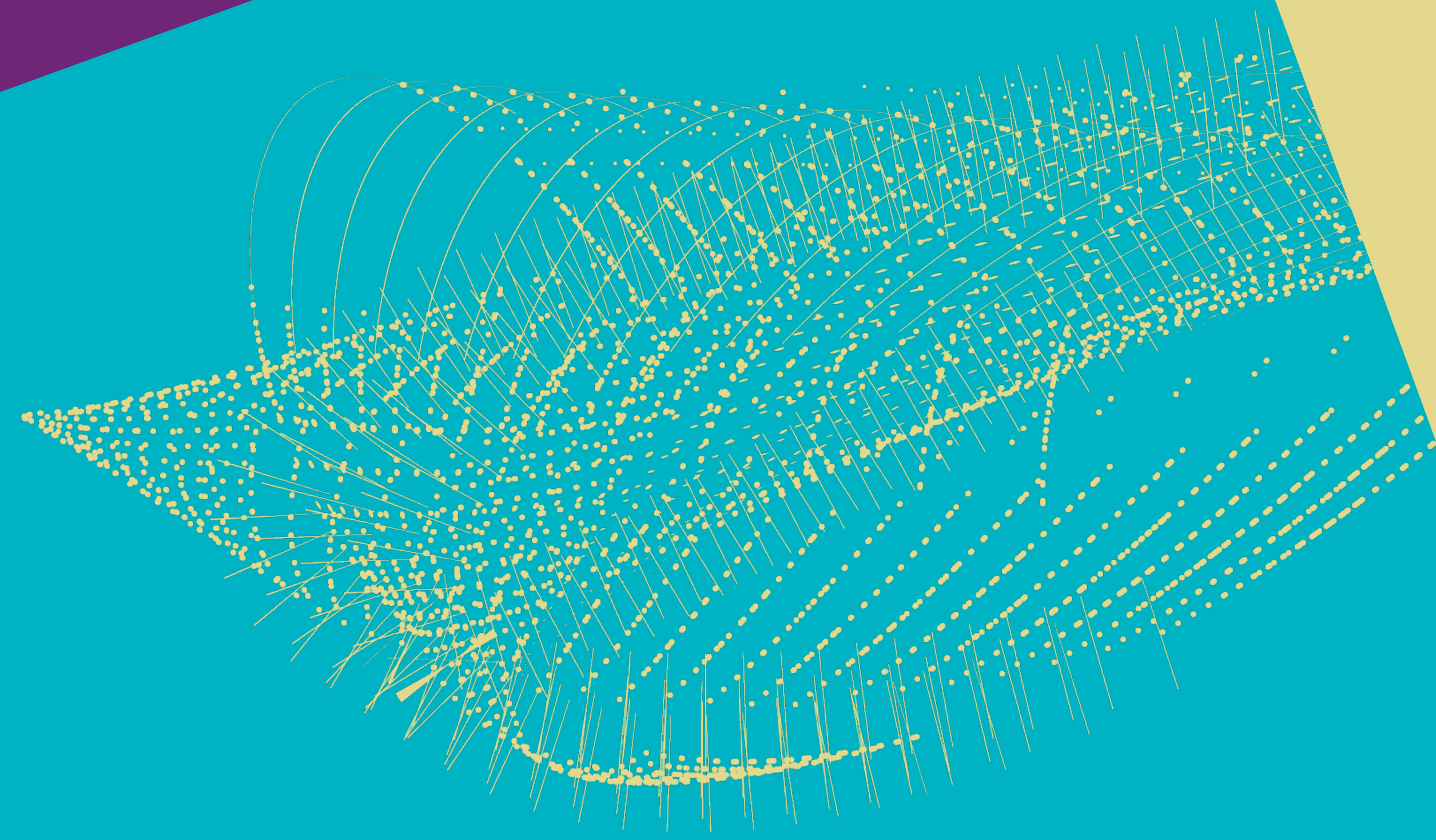


Nikhef



REFLECTIONS

Stan Bentvelsen - Tuesday April 17

# LHC STARTED AGAIN

LHC Page1      Fill: 6614      E: 6499 GeV      t(SB): 04:38:21      26-04-18 08:24:54

## PROTON PHYSICS: STABLE BEAMS

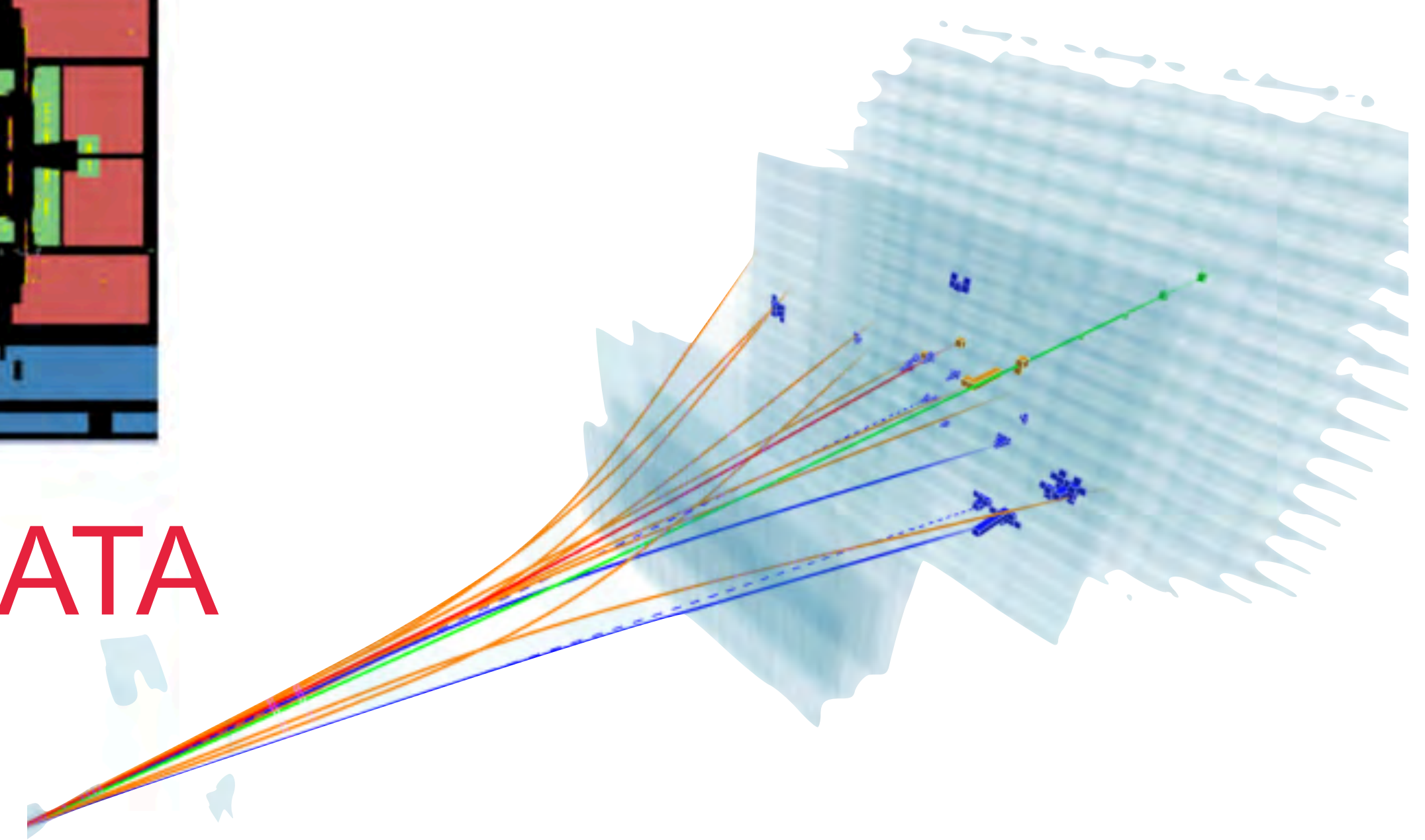
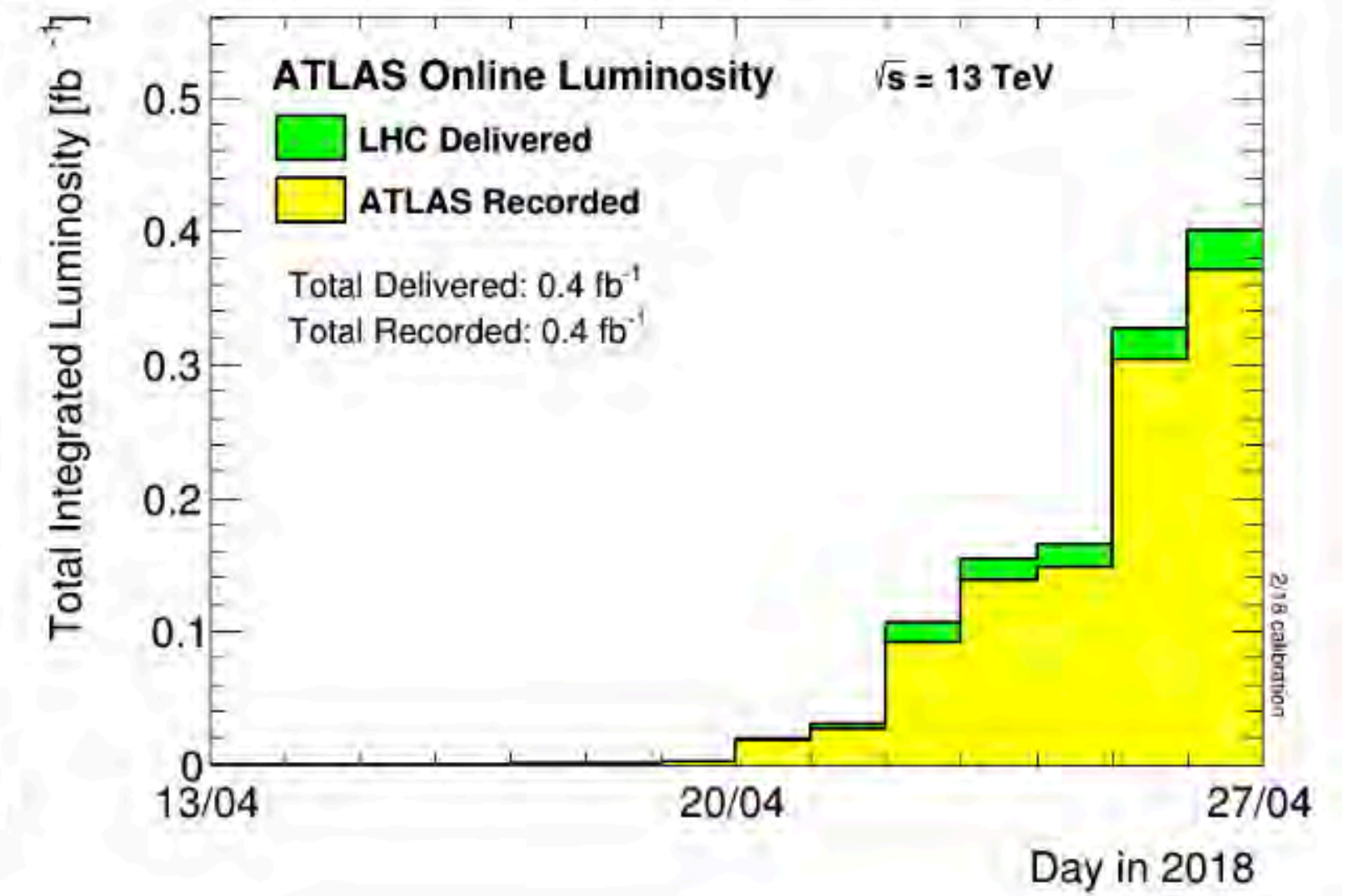
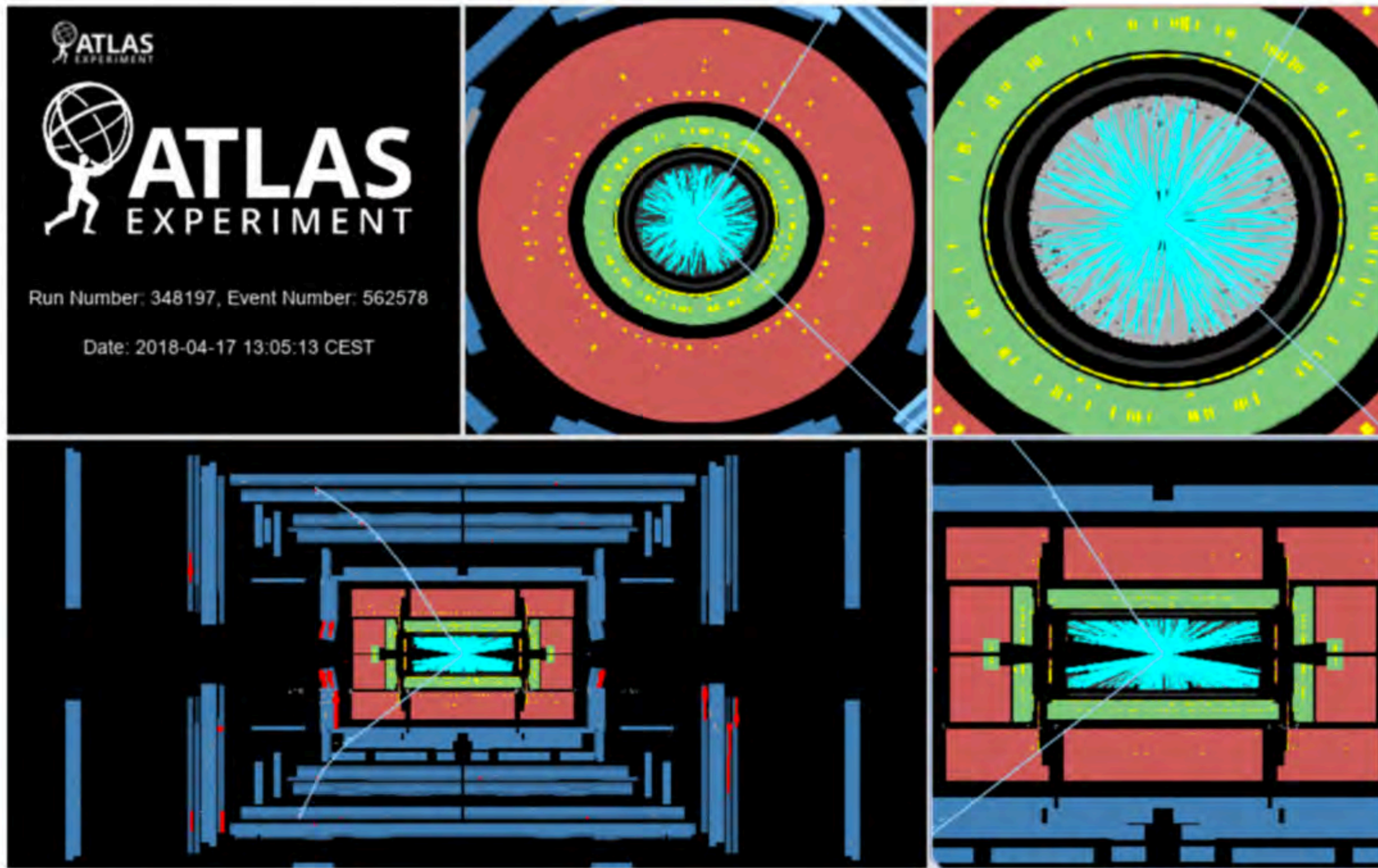
Energy:	6499 GeV	I(B1):	6.09e+13	I(B2):	6.21e+13
Inst. Lumi [(ub.s) <sup>-1</sup> ]	IP1: 3546.88	IP2: 1.04	IP5: 3653.23	IP8: 101.83	

