Cadi Ayyad University (UCA) presentation

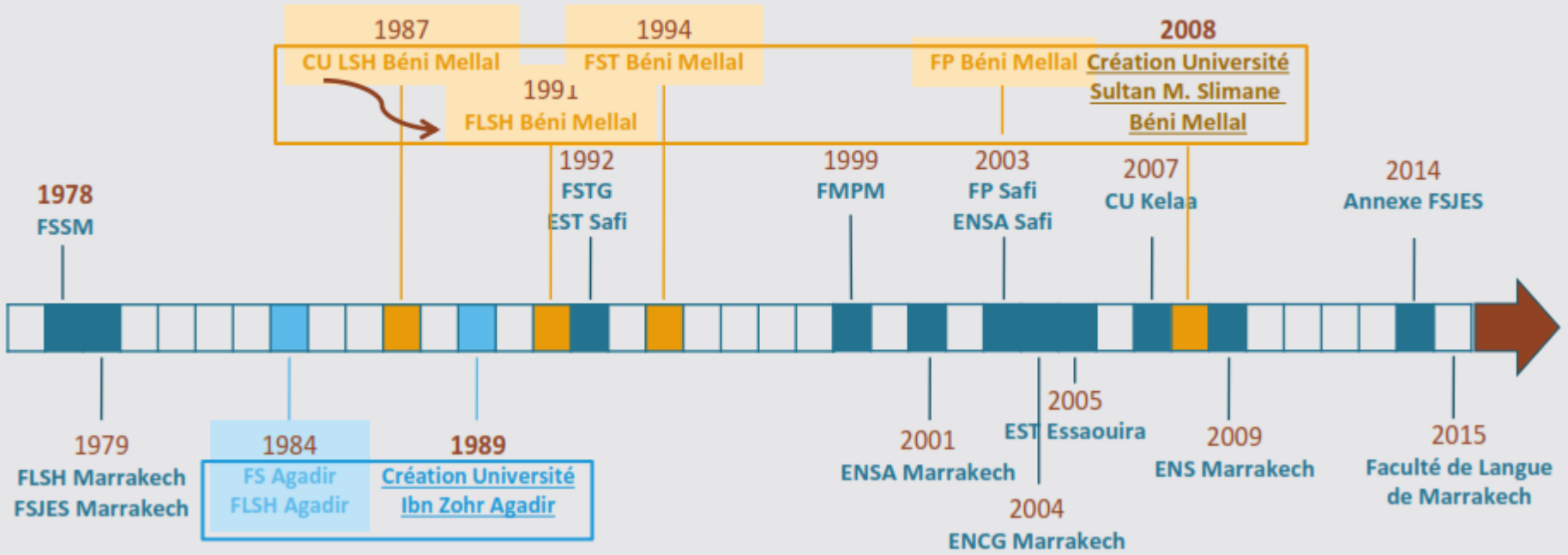
Altos meeting online

25-26 May, 2021

Cadi Ayyad University (UCA)

