Final remarks
2nd annual AlpArray Meeting
hosted by 4D-MB

Mark Handy & Emanuel Kästle

DFG Deutsche Forschungsgemeinschaft
German Research Foundation

Posting presentations of this meeting

We would like to post you presentations on the AA and 4D-MB websites; these will be made available only to participants of the meeting

- Let us know within 2 weeks if you do NOT want your presentation posted (or only on the 4DMB member page).
- Please send us any changes to these within 2 weeks.
- If we don't hear from you by the end of this time, we will assume that you agree to the posting.

Report on Steering Committee Meetings of AlpArray and 4D-MB (Nov. 13 + 14, 2019)

- Reviewed status of *Complementary Experiments*, *Research Groups* and *Collaborative Projects* within AA
- Discussed measures to improve collaboration
- Prepared admission of two new *Complementary Experiments* (PACASE, CIFALPS-2)
- Discussed data management
- Correct citation of AA

Groups within *AlpArray*

Complementary Experiments *(targeted arrays)*

- CASE Central Adriatic Seismic Experiment
- EASI Eastern Alps Seismic
- SWATH-D
- IVREA
- **PACASE Pannonian-Carpathian Seismic Experiment*
- **CIFALPS2 China-Italy-France Alps seismic transect - 2*

Research Groups *(specialized fields)*

- Surface Waves, Ambient Noise, Full Waveform Inversion
- Gravity
- Receiver Functions
- Seismicity, Local Earthquake Tomography
- Seismic Anisotropy

Collaborative Projects *(where interpretation happens)*

- Alps-Carpathians-Dinarides Junctions
- *Western Alpine Arc & Northern Apennines*
- *Alpine Forelands*

How can we improve collaboration?

We need more Collaborative Projects:

Active project:

- *Tectonics & seismicity of the Alps-Carpathian-Dinarides junctions (1st meeting, May 2019)*

Proposed but not active projects:

- *Western Alpine arc and Northern Apennines – resolving slab interaction and crustal response*
- *Alpine forelands – structure, composition and deformation history*
- *Alps in 4D – Alpine chains and basins, from top to bottom and back in time*

How can we improve collaboration?

Measures that have served us well so far:

- Short courses
- Field trips

New measures:

1. Encourage participation in *Working Groups*, joint publications (initiative of Michael Weber)
2. Restructure our Steering Committee
3. Create new *Research Groups* & *Collaborative Projects* in AlpArray

Early Career initiative – *4D-MB*

“Juniors for Juniors”

Michael Weber + Emanuel Kästle + Mark Handy

4D-MB is very interdisciplinary and regionally distributed.

We would like to offer the following formats:

