Phenology Lannemezan

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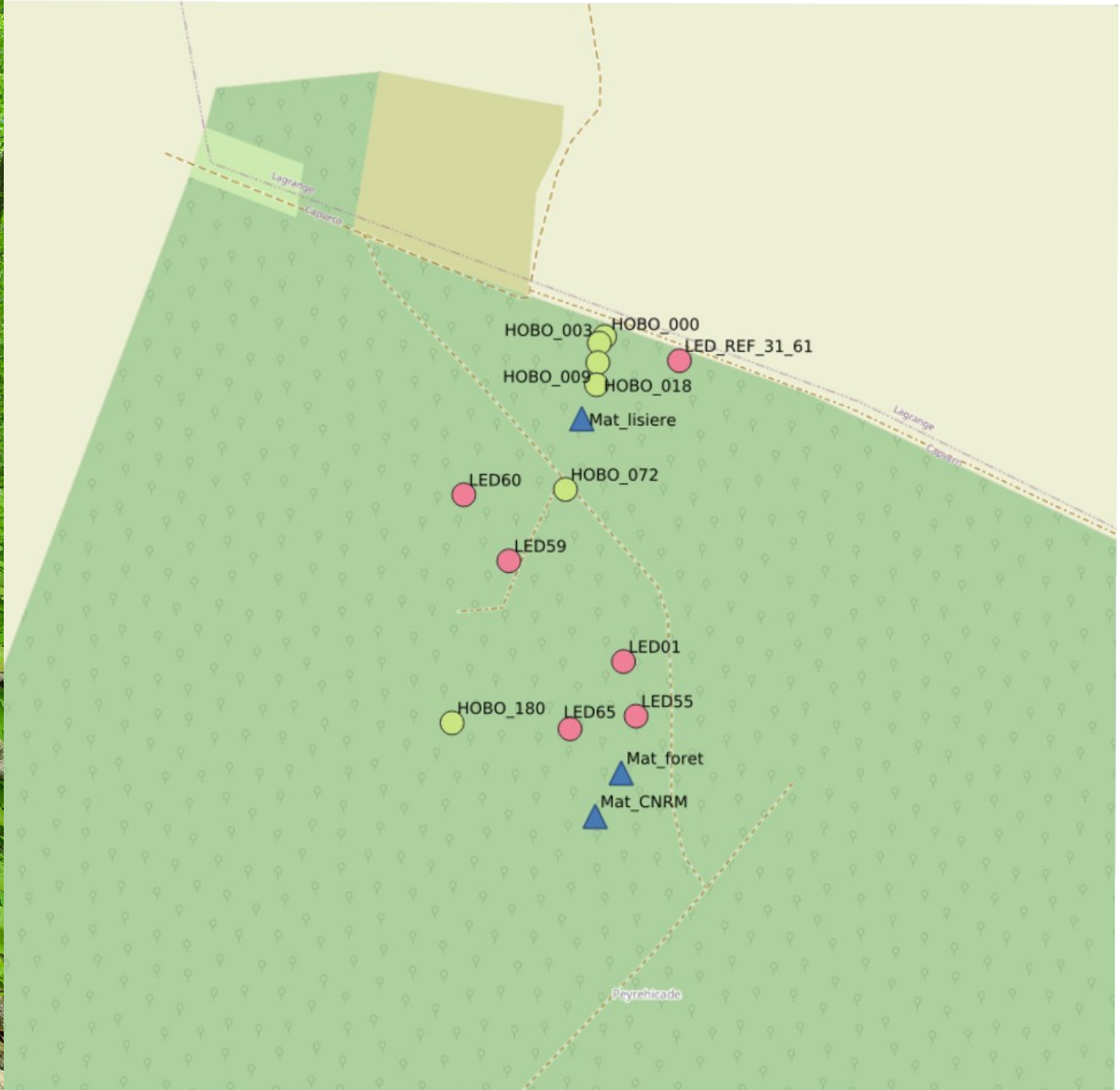