**FBCT Intensity and Beam Energy**      Updated: 08:24:53

**Instantaneous Luminosity**      Updated: 08:24:53

	BIS status and SMP flags			B1	B2
<p><b>Comments (26-Apr-2018 05:48:48)</b></p> <p>IP1/5: X-ing angle change to 150urad XRP in. Physics fill with 603 bunches.</p>	Link Status of Beam Permits	true		true	
	Global Beam Permit	true		true	
	Setup Beam	false		false	
	Beam Presence	true		true	
	Moveable Devices Allowed In	true		true	
	Stable Beams	true		true	

AFS: 25ns\_603b\_590\_524\_542\_48bpi\_17inj      PM Status B1 ENABLED      PM Status B2 ENABLED

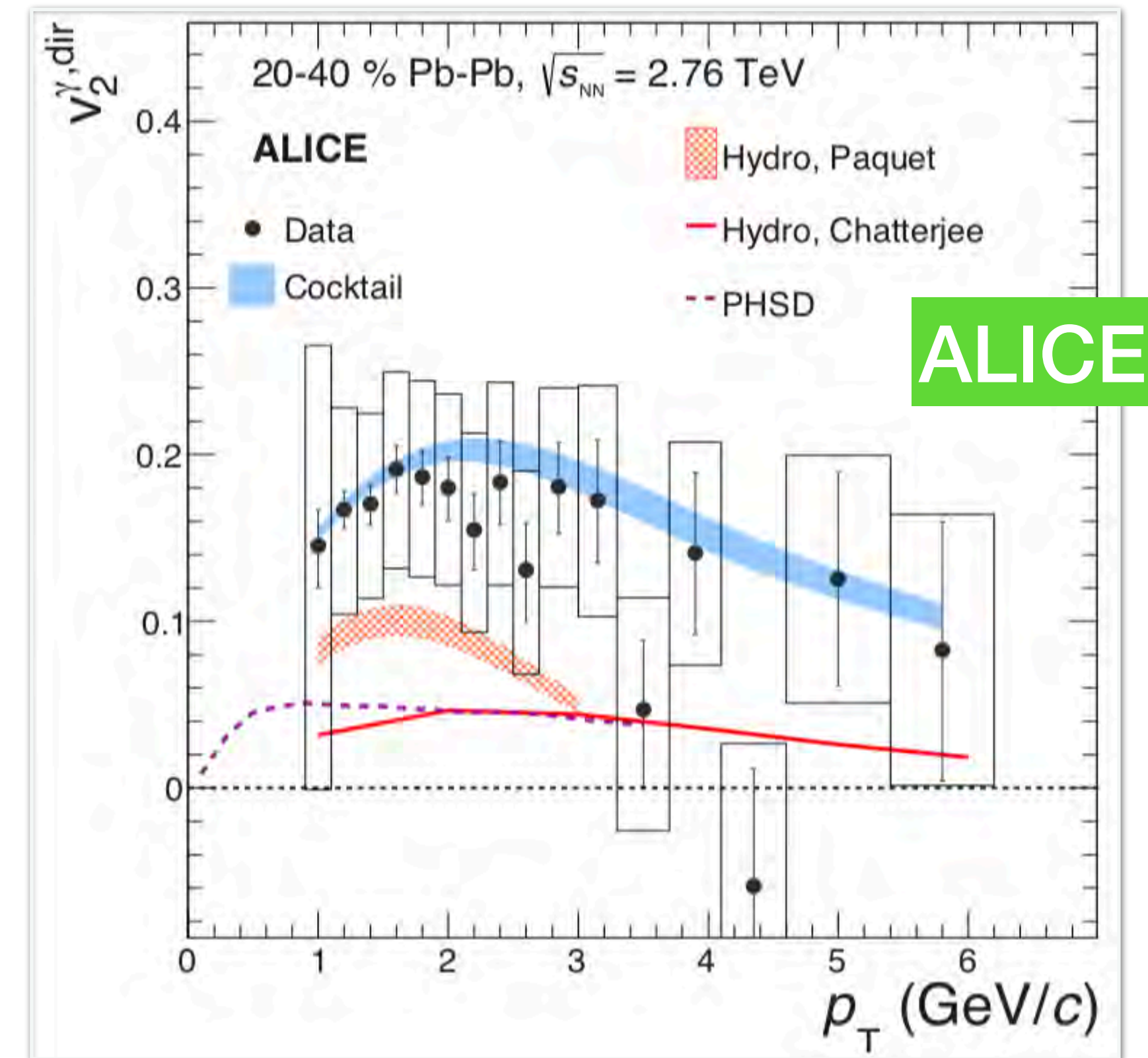
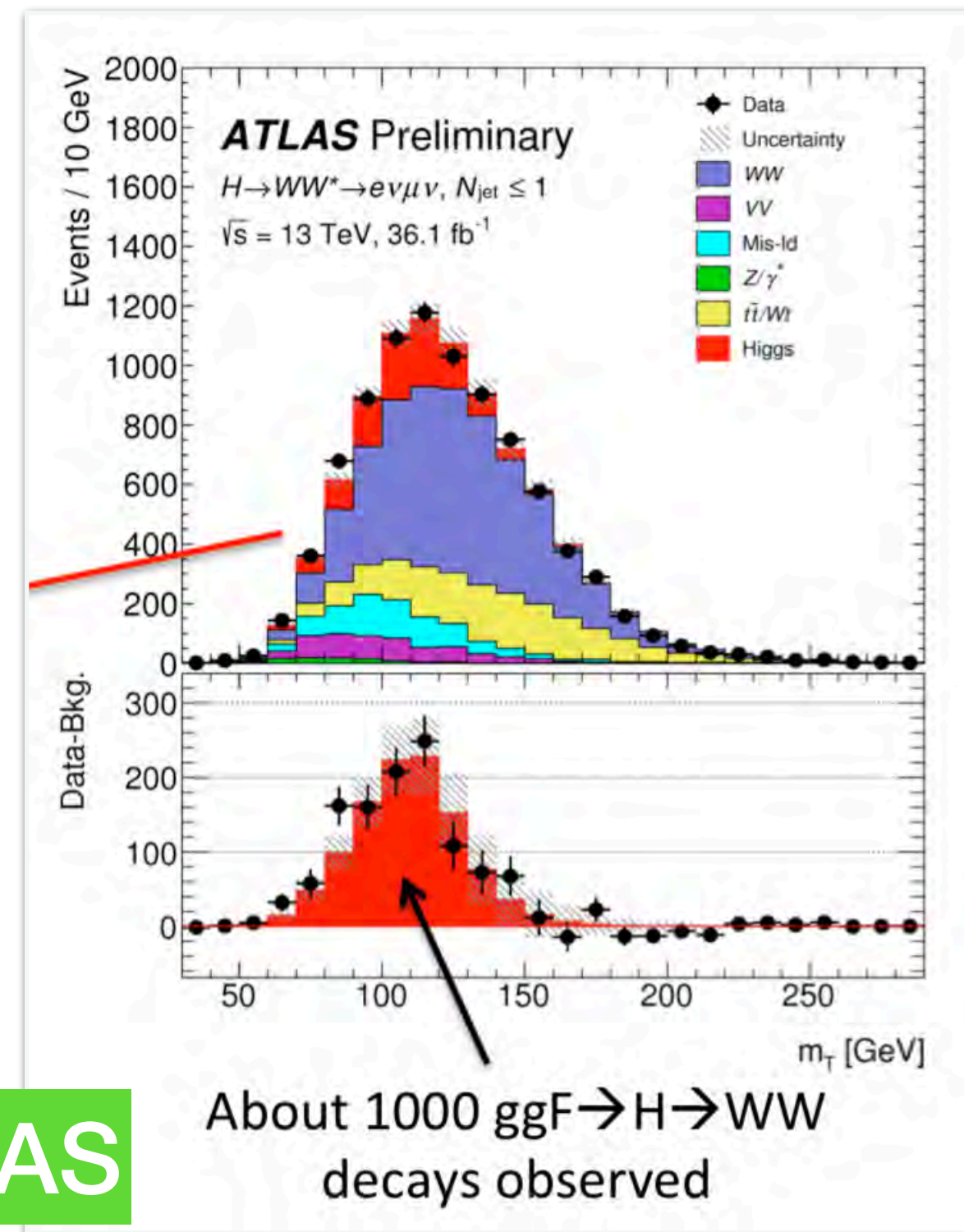
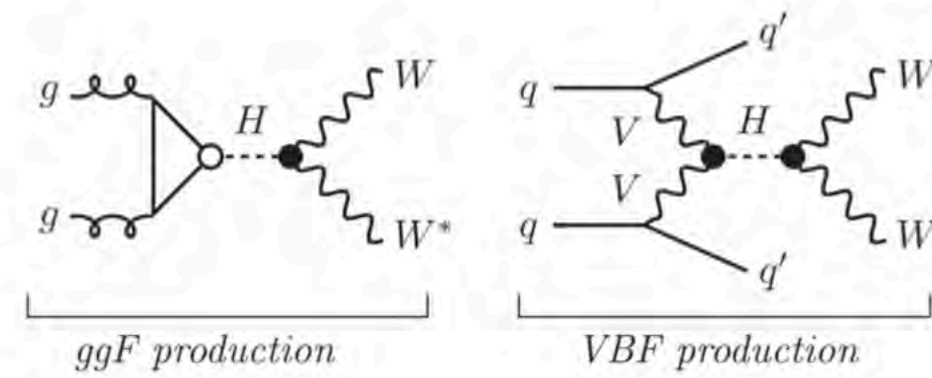
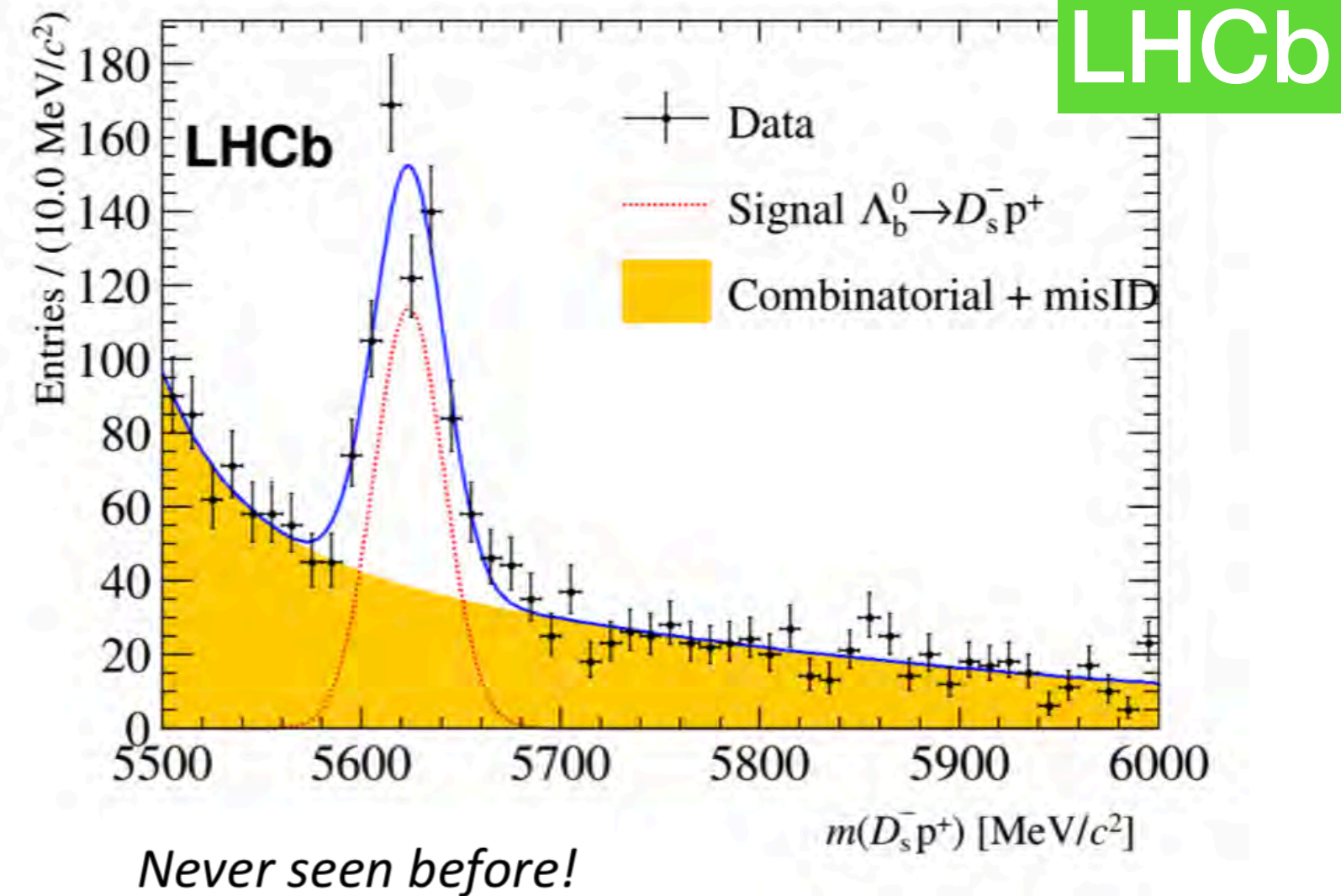


