

FRIDAY, 28<sup>th</sup>                      PLENARY LECTURES

13.00-13.15 Opening

**Paleontology**

13.15 - 13.45 Hugo Bucher: “Taxonomic richness and zones of unknown duration”.

13.45 - 14.15 Walter Etter: “Palaeoecology – from individuals to communities”.

14.15 - 14.45 Discussion moderated by Jean-Pierre Berger

*14.45 – 15.00 Coffee break*

**Mineralogy-Petrography**

15.00 - 15.30 Angelika Kalt: “The East African Rift: an important window to the earth`s mantle”.

15.30 – 16.00 Lukas Baumgartner: “Metamorphic petrology does have a bright future”

16.00 - 16.30 Discussion moderated by Martin Engi

*16.30 - 16.45 Coffee break*

**Geology and Environment**

16.45 - 17.15 Christine Alewell: “New perspectives in environmental geosciences – closing the gap between fundamental and applied research”.

17.15 - 17.45 Pascal Kindler: “The last interglacial climate: a model for future climate? Geological evidences from the Bahamas”.

17.45 - 18.15 Discussion moderated by Helmi Weissert

18.15 Information regarding the new CHGEOL award for the most relevant contribution to applied geosciences

18.20 Presentation of the “Paul Niggli Medal” to a young Swiss geoscientist for outstanding contributions to mineralogy, geochemistry, petrology, geophysics, mineral deposit geology and the technical applications of these research fields

18.30 Election of the 2004 organizing and program committees. General discussion on future Swiss Geoscience Meetings. Refreshments will be provided

19.00 open end Swiss Geosciences party, organized by the “Vereinigung Basler Geologiestudenten”

**Friday lectures**

take place at:

Grosser Hörsaal Bernoullianum  
Geologisch-Paläontologisches Institut  
Bernoullistr. 32, CH-4056 Basel

**Saturday lectures and poster session**

take place at:

Rooms 116 – 120, 1<sup>st</sup> floor  
Kollegiengebäude Universität Basel  
Petersplatz, CH-4056 Basel

**Posters** can (and should) be attached on Saturday morning (from 8.00 am).

All **lecture** rooms are equipped with one slide projector, a beamer and an overhead projector.

If additional equipment is needed please contact “Sgm-Erdw@unibas.ch”

SATURDAY, 29<sup>th</sup> MORNING SESSIONS PRE COFFE BREAK

Paleontology

Time	Authors	Title
8.30	Brayard, Escarguel, Bucher	Lower Triassic latitudinal species richness gradient and paleoclimate
8.45	Monnet, Bucher, Escarguel	Biodiversity of western European Cenomanian ammonoids: An anoxia-related mass extinction?
9.00	Klug, Hagdorn, Montenari	Phosphatised soft-tissues in Triassic bivalves from Germany
9.15	Heimhofer, Hochuli, Weissert	Timing and radiation of early angiosperms during the mid-Cretaceous: Implications from continuous palynological records from Western Portugal
9.30	Thüring, Meyer, Graf, Bucher	Cal Orcko, the worlds largest dinosaur tracksite- Aspects of assessment, protection and conservation
9.45	Marty	Excavating and Safeguarding of Palaeontological Heritage along the “Transjurane” Highway, Canton Jura, Switzerland

Mineralogy/Petrology

8.30	Müntener, Piccardo	Melt migration in ophiolites: evidence from Alpine-Apennine peridotites and implications for embryonic ocean basins
8.45	Jagoutz, Müntener, Pettke, Ulmer, Burg	Fractional crystallisation at elevated pressures of shallow mantle derived magmas in island arcs: petrologic (emp and la-icpms data) and field evidence from the chilas complex, Kohistan (ne pakistan).
9.00	Pilet, Hernandez, Bussy, Sylvester	Evidence for a “Short-Term” Metasomatic Control of Nb/Th and Ce/Pb Ratio in the Mantle Sources of Intra-plate Basalts
9.15	Vennemann, Marks, Siebel, Markl, Potter	Implications of extremely low D/H ratios of amphiboles from alkaline syenite complexes to the fluid evolution in such magmatic systems
9.30	Ulianov, Kalt	Peraluminous websterite and granulite xenoliths from the Chyulu Hills volcanic field, Kenya: rock types and their origin
9.45	Früh-Green, Boschi, Kelley, Bernasconi	Serpentinization, Carbonate Precipitation and Microbial Activity: Insights from the Lost City Hydrothermal Vent Field (MAR 30°N)

