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## CHILDHOOD APRAXIA OF SPEECH

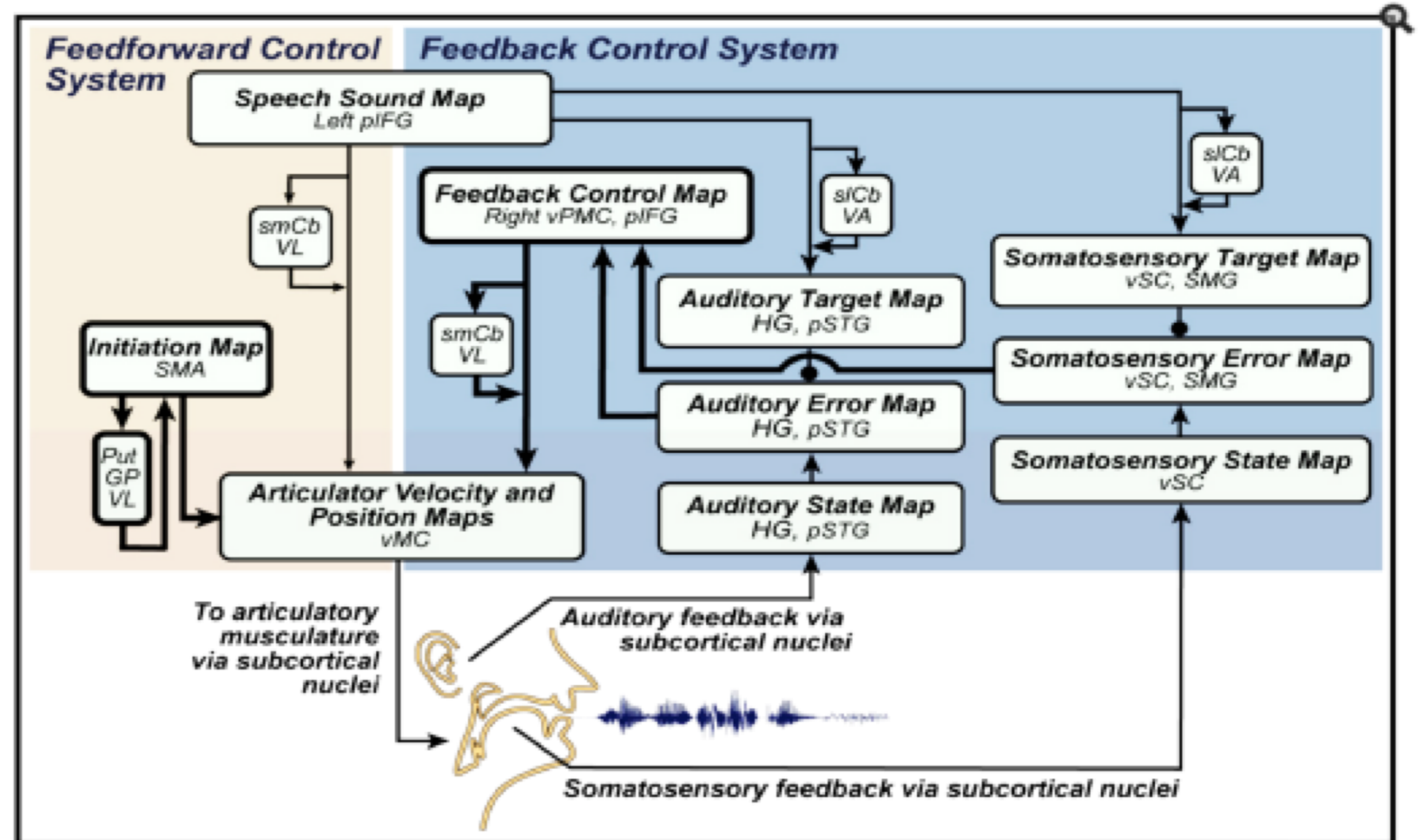
**Childhood Apraxia of Speech (CAS) or verbal dyspraxia** is a rare motor speech disturbance that affects approximately 1-2/1000 children (Shriberg, 1997). It is considered therapy resistant. Speech is qualified by phonemic disturbances, co-articulation deficits, as well as prosodic issues and can be unintelligible

### PROBLEM

previously argued that children with CAS have issues with the regulation predictive component within the articulation model (see work by Terband and colleagues).

