



2 May 2017

Dear College van Bestuur,

Cc: College van Bestuur (VU), Professor Peter van Tienderen (Dean FNWI), Professor Guus Schreiber (Dean FEW/FALW-VU), Professor Ralph Wijers (API Director), Professor Daniel Bonn (former IoP Director), Professor Gijs Wuite (Program Director of Physics, VU), UvA Raad van Toezicht.

The faculty and staff of the API and the IoP are shocked and extremely disappointed by the CvB's recent decision, which leaves no clear path towards a joint Institute of Physics & Astronomy (IPA), and places the long-anticipated move of SRON to Science Park in severe danger. Both these developments threaten to inflict great damage to both the teaching and research programs of our institute, our national and international reputation. We are working tirelessly to make the UvA one of the world's premier universities, and this endeavour also centres on our students - from first-year Bachelors to those in the last stages of their PhD. The decision taken erodes our confidence that our own university shares our and our students' ambitions to take physics and astronomy research and teaching to the next level. We find it embarrassing that in our university strategically critical and visionary projects, which not only have broad support but are also practically achievable, repeatedly fall short of coming to fruition, stumbling at the highest levels of decision making, after great effort by many staff members. This is not acceptable to us, and great harm has already been done to our working relations with our colleagues at SRON and the VU, and our plans for building on the solid foundation we already have with the VU so as to realise world-class, joint educational programs.

The overwhelming evidence - that the proposed moves for astronomy and physics would play out in the most positive way for the UvA and the whole Amsterdam community - has not changed in the last week. *Thus, urgent action is now needed to salvage as much of this plan as possible.* We ask that the CvB communicates to us how they plan to address this, *in concrete terms*, and how IoP and API staff can best help in this process.

Physicists and astronomers work on long-term timescales, driven by the nature of the large, international, and technologically advanced facilities necessary for our work. The anticipated collaboration with the VU and the move of SRON to Science Park have therefore been part of our plans now for many years, and are an integral part of our future strategy.

The Are We Alone (AWA) initiative, bringing together planetary, exoplanetary, and Earth scientists, is one such example. The vision and scope of AWA allowed API to hire two talented new faculty members, and the opportunities it offered are a core part of their scientific plans. In high energy astrophysics API has built a strong partnership with SRON on the next generation of X-ray space telescopes, giving Amsterdam an international

leadership role in this field. Furthermore, our partnership with the VU puts us in a world-leading position in the emerging field of gravitational wave astrophysics. The NOVA International Review Board, chaired by Nobel Prize Winner Professor Brian Schmidt, rated these efforts 'beyond exemplary' earlier this year. Along similar lines, the Research Center of Excellence GRavitation and AstroParticle Physics Amsterdam (GRAPPA) has been a major success, both nationally and internationally, resulting in an extremely popular new MSc track, the hiring of seven new faculty, and very enthusiastic external evaluations.

In a similar vein, bringing together the VU and UvA atomic, molecular and optical physics groups to a single location, would generate a centre of expertise, mass and experimental capabilities otherwise only found in a Max-Planck Institute or similar institution. We can connect labs with optical fiber links so as to share unique laser facilities over distances of a few hundred meters. Equally important are the human links, the cement provided for common research goals by MSc and PhD research students meeting informally at the coffee machine or at lunch - these often provide the spark for new ideas and yield new insight that cannot be matched by collaborations operating at travel times of half an hour or more. It is evident that by joining forces, these groups would reach the critical mass found in world-renowned institutes in this field, and the jump in performance this will allow will be vital in attracting the best students and researchers from the Netherlands and from around the world.

Other areas present equally attractive opportunities for a jump to global leadership, such as the bundling of forces of the physics of living systems group of the VU with the soft-matter research at the UvA. The new combination would - just as in the case of atomic and laser physics - profit greatly from joint lab infrastructure and shared day-to-day interaction so as to provide a setting suited to inspire and facilitate breakthroughs in high-impact fields such as the molecular basis for human health and processes of great relevance to the food, energy and water industry.

There are more examples of how the confluence and co-location of astronomy and physics at the two universities - combined with the special Amsterdam trump card of the proximity to numerous NWO institutes - would give us an unassailable lead. Think of the boost the Solardam initiative would receive when the VU's research lines on the physics of energy and photosynthesis would rub shoulders in the Science Park with the IoP's (and HIMS's) energy research, coupled with the clean-room capabilities and nanophotovoltaic cluster of the NWO institute AMOLF. Very recently, the success of QuSoft is providing fruitful soil for new links with the VU's quantum chemistry research, providing yet another example of the non-linearity of the process leading to international leadership in research and related teaching activities: concentration and collaboration is the key to success.

The creation of the merged UvA/VU IPA has been in development for over five years, but is now potentially back to square one, after legally joining our BSc and MSc degrees, leaving many open questions regarding the future of our educational programs. We are deeply concerned about the impact on the quality and appeal of the joint degrees. Without the VU physicists moving to the Science Park in the foreseeable future, both the BSc and the MSc Physics & Astronomy degrees will continue to have a large fraction of their lecturers located

off-campus. Interactions between students and those lecturers will remain cumbersome and ineffective, to the detriment of the quality of our education programmes. The relocation of the VU physicists so as to bring all of Physics & Astronomy together at Science Park was, for this reason, widely supported not only by our staff, but also our students.

The intensive research training for Bachelors and Masters students - a factor that forms an important part of the market value of their degrees - is also impacted by the decision taken. For example, over the years UvA students have occasionally done BSc and MSc projects at SRON and those projects are highly appreciated by both parties. At present, offering more such projects is unrealistic, due to the large distance between SRON and Science Park. If SRON does not come to Amsterdam, growth in the number of such projects will remain out of reach, as will our plans for specialized courses in space research and instrumentation. This makes it less appealing for students to choose the UvA/VU Physics & Astronomy programme, since we cannot offer the broad educational programmes that we had envisaged. Similarly, the physics students in the joint BSc and MSc degrees will naturally focus on the research groups in the Science Park, and thus will miss out on the unique opportunities on offer from our VU colleagues. On the lab floor and in the lecture hall, astronomy and physics in Amsterdam is poised to leave behind forever the “them and us” paradigm, creating the golden triangle of excellence in teaching, research and location that would give us truly global allure in fields characterised by a brutal international competition for the best and brightest minds.

We are aghast that all of this work may now come to nothing as a result of last week’s CvB decision. It damages our international scientific reputation as a credible partner, in a field that relies almost entirely on collaborations. It has a devastating impact on our research plans, where it has been central for many years. Just as importantly, it damages our Physics and Astronomy students – the joint degrees, and the relocation of SRON: these factors provided an unparalleled opportunity for us to lead in training the next generation of astrophysicists, physicists and space scientists.

The staff and students in Physics and Astronomy simply deserve better. Therefore we exhort the CvB to do everything in their power to realise the plans that we have worked so hard (with their encouragement) to develop these last few years. Concretely, we would ask the CvB to:

- Urgently look into options to reinforce the SRON bid made jointly by UvA and VU, avoiding a ‘go alone’ by either university;
- Rapidly explore alternative possibilities to house the VU Physics department in the Science Park, e.g. in combination with the HighTIF building or similar facilities for SRON.

Yours sincerely,

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