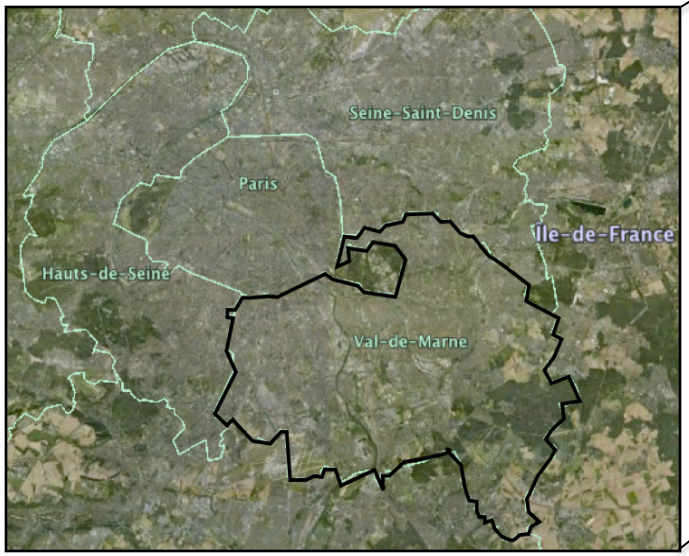
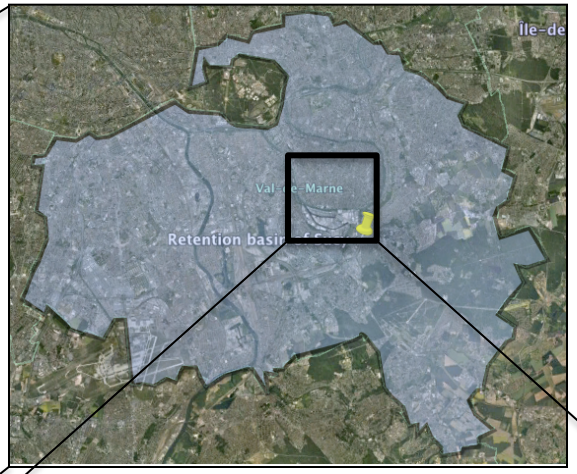
Presentation of the Sucy-en-Brie case study

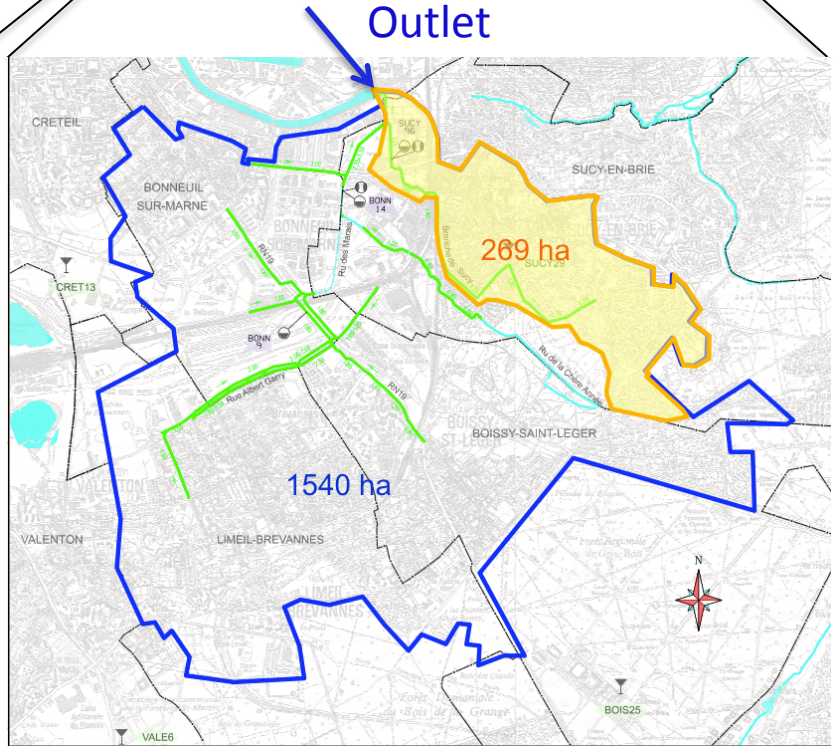
A. Ichiba, Ph. Bompard, I. Tchiguirinskaia, D. Schertzer

