

Receiver Function working group – experience from AlpArray

AdA workshop Dubrovnik

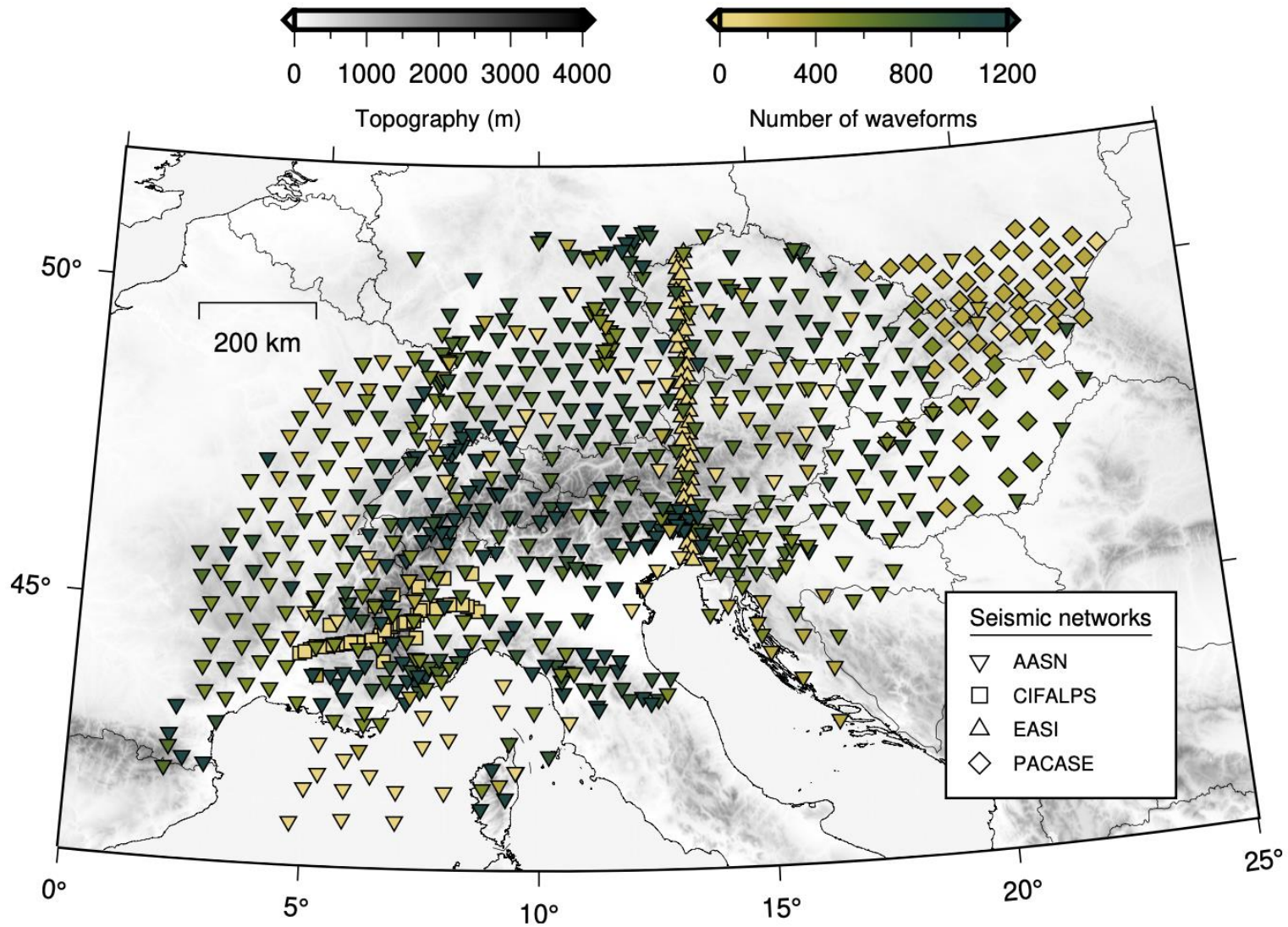
3-5 April 2023



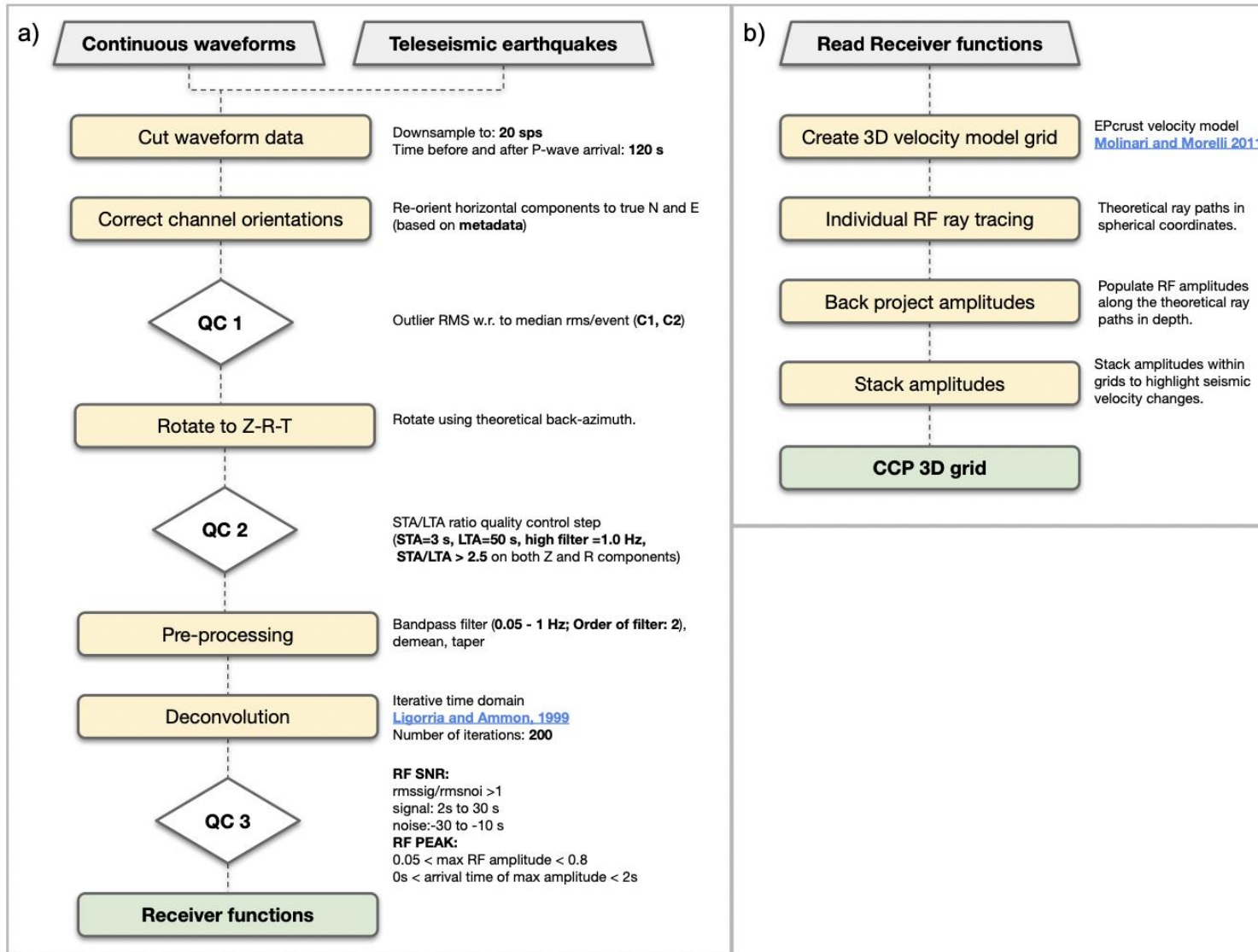
Framework of the AlpArray working group

	Research topic title	Researchers involved (*: PhD)	Participating institutes	Status / TO DO / Notes
CRUST	AlpArray RF database + AlpArray RF Moho map	J. Stipčević, G. Hetényi, J. Vergne, L. Bonatto, F. Link*, I.	ENTIRE WG	2019.02: Data download script is being tested, download task will be distributed across the group
	Fully 3D crustal vS model development (inversion with	L. Colavitti*, G. Hetényi	Lausanne	2021.04: new tool developed, study completed, available in Leonardo Colavitti's PhD thesis.
	1D RF stacks' inversion with Bayesian approach towards	I. Bianchi	Vienna	2021.04: data collected and processed, 3D Vs in testing phase
MANTLE	Sub-lithospheric Sp RF	R. Kind S. Monna, C. Montuori K. Hannemann, M. Korn	GFZ INGV Leipzig	2019.02 INGV: plans to start SP RF. Leipzig: not yet started.
	Mantle transition zone	S. Tharimena, I. Bianchi, G. Bokelmann	Vienna	2021.04:
ANISOTR.	Harmonic analysis	I. Bianchi F.P. Lucente, M. Di Bona, A. Govoni, S. Salimbeni, S. Pondrelli	Vienna INGV	2021.04: data assembled and processed. Interpretation ongoing. Ready for modeling.
	Generalized H-kappa	F. Link*	Frankfurt	2019.02: Methodology fully developed and in preparation for publication. Data collection almost
JOINT INV.	Ambient noise surface waves + body waves + RF (Bayesian & Backus-Gilbert)	J. Vergne, ... A. Paul, Y. Lu*,	Strasbourg Grenoble Lyon	clarify Lyon data access
	Ambient noise + RF + surface waves --> vS model	J. Kvapil, J. Plomerová, H. Kampřová, L. Vecsey	Prague	(in SuWANO FuWI group)
	Upper mantle from teleseisms and regional eqks	F. Di Luccio	INGV	2019.02: transferred to the tomography group
	RF + P wave polarization and delay times + H-kappa stack	K. Hannemann, M. Korn	Leipzig	clarify with respect to French venture and AA RF Moho map
REGIONAL APPLICATIONS	Dinarides, all depths, joint inversions	J. Stipčević, T. Belinić*, I. Dasović, ...	Zagreb	regional co-op. Pannonian B.? 2019.02: surf.wave dispersions with 2-station method in the Dinarides. Joint inv. planned for late 2019. S RF already published, will revisit upper mantle structure. Also working on ANT, to go into the joint inversion. P RF also underway.