# ATLAS, LHCb ALICE TAKING DATA

Last week:  
First collisions of 2018

# PLENTY OF NEW RESULTS FROM LHC

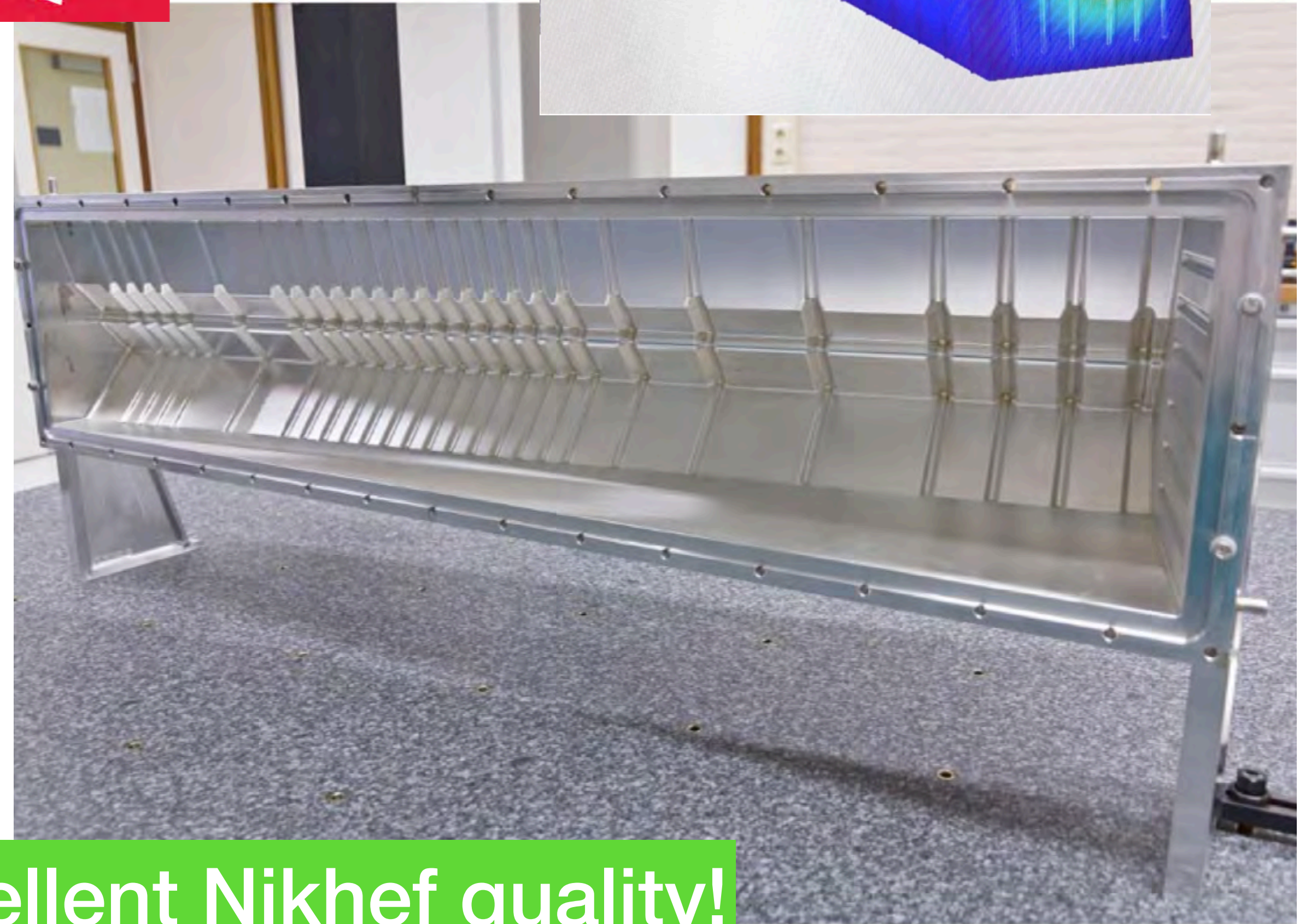
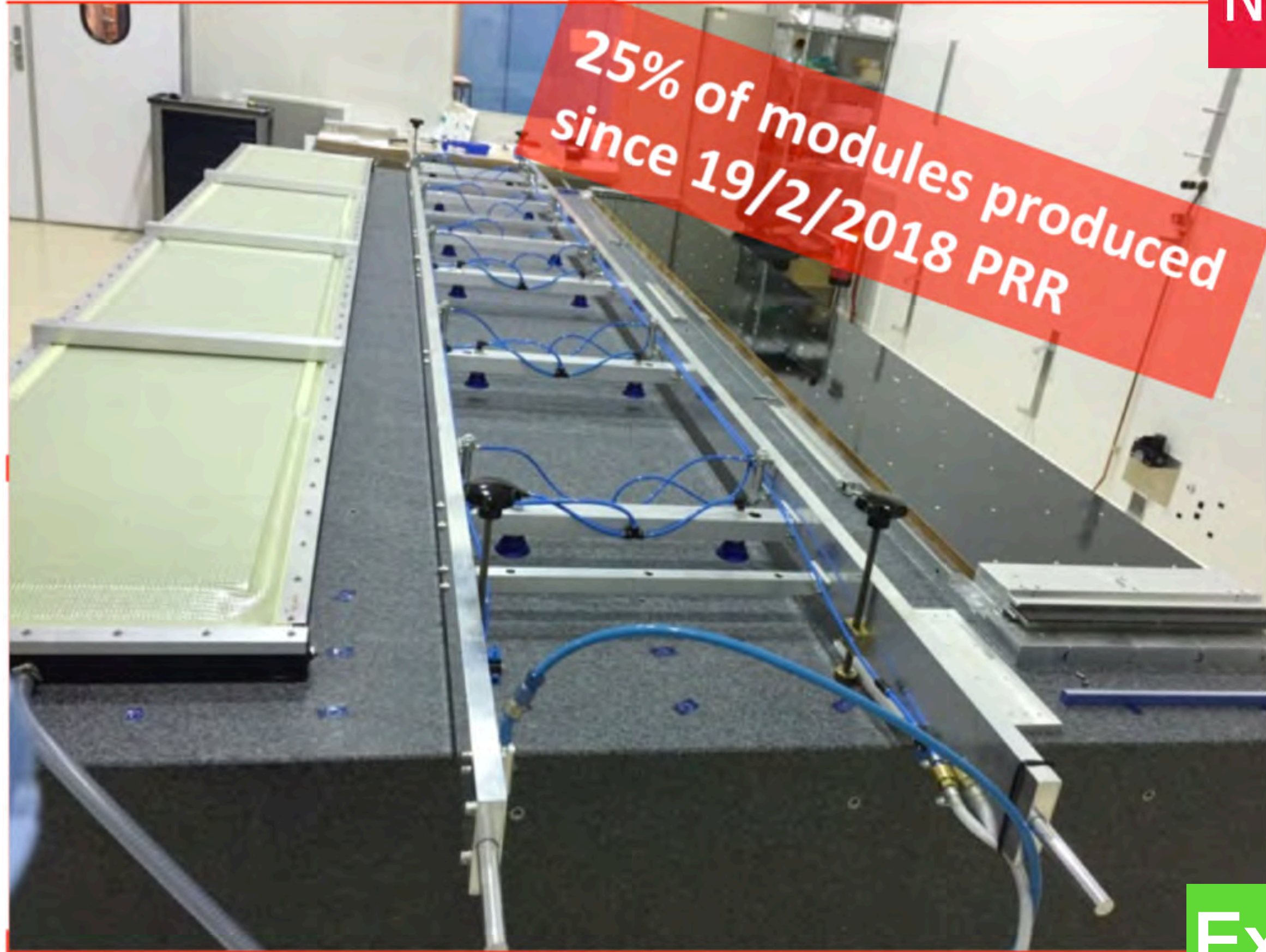
LHCb physics  
result by Master  
Student  
Marinda Vervoert