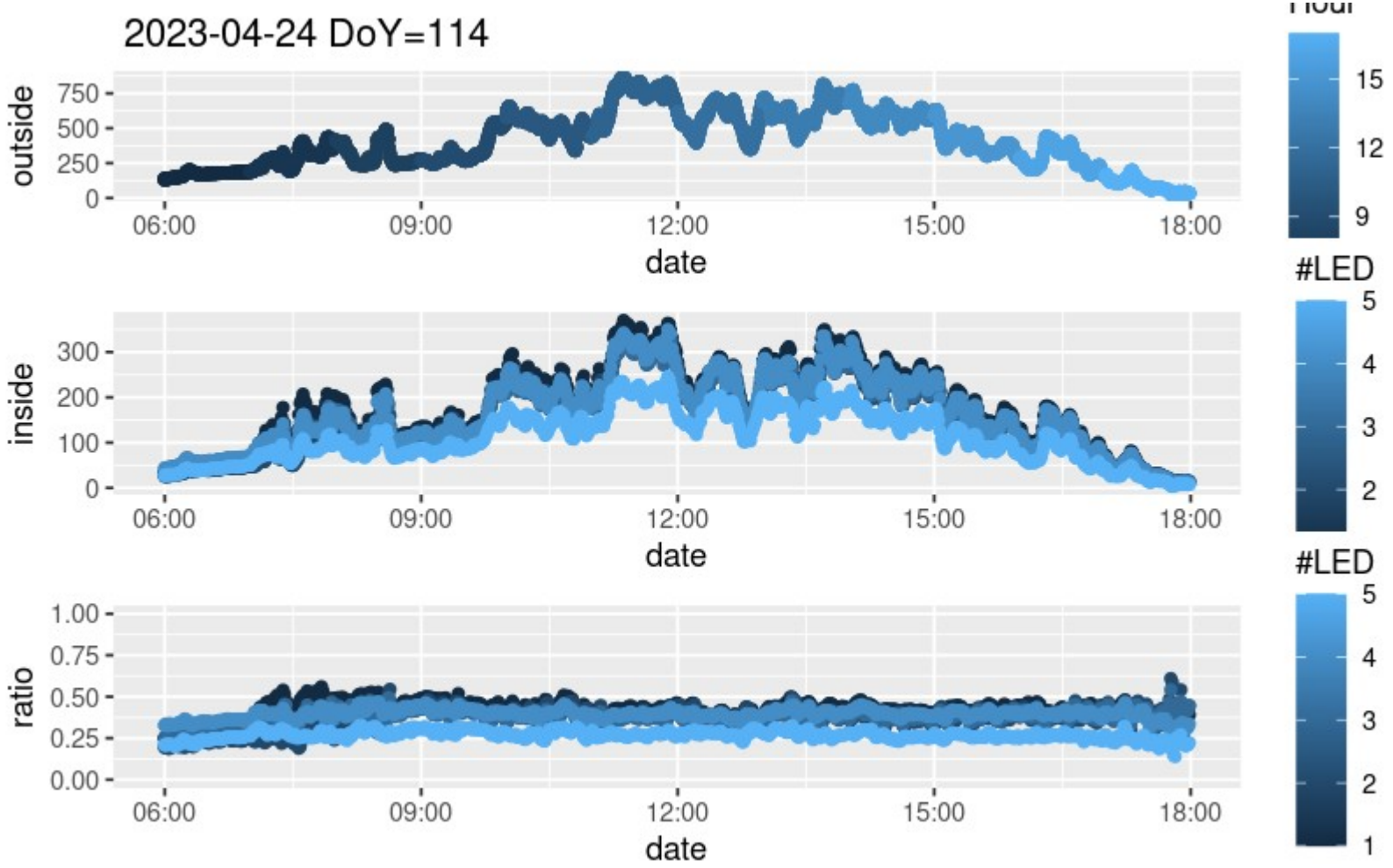
RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