RainGain Project Meeting, Rotterdam, 25-26 October 2012

Location and Environment







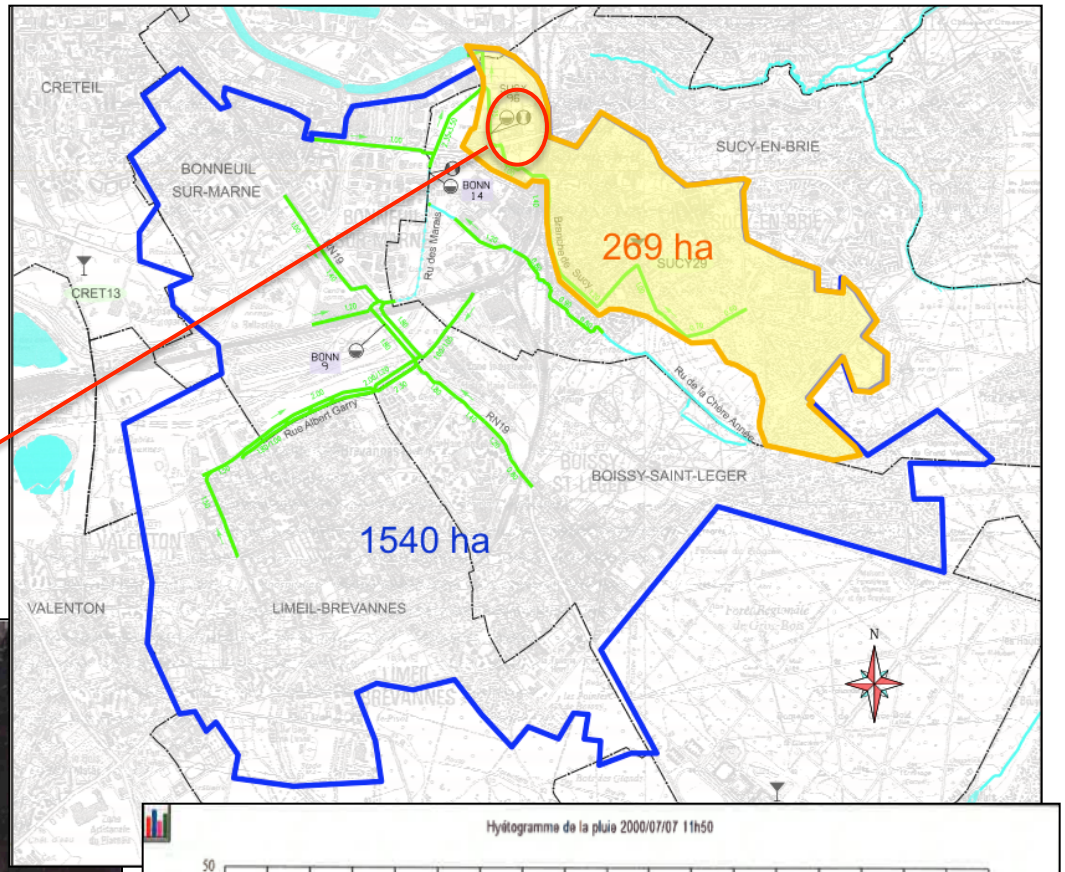
Ru des Marais catchment

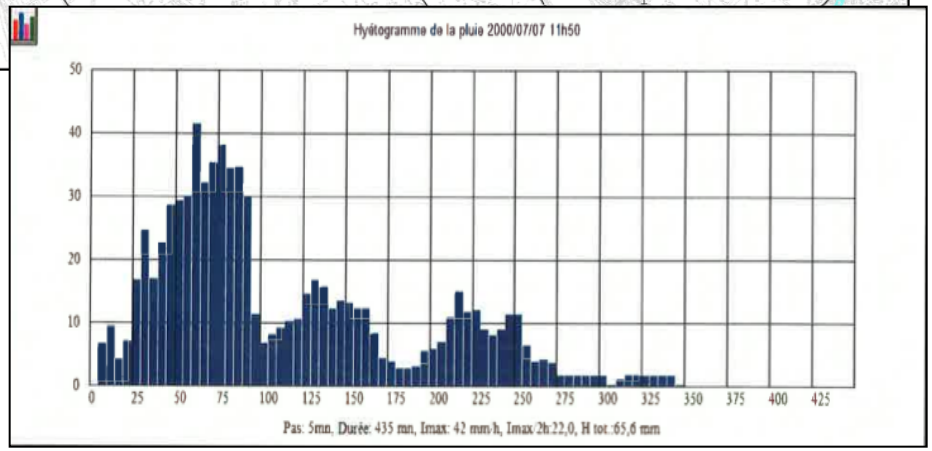
Sucy sub-catchment