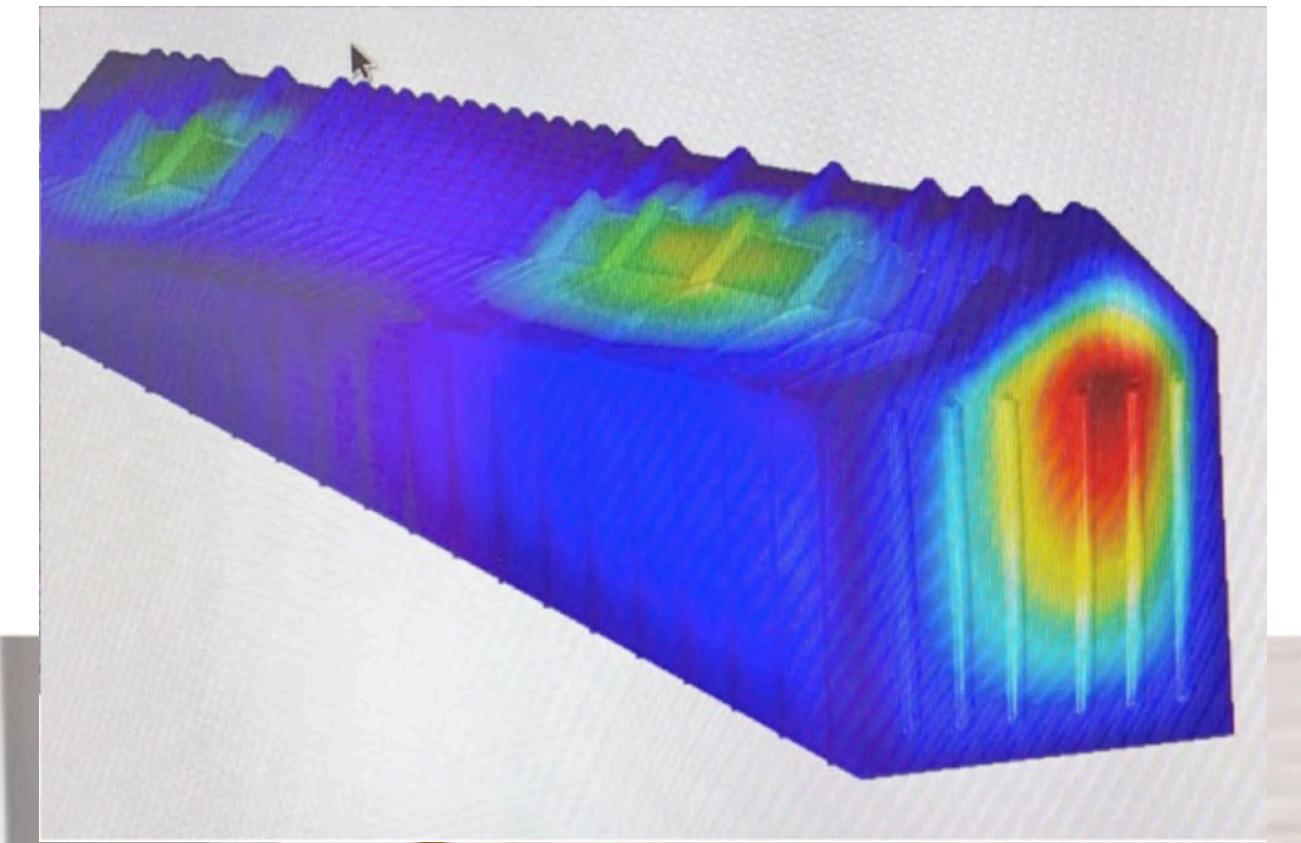
# LHCB UPGRADE PROJECTS



25% of modules produced since 19/2/2018 PRR



Excellent Nikhef quality!



# PRODUCTION AUGER SSD MODULES

Production of 135 SSD modules





ERC Advanced Grant of 3.5 M€  
for Jörg Hörandel  
for adding a Radio Detection layer  
to the Pierre Auger Observatory





# NEW NIKHEF STAFF

***Nikolina Illic***

ATLAS group  
UD at University Nijmegen

Main contribution in ATLAS  
upgrade - Felix system



# NEW NIKHEF STAFF

***Dr Roel Aaij***

Physics Data Processing group  
Background in LHCb

at Nikhef

and at

CERN



# NEW COLLEAGUES

***Two more ATLAS group members***

Federica Pasquali - PhD  
Higgs physics

Jia Jian Teoh - Postdoc  
Felix for TDAQ & ITk



# NEW COLLEAGUES

## ***Communications***

Gieljan de Vries - DIFFER

At Nikhef part-time for coming 6 months-



# VICI CHRIS VAN DEN BROECK

## The nature of black holes by using gravitational waves



# NATIONAL ROADMAP FUNDING - KM3NET

## KM3NeT2.0 roadmap funding

12.7 M€ for infrastructure

Nikhef &  
NIOZ, TNO, KVI-CART



# COMPUTING TECHNOLOGY

## Password hacks

**gotcha.pw:** list with email/password combinations from sites

- *Includes Nikhef, CERN, DESY mail addresses*
- *No direct threat for Nikhef (passwords expired because of mandatory renewal!)*
- *Advice: <https://wiki.nikhef.nl/ct>*

## GPDR -General Data Protection Regulation-

New EU law per May 25. Strict on storing information about people

- *Must protect sensitive data*
- *Minimize which data is stored, clean up when no longer needed*
- *Registration which data is stored/processed*

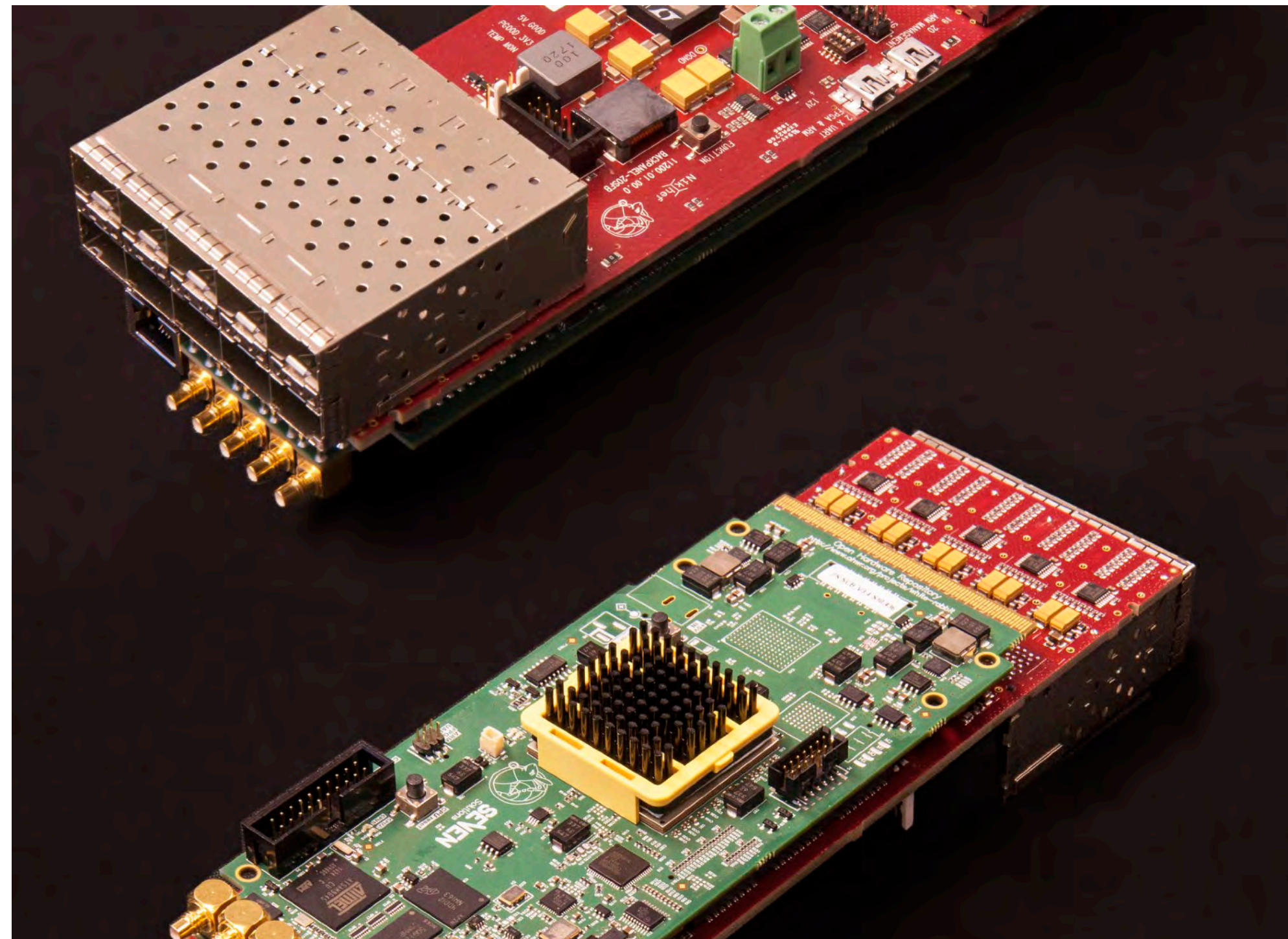
→ Always contact CT if you plan to store sensitive data!



# ELECTRONIC DEPARTMENT

## White Rabbit switch (backpanel)

- developed for CHROMIUM
- design by Peter Jansweijer
- used by Km3Net as switch under water (proto)



## White Rabbit Absolute Calibration

Henk Peek, Peter Jansweijer,  
Dutch National Institute for Subatomic Physics (Nikhef)  
Science Park 105, 1098 XG Amsterdam, the Netherlands  
Email: henkp@nikhef.nl, peterj@nikhef.nl

White Rabbit (WR) is a widely used implementation of high accuracy time dissemination networks. On-site recalibration could be avoided when using absolute calibrated components which can be freely exchanged without recalibration. This publication presents procedures and methods for absolute time dissemination networks, in particular WR. Applications—timing, two-way time transfer, precision time work, time dissemination, fiber, propagation delay.

exchanging network components calibration.

Automated network calibration the calibration parameters in each management layer has access to the and is able to calibrate a WR link

WR devices are absolute calibrated relationship between the internal (Fig. 1) and the external electrical PPS signal and the electrical interface. Electro-optical converter

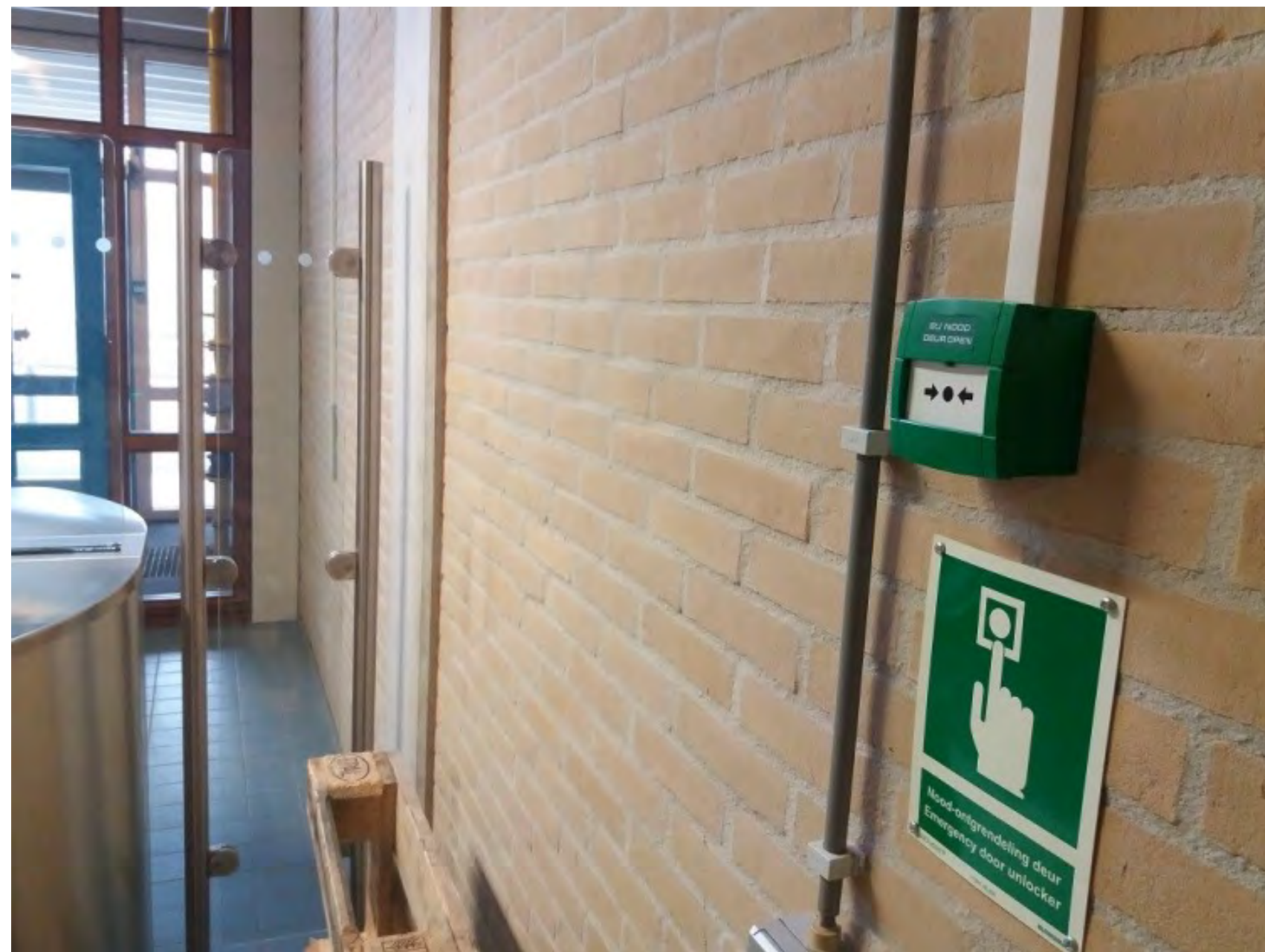
## Absolute time calibration

- for components in a network
- method written down in publication



# CLEARANCE EXERCISE

- Gasleak experience:
  - Excellent reaction of all people
  - Fast evacuation
  - Professional BHV