Swiss Tectonic Studies Group

8.30	Kocher, Exner, Grasemann, Mancktelow	Modelling of progressive evolution of flanking structures
8.45	Kaus, Burg, Podladchikov	Dome structures in collision orogens: some mechanical considerations
9.00	Panien, Pfiffner, Schreurs	Mechanical properties of materials used in analogue modelling
9.15	Ebert, Herwegh, Pfiffner	Parameters affecting the microstructure of impure carbonate mylonites: A case study on samples from the Helvetic nappes (Switzerland).
9.30	de Ronde, Stünitz, Tullis, Heilbronner	Syn deformational Reaction in Experimentally Deformed Plagioclase-Olivine Aggregates
9.45	Prelicz, Burlini, Kunze	Seismic properties of mafic and ultramafic rocks at high PT conditions

## Geochronology

8.30	Brouwer, Engi, Berger, Burri	<b>Towards complete PTt paths: Unravelling Alpine eclogite relics</b>
8.45	Mulch, Cosca, Andresen	In situ UV-laser $^{40}\text{Ar}/^{39}\text{Ar}$ dating of growth increments in muscovite fish and the time scales of deformation in extensional detachment systems
9.00	Putlitz, Cosca	Prograde mica growth recorded by $^{40}\text{Ar}/^{39}\text{Ar}$ ages in high-pressure rocks (Syros, Cyclades, Greece)
9.15	Bucher, Villa	Petrology and geochronology of the ECORS-CROP profile, western Alps
9.30	Ruiz, Seward, Winkler	A new geochronological methodology for exploring basin source region tectonics
9.45	Wipf, Harrison, Seward, Schlunegger	Constraining the evolution of the Coastal margin of Peru through Fission Track and (U-Th/He) dating

## SATURDAY, 29<sup>th</sup> MORNING SESSIONS POST COFFE BREAK

### Alps

10.45	Tricart	Compared final exhumation processes in Pelvoux and Argentera (Western Alps)
11.00	Trullenque, Ceriani, Fügenschuh, Schmid	Polyphase tectonic activity along the Penninic front: implications for the evolution of the Western Alps
11.15	Mancktelow	The Val d'Ossola to Rimella section of the Periadriatic Fault: a major anomaly in the regional kinematic model
11.30	Maxelon, Mancktelow	The 3D geometry of the central Lepontine Alps – A new model for the nappe edifice
11.45	Pelletier, Müntener	High pressure metamorphic evolution of oceanic crust: the example of the Lanzo massif and its sedimentary cover (Western Alps)
12.00	Mullis, Vennemann	Deep percolating meteoric waters in the Central Alps

### Mineralogy/Petrology

10.45	Milke, Dohmen, Wiedenbeck, Wirth, Abart, Becker	Rim growth experiments in isotopically doped thin films: grain boundary diffusion studied on nano scale
11.00	Keller, De Capitani, Abart	A quaternary solution model for white micas based on natural coexisting phengite-paragonite pairs: An approach to modelling the effect of the celadonite component in phengite on the phengite-paragonite solvus
11.15	Müller, Baumgartner, Vennemann	Small-scale stable isotope disequilibrium between metamorphic olivines and carbonate in siliceous dolomites
11.30	Schwab, Spangenberg	Chemical and carbon isotopic changes of hydrocarbons during prograde metamorphism (100-550°C)
11.45	Spangenberg, Jacomet, Schibler	Molecular and isotopic analyses of organic residues from potsherds of the Neolithic lake-shore settlement Arbon Bleiche 3, Switzerland: direct evidence of ancient dairying
12.00		SMPG General Assembly

### Swiss Tectonic Studies Group

10.45	Grujic, Beaumont, Chakungal, Jamieson, Nguyen	Exhumation of high grade rocks in a shortening orogen by channel flow. A case study in the Bhutan Himalayas
11.00	Charrue, Burkhard	Inversion tectonics in the hercynian Anti-Atlas of Morocco
11.15	Simpson	Interactions between erosion, deposition and 3-D (thin-plate) deformation
11.30	Hampel	Response of the tectonically erosive Peruvian forearc to subduction of the Nazca Ridge: geophysical data, 3D

		analogue and numerical models
11.45	Ustaszewski, Schumacher, Schmid	Kinematics of Palaeogene rifting in the southern Upper Rhine Graben revealed from subcrop maps and field data
12.00	Burkhard, Schmid	Seismic hazard assessment for swiss nuclear powerplants : what can geologists contribute ?

