

# High-density EEG signature of NREM sleep parasomnia episodes

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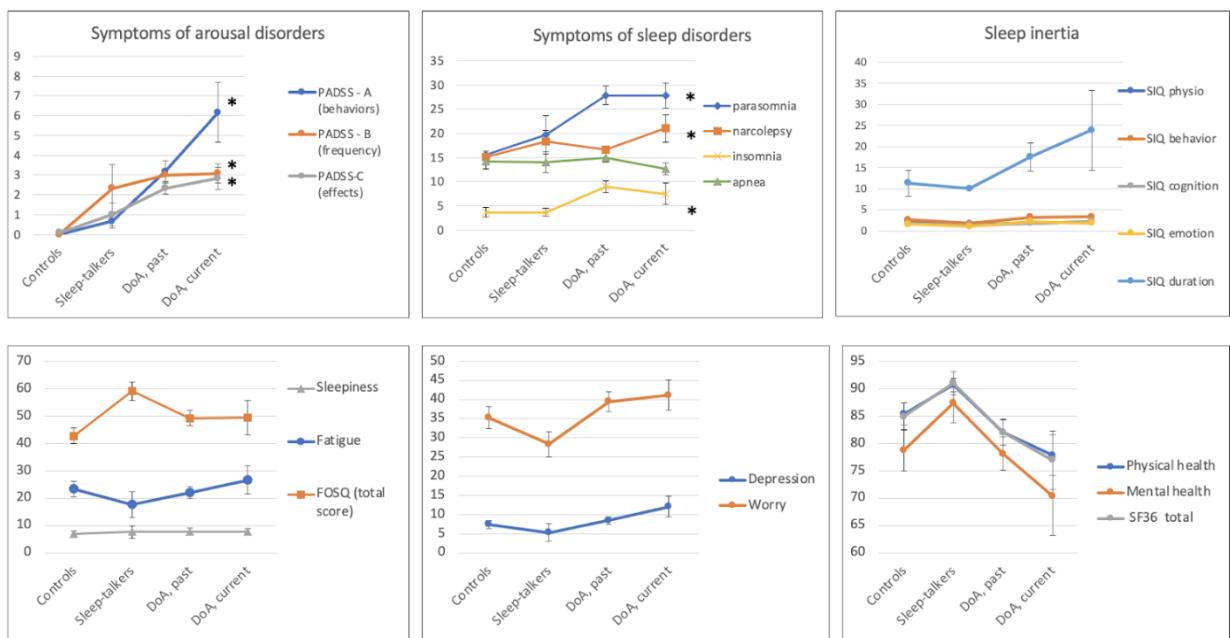
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## Supplementary Material

### Suppl. Fig S1 Subdivision of parasomnia subjects based on their behaviors

A gradient on some sleep variables tended to occur between the different sub-groups: current DoA subjects (13), past DoA subjects (6), sleepwalkers only (3), and controls (12). Tests were performed between NREM parasomnia group (n=22) and controls (n=12) only: \* indicate significant differences. Details of the questionnaires codes are reported in Table 1.



**Suppl. Table S1 Parasomnia episodes with paired sleep**

Matching of parasomnia episodes with awakenings from sleep from the same subject, as much as possible from the same night origin, sleep stage and subsequent consciousness report. (CE for consciousness, N for No consciousness, CNR for Consciousness with no report, . for missing report). Awakenings were as close in time as possible to the PE. Strikethrough unique PE identifiers indicate unusable parasomnias.

