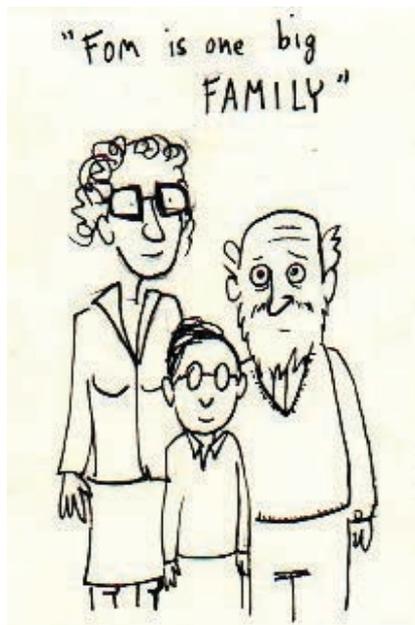


SIX REPORTERS HAVE THREE HOURS TO FIND OUT WHERE THEY ARE, AND WHAT IS GOING ON. USING YOUR RELIABLE INFORMATION AND A HAND CRANKED DUPLICATOR THEY PRODUCE A PAPER WITH THE REAL NEWS: THE DAILY ISSUE.



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FOM PHYSICS



LHC: MORE NEW PARTICLES?

▼ Higgs's was exciting, but now it's really taking off. We will see something completely new, and we don't know what it is yet! Stefan (26), who works at NIKHEF, was one of the researchers involved in the discovery of the Higgs' boson. 'When the news came out, I was actually moving between Geneva and Amsterdam.' After the discovery of the exciting new particle, researchers are digging deeper into the immense heaps of data the experiments produced. The Large Hadron Collider will be closed until February 2015. Technicians are now preparing the installation for new experiments. During the next rounds of collisions researchers are hoping to find more new particles. 'With Higgs we already knew what we were looking for. We had a very distinct mass window. Ingrid (26) and also working at NIKHEF, explains. She was on vacation in Malaysia when she heard the news that the Higgs particle was

found. 'Till now, we had twenty collisions per round, but now we expect sixty collisions.'

Researchers are now trying to understand the new settings of the collider. 'It is already a big challenge to get the data out,' says Stefan. 'It is a lot of data.' But Ingrid is optimistic. 'If there is something, we expect to see it.'

ATTOCLOCK: NEW LIGHT AND FAST PHYSICS

▼ Ursula Keller presents the Attoclock, at present the fastest way to tell the time. A circularly polarised light wave makes one polarisation round per femtosecond. The rotation of the electric field can be measured with an accuracy of about one degree, giving an attosecond clock accuracy. This is the only clock fast enough to measure the tunneling time of an electron.

Keller uses semi-classical models. Why? Don't the laws of quantum mechanics apply? Peter van der Straten (Utrecht University) could shed some light on that: The effects that Keller measures are so strong that the classical laws apply.

MORE ATTENTION FOR FLUID MECHANICS!

▼ There is only one poster on the subject this year. But the physics of fluids should actually get more attention according to Peter (37), who works at the TU Delft. 'With the use of supercomputers we can do experiments we could never do before!' His group is looking into the flow of fluids around particles. We model these dyna-

mics, because it is very hard to look at the flow experimentally. Most of the time the whole thing looks like milk, you can't see through. His work is practical for dredging or deep sea mining. At the TU Delft researchers are watching closely to the pipeflow of fluids. 'These experiments were already done in the nineteenth century, but now we can work with very small Reynolds numbers.' These numbers are used in calculations on the mechanics of fluids. 'Now we can calculate a pipeflow very similar to the ones we see in the field.'

FROM OUR FINANCIAL CORRESPONDENT

▼ Research among the visitors of this Physics at Fom congress about the best buy in the stock market for a long term investment has given us the following results.

Of course, economists don't know the answer to this very exciting question, but will there be an answer in this huge group of talented physicists? The results upto now are not very hopeful, or actually rather disappointing. Most of the interviewees had no idea. Suggestions stayed vague, only hinting towards a certain field, but no answers to what concrete stock to buy. Apart from an employee of IBM, who suggested to buy IBM. Of the 25 interviewed persons, 12 had no idea. Green scored rather well with three votes, and nano technology too.

