

Resource Summary Report

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sLORETA

RRID:SCR_013829

Type: Tool

Proper Citation

sLORETA (RRID:SCR_013829)

Resource Information

URL: http://www.uzh.ch/keyinst/loreta#_NOTES:

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Description: A software application which computes images of electric neuronal activity from EEG and MEG. Standard Low Resolution Brain Electromagnetic Tomography, or sLORETA, localizes “test point sources” exactly (under ideal conditions) when estimating electric neuronal generators. This property can be generalized to any source distribution, based on the principles of linearity and superposition. However, it would be noted that sLORETA has very low spatial resolution.

Abbreviations: sLORETA

Synonyms: Standardized low-resolution brain electromagnetic tomography, Standard Low Resolution Brain Electromagnetic Tomography

Resource Type: software resource

Defining Citation: [PMID:12575463](#)

Keywords: software application, EEG, MEG, electric neuronal activity, image, LORETA, brain electromagnetic tomography

Availability: Free, Not ready for public distribution, Must have administrator rights

Resource Name: sLORETA

Resource ID: SCR_013829

Alternate URLs: <http://www.uzh.ch/keyinst/NewLORETA/sLORETA/sLORETA.htm>

Old URLs: <http://www.uzh.ch/keyinst/loretaOldy.htm>

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Record Creation Time: 20220129T080318+0000

Record Last Update: 20260725T190802+0000

Ratings and Alerts

No rating or validation information has been found for sLORETA.

No alerts have been found for sLORETA.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 771 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

Tretyakova V, et al. (2025) Newly acquired word-action associations trigger auditory cortex activation during movement preparation: Implications for Hebbian plasticity in action word learning. PloS one, 20(7), e0325977.

Arif Y, et al. (2025) Oscillatory and evoked neural responses underlying gating in the primary somatosensory cortices: Evidence from optically-pumped magnetometry. NeuroImage, 318, 121393.

Wang G, et al. (2025) Cortical adaptations in Tai Chi practitioners during sensory conflict: an EEG-based effective connectivity analysis of postural control. Journal of neuroengineering and rehabilitation, 22(1), 120.

Ye K, et al. (2025) Therapeutic deep brain stimulation targeting BNST-NAc circuit driven large-scale brain networks in treatment-resistant depression. Translational psychiatry, 15(1), 442.

Suzuki S, et al. (2025) Characteristics of spontaneous anterior-posterior oscillation-frequency convergences in the alpha band. eNeuro, 12(3).

Ranjan S, et al. (2025) Deep learning-based classification of dementia using image representation of subcortical signals. BMC medical informatics and decision making,

25(1), 113.

Borràs M, et al. (2025) Assessing Motor Cortical Activity: How Repetitions Impact Motor Execution and Imagery Analysis. *Psychophysiology*, 62(6), e70090.

Stephan AM, et al. (2025) Cortical activity upon awakening from sleep reveals consistent spatio-temporal gradients across sleep stages in human EEG. *Current biology : CB*, 35(16), 3812.

Jiang Z, et al. (2025) Abnormal Enhanced Gamma Synchronization in the Default Mode Network Associated With Chronic Pain. *European journal of neurology*, 32(10), e70373.

Kim BR, et al. (2025) Effects of Tablet-Based Cognitive Training in Cognitively Unimpaired Older Adults: A Randomized Controlled Trial. *Psychiatry investigation*, 22(11), 1319.

Bevilacqua M, et al. (2025) Pathway-dependent brain stimulation responses indicate motion processing integrity after stroke. *Brain : a journal of neurology*, 148(7), 2361.

Kumar A, et al. (2025) Cerebello-Prefrontal Connectivity Underlying Cognitive Dysfunction in Spinocerebellar Ataxia Type 2. *Annals of clinical and translational neurology*, 12(6), 1109.

Rong J, et al. (2025) Deep learning-based EEG source imaging is robust under varying electrode configurations. *Clinical neurophysiology : official journal of the International Federation of Clinical Neurophysiology*, 175, 2010730.

Souza GV, et al. (2025) Visuoffective day residue in hypnagogia involves sequential bihemispheric interactions between cortical, subcortical, and cerebellar structures. *Communications biology*, 8(1), 997.

Prince P, et al. (2025) Effects of age on the neural correlates of auditory working memory in cochlear implant users. *PloS one*, 20(6), e0325930.

Trumpp NM, et al. (2025) Spatio-temporal activity of brain electrical sources during processing of abstract social concepts. *Social cognitive and affective neuroscience*, 20(1).

Zhao S, et al. (2025) Effect of altitude on the spatiotemporal signal characteristics of inversion face recognition. *Scientific reports*, 15(1), 25462.

Becker LF, et al. (2025) Modulation of response inhibition with event-related atVNS showed EEG but no behavioral effects. *Scientific reports*, 15(1), 40734.

Chen C, et al. (2025) Prioritizing flexible working memory representations relies on the involvement of the parahippocampal-insula network during memory reactivation. *Communications biology*, 8(1), 1648.

Dumitrescu AM, et al. (2025) Investigating the Spatio-Temporal Signatures of Language Control-Related Brain Synchronization Processes. *Human brain mapping*, 46(2), e70109.