

# **Working Group 9**

## **“Urban” Areas**

**Kathleen Thiessen, WG Leader**

### **Summary**

**29 January 2010**

**2<sup>nd</sup> EMRAS II Technical Meeting  
IAEA Headquarters, Vienna  
25–29 January 2010**

## **WG participants**

- **22 persons participating this week**
- **4 or 5 modellers for each exercise**
- **16 countries represented:**
  - Austria, Canada, Croatia, Cuba, Czech Republic, Denmark, France, Germany, Italy, Korea, Netherlands, Slovakia, Spain, Tunisia, United Kingdom, United States**

## Progress this week

- Discussion of all 3 modelling exercises
- Presentation of modelling approaches for 3 exercises and preliminary results for 2 exercises
- Discussion of plans and schedules for next steps
- Plan for interim WG meeting: 8–10 June 2010, University of Seville, Spain

# First modelling exercise

## Atmospheric dispersion, short-range



1

2007 12.06. (MT) – experiment



2



3



4



5



6



2009 02.24. Jan Helebrant v OpenOffice 3.0



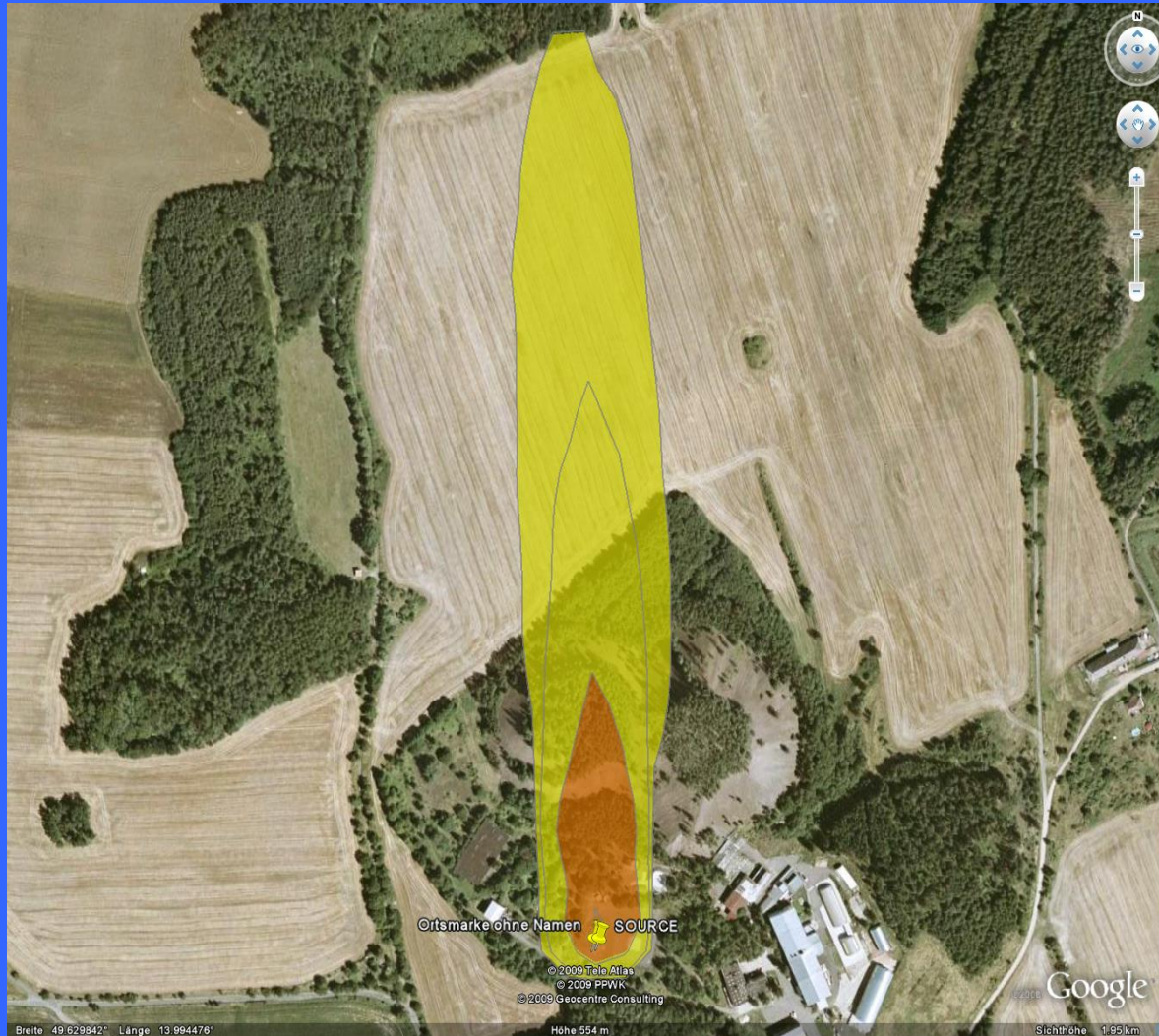
12



SÚRO, soubor verze 1.2

Modelling approaches and preliminary results from 5 participants

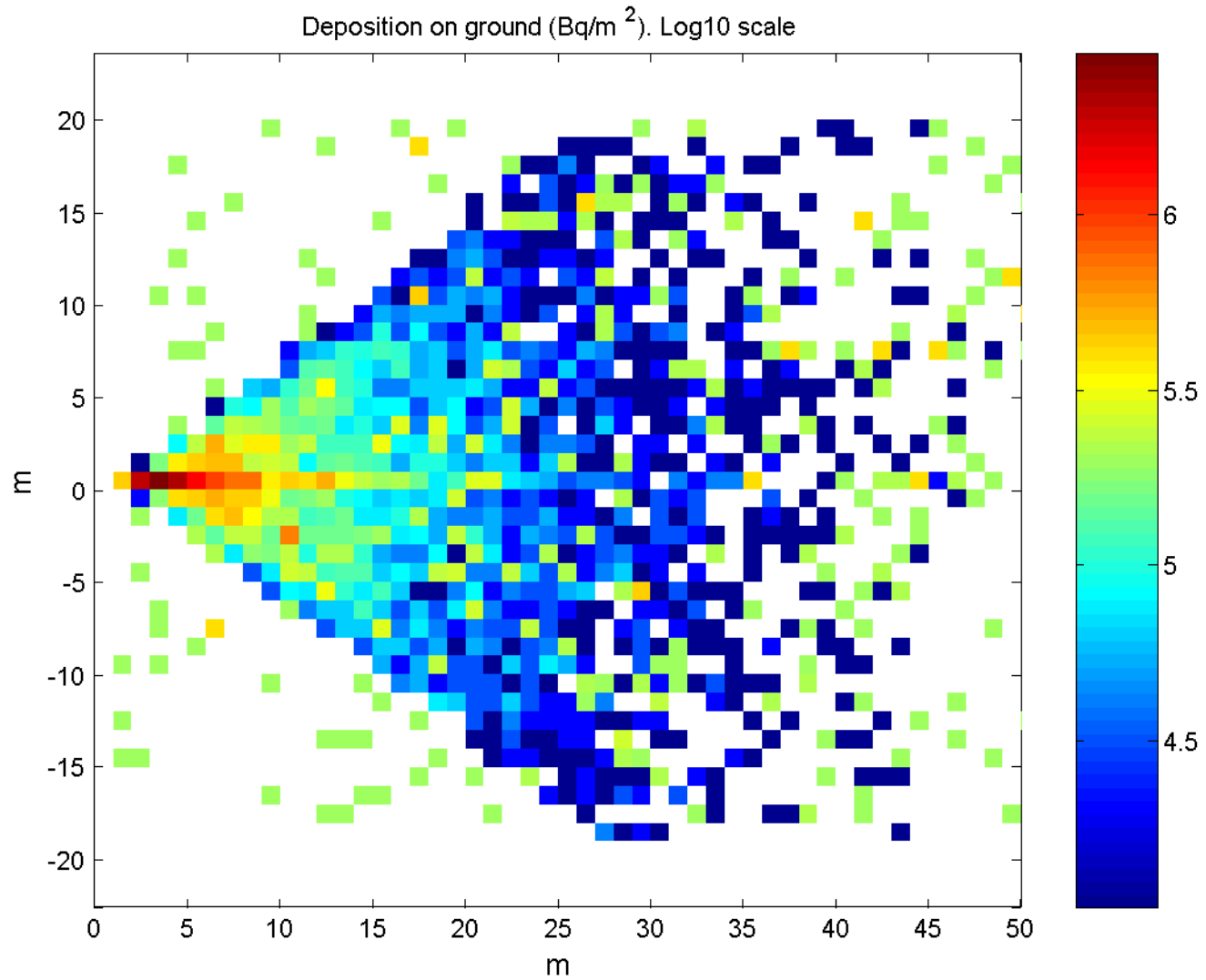
# LASAIR results Test 02, model Deposition (Bq/m<sup>2</sup>)



site (birds eye)

