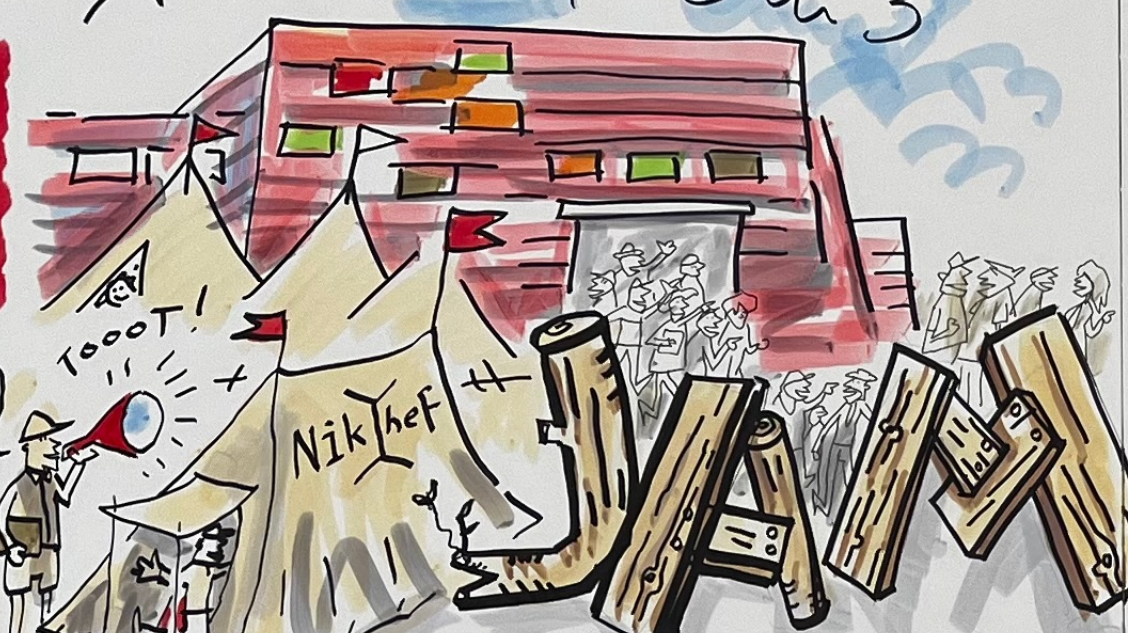


let's FLIP THE FIELD!

Nikhef



The Nikhef ecosystem

We can now make as many BATHS as we can make BAFs!

We're stronger than ever

Alice GROUP

we're going for a new detector!

one jet has less energy than the other

so the energy + the structure can be changed

Wider jets seem to interact with plasma more than narrow jets

creepy stuff going on, but no humans have anything to do with it!

we have a stitched chip!

Hardware activities ITS2 → ITS3 in 2028

we're going from 10^{15} to 10^{16}

testing testing we're not yet sure if at 10^{16} MATS will be operational!

WHY HOW WHAT to communicate about Nikhef?

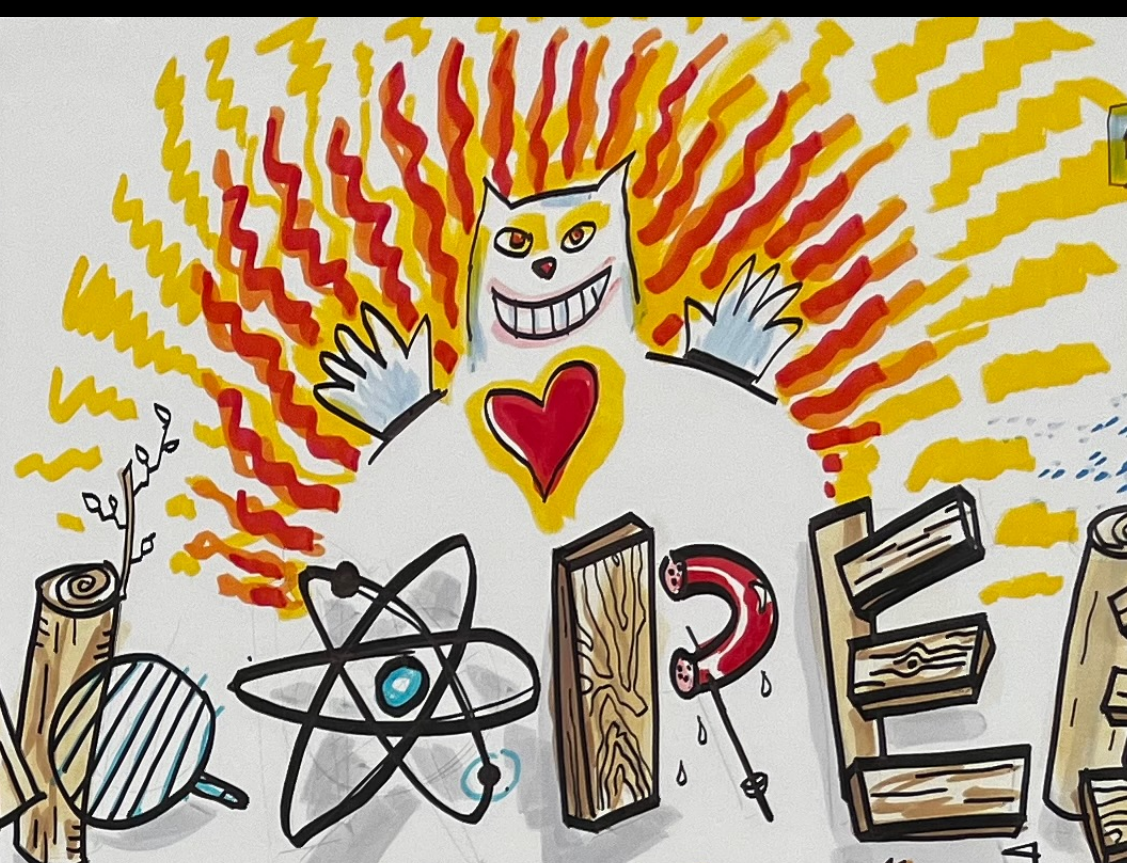
We have amazing stories!