Patient	Night	Sleep stage	Unique Parasomnia Identifier	Consciousness Report	Unique Awakening Identifier	Night	Sleep Stage	Consciousness Report
<b>P00A</b>	RS	N2	60	N	59	RS	N2	N
<b>P00B</b>	RS	N3	86	.	84	RS	N3	N
	RS	N3	88	N	85	RS	N3	N
	RS	N3	90	N	87	RS	N3	N
<b>P00C</b>	BS	N3	128	.	129	BS	N2	N
	RS	N3	135	N	136	RS	N3	N
<b>P00D</b>	RS	N3	34	N	27	RS	N3	N
	RS	N2	32	.	29	RS	N2	N
	RS	N3	33	N	30	RS	N2	CE
	RS	N2	28	CE	35	RS	N2	CE
<b>P00E</b>	RS	N3	46	N	48	RS	N3	N
	RS	N2	51	CE	53	RS	N2	N
	RS	N3	43	CNR	48	RS	N3	N
	RS	N2	52	CE	53	RS	N2	N
	RS	N3	41	CE	48	RS	N3	N
	RS	N2	45	CE	53	RS	N2	N
	RS	N3	49	CE	48	RS	N3	N
<b>P00F</b>	RS	N3	77	CE	73	RS	N3	CE
	BS	N3	68	.	70	BS	N3	CE
	RS	N3	74	CNR	73	RS	N3	CE
	BS	N3	69	.	70	BS	N3	CE
	RS	N3	75	CE	76	RS	N2	CE
	RS	N3	78	CE	79	RS	N2	CE
<b>P00G</b>	RS	N2	114	CE	112	RS	N2	CE
	RS	N2	111	.	112	RS	N2	CE
	RS	N3	113	CE	116	RS	N2	CE
<b>P00H</b>	RS	N2	160	CE	157	RS	N3	CE
	RS	N3	156	N	168	RS	N3	N
	RS	N2	159	N	173	RS	N2	N
<b>P00I</b>	RS	N3	10	CE	9	RS	N2	CE
	RS	N2	5	N	9	RS	N2	CE
	RS	N3	4	CNR	6	RS	N3	CNR
	RS	N3	8	CNR	7	RS	N3	CNR
<b>P00L</b>	RS	N3	124	N	123	RS	N3	N
	RS	N3	126	N	125	RS	N3	N
<b>P00M</b>	BS	N3	11	.	13	BS	N2	N
	BS	N3	12	.	13	BS	N2	N
	RS	N3	17	N	16	RS	N2	N
	RS	N3	19	N	20	RS	N3	N
	RS	N3	45	N	20	RS	N3	N
	RS	N3	48	N	24	RS	N3	N
<b>P00N</b>	RS	N3	143	N	144	RS	N3	N
	RS	N3	140	N	144	RS	N3	N
	RS	N3	148	N	149	RS	N3	N
	RS	N2	147	N	151	RS	N2	N
<b>P00P</b>	RS	N3	182	CE	179	RS	N3	N
	RS	N2	184	CE	181	RS	N3	N
	RS	N3	178	N	179	RS	N3	N
	RS	N3	180	N	181	RS	N3	N
	BS	N3	176	.				
	BS	N2	177	CE				

<b>P00Q</b>	BS	N3	186	CE	187	BS	N2	CNR
	RS	N2	190	CE	193	RS	N2	CE
	RS	N3	189	CE	197	RS	N3	CE
<b>P00R</b>	BS	N3	252	CE	251	BS	N3	CE
	BS	N2	254	N	263	BS	N3	N
	BS	N3	255	CE	251	BS	N3	CE
	BS	N2	257	N	263	BS	N3	N
	BS	N2	256	CE	251	BS	N3	CE
	RS	N3	271	N	268	RS	N3	N
	RS	N3	274	N	272	RS	N3	N
<b>P00S</b>	BS	N2	291	N				
	BS	N3	292	N				
<b>P00T</b>	BS	N3	338	N	339	BS	N2	N
<b>P00U</b>	BS	N2	348	N	349	BS	N3	N
	BS	N2	351	CE	349	BS	N3	N
	RS	N3	354	N	357	RS	N2	N
	RS	N3	356	N	361	RS	N3	N
	RS	N3	359	CE	363	RS	N3	CE
	RS	N3	360	N	364	RS	N3	N
	BS	N2	352	N	349	BS	N3	N
<b>P00V</b>	RS	N3	374	CE	372	RS	N3	CE
	RS	N2	375	CE	376	RS	N3	CE
	RS	N2	378	CE	376	RS	N3	CE
	BS	N2	366	CE				
	BS	N2	367	CE				
	BS	N2	368	CE				
<b>P00Z</b>	RS	N2	385	CE	387	RS	N2	CE
	BS	N3	379	CE				