### Geology

10.45	Allen, Rieu	Neoproterozoic snowball glaciations: how many and when?
11.00	Azmy, Veizer, Misi, de Oliveira, Sanches, Dardenne	Dolomitization and isotope stratigraphy of the vazante formation, São Francisco basin, Brazil
11.15	Louis, Rais, Bernasconi, Weissert	The Oxfordian, a major turning point in Mesozoic oceanography
11.30	Matera, Steinmann, Adatte, Comment, Girardin, Schwab, Diemand, Ravot, Loizeau	Heavy metal fluxes recorded in recent lacustrine sediments from the Neuchâtel area
11.45	S. Baskar, R. Baskar, Kaushik	The laterites of Konkan-Goa coastal belts: geochemistry, mineralogy and geomicrobiology
12.00	Conen, Yakutin, Sambuu	Can predicted impacts of climate change on soil organic carbon be directly measured? A case study from Tuva

### Metallogenic seminar

10.45	Dold	Secondary enrichment processes in sulfidic mine tailings: Lessons for supergene ore forming processes and mine waste remediation
11.00	Vogt, Dold, Spangenberg	Mineralogical and geochemical characterization of the active tailings impoundment Talabre, Chuquicamata, Chile
11.15	Baumgartner, Fontboté	Zoned polymetallic veins and related acid alteration in carbonate rocks, Cerro de Pasco, central Peru
11.30	Chambefort, Moritz	Control of the volcanic environment on hydrothermal fluid circulation: Example of the hydrothermal breccia development in the Chelopech epithermal high-sulfidation deposit, Bulgaria
11.45	Pettke, Audétat, Schaltegger, Heinrich	Zircon and thorite trace element chemistry: A monitor for the magmatic-to-hydrothermal evolution of a crystallizing pluton?
12.00	Audétat, Pettke	Evolution of sulfur and chalcophile elements in the magmas related to porphyry-Cu mineralizations at Santa Rita, New Mexico, U.S.A.

## SATURDAY, 29<sup>th</sup> AFTERNOON SESSIONS

### Alps

14.00	Dumont, Authemayou, Champagnac	Anticlockwise shift of shortening orientation in the External Western Alps: evidences from Hercynian basement, Mesozoic cover and Tertiary synorogenic basins
14.15	Engi, Berger	Constraints on the Thermal Evolution of the Central Alps during the Tertiary
14.30	Froitzheim, Pleuger, Roller	„Slab extraction“: Exhumation by subduction (of the overlying rocks)
14.45	Lukesch, Pfiffner	Postglacial tectonic faults and deep-seated gravitational slope instabilities between the Oberalp Pass and the Rawil Pass (Central Swiss Alps)

15.00	Delacou, Sue, Champagnac, Burkhard	Current geodynamics of the western/central Alps: insights from seismotectonics and numerical modeling
15.15	Kissling, Schmid, Lippitsch, Ansorge, Fügenschuh	Lithosphere structure and tectonic evolution of the Alpine arc

### Geology

14.00	Kober, Schlunegger, Ivy-Ochs, Wieler, Kubik, Schneider	Contrasting denudation and incision rates in the hyperarid central Western Andes: Evaluation by cosmogenic nuclide data and incision studies
14.15	Spikings, Winkler, Hughes, Handler, Crowhurst	Orogenesis, terrane accretion and the subduction of oceanic ridges in the Ecuadorian Andes: a $^{40}\text{Ar}/^{39}\text{Ar}$ , fission-track and (U-Th)/He study
14.30	Marescot, Chapellier	2D resistivity tomography applied to the study of quaternary paleo-valleys
14.45	Langhi	Permo-Carboniferous glacially-related sequences of the Australian North West Shelf: seismic stratigraphy and sedimentary processes revealed by 2D and 3D seismic
15.00	Borel, Stampfli, Furrer, Tacchini, Ringgenberg, Derungs, Rochat, Challandes, Chapellier, Defago, Delacour, Genier-Rosset, Kalt, Pelletier, Robledo, Weber, Wissing, Berger, Clivaz, Cox, deGaspero, Denervaud, Derron, Furrer, Ebert, Hänni, Kindler, Marquer, Marthaler, Moresi, Piguët, Reuber, Reynard, Pfiffner, Pfiffner, Tauxe, Valais, Winistörfer	Objective Earth, a Planet to Discover A Swiss Virtual Campus course
15.15	Funk	Sind Namen Schall und Rauch?