- 269 ha
- The outlet is in the Marne river

Pluvial flooding

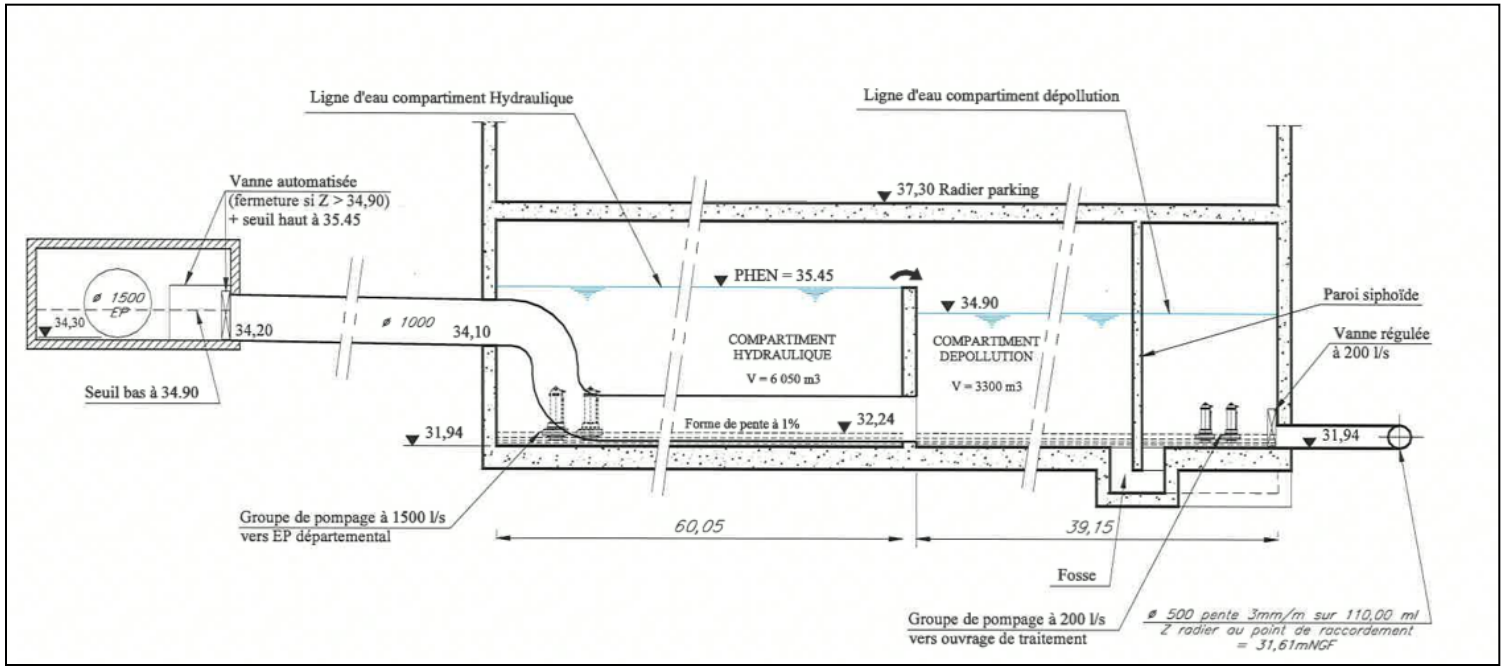
- 7 July 2000 ==>84 mm
- Streets and houses have been flooded
- Sucy train station has been blocked