	Pannonian Basin Ps RF analyses	D. Kalmár*, G. Hetényi, I. Bondár, ...	Budapest	2021.04: study completed, manuscript revised, awaiting next step
	Ivrea Body, Ivrea Verbano Zone	M. Scarponi*, G. Hetényi	Lausanne	2021.04: study completed, two papers published:
	Bohemian Massif	J. Plomerová	Prague	2019.02: P RF over region 10-19E/48-52N processed with Kind et al. 1995 method (delay times), Zhu
	Swath-D	S. Mroczek*, X. Yuan, F. Tilmann ...	GFZ	2019.02: Moho map based on H-kappa in progress
	Western Alps, Ps + Sp RF	J. Vergne, ...	Strasbourg	French national lithospheric model
	Ligurian Alps, CIFALPS-2, Po Plain; Ligurian Sea	S. Salimbeni, ... K. Hannemann, M. Korn	INGV Leipzig	regional co-op.: Ligurian Sea, France, Ivrea, Swath-D, Dinarides. regional co-op.: France, Ligurian Alps 2019.02: not yet started
Autocorrelatic	Ambient noise based autocorrelation to map PmP and SmS Moho reflection	S. Mroczek*, F. Tilmann ...	GFZ	2019.02: PmP profile along EASI line based on ZZ autocorrelation

Stations



Common processing routine





Moho depths beneath the European Alps: a homogeneously processed map and receiver functions database

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