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Visualization of the Multichannel Seismocardiogram

Kim Munck, Johannes J Struijk, Kasper Sørensen, Samuel E Schmidt

INTRO

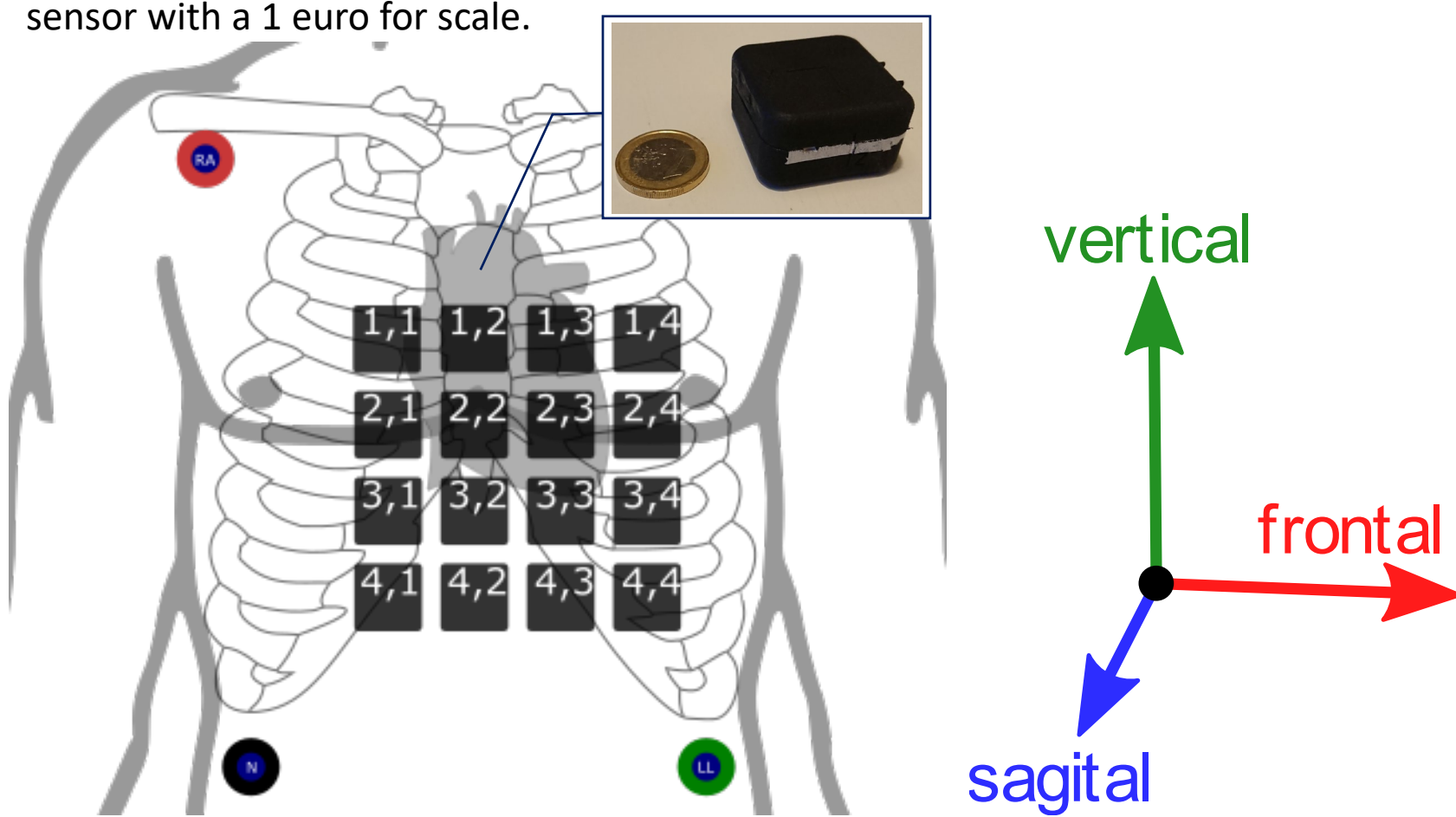
- How can multichannel seismocardiogram be visualized?
- Strengths of the visualization methods?