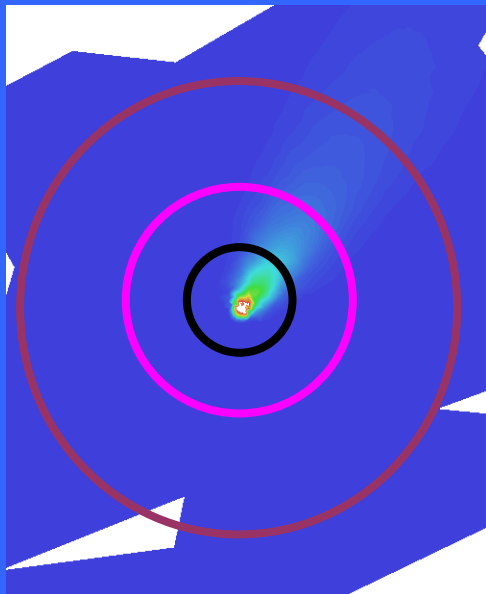
[Google Earth]

# University of Seville model, Test 2



# $^{99m}\text{Tc}$ in the air and on the ground

$^{99m}\text{Tc}$  contamination zones

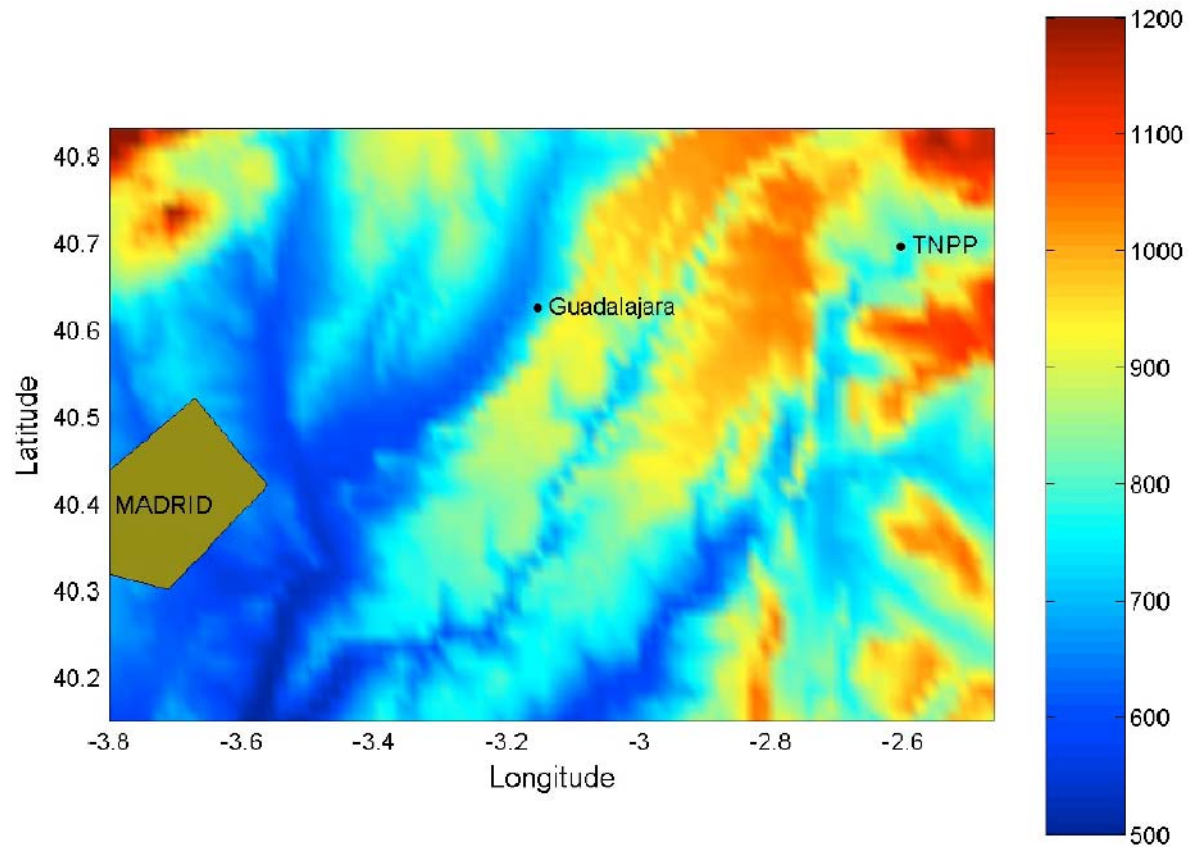


$^{99m}\text{Tc}$  activity on the ground surface per diameter category

Droplet diameter (m)	R <sub>50</sub> zone (m)	R <sub>75</sub> zone (m)	R <sub>95</sub> zone (m)
$2 \cdot 10^{-5} / 2 \cdot 10^{-7}$	7.4	16.6	42.1
$2 \cdot 10^{-5}$	7.2	16.3	41.9
$6 \cdot 10^{-6}$	7.8	17.2	42.5
$1 \cdot 10^{-6}$	7.8	17.3	43.9
$2 \cdot 10^{-7}$	6.1	15.8	46.1