Current solution

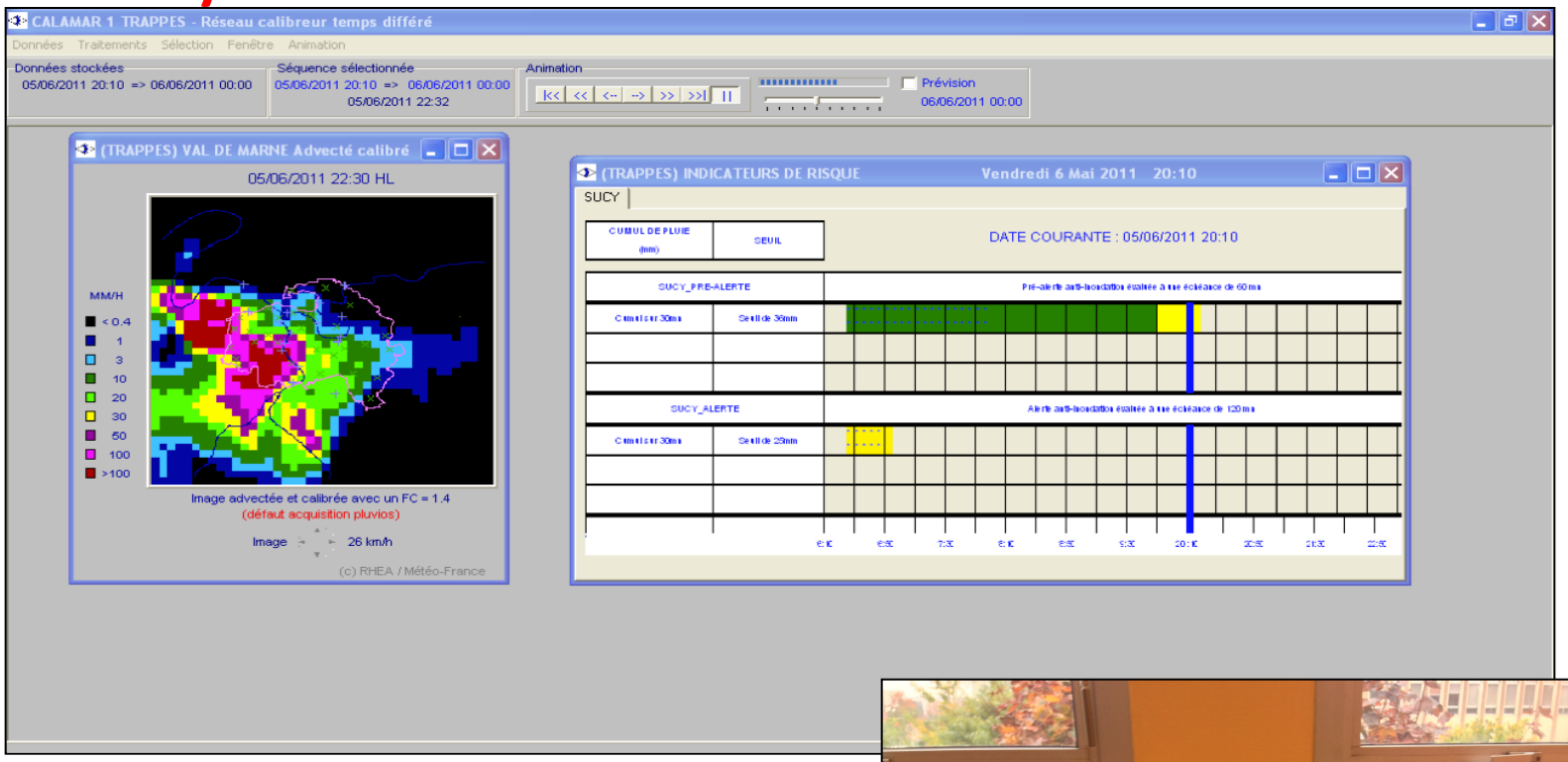
Building a retention basin near Sucy train station