- Entrance gate closed?
  - Do not hesitate!
  - Break the glass!
- *Last week 'slow-whoop' signal in N-building*
- Compliments to Marcel who broke the glas



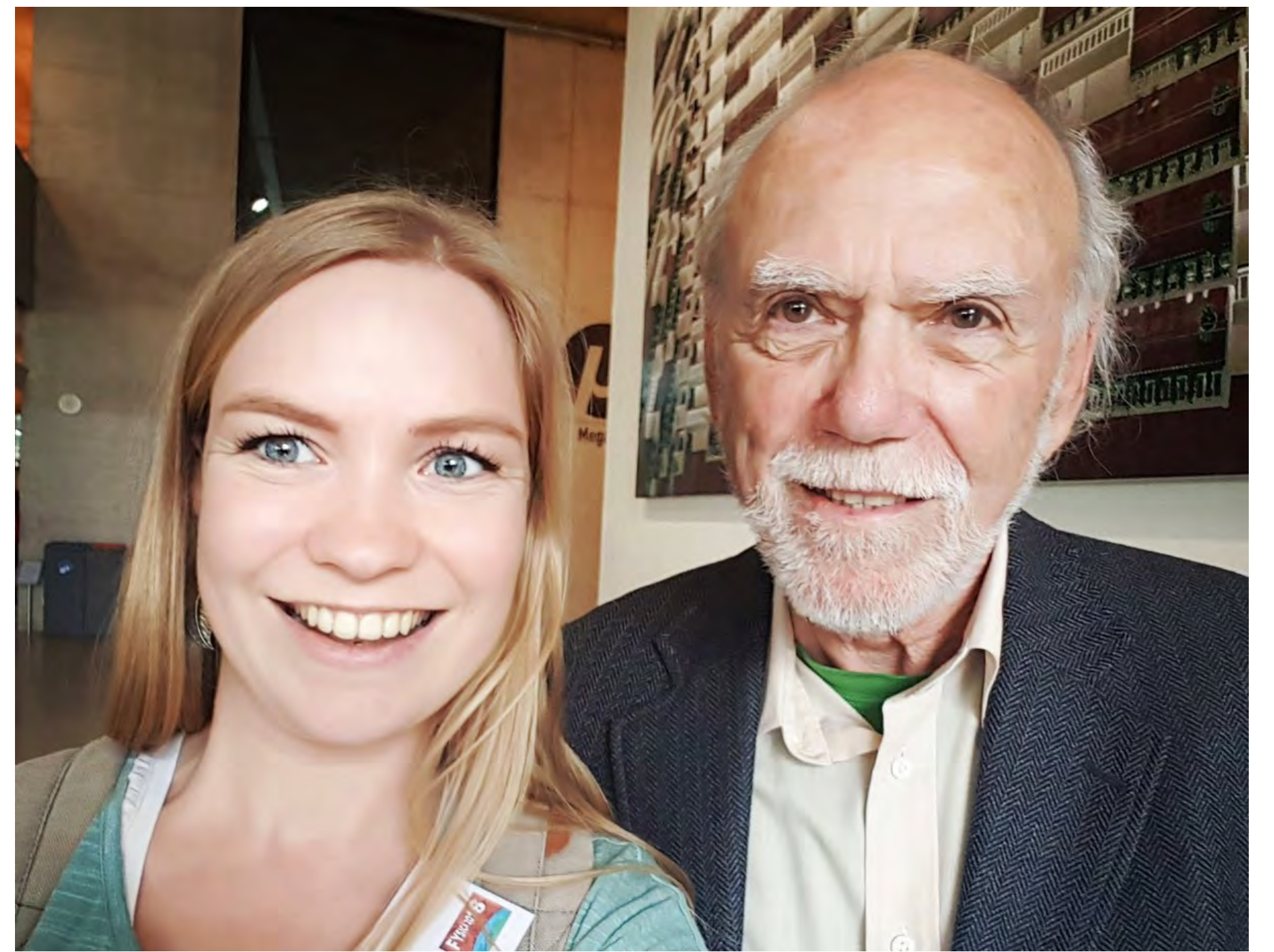
# NEW STRATEGY OF NWO PUBLISHED



Still many things to sort out in new NWO

# PHYSICS SOCIETY (NNV)

**A lot of Gravitational Waves!**



# BIRTH OF THE EINSTEIN TELESCOPE COLLABORATION

**Start of consortium last week in Pisa - Cascina**



QR for more information

# EINSTEIN TELESCOPE

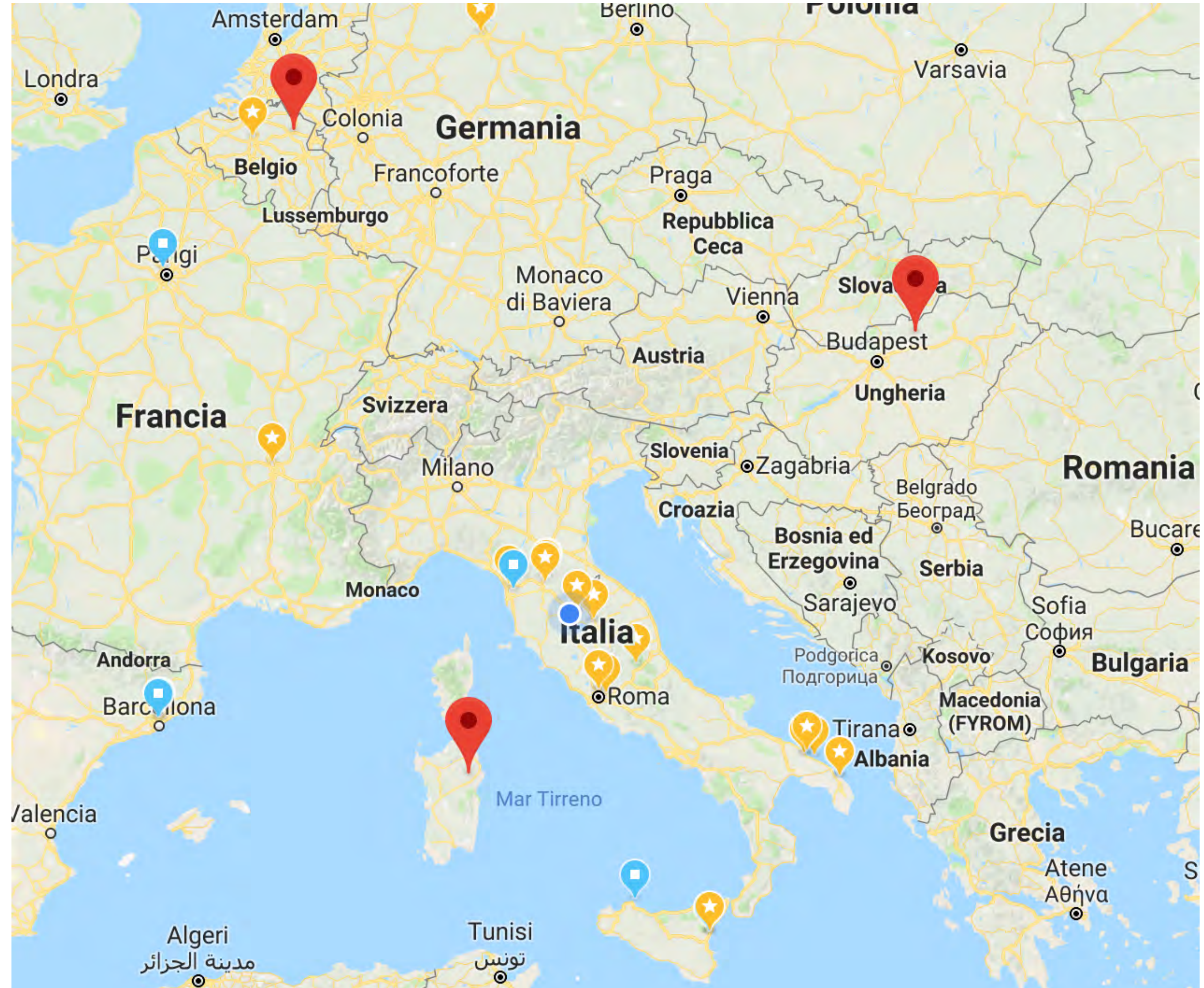
## Location in Netherlands:

Have to deal with

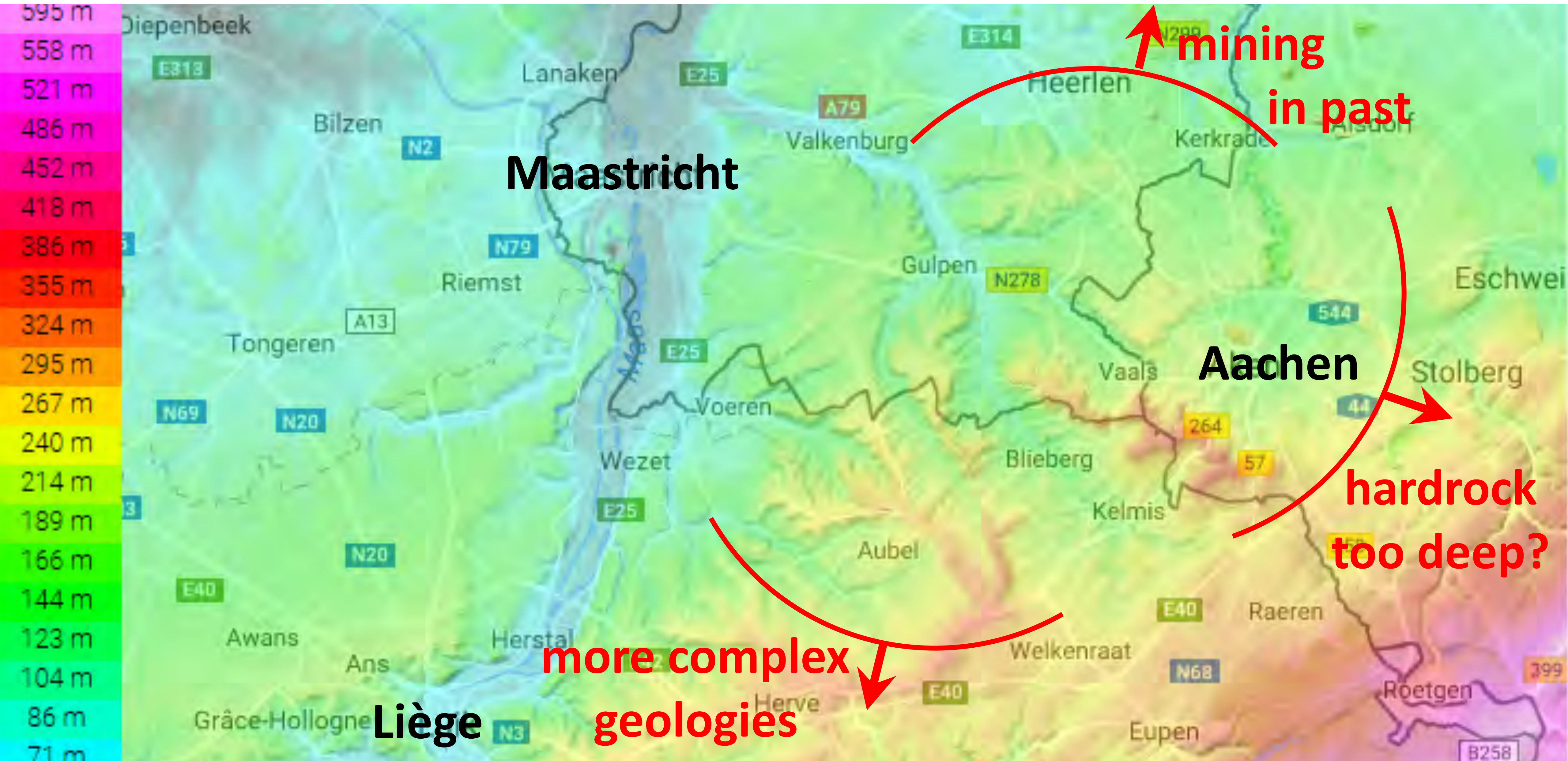
- *lots of politics*
- *lots of money*
- *lots of people*

The basic question:

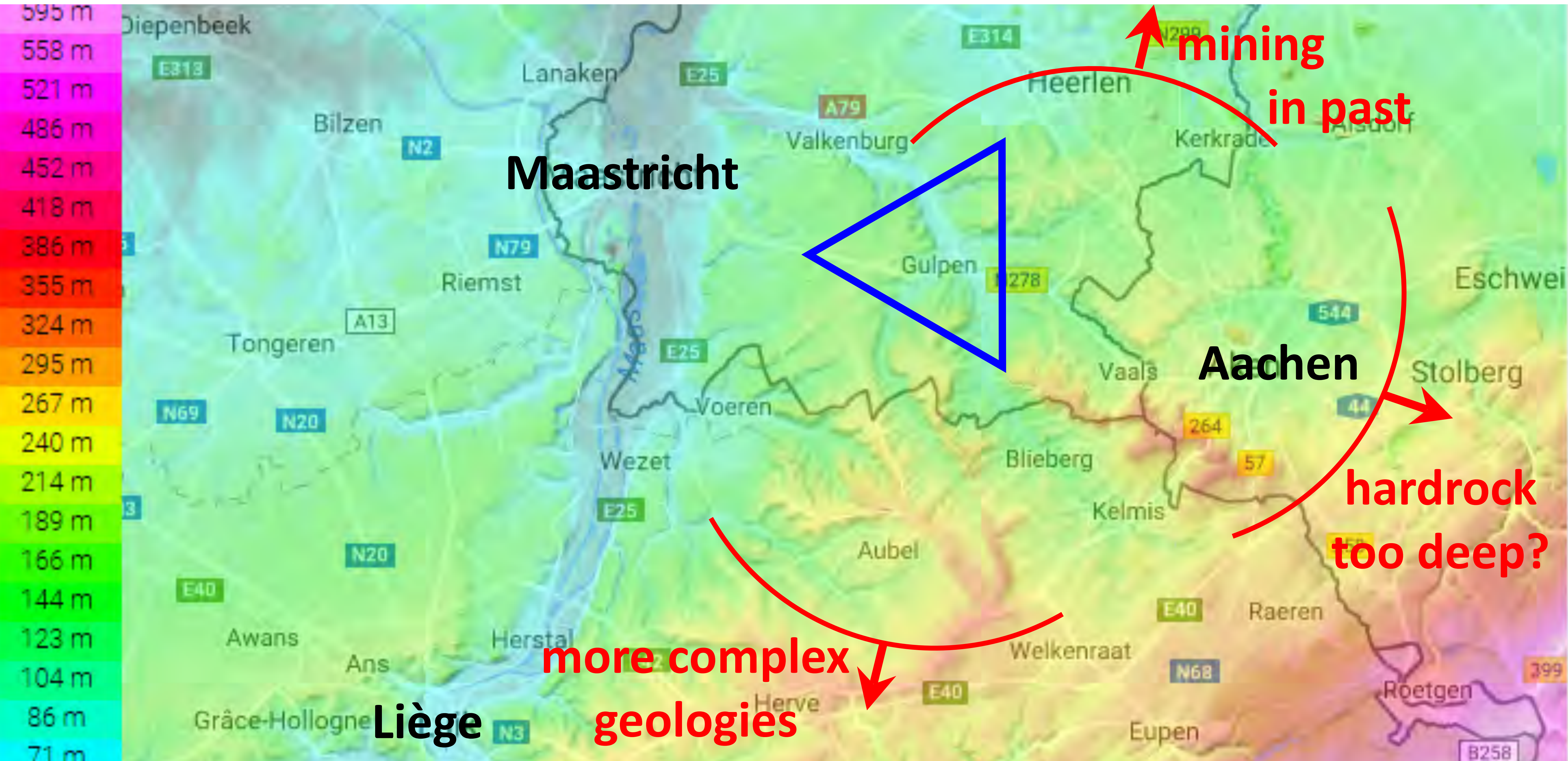
- *is the seismic vibration of the underground sufficiently small?*



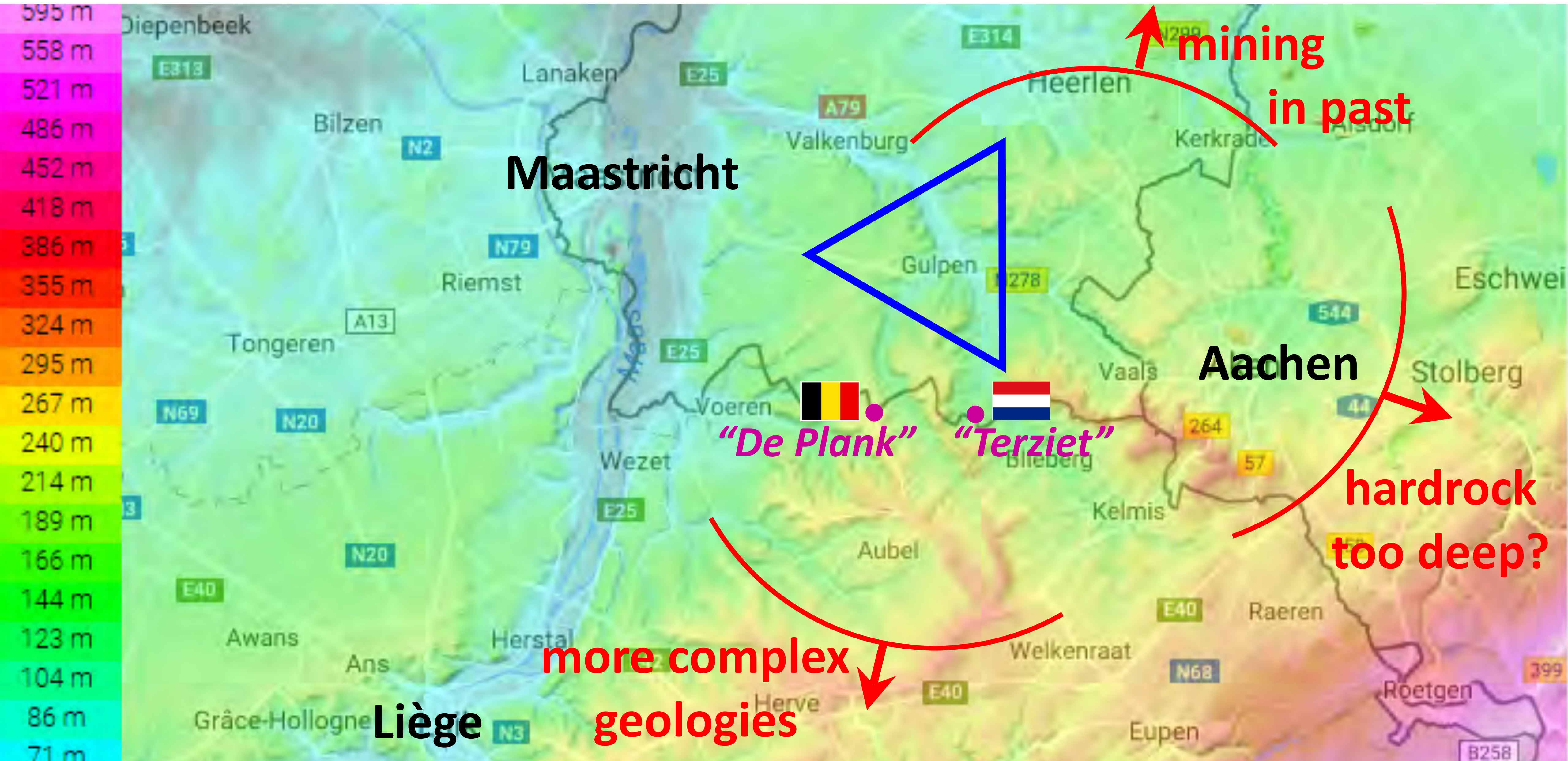
# Seismic studies – map



# Seismic studies – map



# Seismic studies – map





# SEISMIC VIBRATIONS

**Frank and his team:**  
*go and find out!*



# LIMBURG - A PLEASANT PLACE!



# SEISMIC MEASUREMENT - 300 M UNDERGROUND

## First drilling attempt in 2017 failed

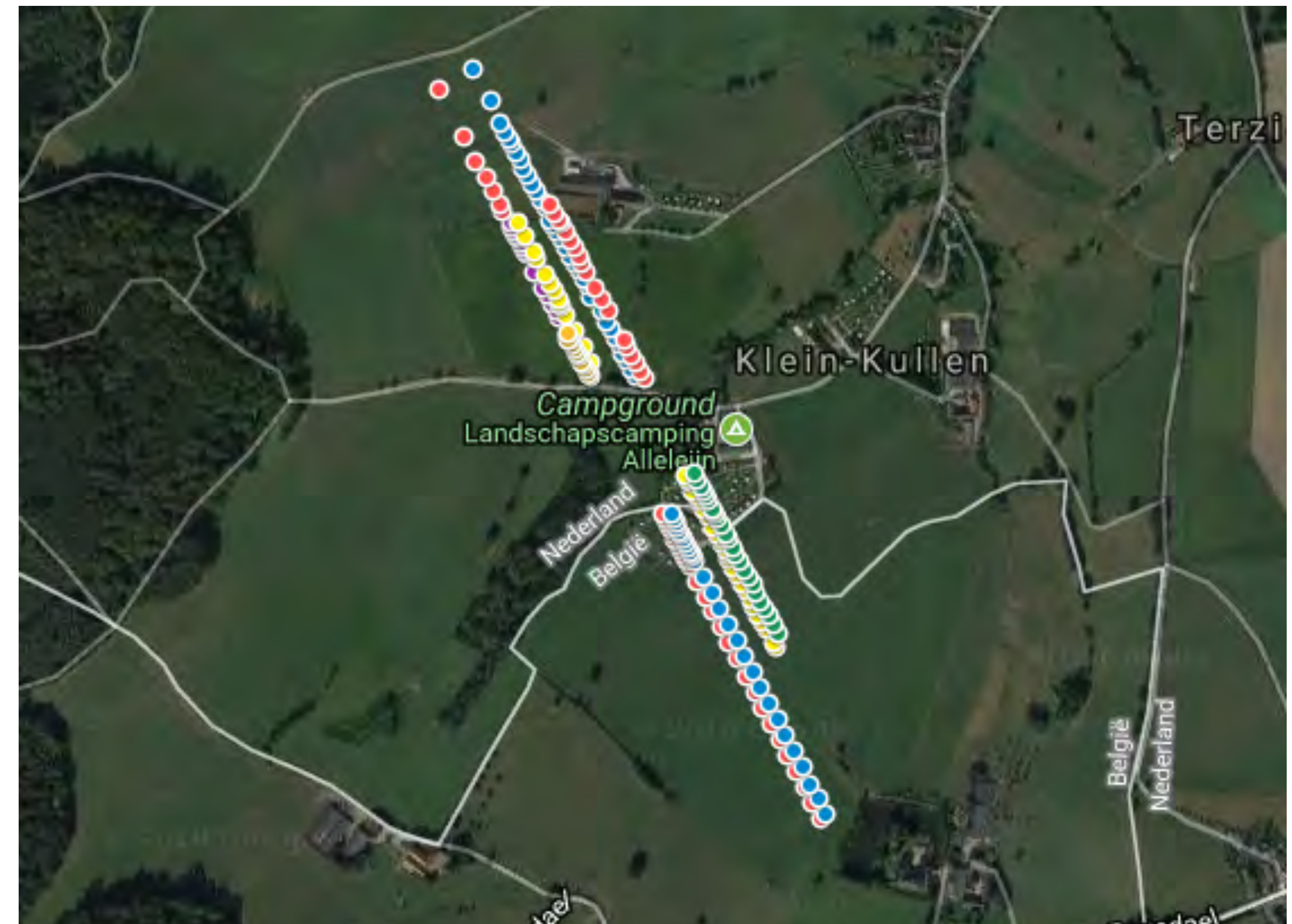
- at depth of 140 m the drill broke

## Now preparing a second attempt

- start with mapping surface vibrations
- new drilling later this year



## Active seismic - line with 182 sensors



# SEISMIC CAMPAIGN IN LIMBURG (TERZIET)



# SEISMIC CAMPAIGN IN LIMBURG (TERZIET)



# NEW INTRANET - LAUNCH - MAY 1ST

The screenshot displays the Nikhef intranet dashboard. At the top, the Nikhef logo is centered, with the user name 'HI SANDEM@NIKHEF.NL!' and a profile icon to the right. A navigation bar on the left includes links for HOME, NEWS, EVENTS, WIKI'S, DOCUMENTS, and EMPLOYEE DATABASE. The main content area features a large 'DASHBOARD' title over a colorful abstract background. Below this, there are three columns of content: 'NEWS' with two articles, 'ONDERSTEUNING' (Support) with a list of services, and 'TECHNISCHE AFDELINGEN' (Technical Departments) with expandable sections for 'OVERLEGGEN/RADEN' and 'WETENSCHAPPELIJKE AFDELINGEN'. On the right side, there are sections for 'WIE IS ONLINE' (Who is online), 'LAATSTE NIEUWS' (Latest news) with three news items, and 'QUICK LINKS' with five links. A chat icon is visible in the bottom right corner.

