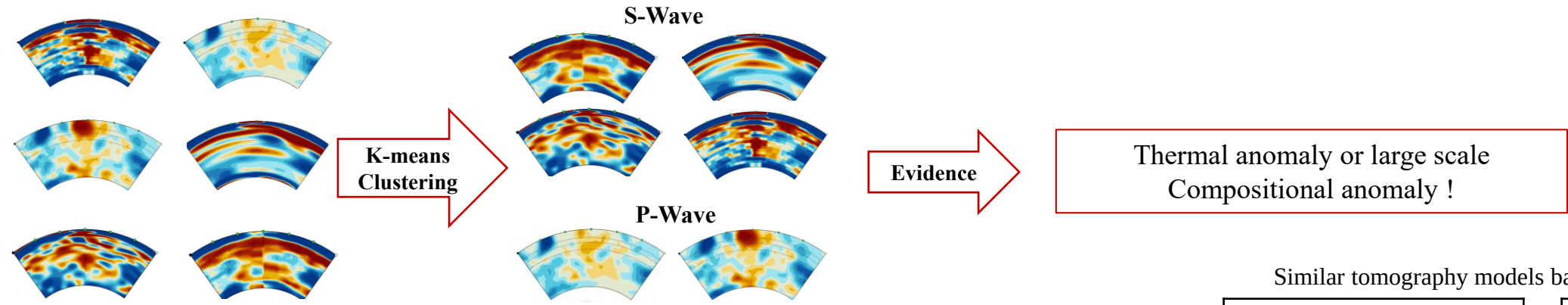


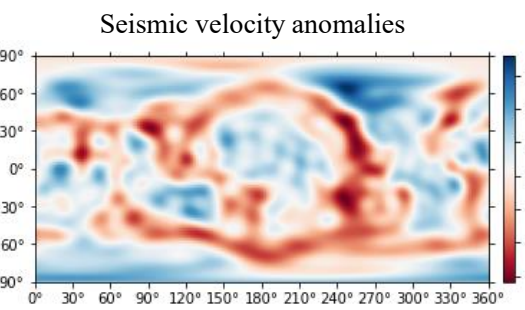
“Applying cluster analysis to seismic tomography models: Uncovering similarities and differences in the spatial and spectral domains”



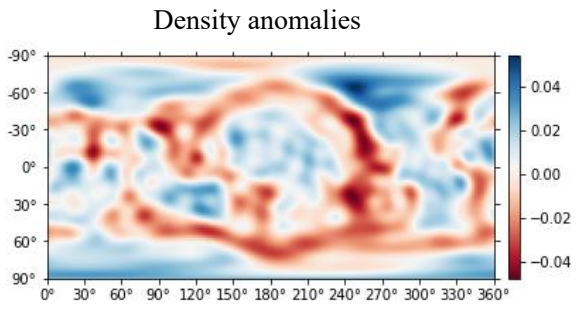
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Attribute: Center of mass



$$\frac{\Delta \rho}{\rho_0} = P \frac{\Delta v_s}{v_s}$$



$$Center of Mass = \frac{\int_V \delta \varphi(\vec{x}) \vec{x} d^3x}{\int_V \delta \varphi(\vec{x}) d^3x}$$

Assumption:
Thermal origin

If correct,
K-means results: No difference between P and S

If incorrect:
K-means results: There is a bias between P and S

Similar tomography models based on center of mass

Cluster 1		Cluster 2	
S wave model	GYPSUMS	S wave model	3D2016-09Sv
	3D2018-08Sv		DBRD-NATURE2020
	S362ANI		SAW642ANB
	S362WMANI		SEISGLOB1
	TX2019slab_S		SEISGLOB2
	SAW642AN		HMSL_S
	SAW24B16	P wave model	GYPSUMP
	TX2011		Detox3
	TX2000		HMSL_P
	SGLOBE-rani-voigt		
	SEMUM		
P wave model	r_TX2019slab_P		
	Detox1		
	Detox2		