# Second modelling exercises

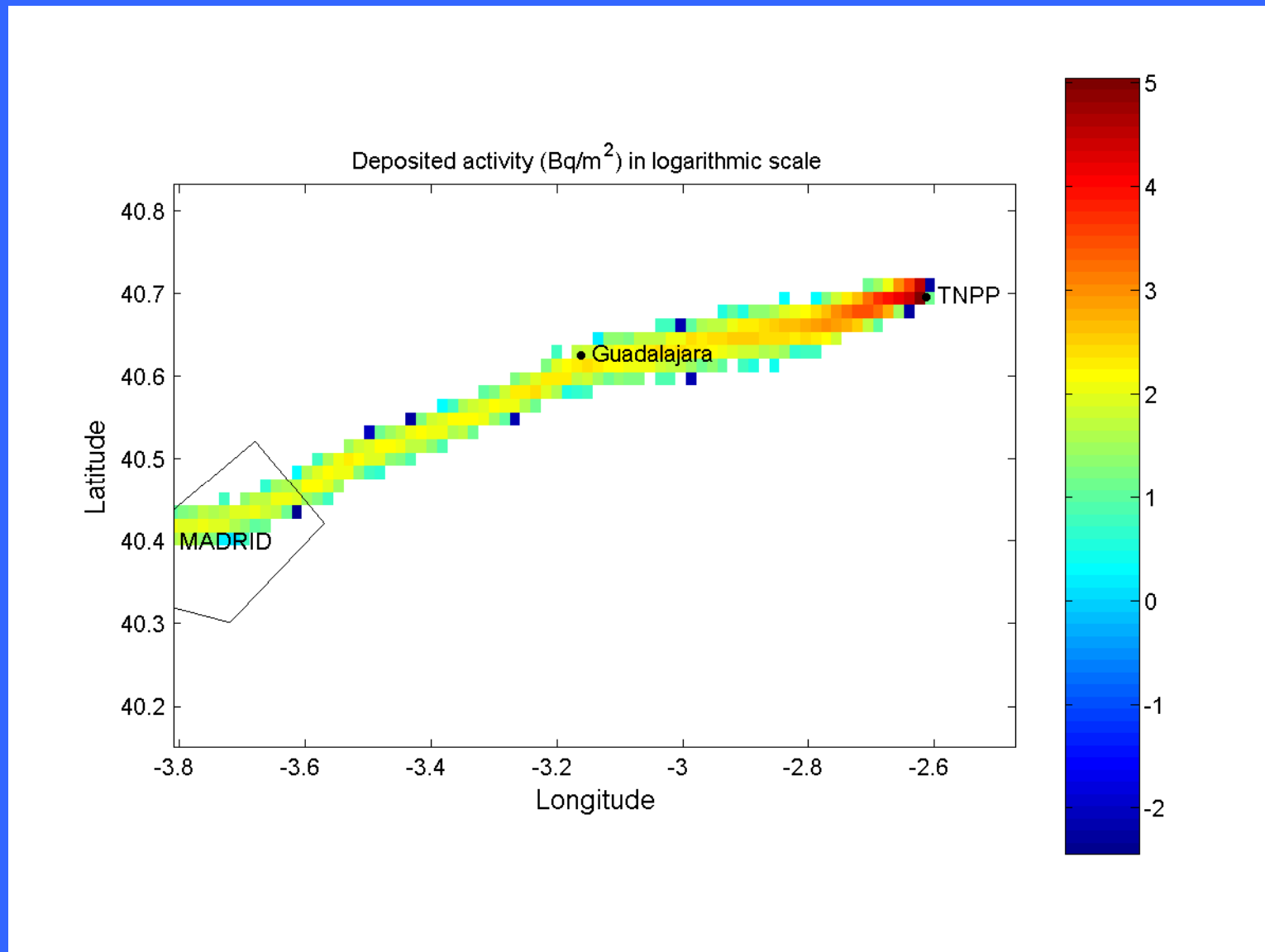
## Atmospheric dispersion, mid-range



Modelling approaches and preliminary results from 3 participants