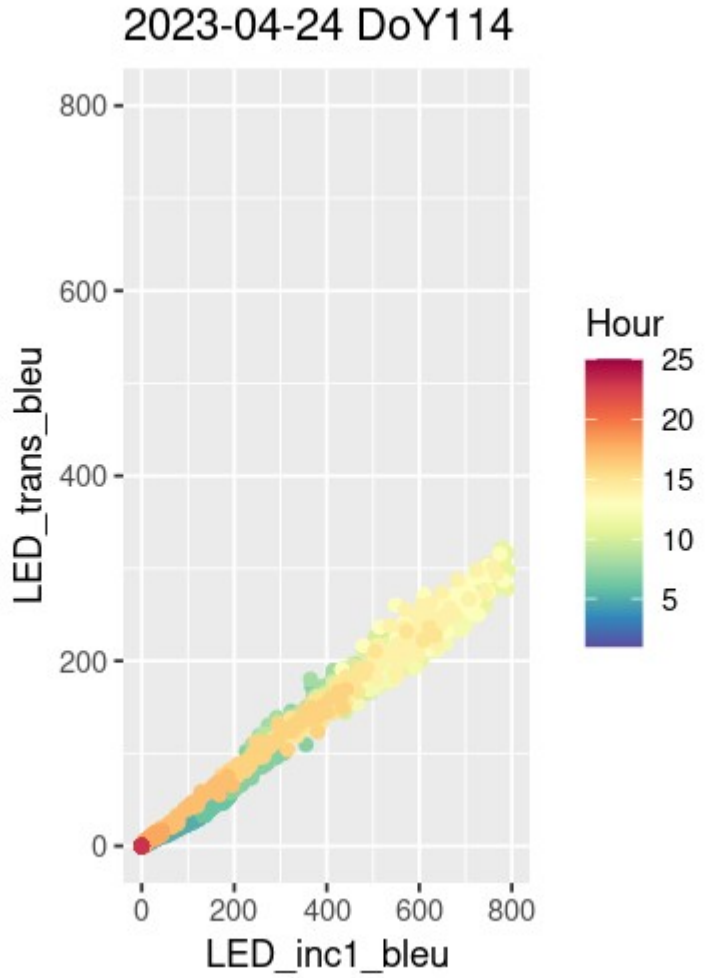
INRAE


Lagrange
Capuron
HOBO_003
HOBO_000
LED_REF_31_61
HOBO_009
HOBO_018
Mat_lisiere
Lagrange
Capuron
LED60
HOBO_072
LED59
LED01
HOBO_180
LED65
LED55
Mat_foret
Mat_CNRM
Peyrehicade