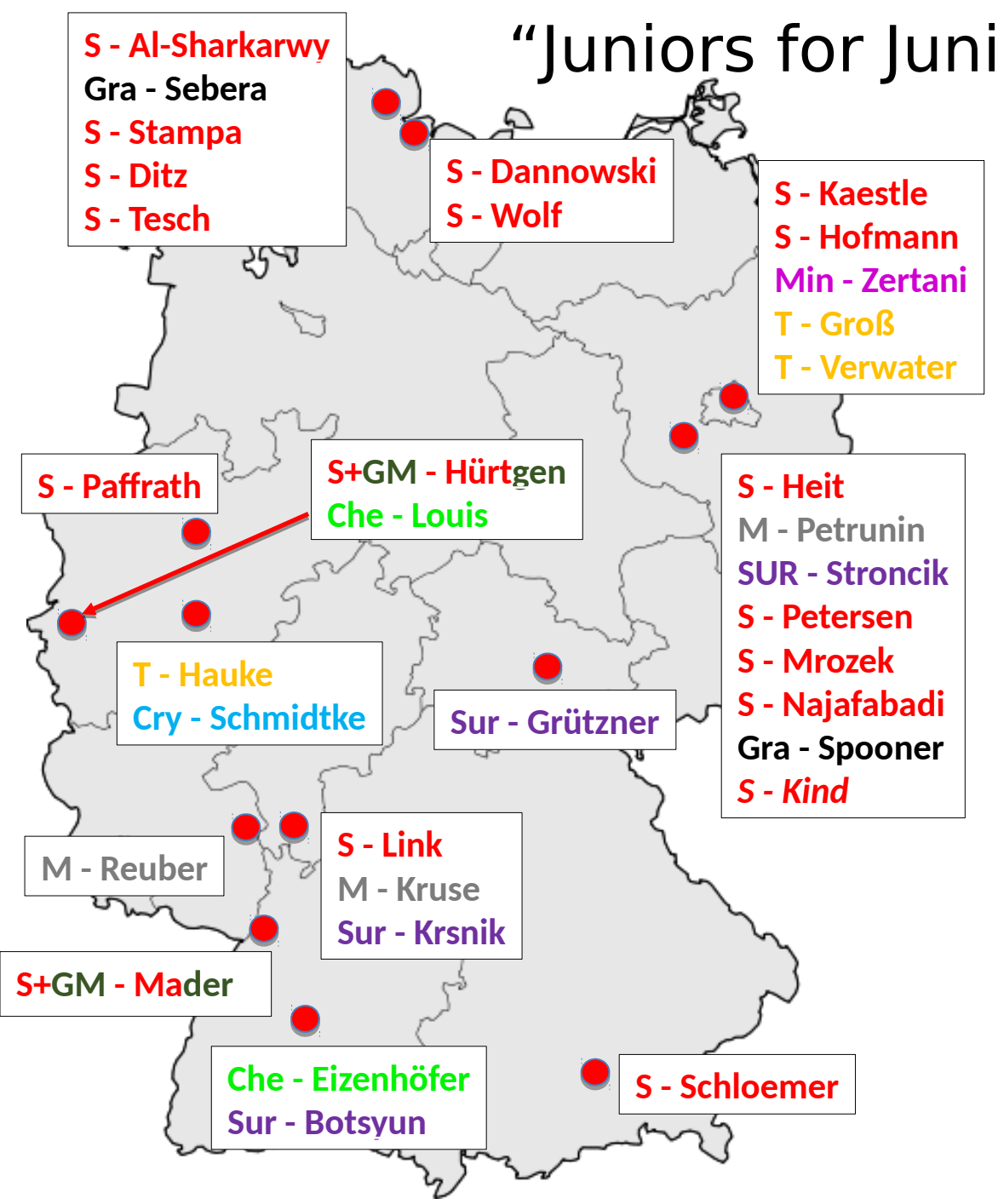
1. Juniors organize short (3 - 6 day) visits with other Juniors (exchange + cooperation).
2. Juniors organize their own „Juniors Work-Shops“ – if wanted.
3. Cost for joint presentations / publications will be covered by the coordinator pot.
4. If you have addition ideas – we would love to hear them.

We’ll be in touch by email very soon!

“Juniors for Juniors”

Juniors + „Eigene Stelle“

Locations
Fields of expertise



21 PhDs
12 PostDocs
1 Senior Sc.

Disciplines

- S - seismology
- GM - geomorph.
- M - modeling
- Che - geochem.
- Cry - crystallog.
- Gra - gravity
- Sur - surface proc.
- T - tectonics
- Min - mineralogy

Correct citation of AlpArray

Publications in the framework of the AlpArray (AA) project should include acknowledgement of AlpArray in the following way:

1. For all people using data from the AlpArray Seismological Network (AASN), the **list of authors followed by "and the AlpArray Working Group" and a link to the AlpArray website** (http://www.alparray.ethz.ch/home/). All members of the AlpArray Seismic Network team should be fully listed in the acknowledgements of each publication (see list of names under http://www.alparray.ethz.ch/en/seismic_network/backbone/data-policy-and-citation/). All network codes must be cited with the appropriate DOI.

2. For all people NOT using AASN data, as well as in journals that do not allow mention of "the AlpArray Working Group" in the author list, the **AlpArray Working Group should be mentioned in the "Acknowledgements" section**.

For more information and/or request of clarification please write to G. Hètenyi, E. Kissling, I. Molinari and E. Kästle.