We have amazing technology to show!

fundamental physics is hard to communicate to the public

test structures tested

SUCCESS



HEAD HEART HANDS 2024

We have 2 FAST beam we make slow molecules



EXPERIMENT: Apply laser cooling to the molecular beam around the focus of the lens.

Welcome to Nikhef

WELCOME TO THE MAI BOREE

STAN BENTVELSEN

Do we communicate in Dutch or also in other languages?

SEE SANTA'S SHIP SAIL AGAIN

STOOMBOOT Yo!!

do you want the results fast? You'll have to work for it!!



shall we kill the internet?

I say we go for it!

COLLABORATION

- CERN
- NIKHEF
- edu VPN
- EVA
- Callisto
- FileSender

- need for speed?
- need for scale?
- need for thought?

CT-PO has no pictures of people because of strict privacy regulations

OOM → Out Of Memory Killer will fix your problem! GRRRR...

HADRON (please memorize) djcHuty Archival Data Repository Of Nikhef

We, as Nikhefians, can do something as well, like we can become a guide or a speaker. We can talk about our work during birthday parties. it's fun!

HEAD THEORY
HEART ANALYSIS
HANDS INSTRUMENTS

All this will link to the analysis department

CT Project Ogen

CTPO

KM3Net

SPIDRA

CT-B takes care of everything that makes life possible

CT gitLAB connects everything with everything

Software Engineering is a PROFESSION

We're here to help you!

you might try a quick fix

You do NOT have eyes on us

We have eyes on you!

OUR FUJITSU MONITORS JUST MIGHT EXPLODE

have you tried turning it off and on again?



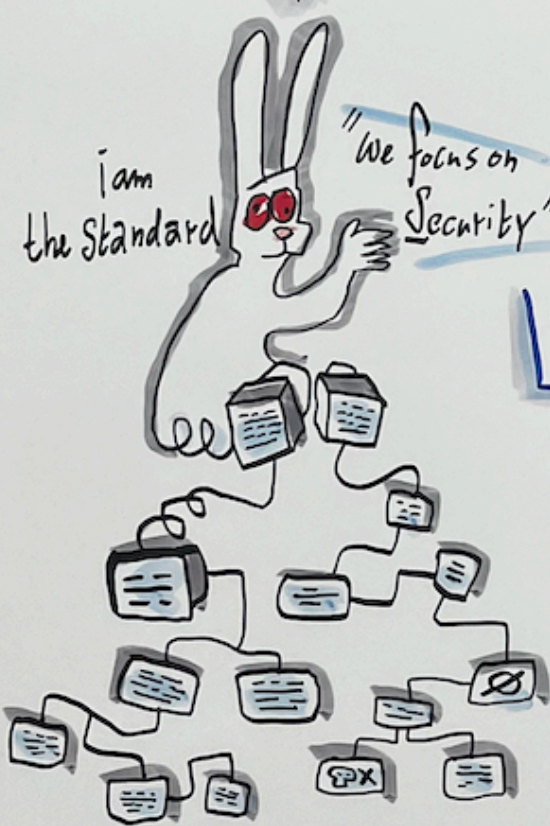
Tekening door Fijne Dag: Tekenaars Norbert Vermeer Irma Rademaker www.finedag.pro



Meet the Engineers InterAction Sessions

Which Sessions did We Visit?

