

TABLE OF CONTENTS

Editorial

The TANDEM AMS facility

Operation of the 6 MV TANDEM accelerator
Energy-loss straggling in gases

The TANDY AMS facility

Activities on the 0.6 MV TANDY in 2013
Improving the TANDY Pelletron charging system
Upgrade of a MICADAS type accelerator to 300 kV
A Monte Carlo gas stripper simulation
129I towards its lower limit
U-236 at low energies
The new beam line at the CEDAD facility
The upgrade of the PKU AMS – The next step

The MICADAS AMS facilities

Radiocarbon measurements on MICADAS in 2013
Upgrade of the myCADAS facility
Phase space measurements at myCADAS
First sample measurements with myCADAS
Rapid 14C analysis by Laser Ablation AMS
Oxidize or not oxidize
Graphitization of dissolved inorganic carbon
Ionplus – A new LIP spin-off

Radiocarbon applications

14C samples in 2013
The 774/775 AD event in the southern hemisphere
Radiocarbon dating to a single year
High resolution 14C records from stalagmites
Ion Beam Physics, ETH Zurich Annual report 2013
14C mapping of marine surface sediment
Tracing of organic carbon with carbon isotopes
Organic carbon transported by the Yellow River
On the stratigraphic integrity of leaf waxes
"True" ages of peat layers on the Isola delta
Middle Würm radiocarbon chronologies

Meteoritic cosmogenic nuclides

The Sun, our variable star
The Laschamp event at Lake Van
Authigenic Be as a tool to date clastic sediments
Meteoritic 10Be/9Be ratios in the Amazon
Determining erosion rates with meteoric 10Be
Erosion rates using meteoric 10Be and 239+240Pu

"Insitu" cosmogenic nuclides

Cosmogenic 10Be production rate

Redating moraines in the Kromer Valley (Austria)
Deglaciation history of Oberhaslital
The Lateglacial and Holocene in Val Tuoi (CH)
Deglaciation history of the Simplon Pass region
LGM ice surface decay south of the Mt. Blanc
Late Weichselian ice sheet history in NW-Svalbard
Deglaciation of an East Antarctic outlet glacier
Landscape evolution of the Sonnblick
The age of the Castelpietra rock avalanche
Prehistoric rock avalanches in the Obersee area
Multi-method approach to date Tschirgant
Dating Swiss Deckenschotter
10Be depth profiles in the western Swiss lowlands
Cosmogenic sediment fingerprinting
The problem of sediment mixing
The erosion rate pattern at Niesen
Temporal steady-state incision (onshore Makran)
Ion Beam Physics, ETH Zurich Annual report 2013
Erosion distribution in the Eastern Himalaya
Contrasting erosion in disturbed ecosystems

Anthropogenic radionuclides

AMS of americium and curium
Ultra-sensitive detection of actinides
Automated urine analysis method
Sequential extraction of ^{137}Cs , ^{90}Sr and actinides
 ^{236}U and ^{129}I in the Arctic Ocean
Mediterranean GEOTRACES
 ^{236}U and Pu in corals from French Polynesia
Determination of plutonium in Japanese samples
Iodine-129 in aerosols from Germany
 ^{129}I in exhaust air of German nuclear facilities
Long-lived halogen nuclides in absorber foils

Materials sciences

In-air microbeams: Evaluation of beam quality
Heavy ion STIM imaging
The MeV SIMS project
Al-Si separation by carbon backscattering
Oxygen transport in noble metals
Accurate RBS analysis of angular distributions
Ion beam induced selective grain growth

Education

Books and their ages
Presentation awards for Ph.D. students

Publications

Talks and Posters

Ion Beam Physics, ETH Zurich Annual report 2013

Seminars

Spring semester

Fall semester

Theses

Internal

External

Collaborations**Visitors**