Correct citation of *4D-MB*

Publications in 4D-MB should acknowledgement AlpArray as in the previous slide, as well as 4D-MB in gthe following way:

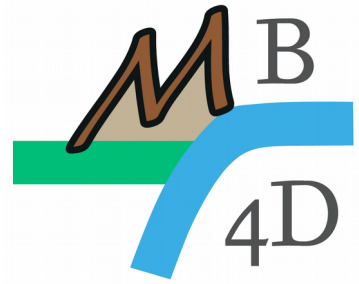
We acknowledge funding of DFG projects …. within the SPP 2017 “Mountain-Building Processes in 4-Dimensions (4D-MB)“.

For more information and/or request of clarification please write to E. Kästle.

…for talks or posters at a conference or workshop

- Use the AlpArray and 4D-MB logos
- Mention AlpArray Working Group
- List the AlpArray website

Thanks!
Don’t hesitate to contact us with feedback.



Publishing our results

Conference volume in *Solid Earth* (EGU)

The deal:

- You submit, the manuscript is reviewed.
- If accepted, it is posted online immediately as an individual contribution.
- After a set time (e.g., 1 yr) papers on a common theme (AlpArray) are published together as a volume.

Please send us a title and names of authors as soon as possible

The next AA/4D-MB scientific meeting

Prague, November 2020

Thanks!

- Emanuel Kaestle
- Andreas Mulch, Franka Wilz, Tobias Schneck & the Senckenberg team

Appendix

Meeting Schedule - Wednesday

Wednesday morning, 13th

9:00 – 9:30 Registration, Poster setup
9:30 – 9:45 Introduction (E. Kästle & M.R. Handy)
9:45 – 10:00 Information on AlpArray seismic network

Session 1: Capturing deformation of the crust and mantle

10:00 – 10:15 H. Pedersen: *Seismic noise in Europe and impact on data quality and imaging*.
10:15 – 10:30 A. Paul: *New information on the structure of the deep crust in the Greater Alps from ambient noise wave equation tomography.*
10:30 – 10:45 M. Paffrath: *Teleseismic P-wave travel time tomography of the Alpine mantle using AlpArray SeismicNetwork data*.
10:45 – 11:00 R. Kind: *LAB beneath the Alps from P- and S-Receiver Functions*.

11:00 – 11:30 **Coffee break**

11:30 – 11:45 S. Pondrelli: *Mantle flow below the Central Alpine region: insights from SKS anisotropy analysis at AlpArray and permanent stations*.
11:45 – 12:00 F. Link: *Isolating the Anisotropy in Crust and Mantle below the European Alps based on differential Ps – XKS Splitting – A Sequential Approach*.
12:00 – 12:15 C. Alder: *3D radially anisotropic model of Europe from ambient noise tomography*.
12:15 – 12:30 P. Kolínský: *How the AlpArray helps us to better understand surface wave propagation*.

12:30 – 14:00 Lunch

Meeting Schedule - Wednesday

Wednesday afternoon, 13th

14:00 – 14:30	Invited talk: Sergei Lebedev (DIAS, Dublin): *Capturing the deformation of the crust and mantle*.
14:30 – 14:45	S. Schippkus: *On the crustal structure and stress field in the wider Vienna Basin region*.
14:45 – 15:00	C. Spooner: *Mass distribution and thermal field across the Alpine orogeny and its forelands*.
15:00 – 15:15	A. Borghi: *Gravimetric estimate of the Moho surface in the Italian area*.
15:15 – 15:30	H. Götze: *AlpArray initiative for a homogeneous Alpine Bouguer gravity anomaly map*.
15:30 – 18:00	**Poster session**
18:00 – 19:00	AA Steering Committee Meeting (only SC members, location: main meeting room)
19:30	Dinner for Early Career Scientists

Meeting Schedule - Thursday

Thursday morning, 14th

Session 2: **Surface response to changes in deep structure**

9:00 – 9:30 Invited Talk: Taylor Schildgen (Univ. of Potsdam): *Geomorphic, geologic, and geophysical clues to the origins of the Central Taurides, Turkey*.
9:30 – 9:45 K. Stuewe: *Young Uplift of the Eastern Alps: A Progress report*.
9:45 – 10:00 P. Eizenhöfer: *Exhumation history along TransAlp: new insights from low-temperature thermochronology and thermo-kinematic models*.
10:00 – 10:15 E. Luijendijk: *Using thermal springs to quantify deep fluid flow and its thermal footprint in the Alps*.
10:15 – 10:30 A. Mulch: *Recovering the long-term surface elevation history of the Alps*.