Created in 1978

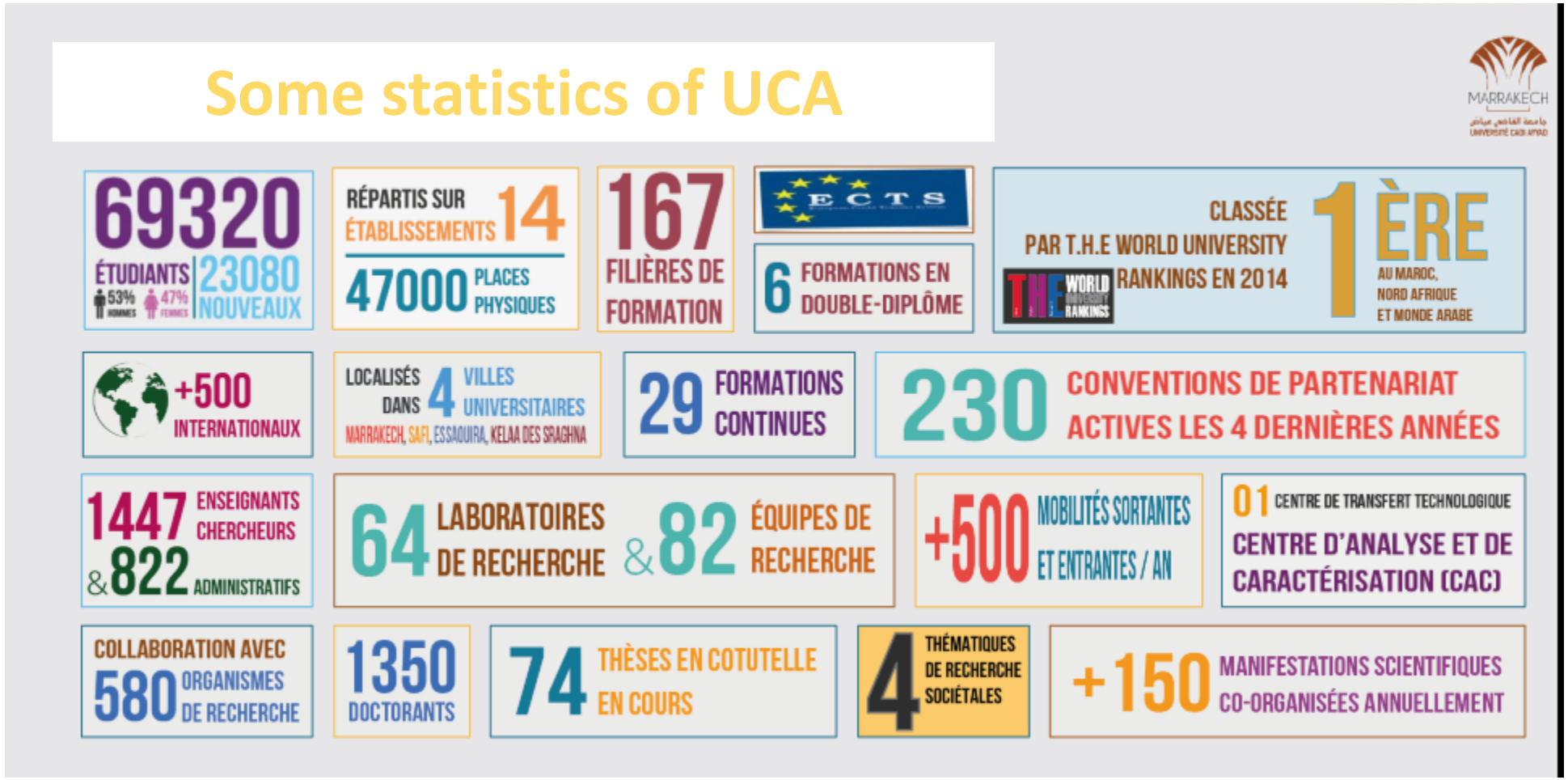
UCA's Time line



www.uca.ma

Cadi Ayyad University (UCA)

MARRAKECH
جامعة القاضي عياض
UNIVERSITÉ CADI AYYAD



Cadi Ayyad University (UCA)

Collaborations of UCA

- Collaboration avec plus de 580 organismes de recherche
- 28% de co-publication avec l'Europe

Cadi Ayyad University (UCA)

Research themes of UCA

- Structuration de la Recherche autour de 4 thématiques sociétales :
  1. Energies, Eau et Développement Durable
  2. Nouvelles technologies du Tourisme et de l'Agroalimentaire
  3. Matériaux
  4. Mobilité Urbaine