Therapy, which is not always successful, is focused on FEEDBACK, without research having demonstrated where the feedback loop the problem is situated

## DIVA – MODEL (Guenther & Tourville, 2006)



## METHODOLOGY

### PARTICIPANTS

Code	Gender	Age	Handedness	Duration of SLT
CAS1	Male	12	Right	6 years
CAS2	Female	11	Right	9 years
CAS3	Male	11	Left	7 years
CON1	Male	13	Left	1 year
CON2	Female	11	Right	6 months
CON3	Male	11	Right	N/A

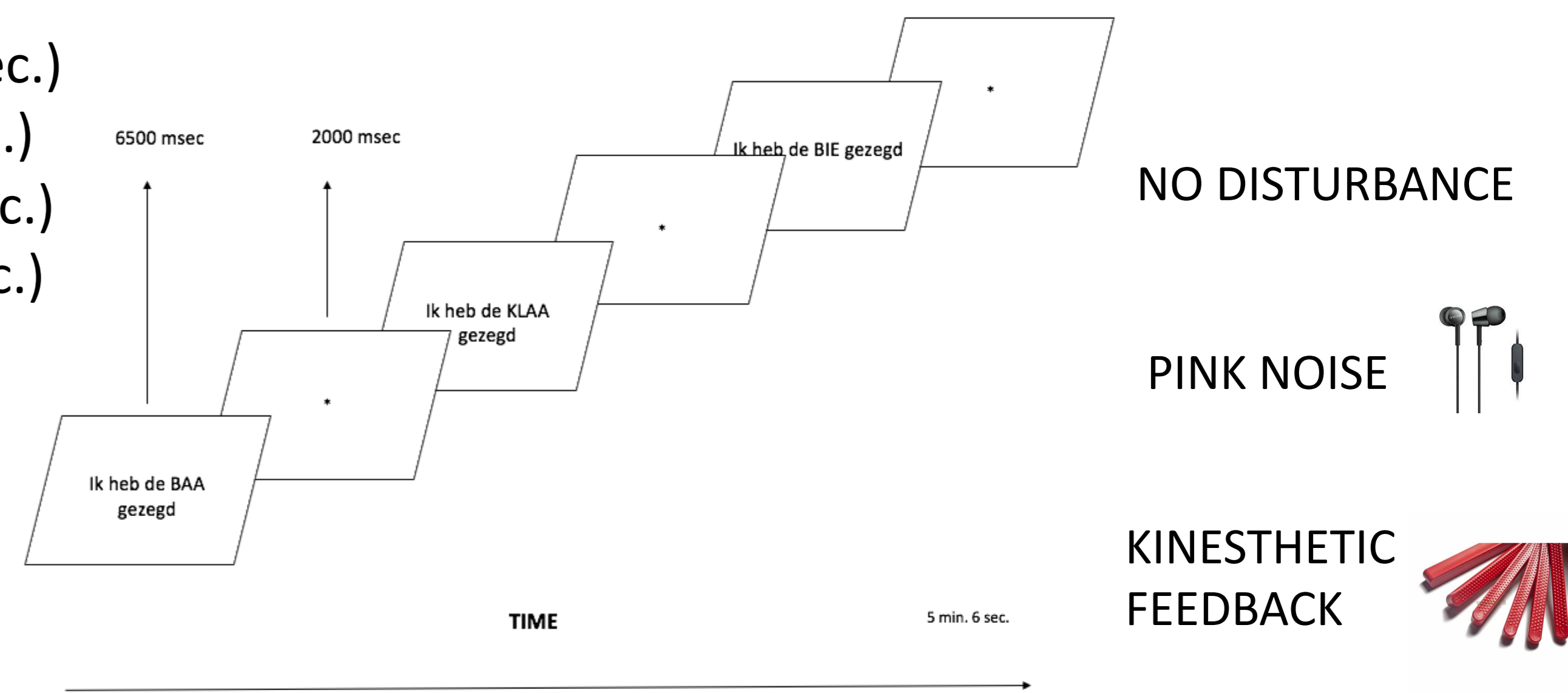
### STIMULI

	B	G	S	PL	KL	SCH
AA	BAA	GAA	SAA	PLAA	KLAA	SCHAA
IE	BIE	GIE	SIE	PLIE	KLIE	SCHIE
OE	BOE	GOE	SOE	PLOE	KLOE	SCHOE