10:30 – 11:00 **Coffee break**

Session 3: **Probing re-organizations of the lithosphere**

11:00 – 11:30 Invited talk: Thorsten Becker (Univ. of Texas, Austin): *Topographic Fingerprints of Mantle Dynamics*.
11:30 – 11:45 B. Kaus: *Modeling slab reversals and the dynamics of the present day Alps*.
11:45 – 12:00 M. Malusà: *Geologic insights from the integration of AlpArray and CIFALPS data, Western Alps*.
12:00 – 12:30 Plenary session: *AA data repository* (everyone interested welcome, location: main meeting room).

12:30 – 14:00 Lunch break

Meeting Schedule - Thursday

Thursday afternoon, 14th

14:00 – 14:15 H. Žlebčíková: *Tomography image of double high-velocity heterogeneity beneath the Eastern Alpine root from the AlpArray data*.

14:15 – 14:30 S. Mroczek: *Crustal structure of the eastern Alps from SWATH-D Receiver Function Migration*.

14:30 – 14:45 C. Haberland: *Crustal structure in the Giudicarie region based on Local Earthquake Tomography with SWATH-D data*.

14:45 – 15:00 A. Sadeghi-Bagherabadi: A*mbient noise study using SWATH-D network*.

15:00 – 15:30 **Coffee break**

15:30 – 15:45 A. Dannowski: *Investigations of the crust and upper mantle in the Ligurian Basin using refraction seismic data and ambient noise– LOBSTER*.

15:45 – 16:00 P. Groß: *Variations in the 3D temperature field in a fossil subduction zone resolved by RSCM thermometry (Tauern Window)*.

16:00 – 16:15 M.R. Handy: *Pro- and retro-wedges in the Eastern Alps and its peripheral basins - clues to a switch in subduction polarity?*

16:15 – 16:30 N. Froitzheim: *Subduction in the Western Alps*

16:45 – 17:45 Plenary session: *What comes after AlpArray?* (Presentations: T. Meier on AdriaArray, P. Kolinsky on AdriaArray, J. Plomerova on PACASE; Moderation: I. Molinari, M.R. Handy)

18:00 – 19:00 AlpArray Seismic Anisotropy Group Meeting (open to everyone interested, location: main meeting room)

18:00 – 19:00 *4D-MB* Steering Committee Meeting (only SC members, location: breakout room 1)

Meeting Schedule - Friday

Friday morning, 15th

Session 4: **Tracking motion and seismicity**

9:00 – 9:30 Invited Talk: Nicola d'Àgostino (INGV, Rome): *Tracking motion and seismicity*.
9:30 – 9:45 C. Grützner: *Distributed deformation in Slovenia - lessons from large earthquakes*.
9:45 – 10:00 M. Kazmer: *Closing a seismic gap with archaeoseismology - the Upper Rhine Graben*.
10:00 – 10:15 F. Fuchs: *Widespread infrasound detection by AlpArray after explosion near Ingolstadt*.
10:15 – 10:30 G. Rossi: *OGS activities on AlpArray seismic network and related research*.

10:30 – 11:00 **Coffee break**

11:00 – 11:15 H. Hausmann: *Routine Earthquake Location in Austria: Accuracy and Improvements from the AlpArray Seismic Network (first results)*.
11:15 – 11:30 S. Mader: *First Results from the Stress Transfer Project*.
11:30 – 11:45 R. Hofman: *Microseismic event detection in the Eastern Alps (Swath-D)*.
11:45 – 12:00 G. Pedersen: *Moment Tensor inversion of local seismicity*.
12:00 – 12:15 M. Mathey: *Seismic crustal deformation in the Western Alps : new insights from high spatial resolution data (Sismalp database)*.

12:15 – 12:45 **Final remarks**