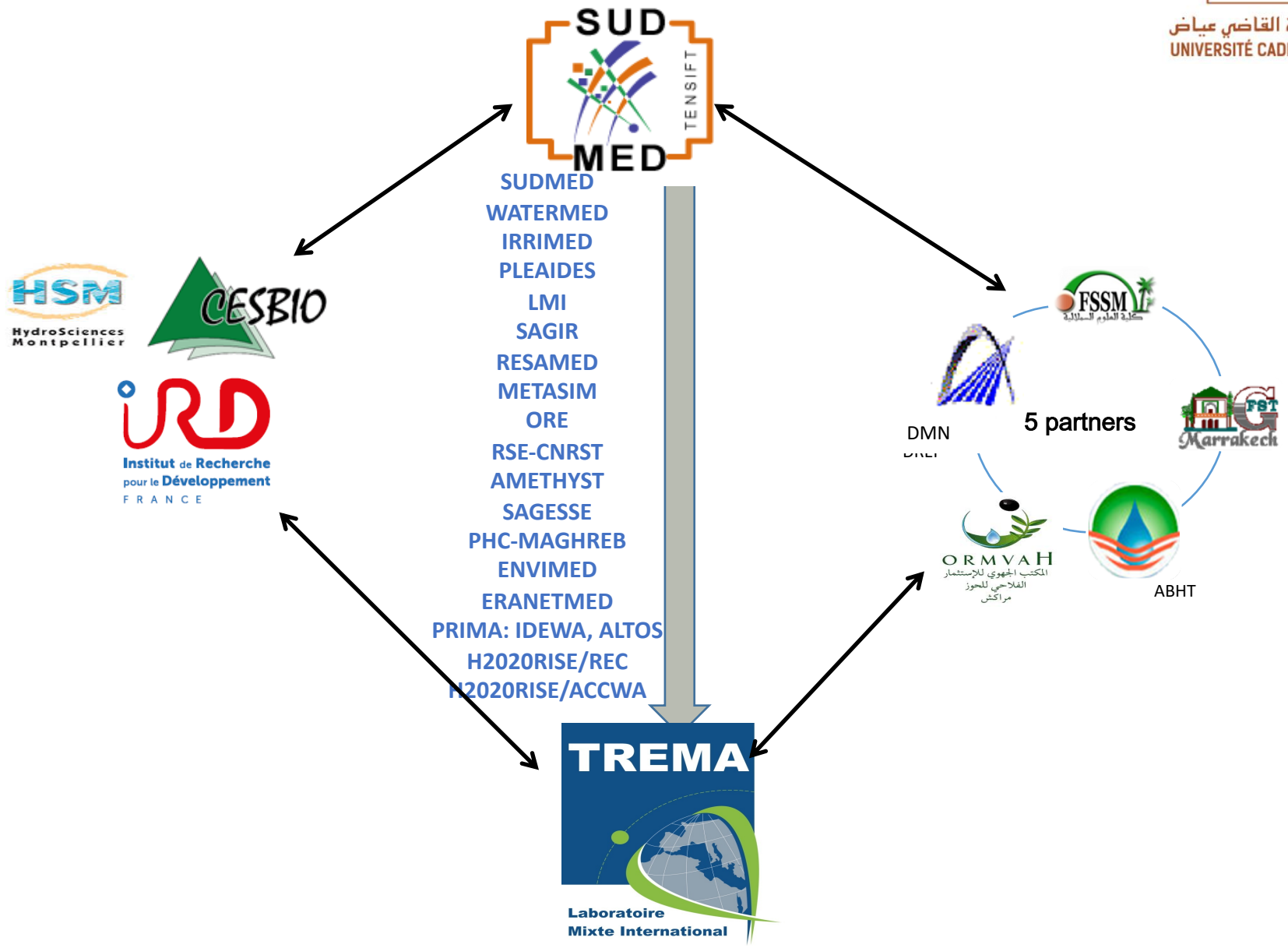
- Encouragement du regroupement des structures de recherche autour de ses 4 thématiques pour plus de synergie et une utilisation efficiente des ressources.
- Fédération des structures de recherche autour de la Cité de l'Innovation.

Objectif > Visibilité et compétitivité nationales et internationales.