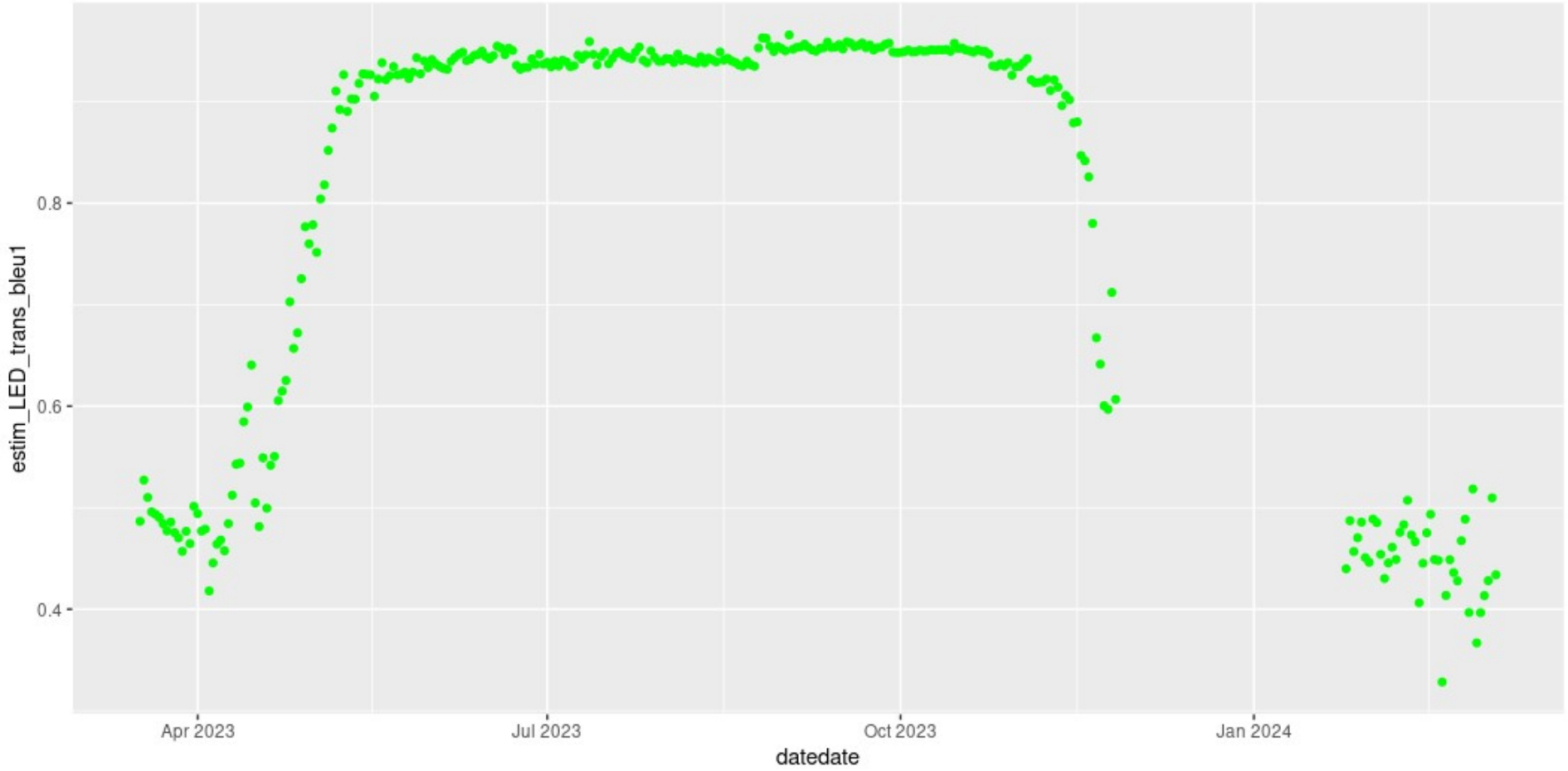
Estimation of Light interception

1) lights sensors inside (n=5) and outside (n=2) the forest. Acquisition every minute
2) compute the daily interception : slope of Rinside/ Routside



