, Pavel Minyuk, Julie-Brigham-Grette, Martin Melles, Hanno Meyer, Steve Burns, etc.)

11:00 Sedimentology and Mineralogy (physical properties, image analyses, grain size, clay mineralogy, heavy minerals, provenance)
(Julie Brigham-Grette, Martin Melles, Volker Wennrich, Frank Niessen, Catalina Gebhardt, Olaf Juschus, etc.)

11:15 Modeling (Global Circulation Models, Lake modeling)
(Rob Deconto, Matt Nolan, etc.)

11:30 Plenary discussions covering topics such as
- avoiding the duplication of effort
- need of full coverage by most important proxies
- time frame for analytical work
- special requirements for sample treatment
- optimizing sample efficiency
- sampling party and sample shipment

12:30 Lunch break (finger food and soup, in the lobby)

Presentations and Discussions (Operational Planning)
1st Afternoon Session - Chair: Brigham-Grette

13:30 Transport and camp logistics
(Tom Quinn)

13:50 Permafrost, lake sediment and impact rock drilling
(Dennis Nielson)

14:10 Permafrost core: on-site science, subsampling and storage
(Georg Schwamborn)

14:25 Lake cores: on-site science, subsampling and storage
(Martin Melles, Julie Brigham-Grette, Pavel Minyuk, Christian Koeberl, Frank Niessen)

14:40 Plenary discussions covering topics such as
- pros and cons for permafrost drilling in 2008 or 2009
- priorities of lake records
- lake ice safety and monitoring
- camp requirements
- camp location
- core and hole requirements
- field participants – who´s going!

16:00 Coffee break

Workshop Results
2nd Afternoon Session - Chaird: Julie Brigham-Grette, Martin Melle, Pavel Minyuk

16:20 Wrap-up discussion and summary of the workshop results concerning
- past science
- future science on existing material
- drilling operations
- on-site science, core transport, subsampling and storage
- off-site science
- data, publications, public outreach
- etc.

F o l l o w – U p M e e t i n g s

Nov. 4th, Sunday

Lake El´gygytgyn Advisory Panel (LEAP) Meeting

In a room close to the library (see signs)

One Day meeting, starting at 8:30 am, LEAP members only

Nov. 5th and 6th, Monday and Tuesday

Independent ICDP/DOSECC/IODP Safety Oversight Panel

Whole days, starting at 8:30 am, for 3 international lake drilling projects

The Lake El'gygytgyn Drilling Project, with the safety and ice management plan, will probably be presented and discussed during the first half of Monday, Nov. 5th.

Project participants are
- Catalina Gebhardt
- Julie Brigham-Grette
- Martin Melles
- Pavel Minyuk

Poster Sessions (Scientific Results and Future Interests)
Friday, Nov. 2nd, 17:00 – ca. 18:30 and Saturday, Nov. 3rd, 8:30 – 10:00.

Chapligin B., H. Meyer, A. Marent, H. Friedrichsen & H.-W. Hubberten: A new approach on the oxygen isotope micro analysis of diatom silica with a laser-fluorination based mass spectrometry unit.

Dehnert A., M. Melles & O. Juschus: Surface sediment composition in Lake El'gygytgyn, Chukotka.

Deutsch A., F. Langenhorst & S. Luetke: Impact metamorphism of volcanic rocks – from the lab to the Moon, the Mars, and to El'gygytgyn.

Gebhardt A.C., F. Niessen & C. Kopsch: Seismic investigation of Lake El'gygytgyn.

Glushkova O.Yu., V.N. Smirnov, T.V. Matrosova, L.N. Vazhenina & T. Brown: Late Neopleistocene and Holocene in terrace assemblage of the El'gygytgyn lake.

Glushkova O.Yu, V.N. Smirnov, N.Ye. Savva, P.S. Minyuk & A.A. Plyashkevich: New data on mineralogy of the El'gygytgyn crater.

Gurov E.P. & C. Koeberl: Classification of shock metamorphosed siliceous volcanic rocks of the El'gygytgyn crater.

Hanisch S. & A.C. Gebhardt: From land plants to anoxia - organic biomarkers give new insight into paleoclimate record of Lake El`gygytgyn.

Matrosova T.V., P.M. Anderson & A.V.Lozhkin: Palynological record of core Lz1024 from El'gygytgyn Lake.

Minyuk P. & V. Borkhodoev: Inorganic geochemistry data as climate proxy in El´gygytgyn Lake sediments from core Lz1024.

Nolan M.: Modern climate-lake interactions at Lake El'gygytgyn in 2007-2010.

Juschus O., G.B. Federov, M.V. Pavlov, G. Schwamborn, O.Y. Glushkova & M. Melles: Late Quaternary Lake level changes of Lake El´gygytgyn (NE-Siberia) as a result of past climate changes.

Juschus O., F. Preusser, U. Radtke & M. Melles: Applying SAR-IRSL methodology for dating fine-grained sediments from core Lz1024, central part of Lake El´gygytgyn.

Juschus O., M. Melles, A.C. Gebhardt & F. Niessen: The significance of Late Quaternary mass movement events for the paleoenvironmental interpretation of sediment records from Lake El´gygytgyn, NE Siberia.

Juschus O., M. Melles & V. Wennrich: Lithostratigraphical and biogeochemical characteristics of cores Lz1024 and Lz1029 from central part of Lake El´gygytgyn.

Ponomareva V., M. Portnyagin, O. Juschus, I. Bindeman & C. v.d. Bogaard: Kamchatka as a source of tephra layers in the El'gygytgyn Lake sediments.
Schirrmeister L., P.P. Overduin, G. Schwamborn & H.-W. Hubberten: Permafrost studies on the southern Laptev Sea margins to understand periglacial landscape dynamics and to reconstruct Late Quaternary environments.

Schwamborn G., G. Fedorov, L. Schirrmeister, H. Meyer & H.-W. Hubberten: Permafrost in the periglacial catchment of Elgygytgyn crater lake.

Snyder J.A., M. Cherepanova & J. Brigham-Grette: Stratigraphy of core PG1351 and development of a digital diatom taxonomy database, Lake El'gygytgyn, Siberia.

Swann G.E.A., M.J. Leng & H.J. Sloane: A diatom oxygen and silicon isotope record from Lake El´gygytgyn over the last 18,000 years.

v.d. Bogaard C., W.-C. Dullo, B. Baranov & K.Georgeleit: KALMAR – The German-Russian multidisciplinary research project "Kurile-Kamchatka and Aleutean Marginal Sea-Island Arc Systems: Geodynamic and Climate Interaction in Space and Time".

Vogel H., P. Rosén, M. Melles, O. Juschus & P. Persson: Fourier transform infrared spectroscopy (FTIRS), a fast and cost effective tool for quantitative analysis of biogeochemical properties in sediments from Lake El´gygytgyn.

Wagner D., A. Gattinger, A. Embacher & A. Lipski: Methane generation in Holocene permafrost deposits of the Lena Delta, Siberian Arctic, and its implcation for the global methane budget.

Wilkie K., etc.: Stable isotope ratios of lipid biomarkers from Lake E'lgygytgyn: Preliminary results (Abstract still missing).