12/02/2016

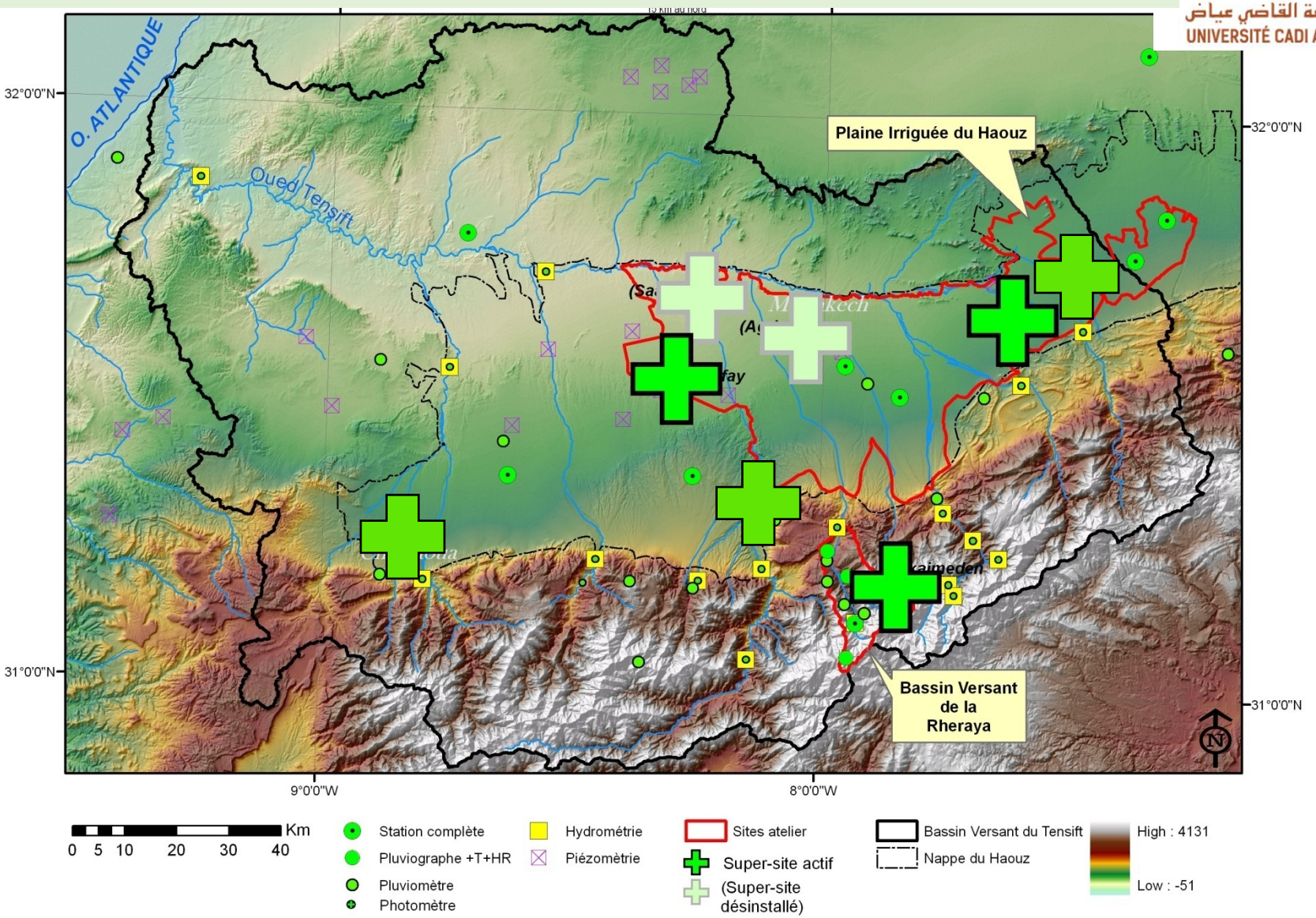
- **64** Laboratoires de recherche
- **82** Équipes de recherche
- **15** Unités Associées au CNRST
- **03** Laboratoires Mixtes Internationaux
- **01** Unité Mixte IRD classée A+ par l'AERES
- **02** Centres de recherche Nationaux
- **03** Nouveaux Centres de recherche
- **01** Centre de Transfert Technologique
- **03** Centres d'Études Doctorales (fusion des SI et S&T)
- **02** Observatoires
- **01** Muséum d'histoire naturelle