**Supp. Table S2**

**Details on parasomnia episodes with conscious experience**

36 PE presented with consciousness upon awakening (divided into CE and CENR). The table presents each parasomnia (subject, origin (baseline or recovery sleep), type of parasomnia (ST, CA), a rating on the amount of sounds (ST) and movement (MVT) (see legend to table 3). Sleepiness upon awakening was obtained from the KSS scale. Details on the parasomnia obtained via the PCQ are indicated (*reminiscence*: did the episode remind the participant of anything already experienced?, *awareness*: were they aware they just had an episode?, *emotions*: were they having negative (-2) or positive emotions (+2),, other scales from 0 to 4 (strongest): *dreamlike experience*: were they aware they were dreaming, *control*: were they in control of what they were doing, *perception*: how much were they perceiving things (seeing/hearing), *thinking*: how much were they thinking during their experience, *faces*: did their experience involve faces, *speech*: did their experience involve speech, *yourself*: how much was their experience centered on themselves, *environment*: how much was it centered on their environment, *space*: were they moving through spaces, *moving*: how much were they or other people moving during their experience, *where*: where did your experience take place). Details of the words pronounced in the report and experience complexity are reported in the main Materials and Methods section.

Unique PE ID-A1-A35	Participant	Night	Panomnia Type	ST	MVT	Sleep stage	KSS	Congnitive	Reminiscence	Awareness of episode	12. emotions	13. dreamlike	14. control	15. perceptions	16. thinking	17. faces	18. speech	19. yourself	20. environment	21. space	22. moving	23. where	Number of words	Complexity scale	Environment related
4	POOI	RS	CA (simple)	1	1	N3	6	CNR	na	.	na	na	na	na	na	na	na	na	na	na	na	na	0	1	
8	POOI	RS	Sleep-talk	2	0	N3	5	CNR	na	yes	1	3	3	1	2	3	3	3	1	0	1	outdoors	10	2	
10	POOI	RS	CA (simple)	1	1	N3	.	CE	yes	.	0	1	0	2	0	0	0	1	2	0	0	outdoors	1	2	
28	POOD	RS	CA (simple)	1	2	N2	9	CE	no	.	na	na	na	na	na	na	na	na	na	na	na	na	0	1	
41	POOE	RS	CA (complex)	2	3	N3	9	CE	yes	yes	-2	1	0	3	1	0	0	.	.	.	.	.	28	3	
43	POOE	RS	CA (complex)	2	3	N3	.	CNR	na	yes	na	na	na	na	na	na	na	na	na	na	na	na	0	1	