**HOME**

**NEWS**

**EVENTS**

**WIKI'S**

**DOCUMENTS**

**EMPLOYEE DATABASE**

**Nikhef**

HI SANDEM@NIKHEF.NL!

**DASHBOARD**

**NEWS**

**ONDERSTEUNING**

**TECHNISCHE AFDELINGEN**

**OVERLEGGEN/RADEN**

**WETENSCHAPPELIJKE AFDELINGEN**

**WIE IS ONLINE**

**LAATSTE NIEUWS**

**QUICK LINKS**

MILJOENENINVESTERING IN KM3NET  
APRIL 18, 2018

NIKHEF-PUBLIEKSLEZING GROOT SUCCES  
APRIL 18, 2018

COLLEGA IVO VAN VULPEN GEEFT BOEK UIT  
MARCH 2, 2018

Arbo & Veiligheid

Bibliotheek

Directiesecretariaat

Receptie

Communicatie

Facilities & Datacenter

Financiële afdeling (FA)

CT/Helpdesk

Zoek een medewerker

Arbo & Veiligheid

Indico

CT/Helpdesk

# NEW INTRANET - LAUNCH - MAY 1ST

The screenshot shows the Nikhef intranet homepage for the Directiesecretariaat department. The page features a purple sidebar with navigation links: HOME, NEWS, EVENTS, WIKI'S, DOCUMENTS, and EMPLOYEE DATABASE. The main content area has a dark background with a network diagram and the title 'DIRECTIESECRETARIAAT'. Below the title, there are two columns of text. The left column lists support services under 'ONDERSTEUNING', including Arbo & Veiligheid, Bibliotheek, Directiesecretariaat, Receptie, Communicatie, Facilities & Datacenter, Financiële afdeling (FA), CT/Helpdesk, and Personeelszaken (HRM). The right column provides an overview of the Directiesecretariaat, its location (H233), hours (08.30 - 17.00), and a list of staff members with their roles. A right-hand sidebar contains sections for 'WIE IS ONLINE', 'LAATSTE NIEUWS' (with three news items), and 'QUICK LINKS' (with five links). A red chat icon is visible in the bottom right corner.

**HOME**

**NEWS**

**EVENTS**

**WIKI'S**

**DOCUMENTS**

**EMPLOYEE DATABASE**

**Nikhef**

HI SANDEM@NIKHEF.NL

← → 🔍 🔔

# DIRECTIESECRETARIAAT

**ONDERSTEUNING**

- » [Arbo & Veiligheid](#)
- » [Bibliotheek](#)
- » **Directiesecretariaat**
- » [Receptie](#)
- » [Communicatie](#)
- » [Facilities & Datacenter](#)
- » [Financiële afdeling \(FA\)](#)
- » [CT/Helpdesk](#)
- » [Personeelszaken \(HRM\)](#)

**DIRECTIESECRETARIAAT**

Het directiesecretariaat is gevestigd in kamer H233 en geopend tussen 08.30 – 17.00 uur. Het directiesecretariaat ondersteunt de directie en medewerkers op secretariael en organisatorisch gebied.

**Medewerkers directiesecretariaat**

- [Eveline Schram-Post](#)  
hoofd directiesecretariaat & hoofd receptie, ondersteuning Stan Bentvelsen en Arjen van Rijn, secretariaat Stichting Beheer WCW
- [Joan Berger](#)  
secretariaat IHEF&Atlas, secretariaat Voorlichting
- [Wijnanda de Haan](#)  
secretariaat NWO projectbureau, secretariaat AMS, secretariaat PMO
- [Karin Matthesius](#)  
secretariaat Facilities reisfunctionaris afdeling Travel

**WIE IS ONLINE**

**LAATSTE NIEUWS**

- 🔔 [MILJOENENINVESTERING IN KM3NET](#)  
APRIL 18, 2018
- 🔔 [NIKHEF-PUBLIEKSLEZING GROOT SUCCES](#)  
APRIL 18, 2018
- 🔔 [COLLEGA IVO VAN VULPEN GEEFT BOEK UIT](#)  
MARCH 2, 2018

**QUICK LINKS**

- » [Zoek een medewerker](#)
- » [Arbo & Veiligheid](#)
- » [Indico](#)
- » [CT/Helpdesk](#)
- » [Wachtwoord wijzigen](#)

🗨️

# CLIMATE N-BUILDING



First phase system completed last week  
This month cleaning-up.  
Instructions on heating/cooling follow

***Experiencing some problems with the controls of the cooling and heating installation in the N building.***

- Apologies!
- Do not make any adjustments to the installation



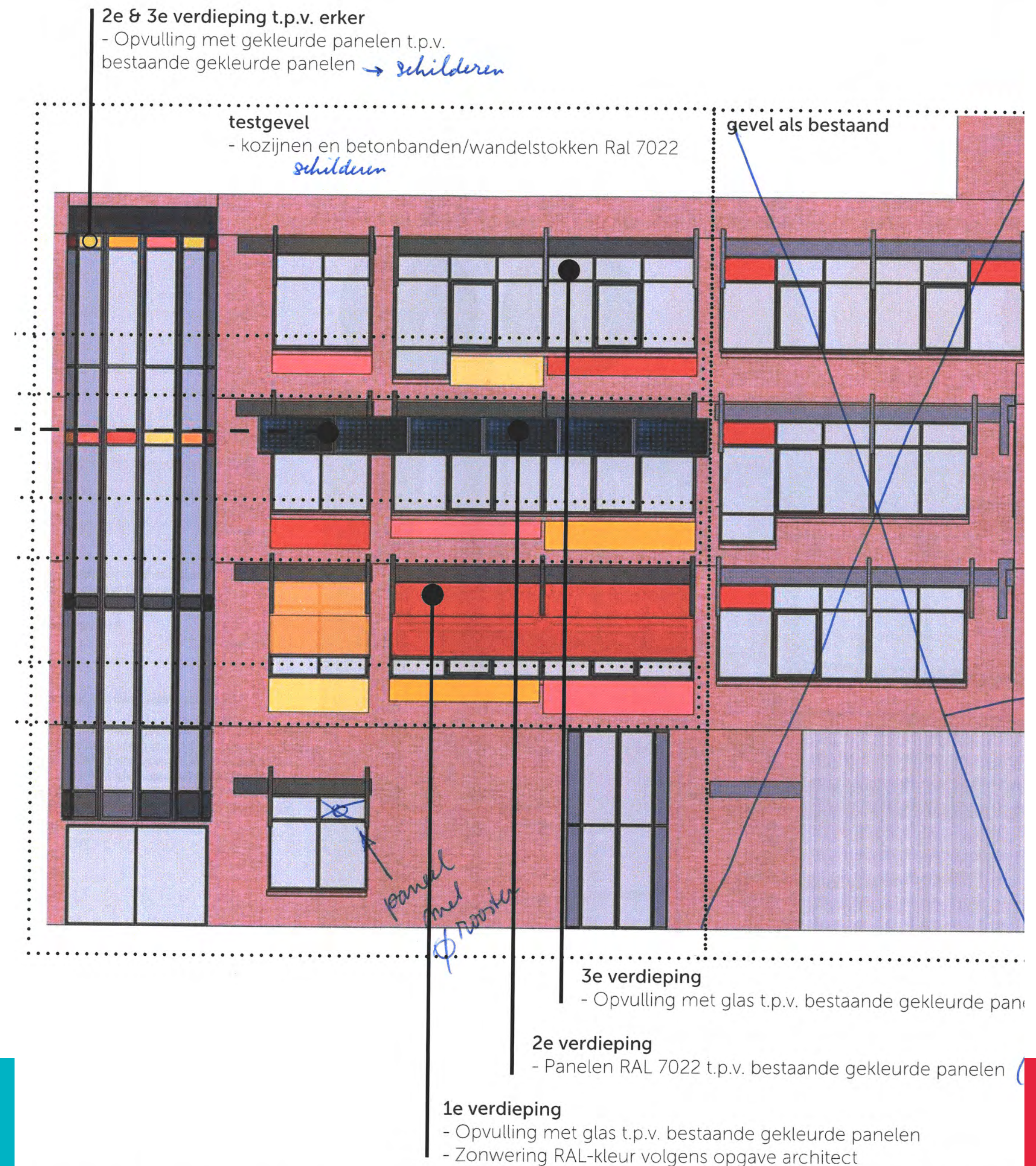
# FACADE RENOVATION

## Today start of new pilot project

The facade next to the Nikhef entrance

- Colorful elements
- Painting of concrete structures
- Increase amount of glass
- Sun protection system

Finish end of May (excl sun protection)



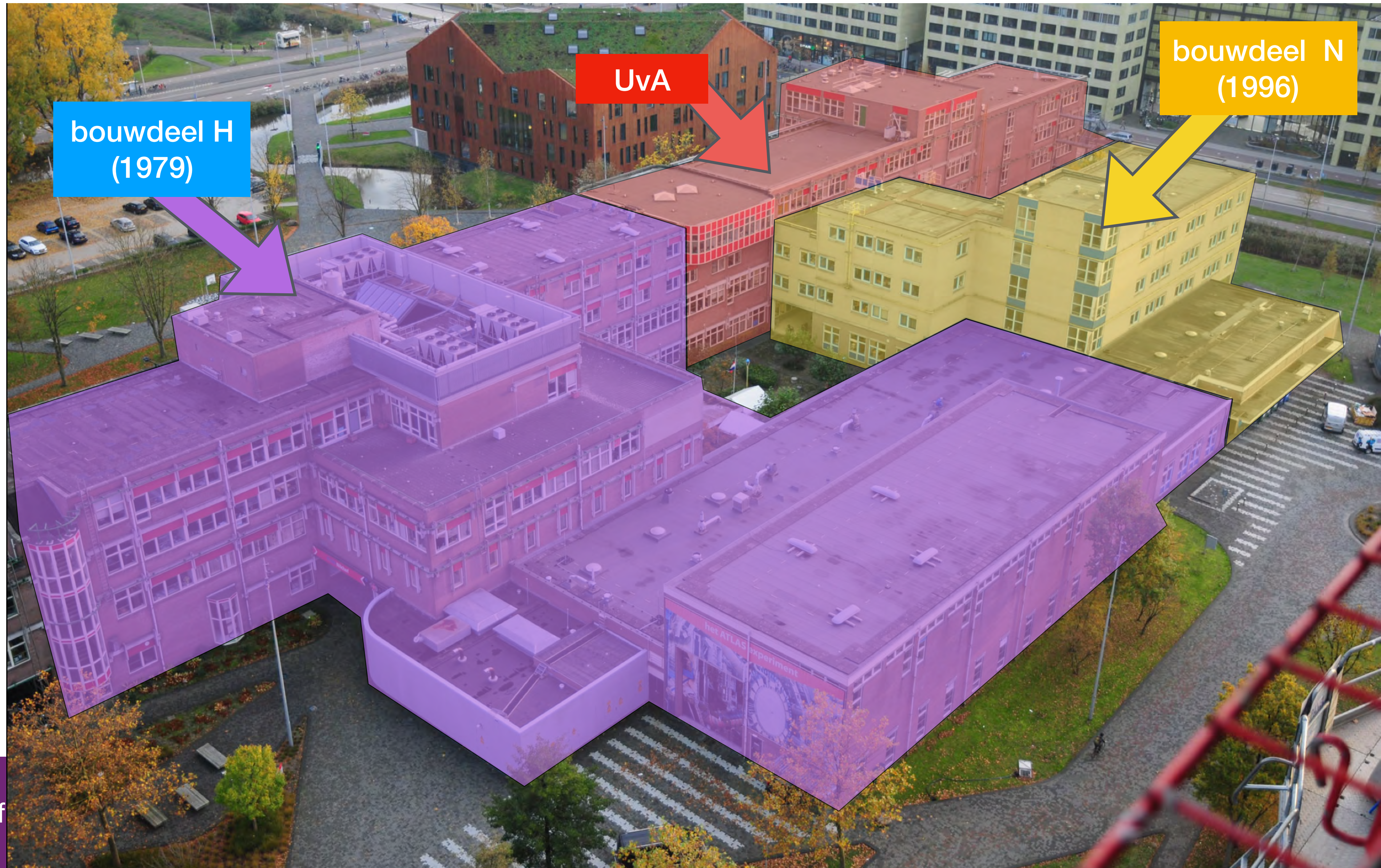
# RENOVATION NIKHEF + EXTENSION DATA CENTRE

Long ambition  
to renovate  
our buildings  
&  
extent the  
data-centre



# RENOVATION NIKHEF + EXTENSION DATA CENTRE

Long ambition  
to renovate  
our buildings  
&  
extent the  
data-centre



# RENOVATION PLANS

## **Late maintenance - no longer durable**

- Effort to prevent incidents
- Currently workable - but safety comes into play

## **Renewed need and increased efficiency**

- Assembly rooms after shedding accelerator
- Startup houses
- Space norm (ARBO)
- smaller library, centralization meeting rooms