Luckily, our reporter ran into Elahe (29) and Sareh (30), and they had the following advise: Young people should invest in fundamental physics, however, the older ones would be best off investing in applied phy-

sics, should they hope to get any return on their investment during their life times.

BREAKTHROUGH IN NEGATIVE REFRACTIVE METAMATERIALS

▼ Today at 15.45h, Ruben Maas of AMOLF will talk about new materials for making lenses. Ruben has already made some samples of the material. He made a 10 micrometer prism, only to find out the light refracted in the opposite direction from what was expected. This is a new insight, and this afternoon, Ruben will tell us how to take advantage of this amazing new material.

SPINTRONICS DOOMED

▼ Arno (26) attends FOM Physics because he has to. His professor sent him. He doesn't expect to find much of interest in his field 'spintronics'. Neatly positioned on the intersection between nanotech and magnetism one would expect his topic an exciting place to be. However, no major breakthroughs were reported in the last year. Confirmation of this bold statement is quickly found. Marcel (56), the general manager of the conference centre: "I have no idea...".

Arno doesn't expect much to happen in the future either, as the field is mostly finished. "I'll finish my PhD and then I'm out of here".

PEEK OVER THE FENCE

▼ 'It feels like taking a peek over the fence.' Stefan, working at the TU Eindhoven, is actually not a physicist. 'As a chemist I am very curious about the practical applications of the field of atom secondary spectroscopy.' In this field ultrashort lightflashes are generated. These flashes take shorter than the time an atom needs to vibrate. 'A reaction can never go faster than the vibrationtime of an atom. So I bet it has something to do with electrons,' Stefan philosophizes.



cooking in an anti-wok with flameless combustion.

WEIRD, WEIRDER AND QUANTUM

▼ At some point in your second year of education as a physicist, something quantum happens in your brain and utterly bizarre things stop sounding weird to you. You can for example accept the fact that a particle and an anti-particle can in fact be the same thing and go on with your life as if that made any sense. In other words, this means that your pen, has an anti-pen somewhere else in the Universe, that (dig this) you can't see and you can't write with. Our editorial team has speculated about the existence of a Majorana pen that is a pen and it's own anti-pen and just typing this sentence is making our computers overheat.

Mr. Hafkenschilde (23) of the KVI explained quantum effects and the problematics that they pose for computer technology, in a way that even a seasoned journo like me can understand. Basically when you make the wires in a computer too teeny, electrons start leaving the wires. Which is the same that happens to me when I enter a crowded bar. Like electrons, I guess, I always liked more roomy places with cold beer and warm company.

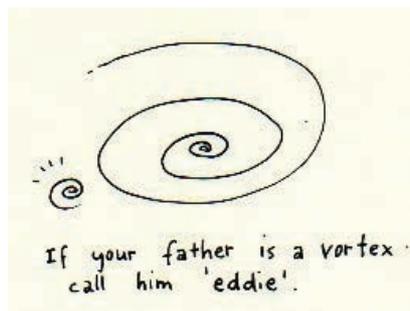
We might be no more than a few years away from the first quantum computers, some say even five years away. Rutte apparently dumped a bag of money on the hands of a scientist to make sure this happens pronto. I for one can't wait 'till the

day that I will be able to see all my friend's and anti-friends updates on Facebook simultaneously.

WHO'S YOUR VORTEX

▼ Apparently when one pole of a dipole vertex meets the other pole they propel each other forming a velocity differential that makes a lot of people restless. Not unlike in matters pertaining to love, the Universe has it's own mysteries. Like for example, if your father is a vortex you can call him eddie. The semantics of intimacy ever so unphantomable. From the heights of The Great Artic Vortex to the heart of the Tokamak fusion reactor you don't want these dipolar interactions to mess with stuff too much. Vitor Fernandez makes sure that things inside the Tokamak reactor are quiet and don't move about too much. His research attempts to bridge our understanding between what goes on in Canadian winters and what goes on inside magnificent devices made to make great humans look tiny.

But will we see fusion reactors providing us with juice for our smartphones anytime soon? Some can't say... others won't speculate. Do your media training guys! if you don't dare to speculate, the media will!



COLOFON

▼ The Daily Issue is written and printed on the spot by a varying board of editors. This issue was made by: Danibal, Diana Wildschut, Dick Bos, Harmen Zijp, Lemke Kraan, Luis Fernandez and Peter Uithoven.

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