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NORWEGIAN INSTITUTE OF
BIOECONOMY RESEARCH

Acute behavioral responses of ewes to virtual fence cues

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Virtual fence:

Monil and Nofence VF collars for small ruminants



Knowledge gap:

Acute stress responses immediately around VF cue events are poorly documented in small ruminants



Test arena



Test arena

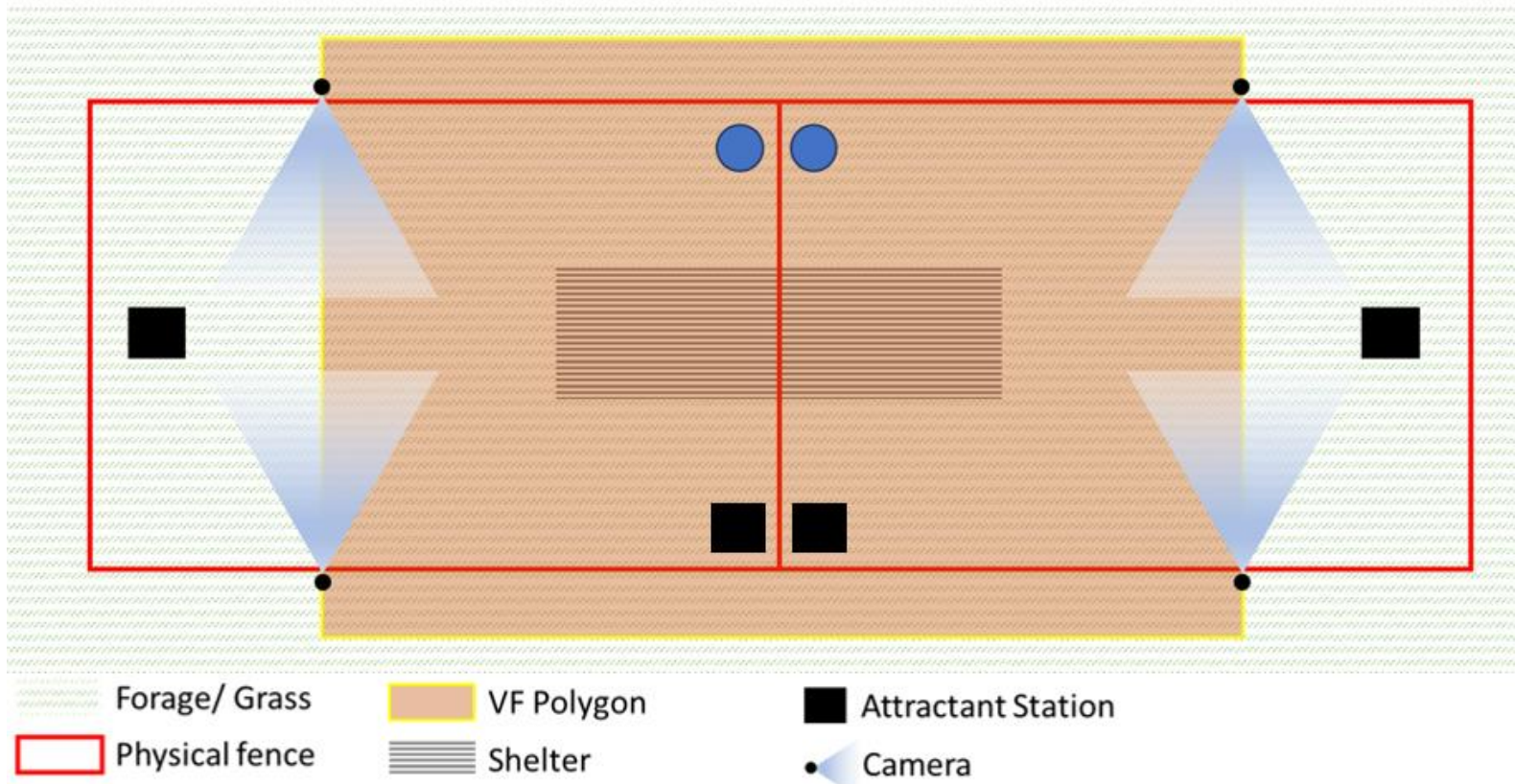
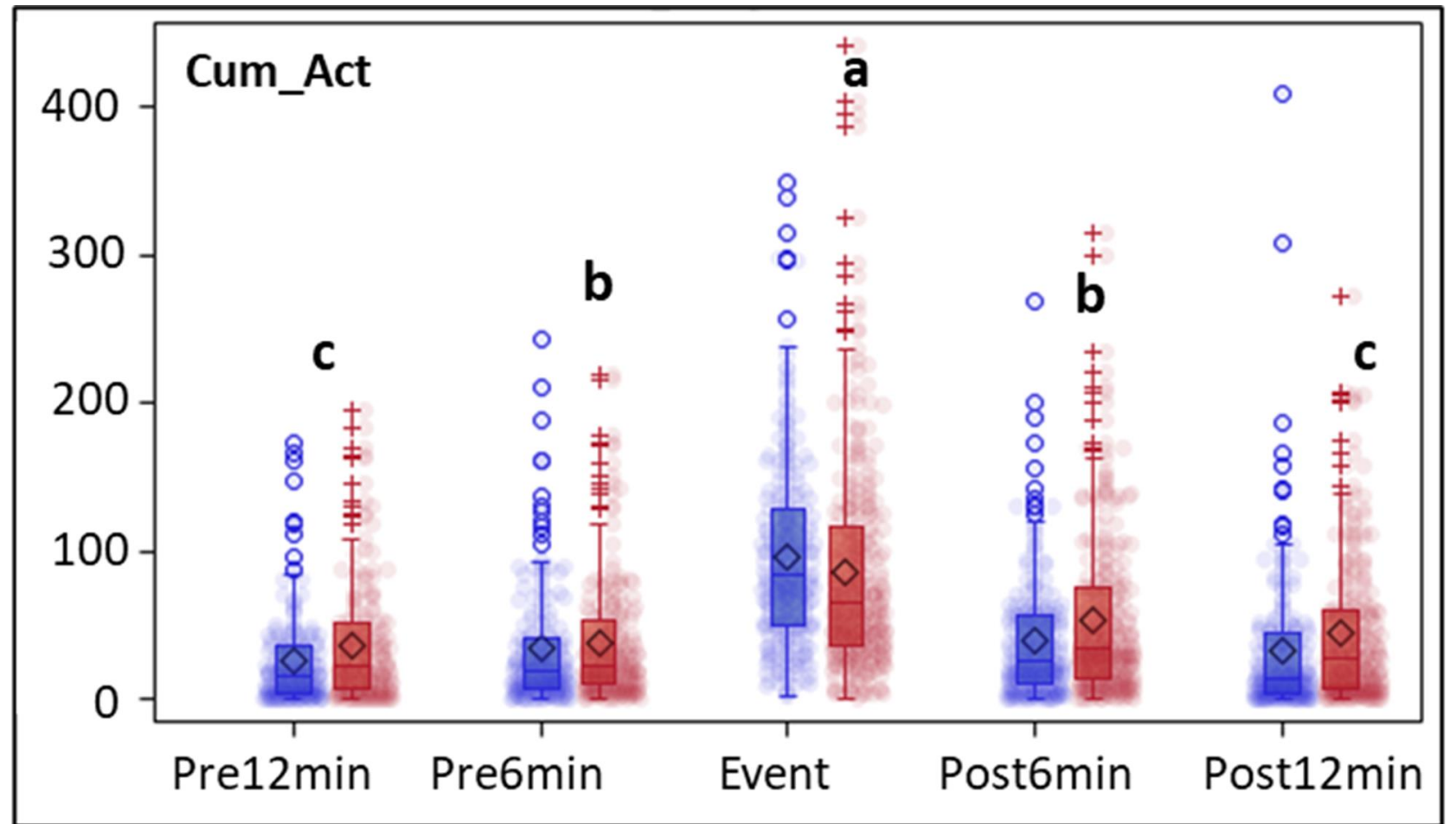


Figure 2. Mirrored 30 × 60 m arenas, each containing a separate group of ewes ($n = 2 \times 10$) fitted with either Monil or Nofence VF collars. The figure illustrates the VF in activated mode, where animals are restricted to three-quarters of the arena area.



What happens after cues?

Bolus activity data show:



Bolus movement count data (Blue and Red indicate VF Collars) during VF cueing across time windows representing 12 and 6 minutes before (Pre12min, Pre6min) and after (Post12min, Post6min) the event. Letters denote pairwise comparison between the time windows.

Video behavior data show:

Behaviour %	Week		P-value
	First	Second	
No reaction (unwanted)	10.45	4.07	0.01
Perks up ears/stops	8.95	2.47	<0.01
Turns around calmly (desired)	54.44	73.34	<0.01
Trots back (approved)	9.45	7.64	
Fear reaction (unwanted)	10.17	4.41	<0.01
Extreme reaction (unwanted)	0	0	