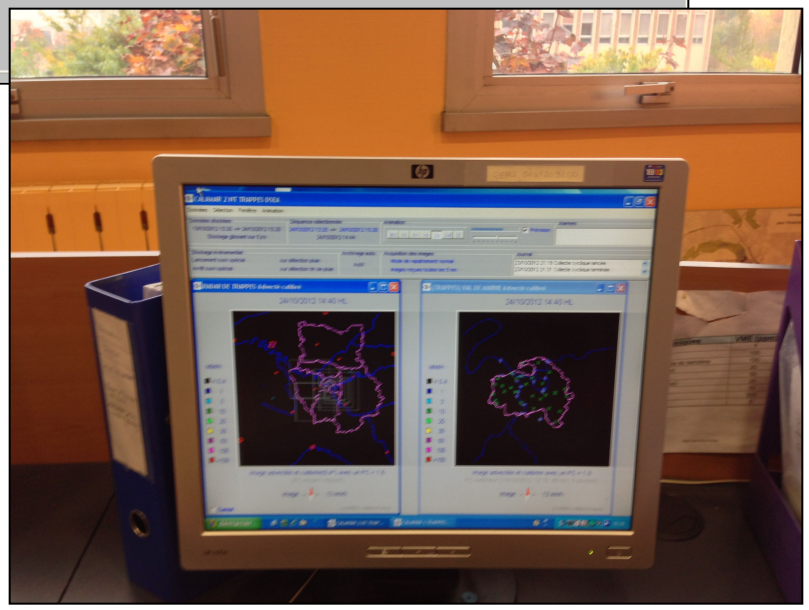


- Total volume of 9350 m3
- The retention basin achieves two functions:
  - ✓ Depollution of water before releasing it into Marne river
  - ✓ Protection against flooding by storing water during the peak flow events

When do we have to switch between the two gesture modes??

