Space: the final frontier…
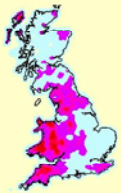## Or just the starting point?

The Mission

To explore the spatial distribution of confirmed scrapie-affected flocks in Great Britain between January 1993 and December 2002
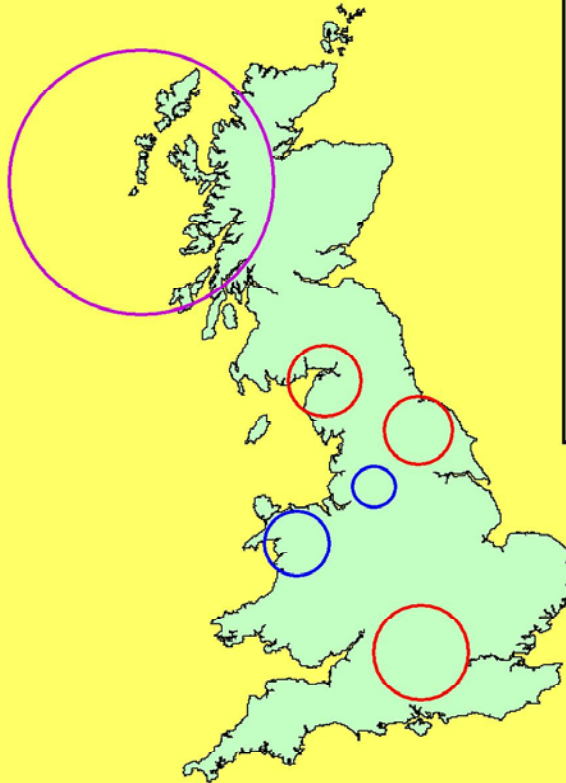
The Technology

ArcView 3.2 – kernel density maps

SaTScan 4.0.3 – cluster scan

Main Figure: 4 controls per case: 5% scanning window

The Outcome

Sheep holdings per square km

Scrapie-affected holdings per 100 sheep holdings per square km

The Data

- The Scrapie Notifications Database (SND)
  - 951 affected flocks recorded at holding level CPH

  - OS map reference-derived northing and easting for 74%
  - Postcode-derived northing and easting used for 22% as no OS map reference location recorded
  - Missing data 4%

- June Agricultural Census data
  - 1999-2000 England & Wales – Scotland holding level CPH

  - Northing and easting

The Clusters

From top to bottom

Primary cluster – 'Low' - Western Scotland

'High' –North Cumbria

'High' – North Yorkshire

'Low' – South Yorkshire/Pennines

'Low' – North West Wales

'High' – Central South

??Possible Reasons??

Introduction – exposure to disease

Maintenance – effective transmission (disease reproduction ratio)

Case ascertainment – detection, recognition, reporting

Flock factors – flock size, breed, PrP genotypes, age structure

Management factors – grazing policies, purchase/selling policies, land management, stocking density, lambing practices

Contact structures

Human social networks/influences

Mission accomplished: The next step

The 'risk factors for scrapie at flock level' study

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