Cadi Ayyad University (UCA) : collaborations



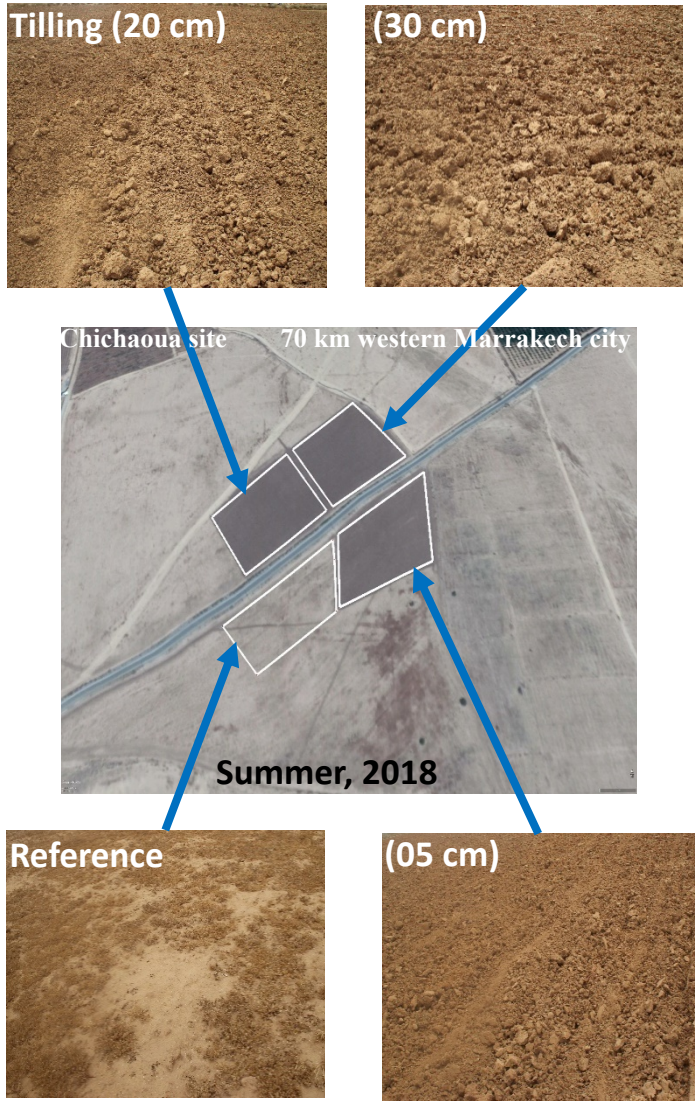
TENSIFT Observatory

- Gather, manage and distribute consistent set of data and informations describing the functioning and evolution of land surfaces



Recent experiments

Roughness and SMC measurements on bare soil

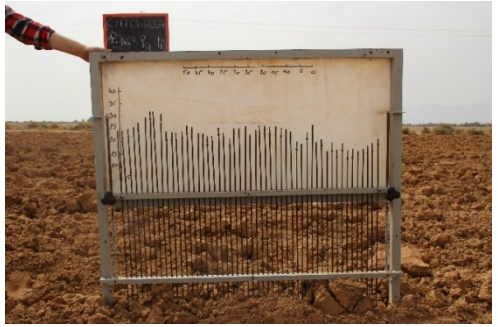


Main objectives:

- Investigation of the effect of surface roughness on the radar signal (C-band) over bare soils,
- Comparison of the backscattering coefficient derived from 3 radar models (IEM, Oh and Ulaby model),
- Retrieving surface soil moisture by using these models and Sentinel-1 data.

