

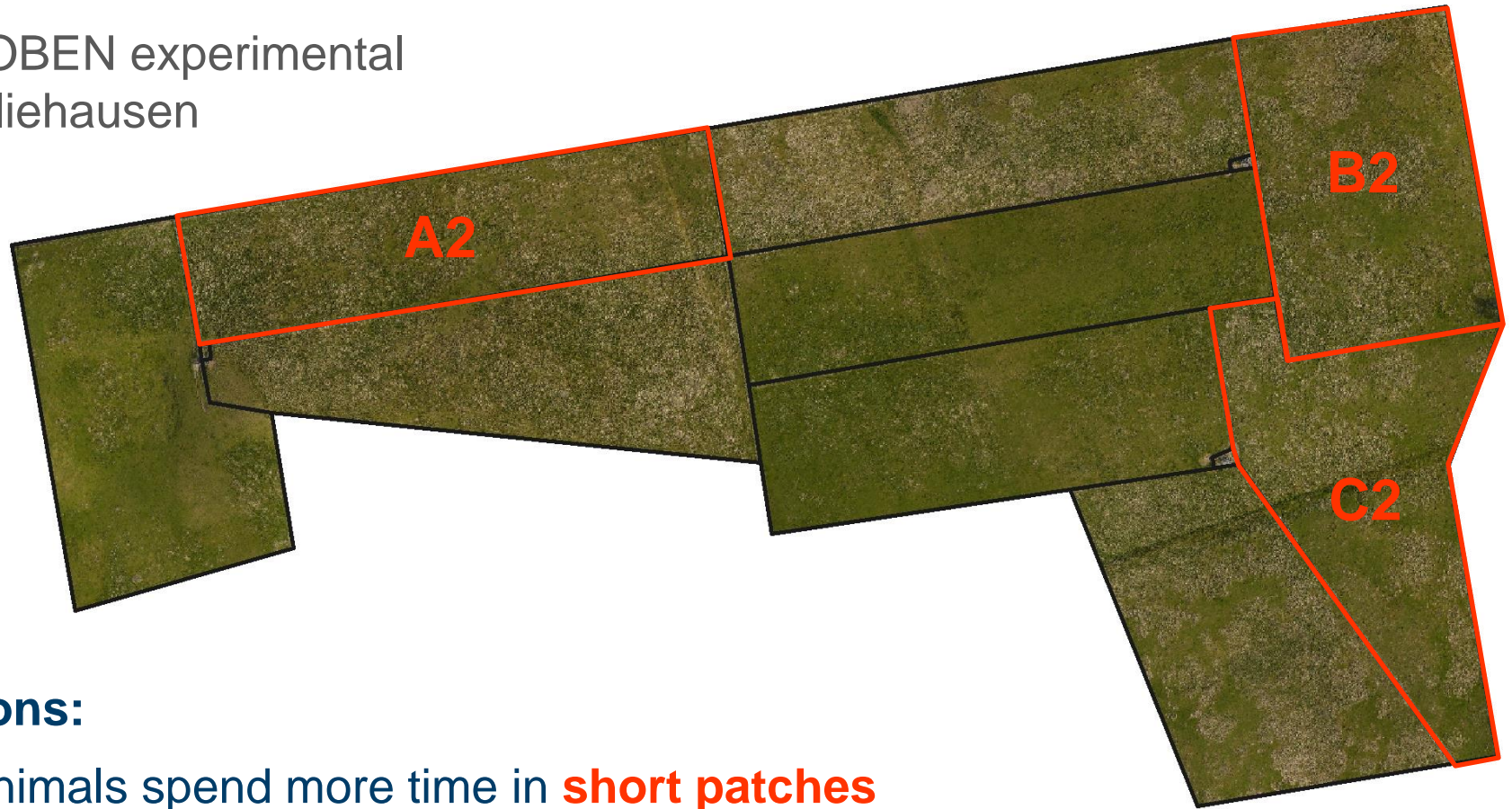
Grazing cows: **What are they doing when and where?**

First experiences with a GPS and activity sensor

Bettina Tonn, Christopher Noll, Anja Schmitz, Johannes Isselstein
Institute of Grassland Science, University of Göttingen

Sward-animal interactions: the importance of heterogeneity

FORBIOBEN experimental
site Relliehausen



Questions:

- Do animals spend more time in **short patches** than in **tall patches** when grazing?
- Do spatial patterns of **grazing** and **resting** behaviour differ ?
→ potential for large-scale nutrient transfer

A new approach

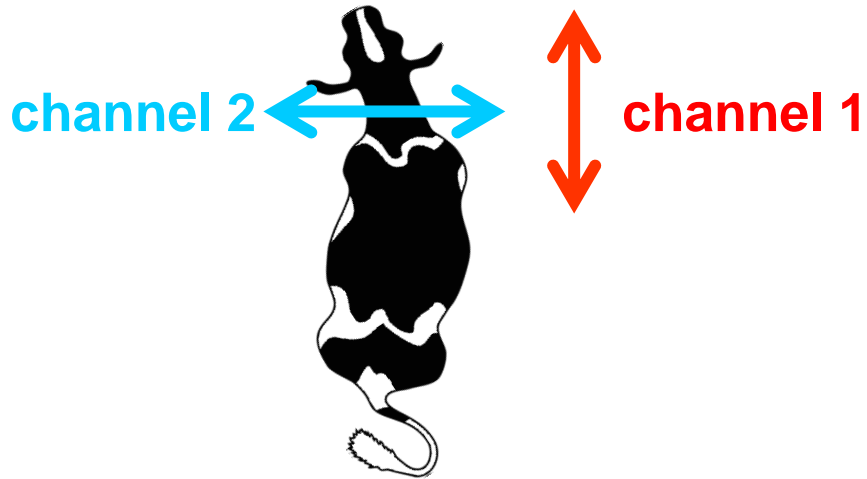
VECTRONIC GPS Plus Collar with three-way accelerometer



- collars on **three cows** per paddock, **three paddocks**
- measurement interval **1 min**, duration **44 days**

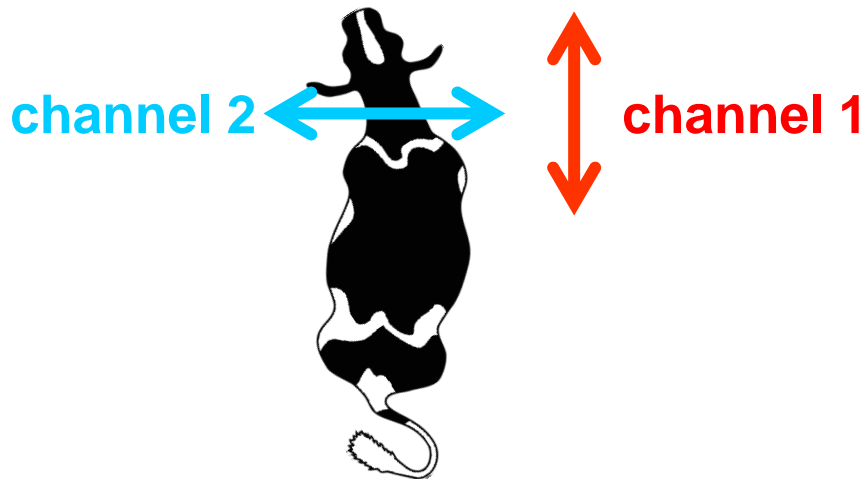
Activity sensor settings

(1) xy activity

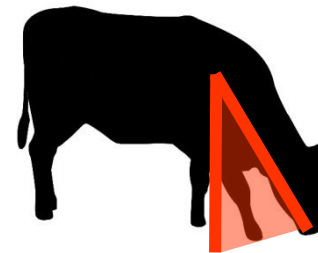


Activity sensor settings

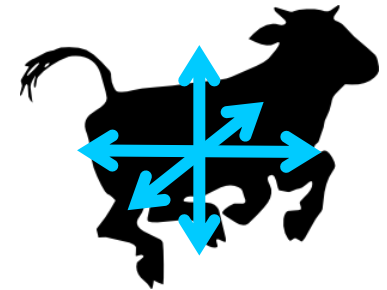
(1) xy activity



(2 & 3) head angle & acceleration threshold



channel 1



channel 2



proportion of time that a threshold value for **head angle**/
xyz acceleration is exceeded

Conclusion

Does it work? → **YES**

Is it simple? → **NO**

Are the first results promising? → **DEFINITELY**
(we think)



THANK YOU!