White Rabbit: precision time distribution over ethernet



the Security Operations Centre

A DAY AT CSIRT

They are keeping me for RANSOM!

"We monitor for anomalies."

Don't worry, when it goes wrong, we deal with it the RIGHT way.

killchain!

"We'll make a profit from problems." (Fact!)

PCB design

designer LA V OUT

our tool: Siemens Vx Enterprise

OUR CROWN JEWEL

OUR LIBRARY

We don't just write, you can read that!

6 DOF's

ontwerpen met speelkaarten, panaises, EN... SCHUURBLOKJES!

en: knik en prikkers!

Wt en het ziet er wel wetenschappelijk uit!

$$\nabla \times \mathbf{B} = \mu_0 \mathbf{j} + \frac{1}{c^2} \frac{\partial \mathbf{E}}{\partial t}$$

Internal Communications

Nikhef has grown so much, it needs to RESTRUCTURE.

ik vind dat datk matter meer aandacht verdient.

→ 7 vinkjes!

mensen praten makkelijker over colliders dan over inclusiviteit

ik-ZAG-14-MEN-SCH ta-fel-ten-nis-sen. ... ECHT-WAAR!

RF DESIGN

if you have a signal, you can transmit it... through ANYTHING.

BUT... IT CAN ALSO REFLECT!

even a simple WIRE is NOT a simple WIRE in the field of RF-design.

AND:

We have very big and powerful machines with loads of capacity, data etc! We are connected to MISP/CERT and many other prominent parties.

$$V_p = \frac{c}{\sqrt{\epsilon_r \mu_r}}$$

N.Vermeer
Tekening: i.RADEMAKER
Fijne DAG
www.finedag.pro

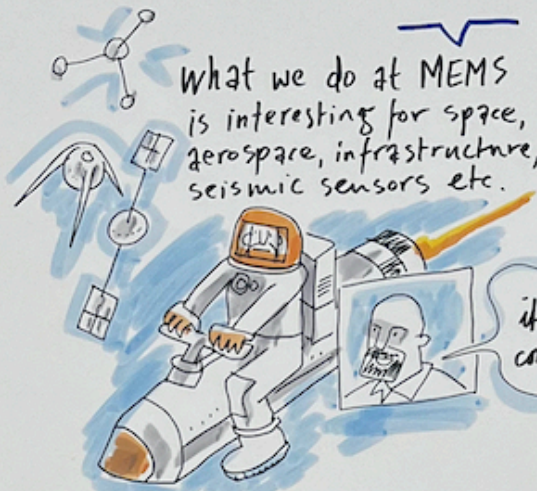


Introducing: E.T. the Electronic Team

We are a great band!



What we do at MEMS is interesting for space, aerospace, infrastructure, seismic sensors etc.



Does it have something to do with fluctuations of air and soil density?

I THINK SO! I ALSO THINK YOU CAN MAKE A PENDOUT ON A SENSEIS CHIP.

it has great configurability too!

YEAH IT WAS DEVELOPED WITH XFAB 0.35 UM HV PROCESS

Jan KLUYVER AWARD 2023

PROF. DR. JOS ENGELEN (Chair/Jury)

And the Winner is...

RASA MULLER

Getting to the Point



So... IS IT STABLE?

SURE! Send it to CERN.

the integral circuit technology allows us to connect, to go much faster and to consume more which is very cost effective. We go from parallel to serial by which it all goes even faster. The selection signal is great. Not standard technology but it's a bit customized already.

WOW GREAT WORK!

when the lights are off, Higgs is on!

we just don't know why.

$\lambda \neq 0$?

one Higgs splits into two Higgs!

if not, SM will be in trouble!

What I'm searching for might not exist. (heavy resonance searches) HADRONS, LEPTONS etc. We need to maximise statistical power.

we need data driven methods because they're much more reliable

OWC group activities are numerous! set up guide lines, mentoring DRSTP, support PhD training, c3 meetings etc etc. BND schools (Belgium, Germany, NL) great for social bonding too!

Nikhef Postdoc council will be set up soon partnering with other universities. We want to keep our talents on board!

$$A = B \times \frac{C}{D}$$

RESULTS CAN BE EXPECTED SOON!

