

KOMEX II

KURILE OKHOTSK SEA MARINE EXPERIMENT

CRUISE REPORT

**RV AKADEMIK M.A. LAVRENTYEV CRUISE 29
LEG 1 AND LEG 2**

VLADIVOSTOK – PUSAN – OKHOTSK SEA – PUSAN – OKHOTSK SEA –
PUSAN - VLADIVOSTOK

MAY 25 - AUGUST 05, 2002

110

GEOMAR REPORT



KOMEX II

KURILE OKHOTSK SEA MARINE EXPERIMENT

CRUISE REPORT

RV AKADEMIK M.A. LAVRENTYEV CRUISE 29 LEG 1 AND LEG 2

**VLADIVOSTOK – PUSAN – OKHOTSK SEA – PUSAN – OKHOTSK SEA –
PUSAN - VLADIVOSTOK**

MAY 25 - AUGUST 05, 2002

**Edited by
Nicole Biebow, Ruslan Kulinich and Boris Baranov
with contributions of cruise participants**

The KOMEX marine expeditions were initialized on responsibility of
the P. P. Shirshov Institute of Oceanology, Moscow,
the Pacific Oceanological Institute (POI), Vladivostok,
and the GEOMAR Research Center for Marine Geosciences, Kiel

GEOMAR
Forschungszentrum
für marine Geowissenschaften
der Christian-Albrechts-Universität
zu Kiel

KIEL 2003
GEOMAR REPORT 110

GEOMAR
Research Center
for Marine Geosciences
Christian Albrechts University
in Kiel

Redaktion dieses Reports:
Nicole Biebow und Katharina Georgeleit

Editors of this issue:
Nicole Biebow and Katharina Georgeleit

GEOMAR REPORT
ISSN 0936 - 5788

GEOMAR REPORT
ISSN 0936 - 5788

GEOMAR
Forschungszentrum
für marine Geowissenschaften
Wischhofstr. 1-3
D - 24148 Kiel
Tel. (0431) 600-2555, 600-2505

GEOMAR
Research Center
for Marine Geosciences
Wischhofstr. 1-3
D - 24148 Kiel
Tel. (49) 431 / 600-2555, 600-2505

PART I:

***RV AKADEMIK LAVRENTYEV* CRUISE 29**

LEG 1

VLADIVOSTOK - PUSAN - SEA OF OKHOTSK - PUSAN

MAY 25 - JUNE 27, 2002

Table of contents

INTRODUCTION	1
<i>By R. Kulinich and N. Biebow</i>	
PART I: CRUISE REPORT LV29: FIRST LEG OF THE 29TH CRUISE OF RV AKADEMIK LAVRENTYEV, MAY-JUNE 2002	6
1. CRUISE NARRATIVE	6
<i>By N. Biebow and R. Kulinich</i>	
2. TECHNICAL SUPPORT OF HYDRACOUSTIC OBSERVATIONS	10
<i>By A. Salomatin</i>	
2.1 Multichannel system of digital registration.....	10
2.2 Scope of the acoustic survey	11
2.3 Preliminary results	11
3. SWATH BATHYMETRY MAPPING	15
<i>By H. Hein</i>	
3.1 Testing and calibration.....	15
3.2 Investigation areas	18
3.3 Conclusions	18
4. SEAFLOOR MORPHOLOGY OFF THE EASTERN OKHOTSK SEA COAST: RESULTS OF SINGLE- AND MULTIBEAM ECHOSOUNDER SURVEY	19
<i>By B. Baranov, H. Hein, A. Salomatin, A. Radyukin, and G. Nepomiluyev</i>	
4.1 Introduction	19
4.2 Eastern Sakhalin slope	20
4.3 Derugin Basin	22
4.3.1 “Barite Mounds” area.....	23
4.3.2 “Lola Hills” area	25
4.4 Preliminary conclusions.....	26
5. WATER COLUMN STUDIES	27
<i>By A. Salyuk, V. Sosnin, A. Obzhirov, P. Tishchenko, G. Pavlova, O. Vereshchagina, N. Khodorenko, S. Sagalaye, N. Biebow, K. Wallmann, and B. Domeyer</i>	
5.1 Introduction	27
5.2 CTD observations	27
5.2.1 Dissolved oxygen.....	27
5.2.2 CTD depth calibration.....	27
5.3 General hydrographic situation	28
5.4 Main hydrographic features.....	29
5.4.1 Shelf-slope area	29
5.4.2 Derugin Basin	31
6. METHANE INVESTIGATIONS	33
<i>By A. Obzhirov and O. Vereshchagina</i>	
6.1 Introduction	33
6.2 Methods.....	33
6.3 Methane distribution in the water column.....	33
6.3.1 Results	33
6.3.1.1 Terpeniya Bay and slope.....	34