## **Increase representation 'look and feel'**

- Move entry + refresh vide
- Pilot projects (corridor and spectrum)  
receive a very positive response



# BENEFITS DATA CENTRE

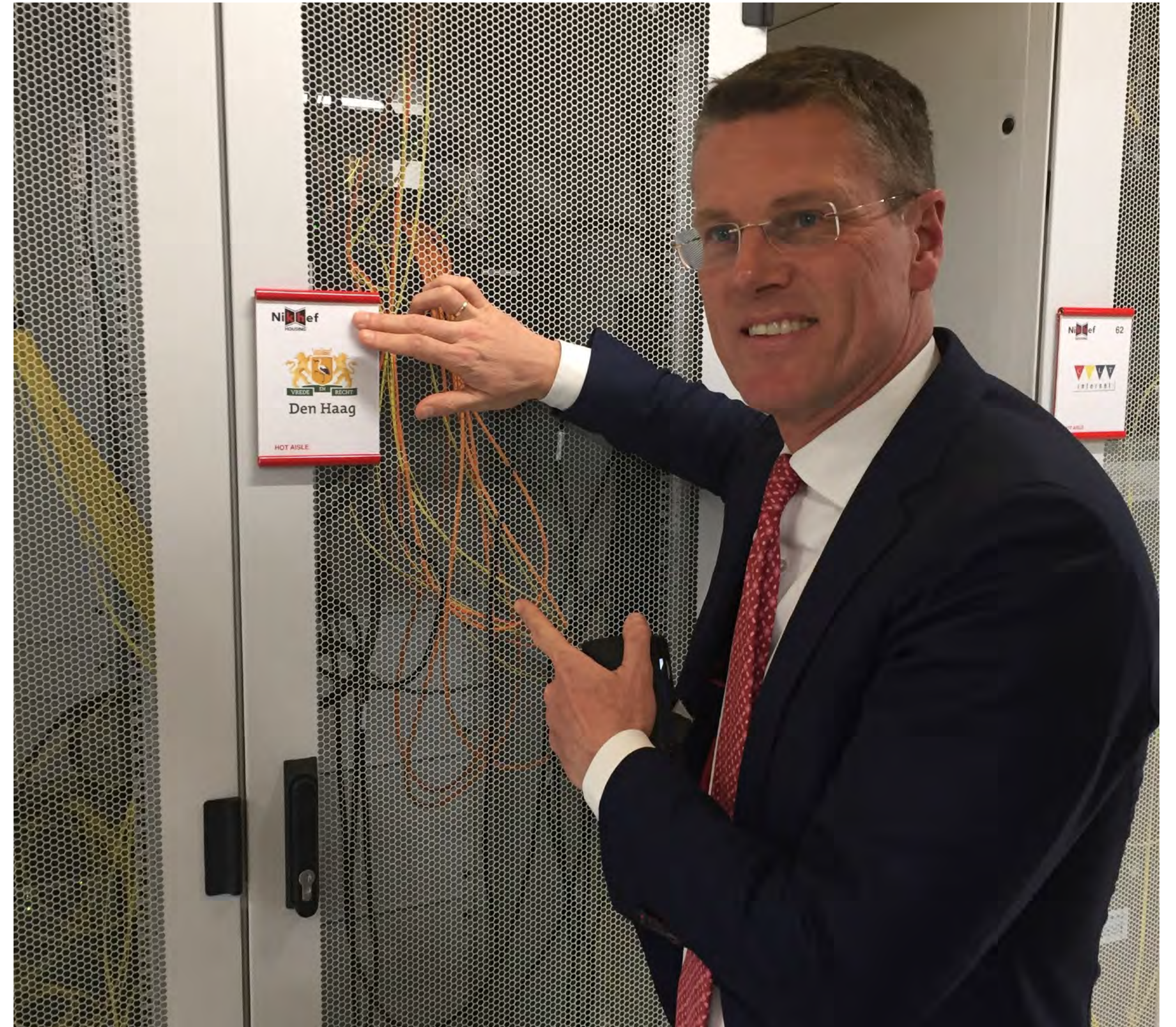
Pieter Duisenberg

## Internet connectivity:

- >160 clients in a well-sought neutral location
- Most successful 'valorisation activity'
- Infrastructure acts as magnet
  - *ICT talent,*
  - *State-of-the-art equipment*
- Synergy Nikhef ICT activities

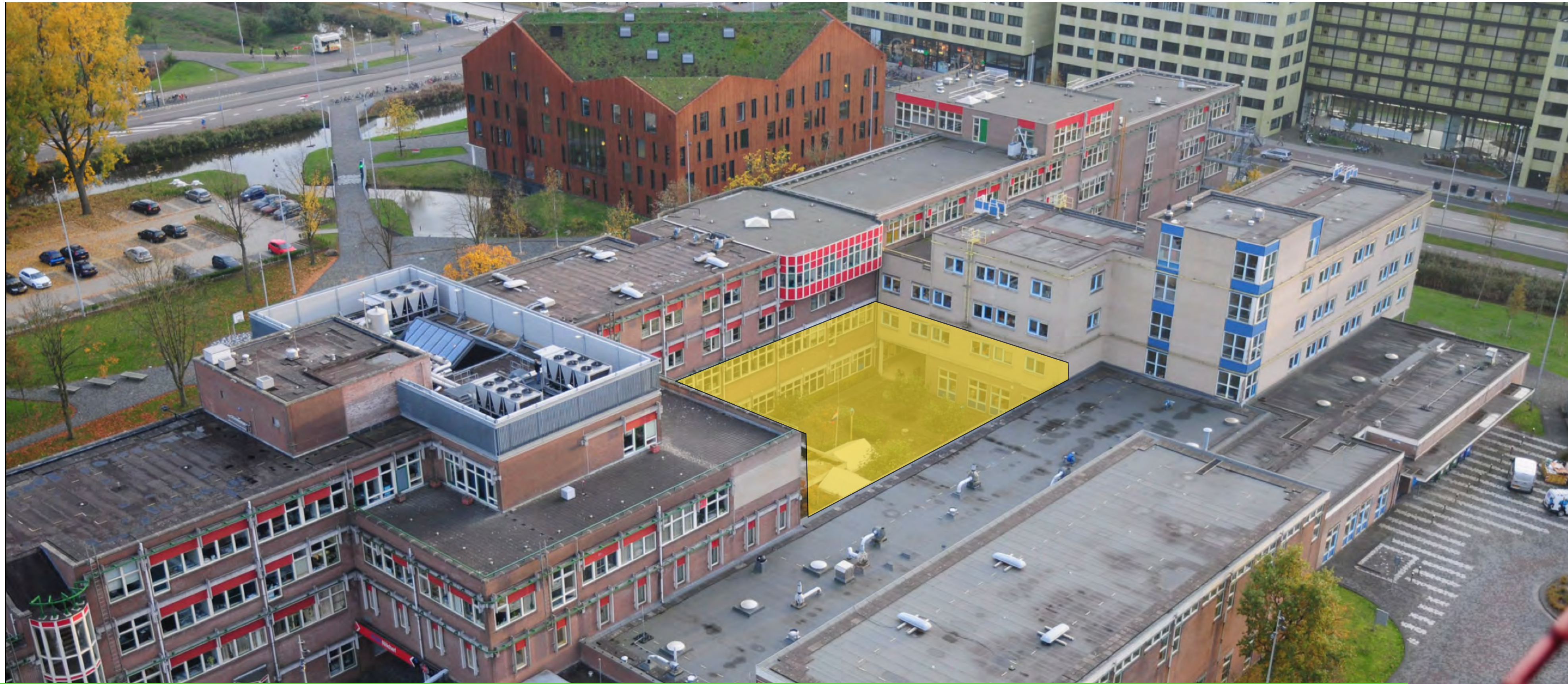
## Urgency:

- Data centre is full - more clients waiting



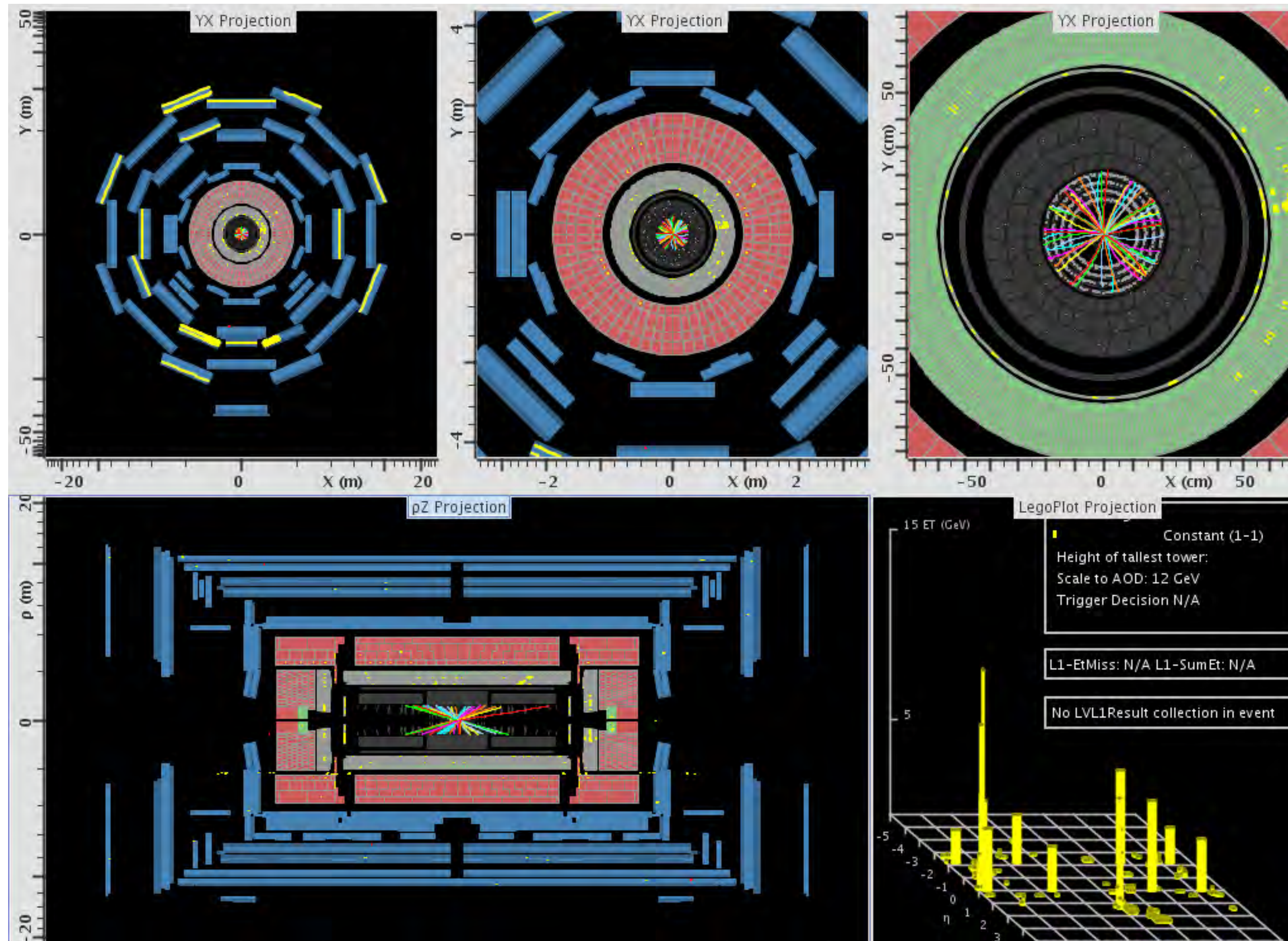
# ROOFING THE COURT YARD

Renovation plans are approved and funded by NWO & Nikhef (37M€ total)



We can start to renovate the buildings and extend the data-centre!  
A very visible activity for the coming years-

# TURN ON LHC



## First time in 2018

LHC delivered beam collisions with one colliding bunch for all the experiments, including ATLAS

13 TeV and nominal intensity ( $\sim 1e11$  protons per bunch), without Stable-Beams yet.

ATLAS is collecting data quite smoothly.

# ERC ADVANCED - JORG HORANDEL



Jorg Horandel (Nikhef - Radboud University)



# DUTCH SCIENCE AGENDA - NWA

## National Science Agenda

Increasing important -

- Status of NWA
- Startimpuls status
- Emergent phenomena
- Feedback
- Next funding round



NWA Route 2 Startimpuls



Aankomende Evenementen



3 Game Changers



[www.nwa-bouwstenen.nl](http://www.nwa-bouwstenen.nl)