

MOCOPo

*Measuring and mOdelling
traffic COngestion and POLLution*

MOCOPo task 1:
status of trajectories collection in January 2012

Christine Buisson, Laurent Debize, Florian Marczak, Céline Parzani

5 days and 3 zones of helicopter fights

*Zone 1: Meylan
merge (from left to right)*



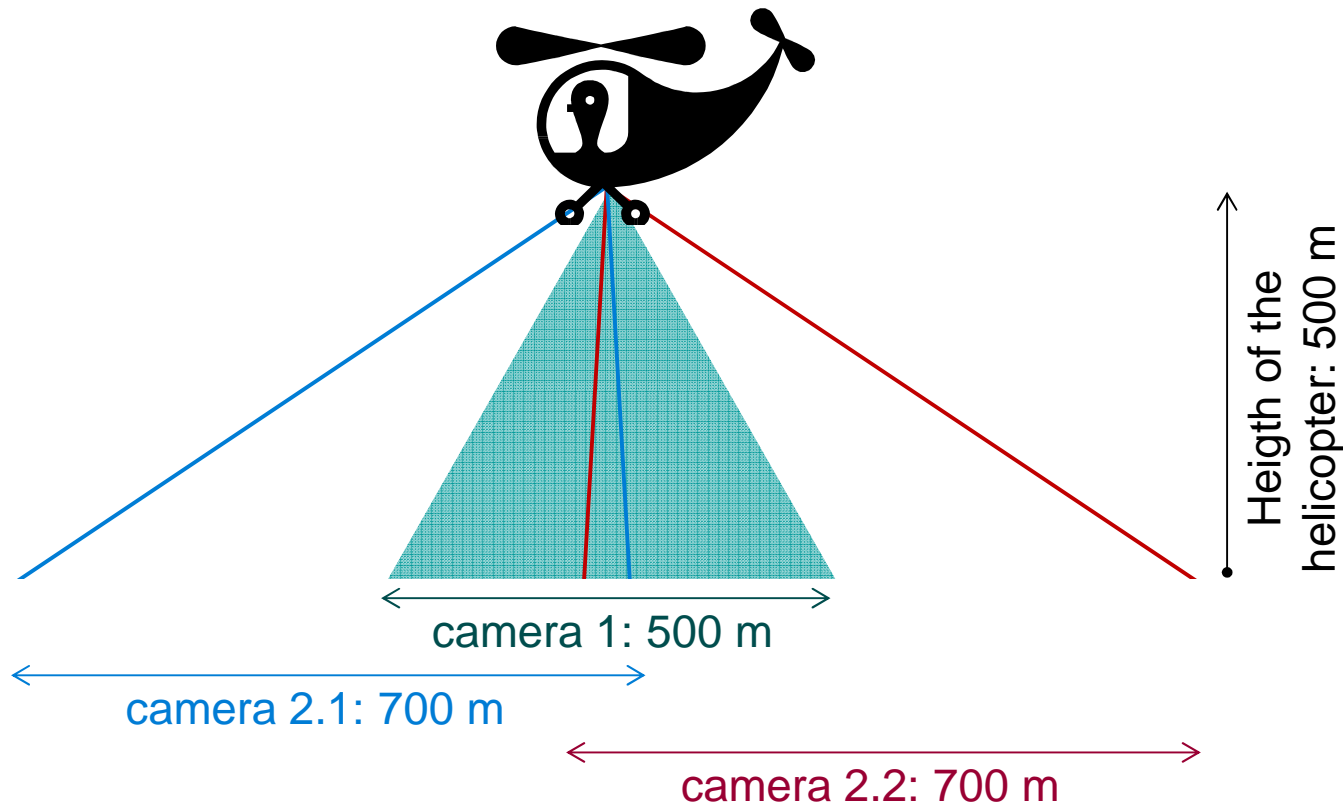
Zone 2: Eybens



*Zone 3:
Le Rondeau*



Three cameras for a complete measurement



- ▶ Camera 1
 - ▶ 2500*1000 pixels
 - ▶ More than 20 images/second
- ▶ Cameras 2.1 and 2.2
 - ▶ To determine upstream and downstream flows