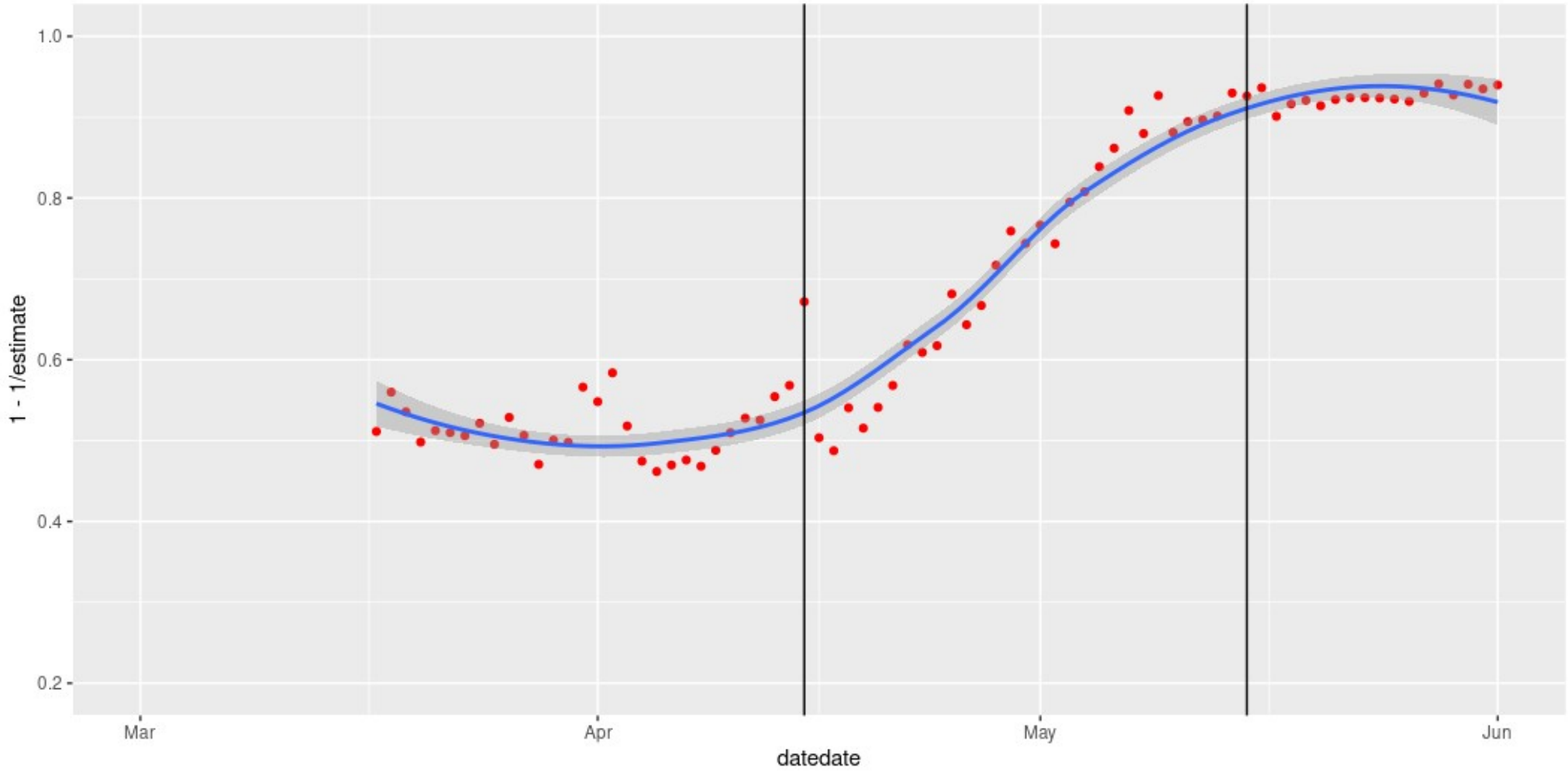


Temporal Dynamic of Light interception