Methods

- Multichannel SCG with 16 three-axis acceleration sensors
- Measured on 11 healthy male subjects in a 4 by 4 grid

Sensor placement and orientation

Multichannel seismocardiogram sensor placement and orientation of the cardinal axis. Sensor 3,2 was placed above the xiphoid process and used as origin in the sensor coordinate system. The image shows the 30 x 30 x 20 mm sensor with a 1 euro for scale.



- Four visualization methods

1. SCG chart
2. Color plot
3. Tracking map
4. Seismic mesh

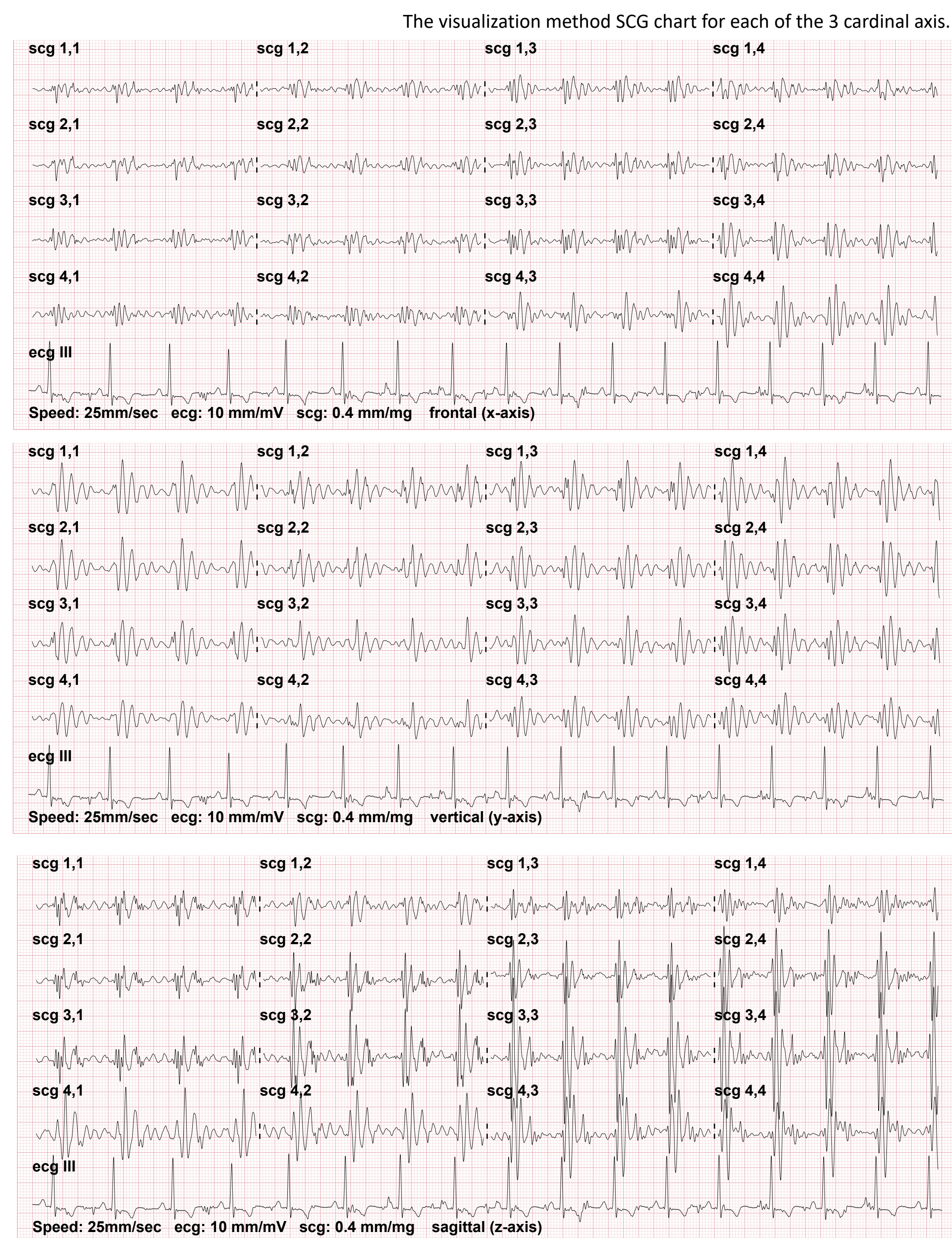
DISCUSSION

Strength evaluation

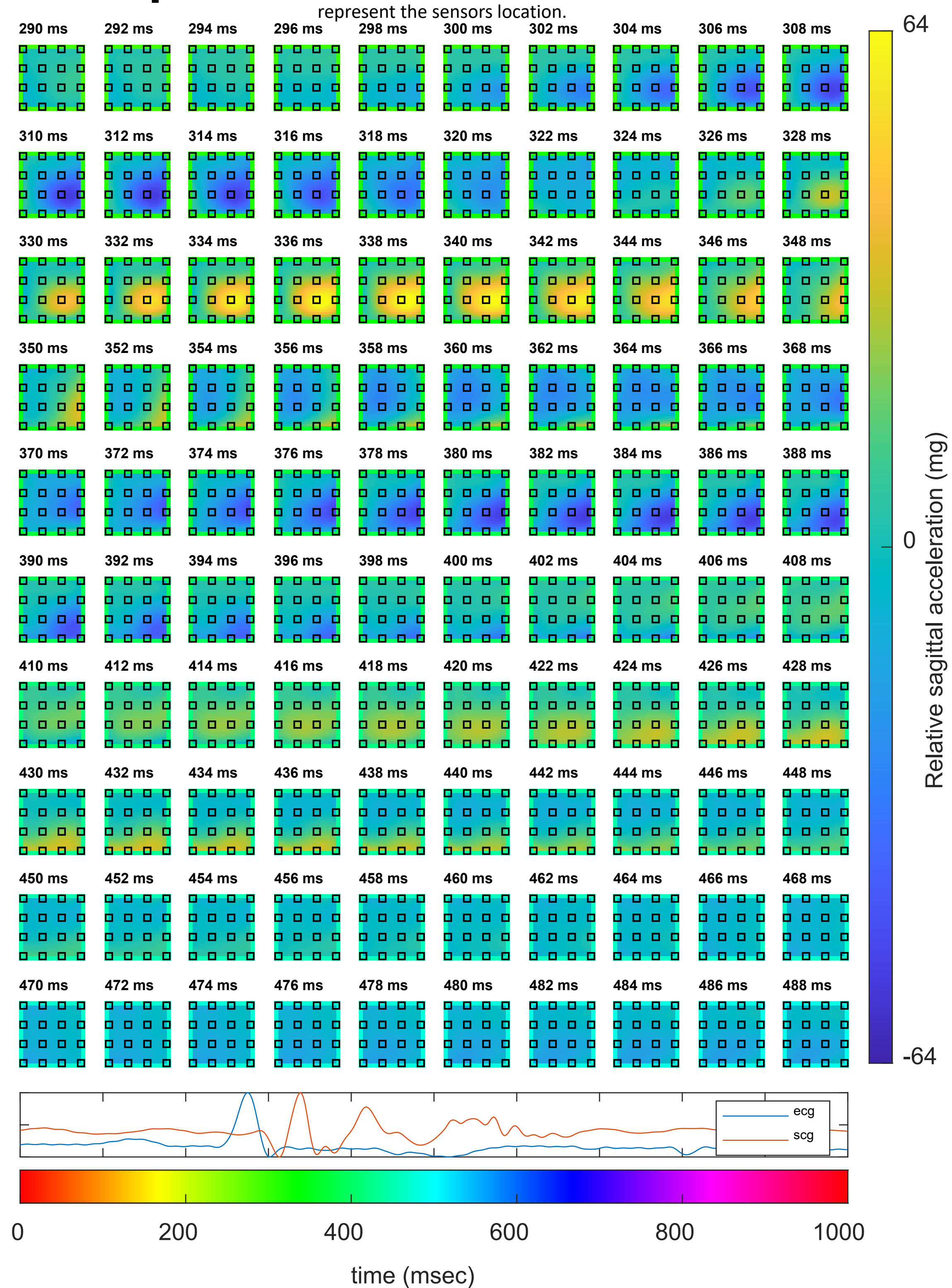
A summarized evaluation of the visualization methods strengths, where * and ** means that the strength is moderate or strong, respectively.