Summary: **7 h 10** of potentially perfect data
and 8 h 40 of analyzable data

	Zone 1 - merge 1h50 (2h40)		Zone 2 - standard section 1h30 (2h10)		Zone 3 - weaving section 3h50 (3h50)	
	duration	Remark/period	duration	Remark/period	duration	Remark/period
Mon. 12	15'	8:16 - 8:32			50'	16:12 - 17:02
Tues. 13	51'	No image of camera 2.1 downstream 7:29 - 8:21	40'	No image of camera 2.1 downstream 8:40 - 9:20		
Wed. 14	45'	Many clouds and rain; helicopter at 450 m	15'	9:26 - 9:41	60'	16:21 - 17:21
Thurs. 15	35'	7:32 - 8:06	50'	8:54 - 9:44	60'	16:17 - 17:17
Fri. 16	60'	7:58 - 8:58	25'	9:04 - 9:28	60'	16:07-17:07

In global, more than 20,000 vehicles
will be precisely observed along 500 m



Video analysis

Digitalization made with the help of a software developed by TU Delft

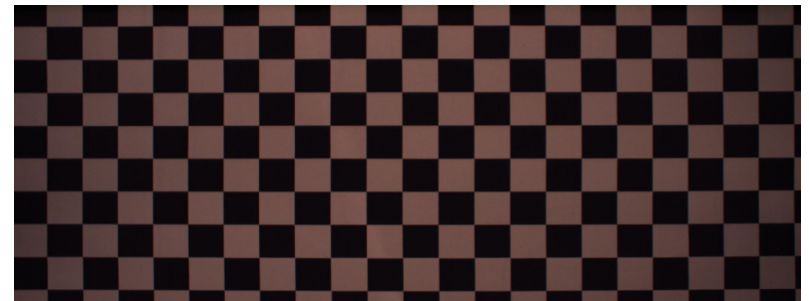
3 steps

- ▶ Stabilization
- ▶ Determination of the objects moving from one image to another
- ▶ Building up the vehicles trajectories from one image to another



First step: stabilization

- ▶ Image distortion correction
- ▶ Choose a reference image
- ▶ Define the region of interest