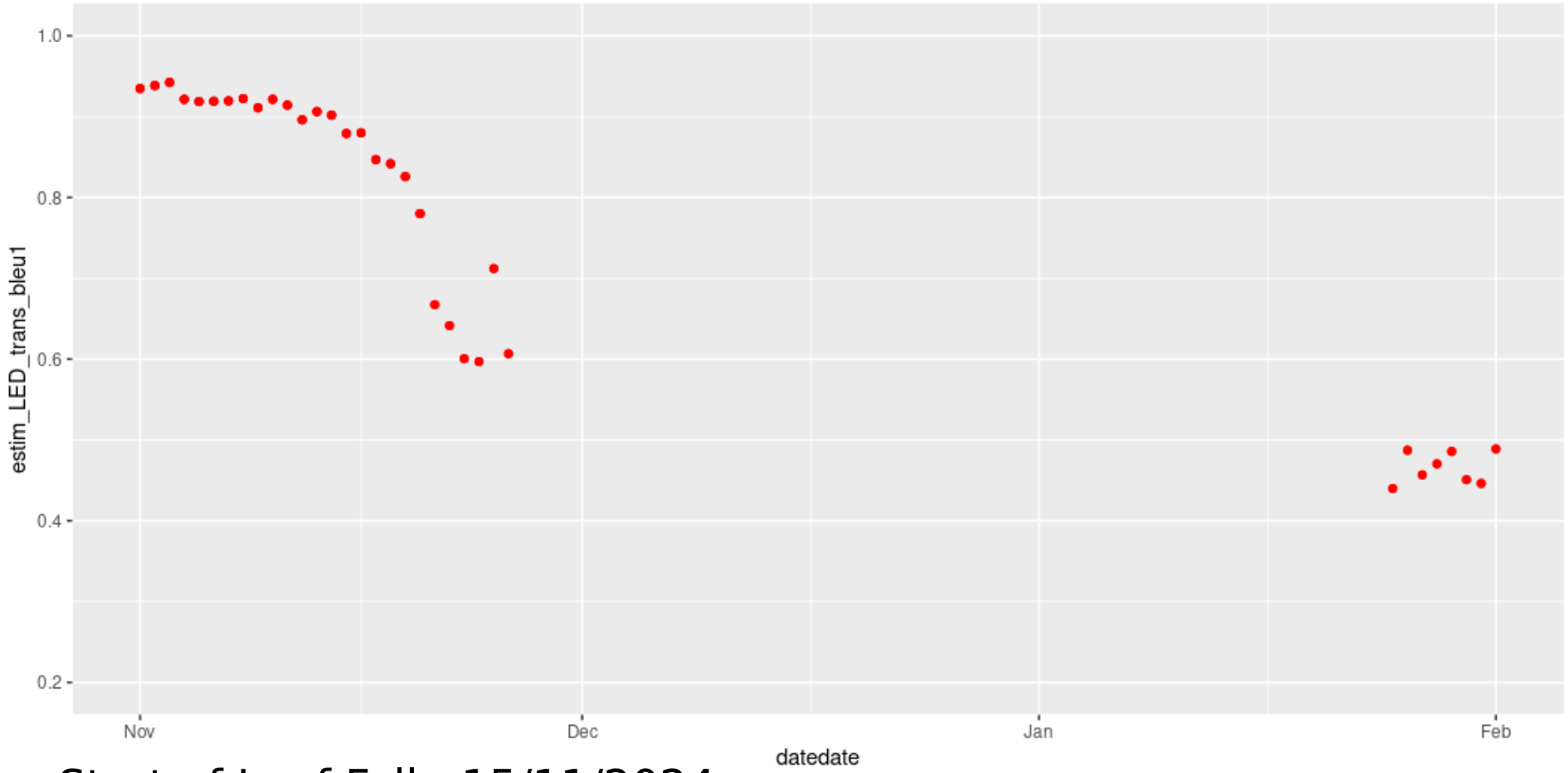


Light interception, zoom on spring period :