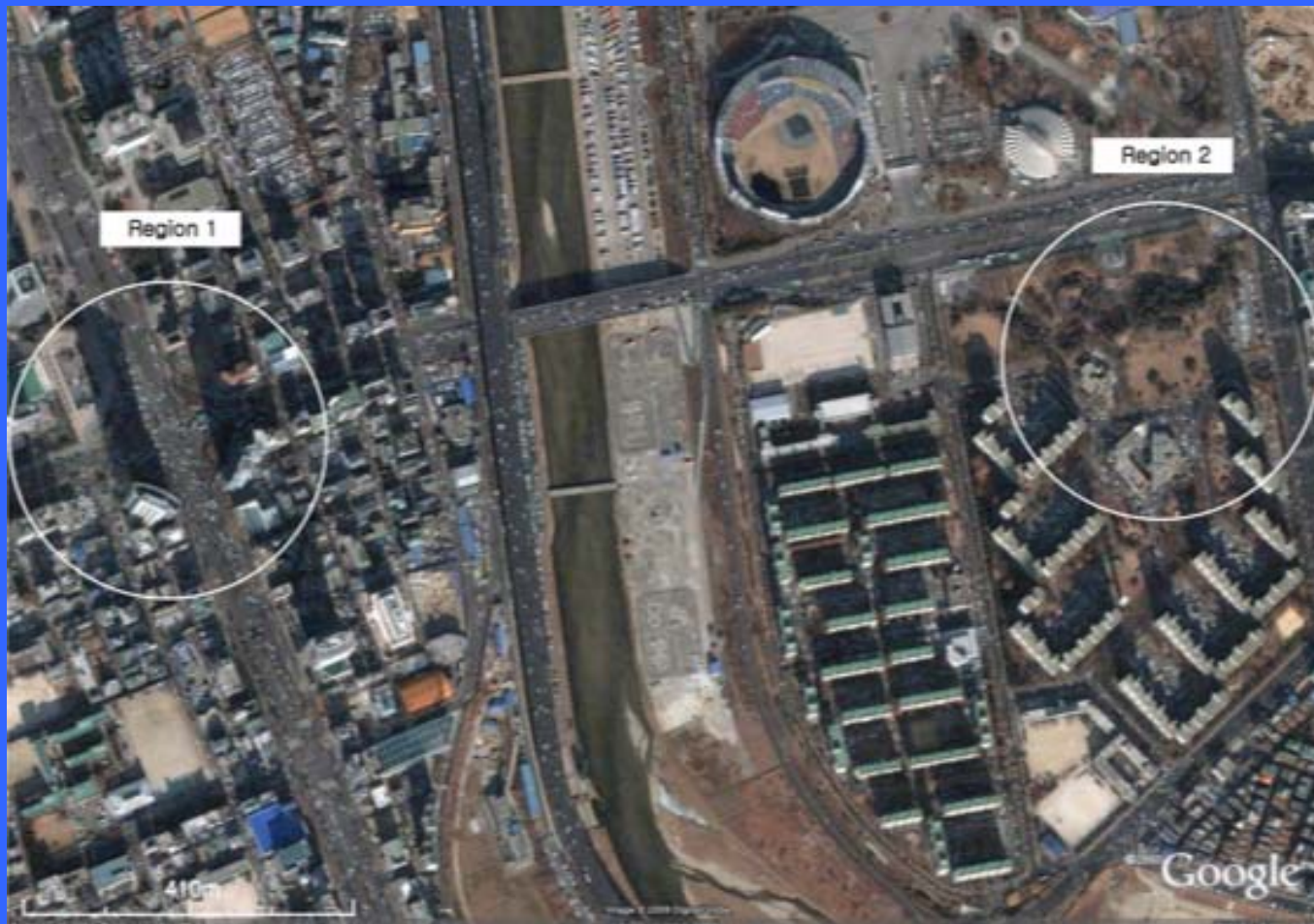


# University of Seville model, Trillo NPP scenario



# Third modelling exercises

## Contaminant transport and countermeasures



Modelling approaches from 3 participants