CONNECT SUPPLY COOL

young PhD council for ideas, complaints buddies, mentees & mentors, activities housing, (travel) tips workshops

PEOPLE group inspiring



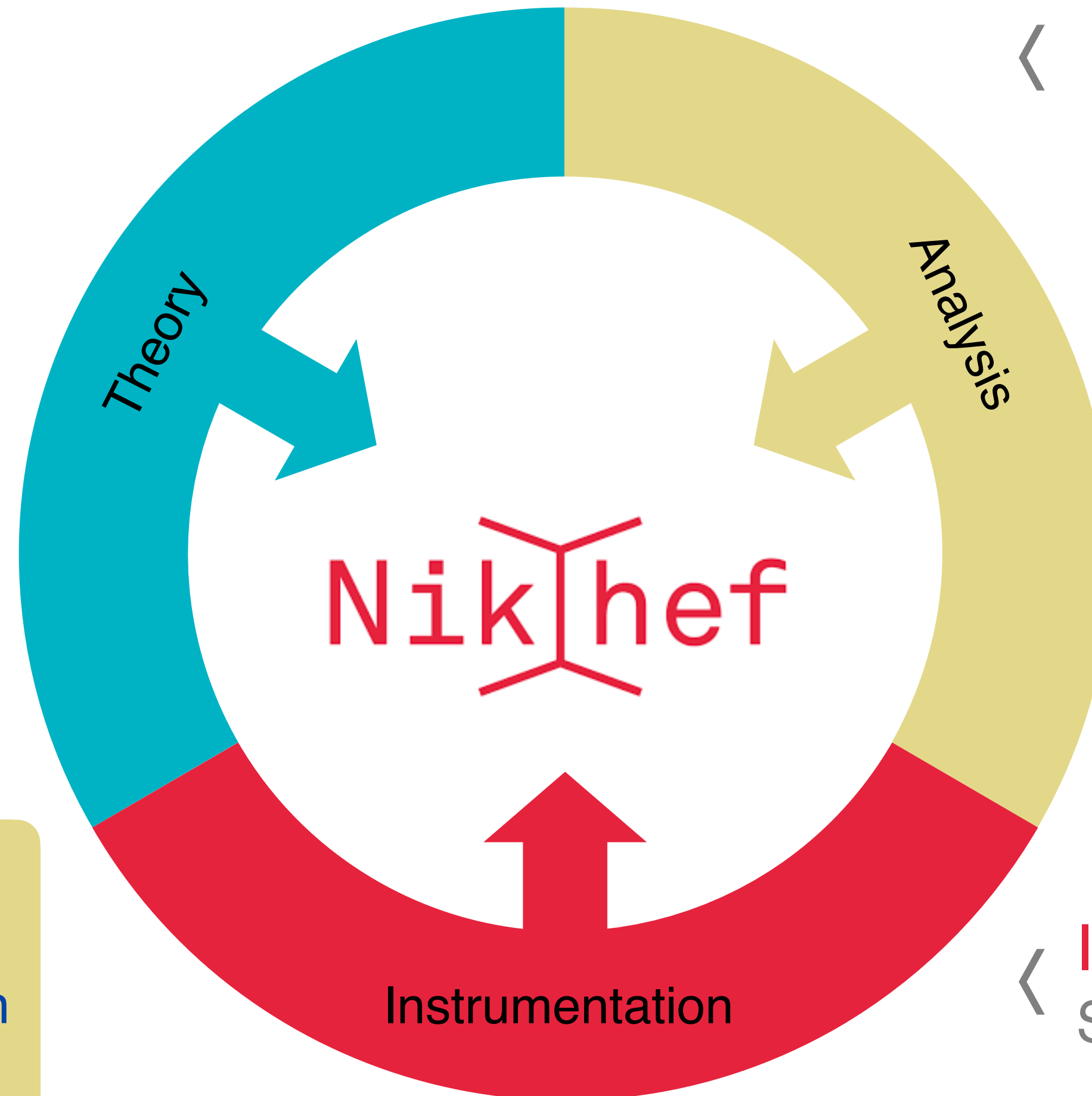
Tekening: Fijne DAG
www.finedag.pro
N.Vermeer + i.Rademaker



NIKHEF: HEAD, HANDS AND HEART

The Nikhef ecosystem

Theory phenomenology
Accurate predictions



Data taking & Analysis
Assemble new knowledge

Instrumentation and R&D
State of the art detectors

Nikhef as a *top-brand*

- International powerful
- Innovative technology, spin-off and outreach
- Train and attract talent

Focus & mass of our activities

NIKHEF STRATEGY 2023-2028

Expanding knowledge

Nikhef's main research effort is aimed at further expanding our understanding of the universe in terms of elementary particles and forces, through the interpretation of data, and confronting results with theory and vice versa.

Maintaining infrastructure

Much of Nikhef's effort is put into upgrading and exploiting the current experiments and building new experiments. The technology departments at Nikhef are essential to make this happen.

Preparing the future

Nikhef is constantly innovating towards new technologies and designs of new facilities and projects to explore new scientific challenges and opportunities in the years to come.

Healthy partnership

Nikhef strives to be a vibrant, diverse and inclusive community in the (inter)national field of (astro)particle physics by ensuring a safe work environment and investing in people's talents and expertise.

ORGANIZING TEAM

And Rosemarie!





THANK YOU FOR JOINING
NIKHEF JAMBOREE 2024