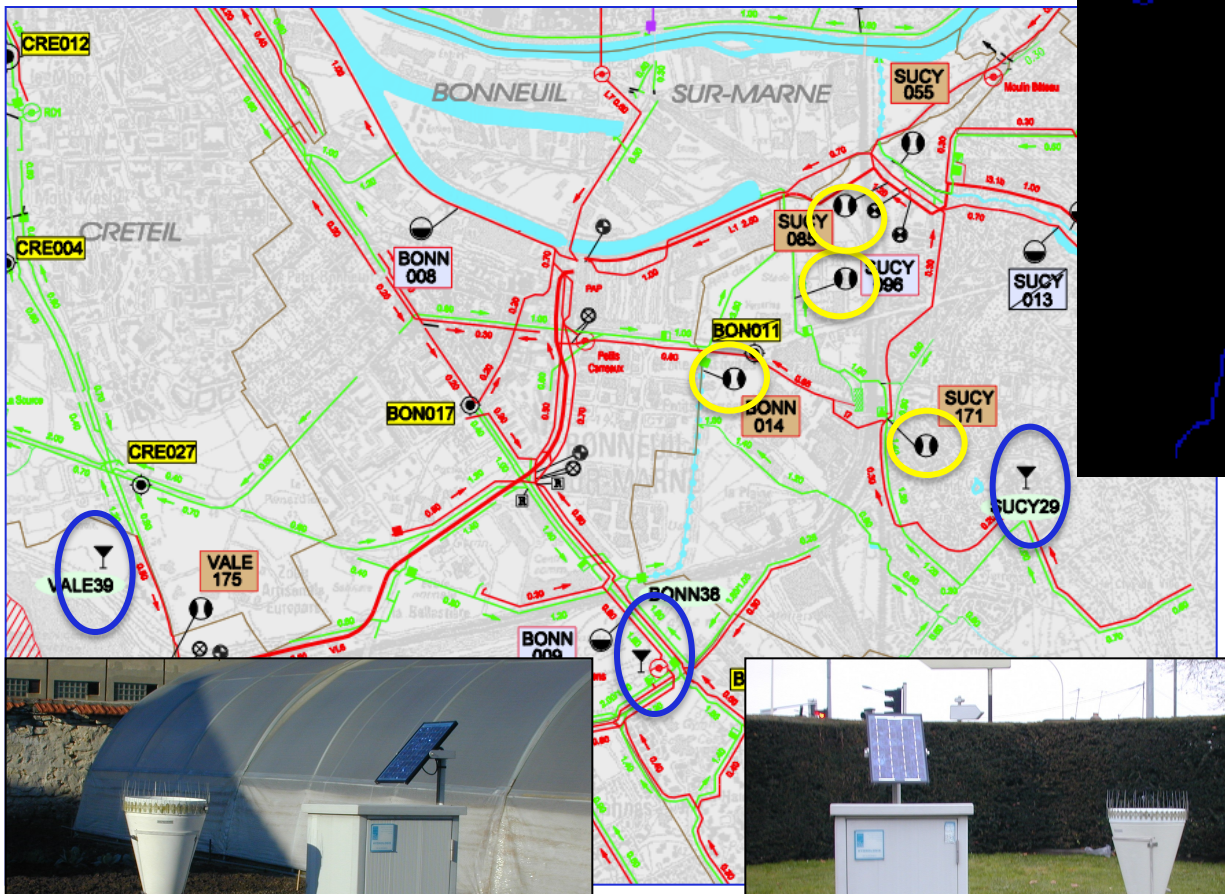
CALAMAR System

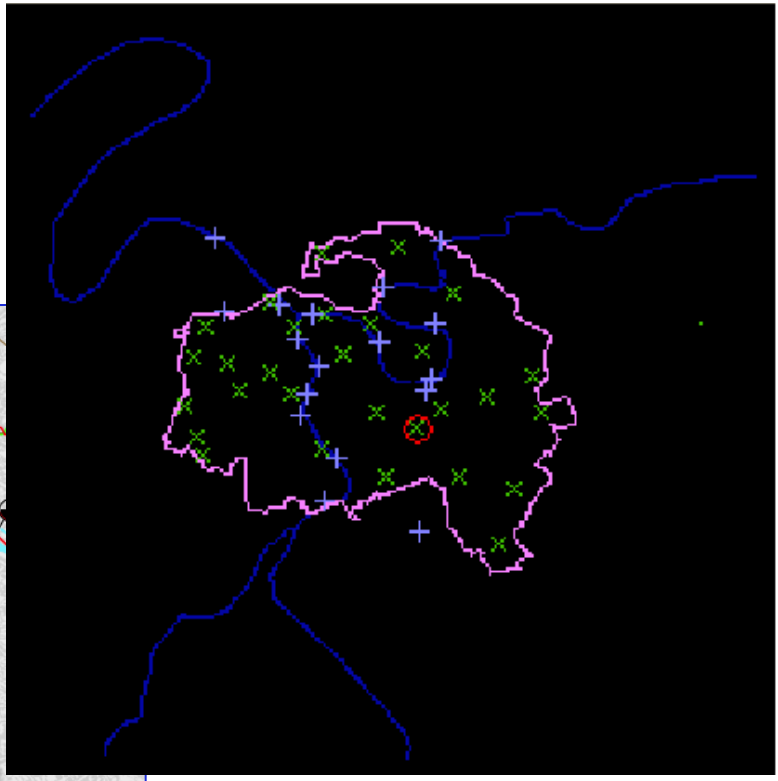




- A forecasting system
- Real time calibration
- An important risk of false alarm exists