Surface soil moisture

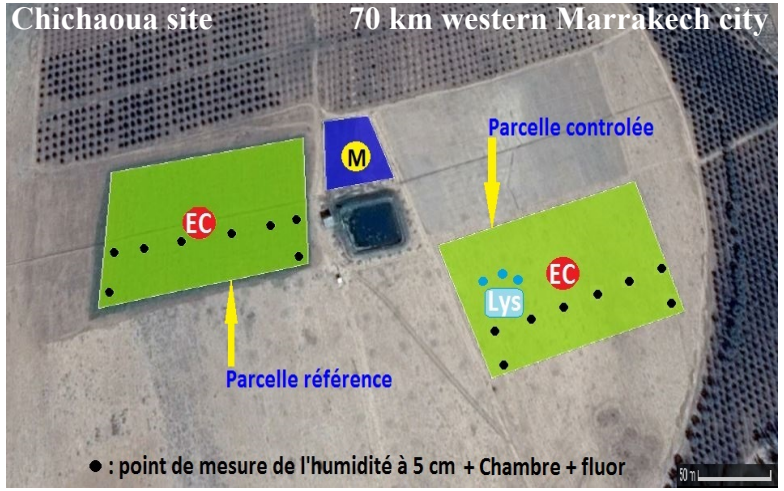
Soil roughness



Thesis: N. Ouaadi

Recent experiments

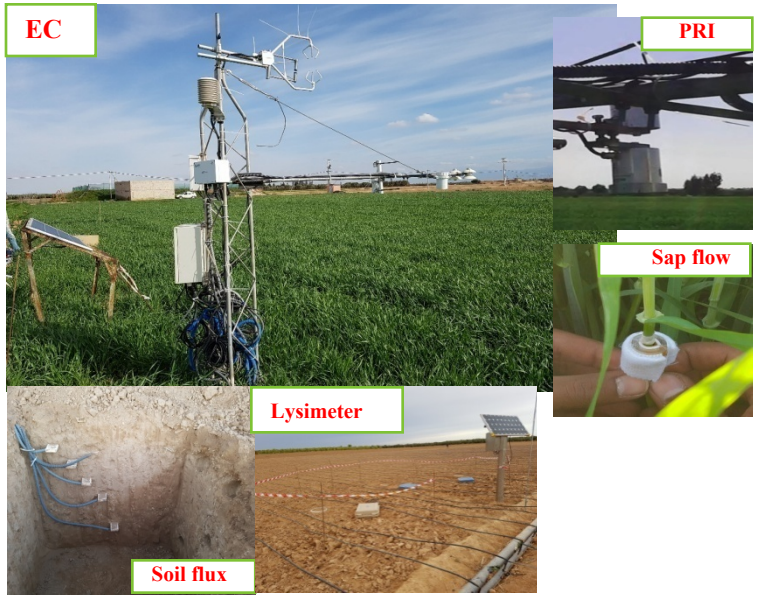
Stressed and not stressed wheat, drip irrigation (2016 – 2018)



➢ **Partitioning E/T**: comparison/complementary between different sensors monitoring the surface water balance terms with various spatio-temporal resolutions,

➢ **Crop water stress**: measurement and characterization.

(2 EC, 3 smart lysimeters, sap flow systems, fluorimeter, PRI, gas chambers, porometer) + LAI, biomass, vegetation and soil water content ...

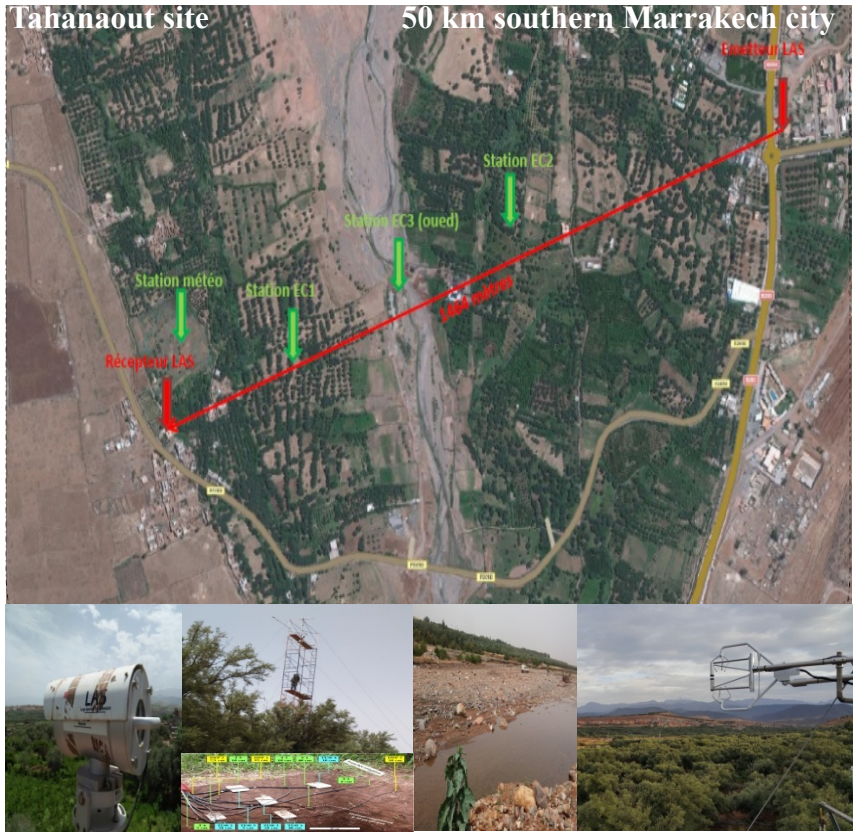


Thesis: Z. Rafi

Recent experiments

Hydrological functioning of the foot-mountain zone (2016-date)

- Evaluation of the ETR over the practiced heterogeneous covers,
- Extension of SAMIR Software,
- Estimation of deep percolation with water balance (groundwater recharge).