### Metallogenic seminar

14.00	Landtwing, Pettke, Halter, Heinrich, Redmond, Einaudi	Cu-Fe-sulfide deposition in porphyry Cu-Au-Mo deposits: Cathodoluminescence petrography and microanalysis of fluid inclusions from Bingham Canyon, Utah, U.S.A.
14.15	Rey, Wallier, Tamas, Leary, Howie, Minut, Heinrich	Magmatic to hydrothermal evolution of porphyry-style Cu-Au and breccia-hosted low-sulfidation Au epithermal mineralization at Rosia Poieni and Rosia Montana, Apuseni Mts, Romania.
14.30	de Haller, Corfu, Fontboté	The iron oxide-Cu-Au deposit of Raúl-Condestable, Lima, Peru: Geological and U-Pb geochronological results
14.45	Vallance, Markowski, Fontboté, Chiaradia	The gold-skarn deposits of the Nambija district, Ecuador
15.00	Lavric, Spangenberg	Roles of organic matter in the mercury mineralization at Idrija, Slovenia
15.15	Strmic, Spangenberg, Palinkas, Borojec	The Ljubija siderite deposit, NW Bosnia: Fluid inclusions, stable isotopes, inorganic and organic geochemical constraints
15.30	Palinkas, Strmic, Spangenberg	The Vares and Veoveca SEDEX deposits, Central Bosnia: Fluid inclusions and sulfur isotope data

SATURDAY, 29<sup>th</sup> POSTER SESSION

Alps

Nr	Authors	Title
A1	Bucher, Ceriani, Fügenschuh, Schmid	Tectonic evolution of the Western Alps: an attempt to correlate deformation events
A2	Champagnac, Sue, Delacou, Burkhard	Late alpine brittle extension in the internal zones of the Northwestern Alps
A3	Ferrari, Luzieux, Stampfli	Formation and evolution of the northern Briançonnais passive margin
A4	Heijboer, Mullis, Vennemann, de Capitani	Fracturing and fluid flow in the External Central Alps during retrograde Alpine metamorphism
A5	Keller, Abart, De Capitani, Stünitz, Schmid	Metamorphic evolution of pelitic rocks of the Camughera Moncucco unit and Monte Rosa nappe (Western Alps)
A6	Mullis, Wolf, Ferreiro Mählmann	Temperature Determination between 50 and 270 °C through Fluid Inclusion Microthermometry and Vitrinite Reflectance Values in the External Parts of the Central Alps
A7	Mullis, Abart, Vennemann	Fluid regimes along the Glarus overthrust and their possible impacts on thrusting and calc-mylonite formation
A8	Persaud, Pfiffner	Postglacial faulting in the Alps of eastern Switzerland
A9	Pleuger, Froitzheim, Jansen, Schäfer	Structural analysis of continental and oceanic rocks in the upper Sesia valley (Piemonte, northern Italy)
A10	Schmid, Fügenschuh, Schuster	Tectonic map of the Alps and overall architecture of the Alpine orogen
A11	Sue, Delacou, Champagnac, Burkhard	Low seismic strain in the western Alps: quantification and interpretations
A12	Tarantola, Mullis, de Capitani, Dubessy	The CH <sub>4</sub> / H <sub>2</sub> O-(CO <sub>2</sub> ) transition zone in the external part of the Central Alps, Switzerland: Observations and hypothesis
A13	Wissing, Pfiffner	The influence of inherited basin geometries on Alpine-type nappe structures: a numerical modeling approach

Geochronology

GC1	Cosca, Caby, Bussy	Earthquakes and Exhumation of UHP rocks: Occurrence, Composition, and UV-Laser Ablation <sup>40</sup> Ar/ <sup>39</sup> Ar Geochronology of Pseudotachylytes from the Dora Maira Massif
GC2	Gröger, Fügenschuh, Tischler	Tertiary structural evolution and exhumation history of the Rodna mountains in Northern Romania: preliminary fission track data
GC3	Waite, Fügenschuh, Schmidt, Schmid	Low-grade metamorphism and exhumation in central Chile (35° S)

Geology

GG1	Gaïbor, Hochuli, Winkler	The Santiago Formation of the Oriente Basin (Ecuador): a hydrocarbon source rock?
GG2	Luzieux, Heller, Winkler, Vallejo, Spikings, Hochuli	Origin and accretionary history of oceanic terranes along the Ecuadorian margin between 2°S-1°N: Preliminary results
GG3	Obrist, Gustin, Arnone, Schorran, Verburg, Johnson	Terrestrial ecosystems are large sources of Hg to the atmosphere
GG4	Vallejo, Winkler, Spikings, Luzieux, Hochuli, Heller	Provenance analysis of accreted units in the Western Cordillera of the Ecuadorian Andes, preliminary results

GG 5	Winkler, Villagómez, Spikings, Tobler, Abegglen, Egüez	The Inter-Andean Depression of Ecuador, revisited
GG 6	Brodbeck, Voegelin, Wetzels, Weissert	Carbon isotope stratigraphy of mid-Jurassic platform carbonates, Hauptrogenstein formation, northern Switzerland