45	POOE	RS	Sleep-talk	2	0	N2	.	CE	.	no	.	.	.	.	.	.	.	.	.	.	.	.	10	2	
49	POOE	RS	CA (complex)	1	3	N3	4	CE	yes	no	1	.	.	.	.	0	2	.	.	.	1	indoors	10	2	
51	POOE	RS	CA (complex)	1	3	N2	6	CE	no	yes	0	1	2	1	1	0	3	3	2	1	1	indoors	24	3	
52	POOE	RS	CA (complex)	0	3	N3	6	CE	yes	yes	0	2	1	3	1	0	1	3	2	0	2	indoors	40	3	
74	POOF	RS	CA (simple)	0	2	N3	6	CNR	na	.	na	na	na	na	na	na	na	na	na	na	na	0	0		
75	POOF	RS	CA (complex)	2	3	N3	8	CE	.	yes	.	.	.	.	.	.	.	.	.	.	.	.	52	3	
77	POOF	RS	CA (complex)	0	3	N3	.	CE	yes	no	1	4	3	2	2	4	2	1	1	3	4	both	74	3	
78	POOF	RS	CA (complex)	2	3	N3	6	CE	yes	no	1	2	3	2	1	4	2	3	0	3	4	outdoors	58	3	
113	POOG	RS	Sleep-talk	2	0	N3	7	CE	yes	no	0	3	2	4	3	0	4	4	0	0	0	neither	18	2	yes
114	POOG	RS	Sleep-talk	1	0	N2	7	CE	yes	no	0	3	3	4	3	0	4	4	0	0	0	indoors	12	2	yes
160	POOH	RS	Sleep-talk	2	0	N2	9	CE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18	2	yes
177	POOP	BS	CA (complex)	2	3	N2	7	CE	no	yes	-1	3	0	3	4	1	4	1	4	1	3	neither	29	3	
182	POOP	RS	CA (complex)	2	3	N3	6	CE	yes	.	0	.	.	.	.	.	.	.	.	.	.	.	23	3	
184	POOP	RS	Sleep-talk	2	0	N2	5	CE	yes	.	.	.	.	.	.	.	.	.	.	.	.	.	12	2	
186	POOQ	BS	Sleep-talk	1	0	N3	8	CE	no	no	0	0	1	4	2	2	2	3	1	1	1	outdoors	27	3	
189	POOQ	RS	CA (complex)	2	3	N3	8	CE	.	yes	.	.	.	.	.	.	.	.	.	.	.	.	5	2	
190	POOQ	RS	Sleep-talk	1	0	N2	8	CE	yes	.	1	0	3	2	0	0	3	4	0	0	0	indoors	21	2	yes
252	POOR	BS	CA (simple)	0	1	N3	6	CE	no	.	1	0	0	2	0	1	0	0	0	0	0	neither	4	2	
255	POOR	BS	Sleep-talk	2	0	N3	4	CE	no	no	0	0	0	0	0	0	1	0	0	0	0	neither	6	2	
256	POOR	BS	Sleep-talk	2	0	N2	4	CE	yes	yes	0	0	1	1	2	0	4	4	4	0	0	indoors	10	2	yes
351	POOU	BS	CA (complex)	2	3	N2	7	CE	yes	yes	-2	0	3	4	3	0	0	2	4	0	2	indoors	9	2	
359	POOU	RS	CA (complex)	2	3	N3	5	CE	yes	no	2	0	2	.	3	3	3	1	1	0	indoors	8	2		
366	POOV	BS	Sleep-talk	1	0	N2	3	CE	no	no	1	0	4	4	3	0	3	3	3	0	3	indoors	10	2	
367	POOV	BS	CA (simple)	1	1	N2	6	CE	yes	yes	0	2	3	3	4	3	4	3	2	0	1	both	26	3	
368	POOV	BS	Sleep-talk	1	0	N2	7	CE	yes	.	0	2	2	4	4	0	4	4	3	0	0	indoors	3	2	yes
374	POOV	RS	CA (complex)	1	3	N3	6	CE	yes	yes	0	0	4	4	4	3	4	4	0	1	3	both	13	2	yes
375	POOV	RS	Sleep-talk	1	0	N2	5	CE	yes	yes	0	0	2	4	4	0	4	4	2	0	3	indoors	11	2	yes
378	POOV	RS	Sleep-talk	1	0	N2	8	CE	yes	.	0	0	0	3	3	0	4	3	0	0	0	.	11	2	yes
379	POOZ	BS	CA (simple)	1	2	N3	8	CE	no	.	0	1	1	.	3	4	3	3	4	1	1	indoors	6	2	yes
385	POOZ	RS	Sleep-talk	1	0	N2	9	CE	yes	yes	0	1	3	3	4	3	4	4	4	0	0	indoors	14	2	yes