1 LAS, 2 completes EC, 1 meteo station + OS,

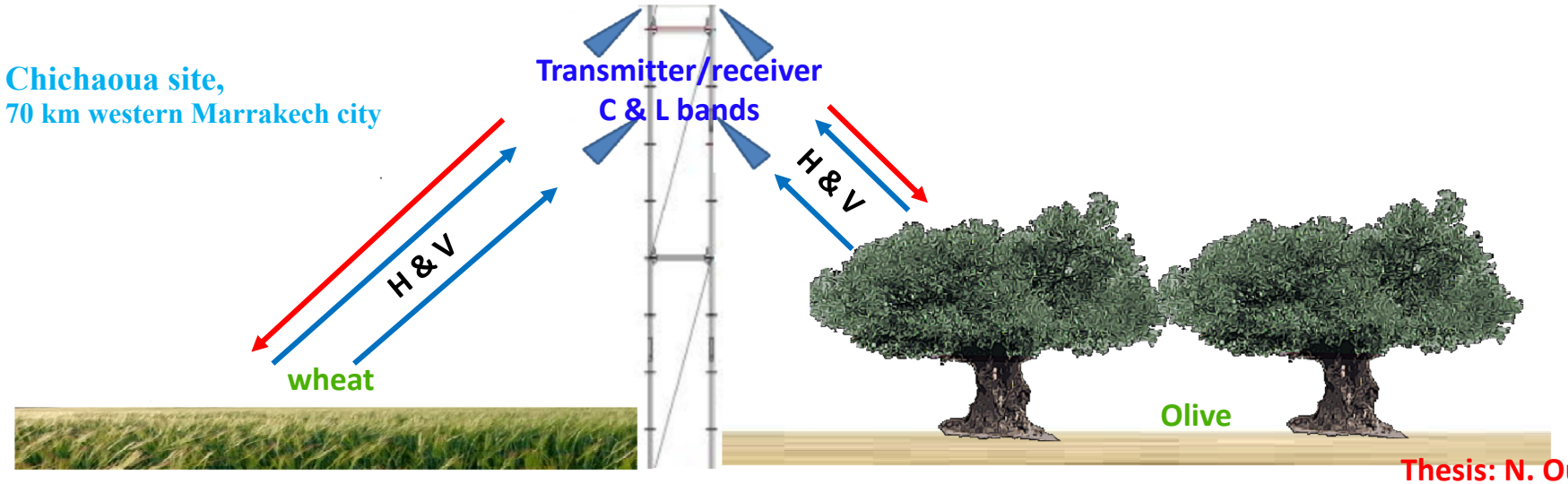
LAI

Thesis: J. Elfarekh

Recent experiments

MOCTAR / Mission sentinel-1: Observations des Cultures par Télédétection radAR

- Improve our understanding of the radar signal (C and L bands) on annual and perennial crops,
- Provide the key variables (biomass, soil moisture content) for monitoring evapotranspiration,
- Study the potential of Sentinel-1 data to monitor the crop water stress,
- Assessment of the complementary between the radar data (C and L bands) and optical data for piloting the crop models.



Thesis: N. Ouaadi

Team involved

5 Professeurs:

S. Khabba

Y. Fakir

S. Er-Raki

L. Hanich

J. Ezzahar

8 PhD students

E. Bourass

N. Ouaadi

J. Elfarkh

A.Moucha

M. Benkirane

S. Boughdadi

A.Chakir

B. SEBBAR

S. Rachidi

M. Benghanem

M. Chtioui

F. Sghir

Agence de Bassin Hydraulique du Tensift

ALTOS Funding

- Total Funding: 75 keuros
- First part: 45 keuros, received at the end of 2020
- Consummed: 25,1 keuros materials, 3,1 fellowshiop for Phd students, Informartique: 2,4 keuros
- Consumed: 68%
- Remaining : 30% for travel, organizing meeting, …. Not consumed due to COVID situation