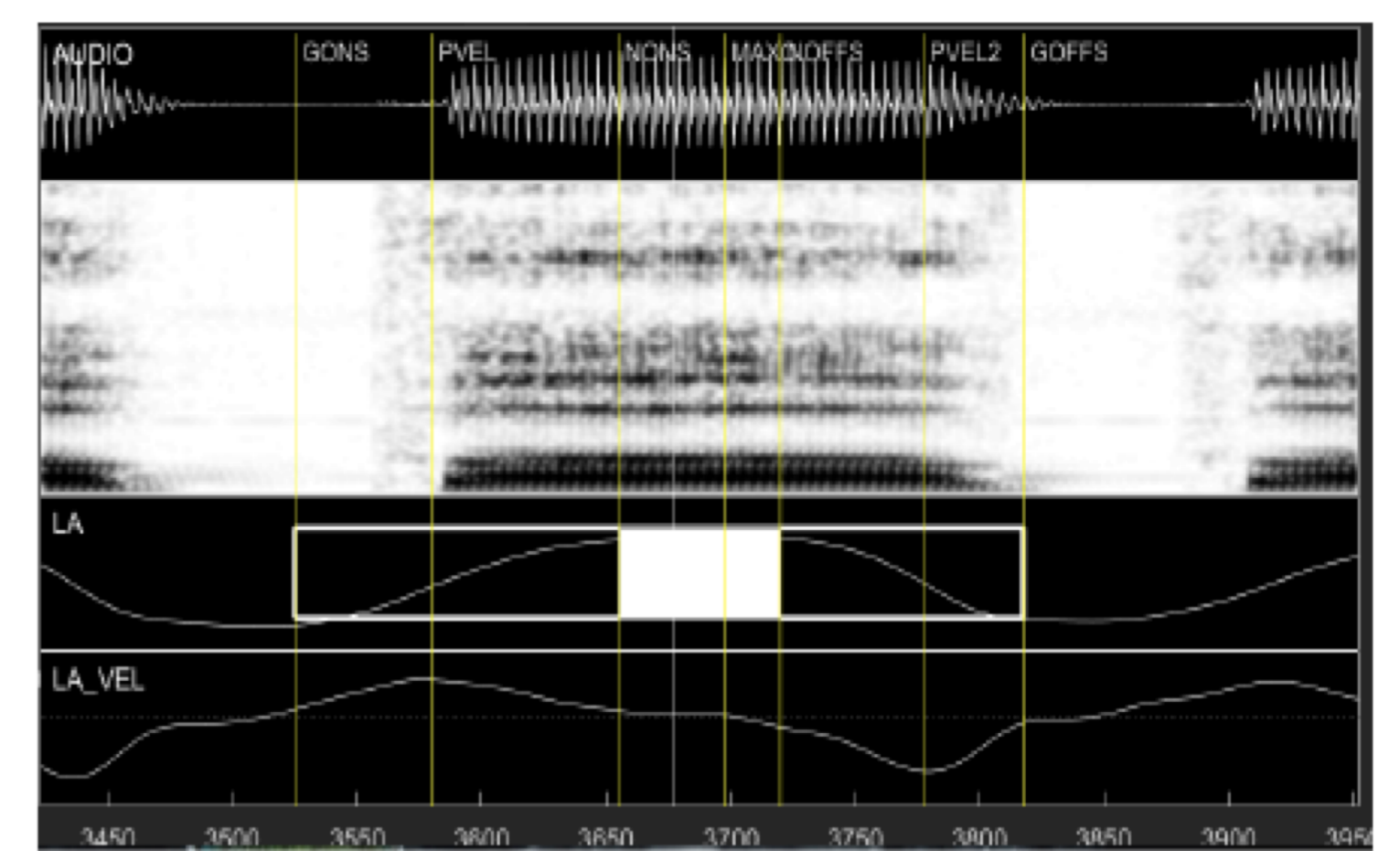
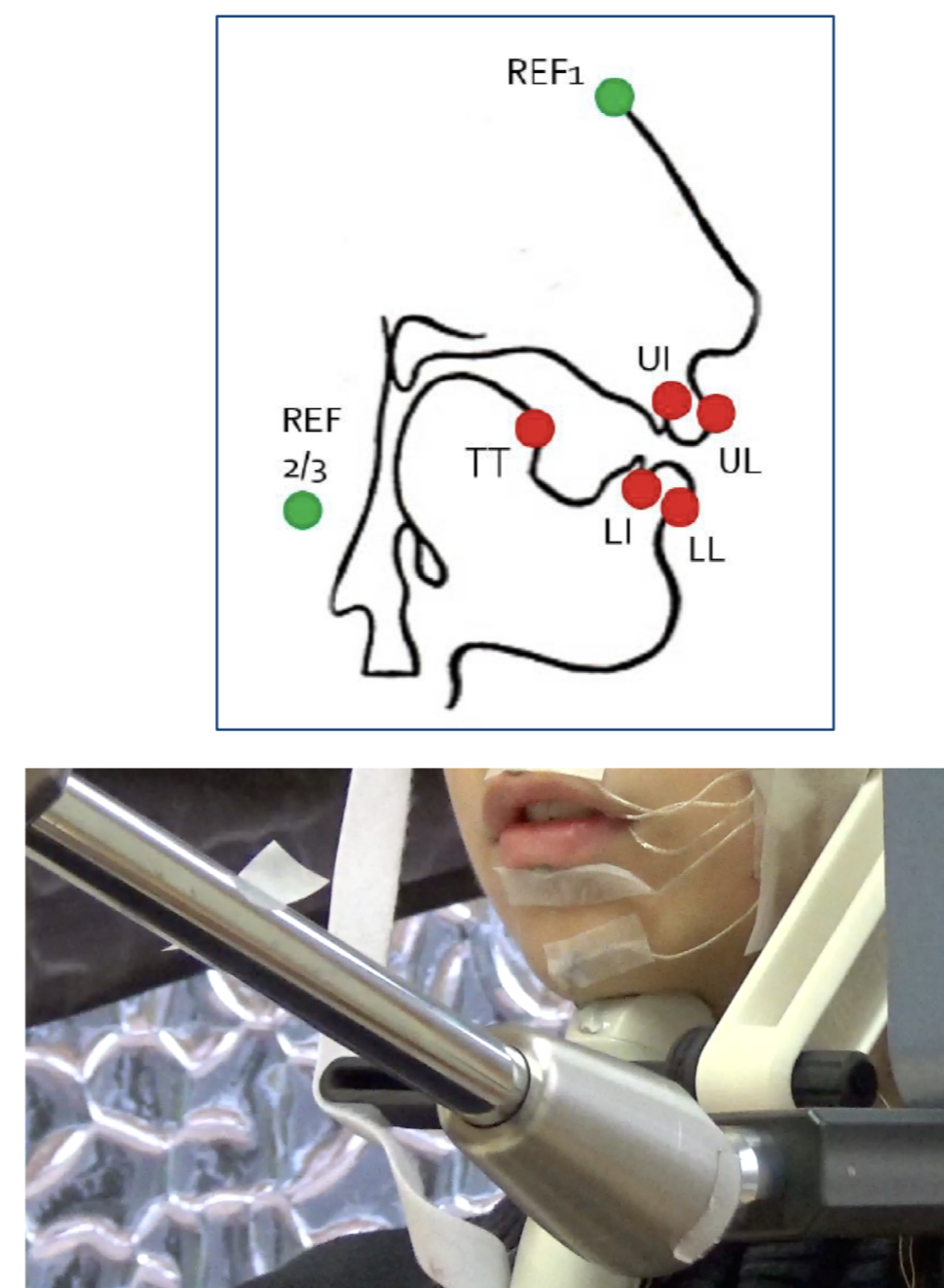
### PARADIGM

#### 1. Diadochokinesia 2. « Feedback interruption task »

- PaPaPa ... (10 sec.)
- TaTaTa... (10 sec.)
- KaKaKa... (10 sec.)
- PaTaKa... (10 sec.)



## ELEKTROMAGNETIC ARTICULOGRAPHY



Marta for Matlab (Tiede, 2019)

## RESULTS