	SCG chart	Color plot	Tracking map	Seismic mesh
Temporal	**		*	
Spatial		*		**
Directionality			**	

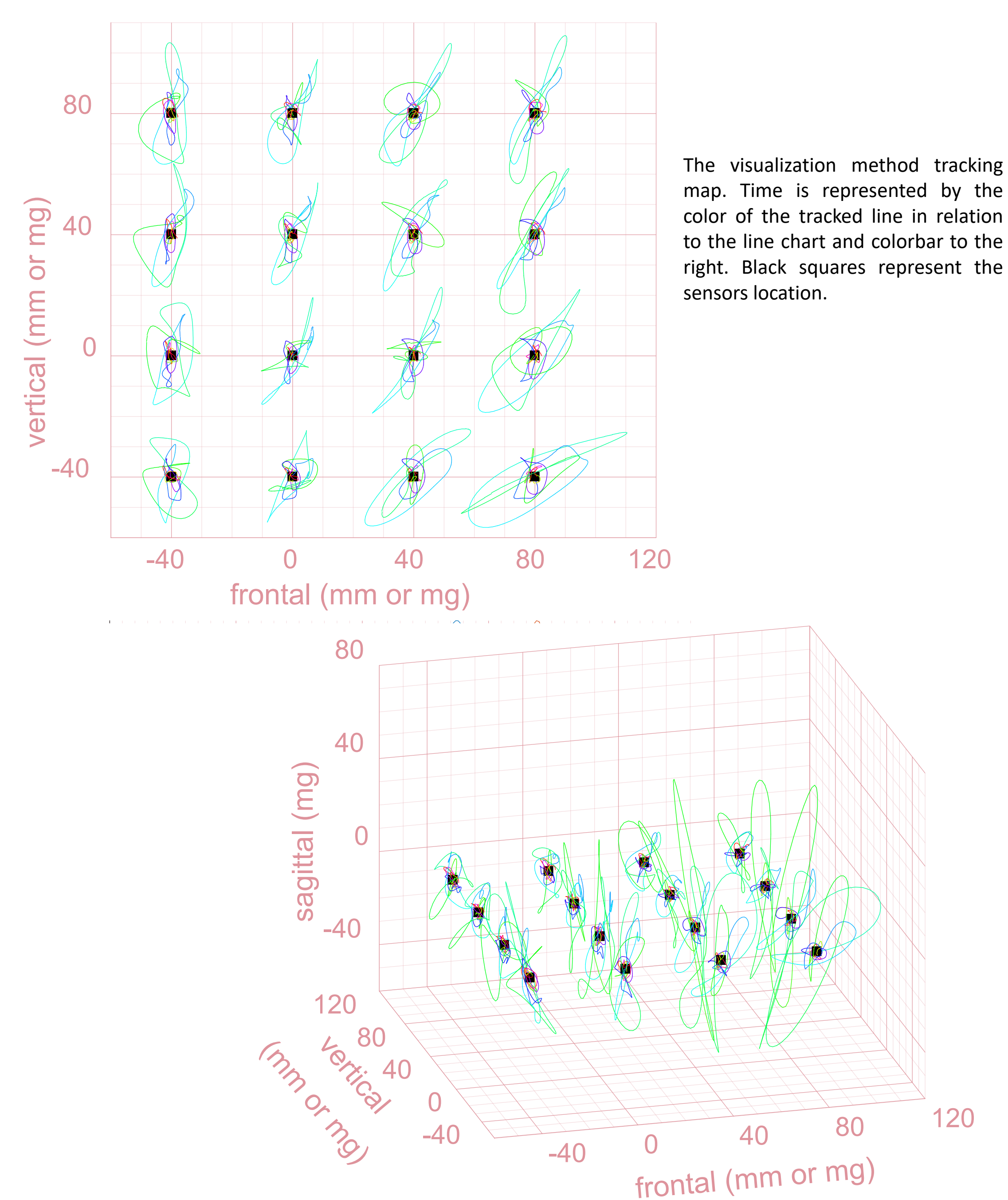
SCG chart



Color plot



Tracking map



Seismic mesh

