

**Table 1: Summary of model parameters fitted to the response modification index ( $\Delta R_{AW}$ ) and the differential modification index ( $\Delta R_{diff}$ ).**

Parameters	Exponential fit	STDP model <sup>1</sup>		Suppressive STDP model <sup>2</sup>	
		Additive	Multiplicative	Additive	Multiplicative
$\Delta R_{AW}^3$					
A+	n.a. <sup>5</sup>	2,44	4,34	9,52	16,15
A-	-0,38	-0,29	-0,42	-0,27	-0,38
$\tau^+$ (ms)	n.a.	1,60	1,30	0,90	0,70
$\tau^-$ (ms)	6,90	11,60	10,60	15,50	13,70
$\tau_S^{pre}$ (ms)	n.a.	n.a.	n.a.	0,0004	1,60
$\tau_S^{post}$ (ms)	n.a.	n.a.	n.a.	18,50	19,70
R <sup>2</sup>	0,32	0,24	0,25	0,33	0,34
$\Delta R_{Diff}^4$					
A+	n.a.	3,81	10,28	19,18	28,50
A-	-0,57	-0,49	-0,85	-0,38	-0,73
$\tau^+$ (ms)	n.a.	1,90	1,20	0,90	1,00
$\tau^-$ (ms)	6,30	10,70	9,60	16,40	13,80
$\tau_S^{pre}$ (ms)	n.a.	n.a.	n.a.	3,20	40,70
$\tau_S^{post}$ (ms)	n.a.	n.a.	n.a.	34,90	45,00
R <sup>2</sup>	0,38	0,35	0,38	0,49	0,53

<sup>1</sup> adapted from Song and Abbott (2001)

<sup>2</sup> adapted from Froemke and Dan (2002)

<sup>3</sup> index of normalized response changes (see Methods)

<sup>4</sup> index of differential response changes (see Methods)

<sup>5</sup> not apply