### Mineralogy/Petrology

MP 1	Abart	The Mechanism of Decarbonation in a dolomite layer in the Monzoni Contact Aureole
MP 2	Kaczmarek, Müntener	Juxtaposition of melt migration and high-temperature shear zones in the Lanzo peridotite (Italy)
MP 3	Kaesler, Kalt	Modal metasomatism in mantle xenoliths from Marsabit, Kenya: textural and compositional characteristics
MP 4	Kalt, Hänni, Hoffer, Rettenmund, Amstutz, Docourt	Petrology of metamorphic rocks from central and southern Andros, Cyclades, Greece
MP 5	Kerous, Spangenberg, Palinkas, Tari-Kovacic	Petroleum source rocks and oil seeps in profiles across the Adriatic-Dinaridic carbonate platform, Croatia
MP 6	Kolb, Abart, Lammer	Regolith Mixing Relationships on the Surface of Mars: Implications for the Oxygen Content of the Martian atmosphere
MP 7	Kuhn	Phase relations and chemistry of scapolite in metacarbonate rocks from Central Alps, Switzerland
MP 8	Reusser, Ralf, Gasser, Malmström	Focused ion beam technique as a preparation for chemical analysis at sub-micrometer scale
MP 9	Skora, Baumgartner, Vennemann	Mineralogical and stable isotope evidences for limited fluid flow during wollastonite ore formation (Hunter Mountain contact aureole, Death Valley NP; USA)
MP 10	Ulianov, Kalt	Metamorphism of peraluminous sapphirine- and hibonite-bearing granulites in xenoliths from the Chyulu Hills volcanic field, Kenya
MP 11	Wohlers, Baumgartner, Hauzenberger	A field and experimental study of melt distribution in pelites and quartzites at shallow crustal levels

### Paleontology

PA 1	Becker	Paleoecology and paleoclimates of the Jura Molasse (Oligo-Miocene): data from Rhinocerotoida and clay minerals
PA 2	Berger, Reichenbacher, Becker, M. Grimm, K. Grimm, Picot, Storni, Pirkenseer, Schaefer, Derer	Tertiary stratigraphic chart of the Upper Rhine graben and the Swiss Molasse basin: synthesis 2003
PA 3	Berger, Reichenbacher, Becker, M. Grimm, K. Grimm, Picot, Storni, Pirkenseer, Schaefer, Derer	Paleogeography of the Upper Rhine Graben (URG) and the Swiss Molasse Basin (SMB) from Eocene to Pliocene
PA 4	Galfetti, Guex	Biomining and Trace Elements, A Laser Ablation ICP-MS study on Liassic belemnites
PA 5	Jank, Wetzels, Meyer	The Late Jurassic Reuchenette Formation in Northwestern Switzerland (Kimmeridgian sensu gallico, Ajoie-Region JU) – A new biostratigraphically based Frame
PA 6	Knappertsbusch	Microevolution in planktonic foraminifera: a morphometric case study applied to the Globorotalia menardii plexus and G. tumida lineage
PA 7	Pirkenseer	The relationships between the Upper Rhinegraben, the Molasse Basin and the Bressegraben during the Oligocene: paleogeography, paleontology and stratigraphy
PA 8	Storni, Strasser, Berger	Palaeontology and palaeoecology of the Altkirch quarry (Early Oligocene, Alsace): sea or lake?

PA 9	Tütken, Vennemann, Pfretzschner	Oxygen isotope composition of bone and tooth phosphate – A palaeoclimate proxy for the terrestrial and marine fossil record and its diagenetic alteration
---------	---------------------------------	---

### Swiss Tectonic Studies Group

ST 1	Keulen, Heilbronner, Stünitz	What happens after fracturing? Particle size reduction and annealing in experimentally deformed granitoid and diabase
ST 2	Schmalholz, Podladchikov, Jamtveit	Structural softening of the lithosphere
ST 3	Schmid, Podladchikov, Marques	Folding of finite length layers
ST 4	Tischler, Groeger, Schmid, Füegenschuh	Miocene tectonics at the northern border of the Transylvanian basin
ST 5	Trullenque, Schmid, Heilbronner, Stünitz, Kunze	Progressive shear in naturally deformed calcitic rocks: microfabric evolution and a new type of oblique c-axis- orientation

The posters, installed directly in front of the lecture hall, are accessible all Saturday. The official POSTER SESSION starts at 15.30. Authors are expected to be available for discussion during the official poster session, when refreshments will be served.

Looking forward for a stimulating meeting

On behalf of the organizing committee

Rainer Abart  
Bernhard Füegenschuh  
Stefan Schmid