Monitoring





29 rain gauges

Flow measurement

Rain gauges

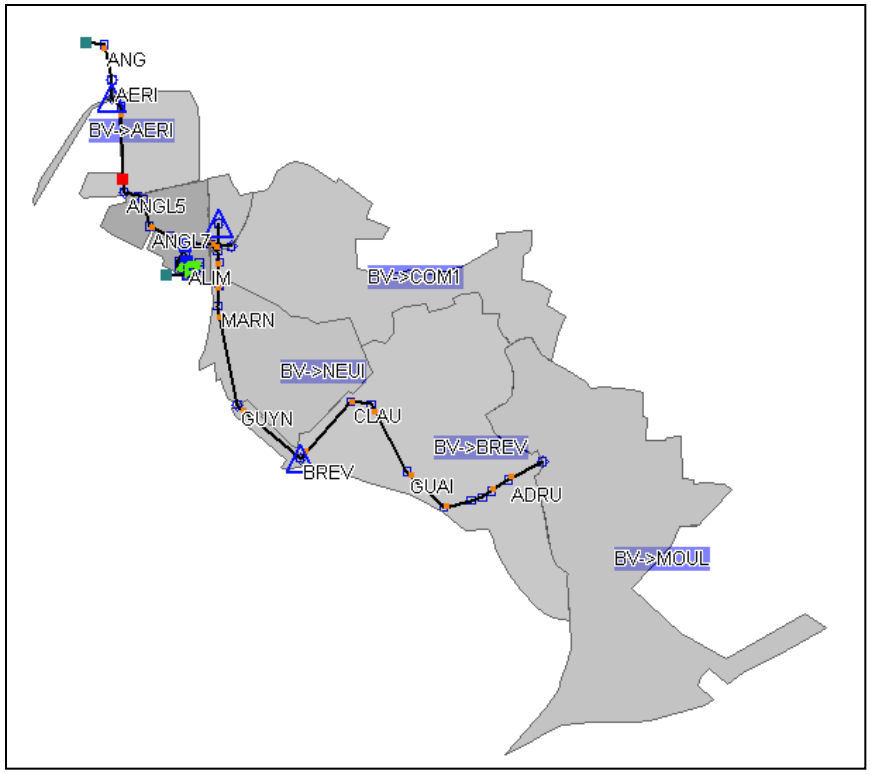
Radar data

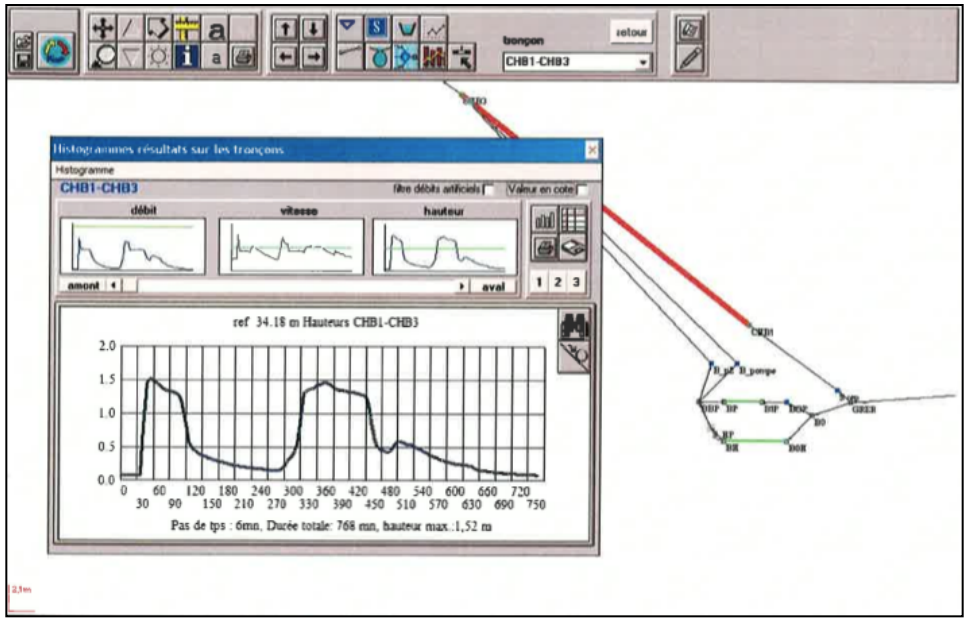
- Météo France C-band radar
- Resolution : 1Km x 1km x 5min

Radar data

- X-band radar
- Only 10 km far from the Sucy basin
- High resolution

Canoe model





- Canoe model currently in use by the CG94
- Already calibrated

We plan to use Multi-Hydro model in this research study

Thank you for you attention