

## modeling

**Step 1** WRF

high-res. meteo data

**Step 2** FLEXPARTsource receptor  
relationship ( $SRR_{xyzt}$ )

## pre-processing

**Step 3** Log-polar  
grid transforma-  
tion $SRR_{xyzt}$  $SRR_{\theta rzt}$ **Step 4** Grid cell  
pre-processing

- gaussian filter
- quantile transform
- remove low influence cells

## clustering

**Step 5** Iterative  
k-means clustering  
algorithm**Step 6** Silhouette  
scoring**Step 7** Selecting  
the optimal  
number of clusters