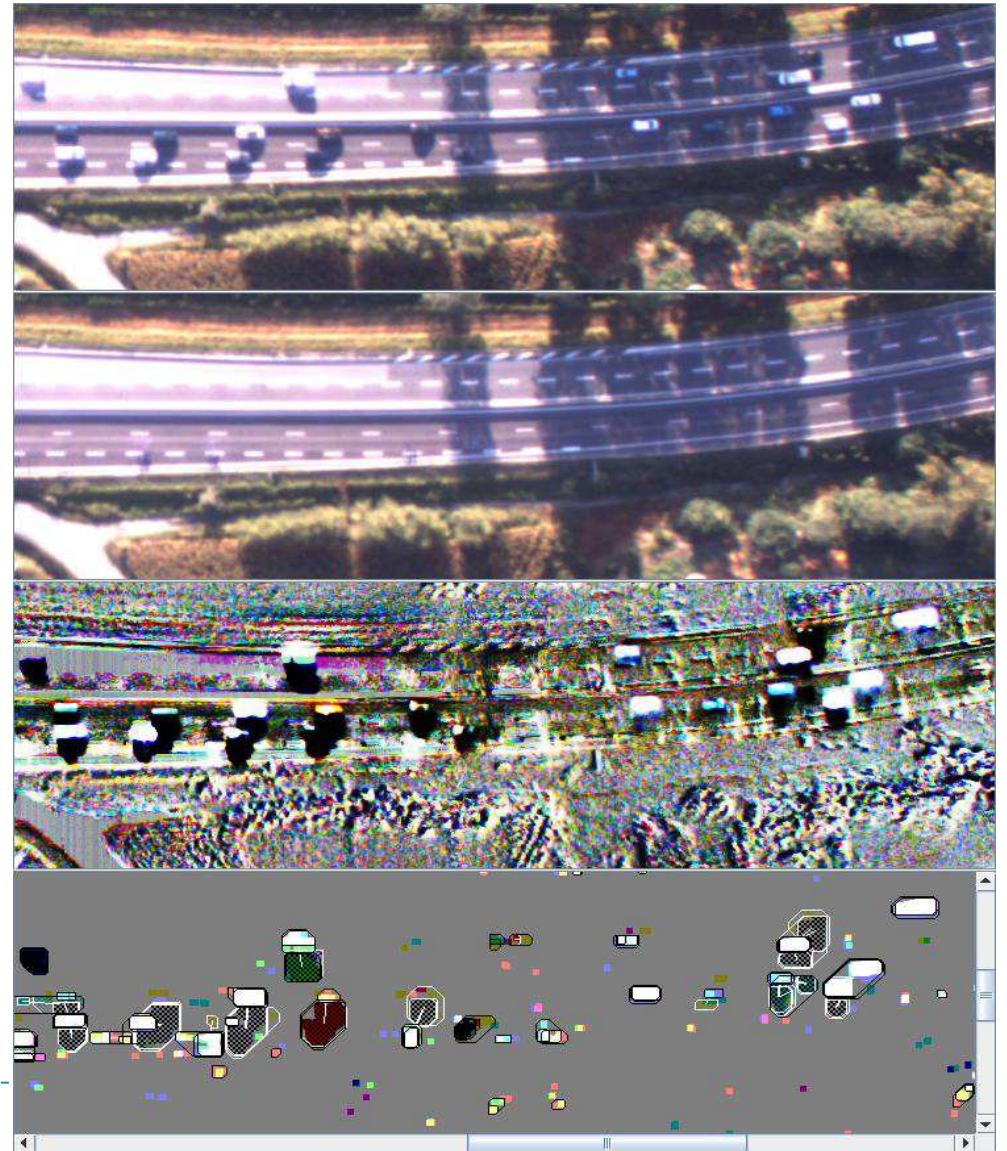
Step 2: identify what moves

Image from step 1

“Nude” image

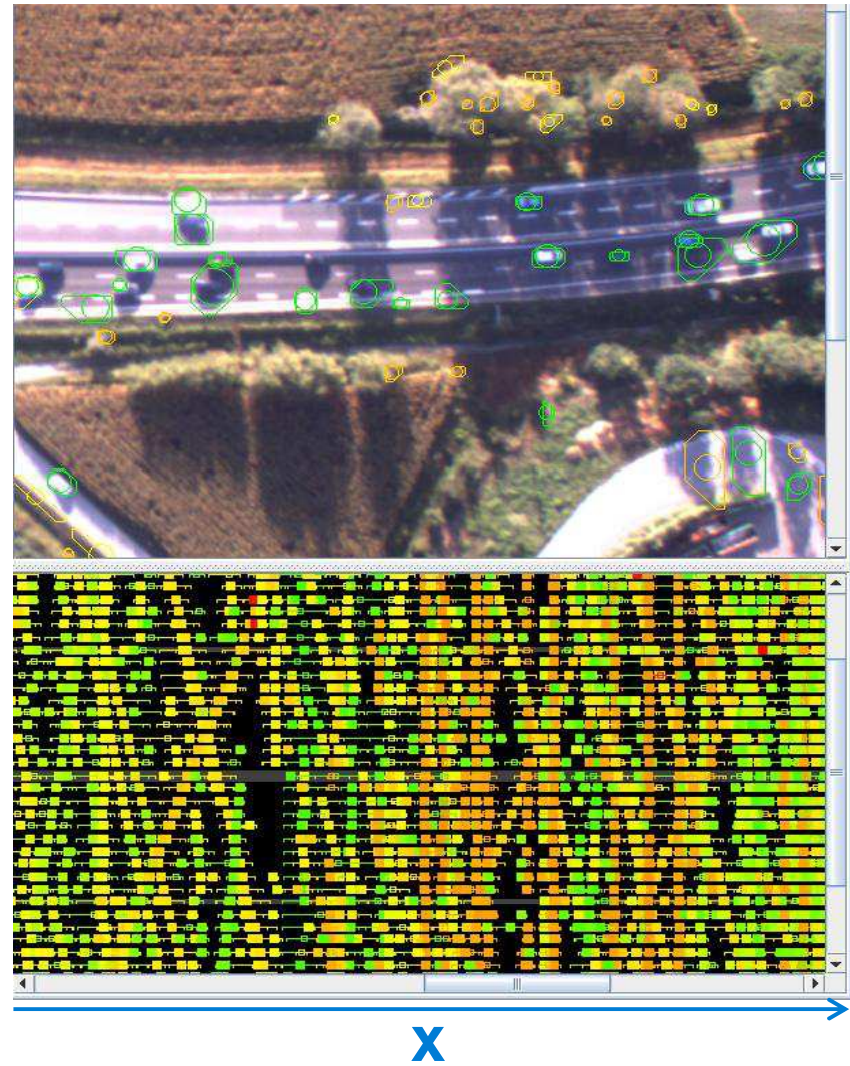
Difference

Moving spots



Step 3: building trajectories

- ▶ Connexion of the spots between two successive images



Trajectories data should be available soon...

We hope you will use them!

<http://mocopo.ifsttar.fr>