Leaf emergence : 15 April 2023 Leaf full development : 15 May 2023



End of Season

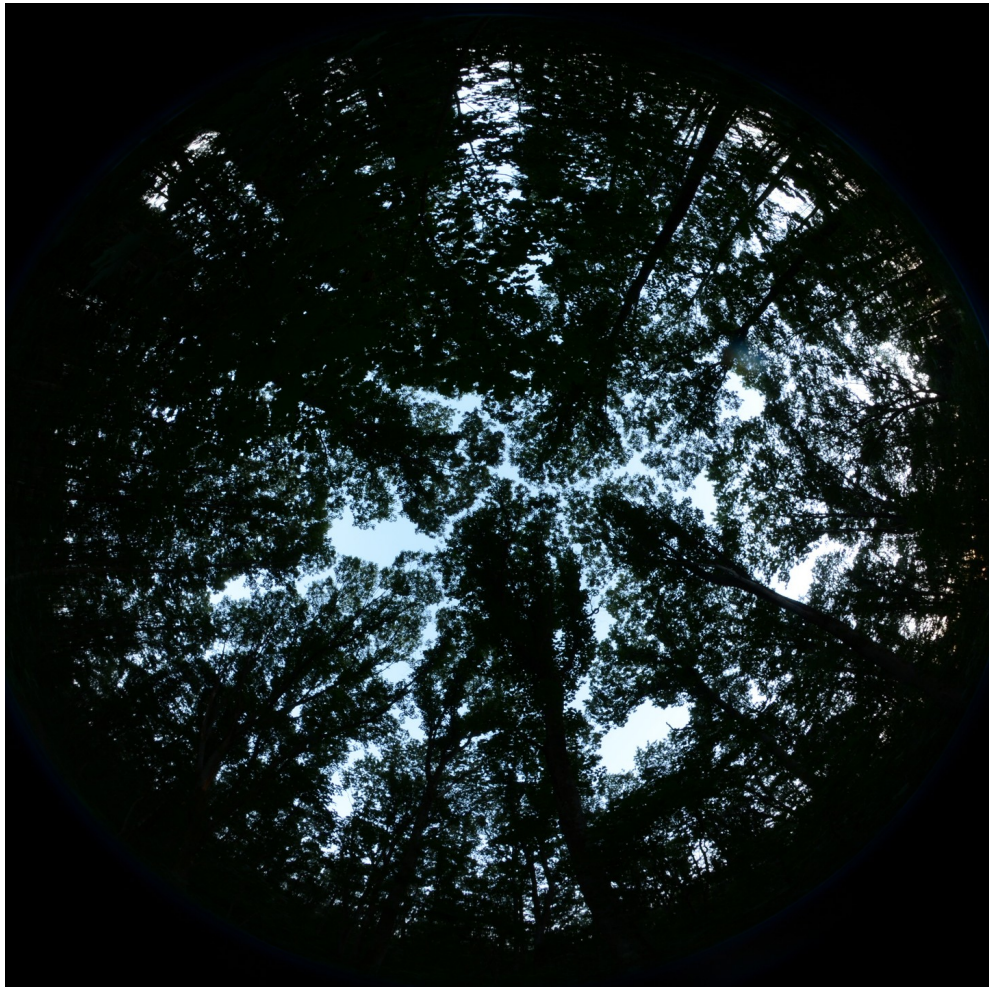


Start of Leaf Fall : 15/11/2024

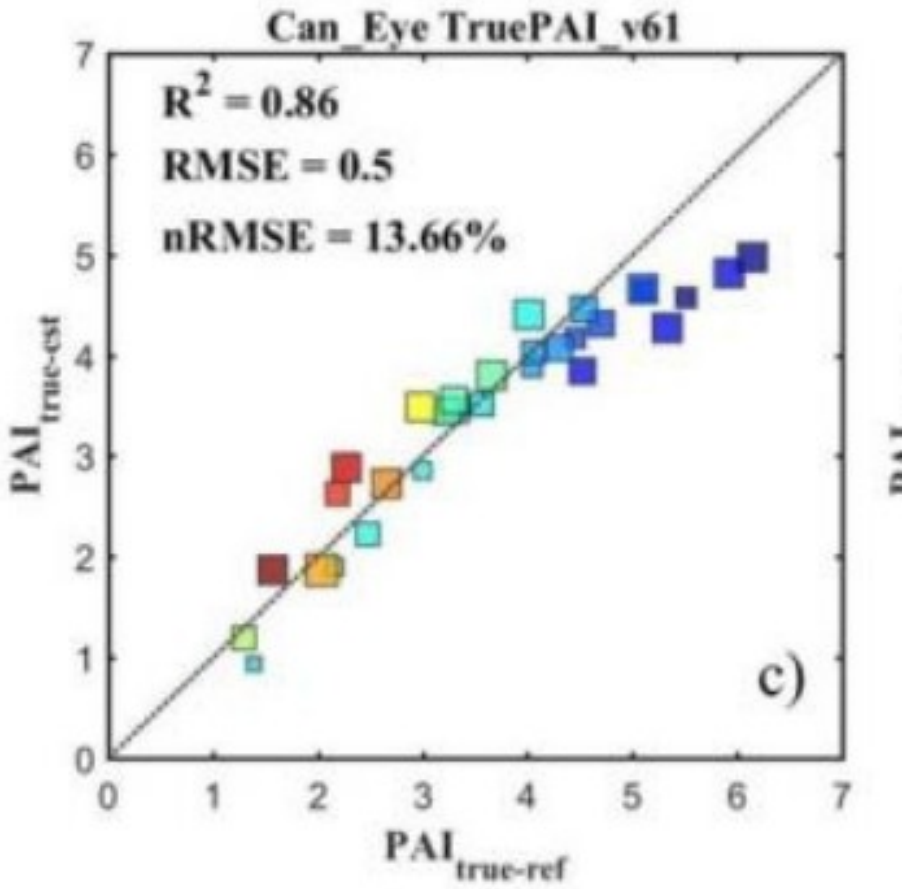
Estimation by Hemispherical picture

14 April 2023

20 August 2023



Estimation by Hemispherical picture



- Numerical simulation of 30 different forests (various tree size and distribution) with a DART-like model
- Numerical simulation of hemispherical picture.
- Comparison of simulation and CAN-EYE results

Liu et al. 2021, remote sensing

DHP results

Image processing with CAN-EYE (https://can-eye.paca.hub.inrae.fr/)

Date	Fapar	Effective PAI	PAI
19/04/2023 (evening)	0.48	0.8	1.1
20/04/2023 (morning)	0.50	0.9	1.5
20/08/2023 (evening)	0.8	1.9	3.4

TO DO

- Create a daily estimation of forest LAI based on light interception and DHP. For surface models runs ?
- Look at the link fluxes / LAI. (obs+ model ?)
- Compare with 10m copernicus LAI maps
- Put data on MOSAI website.