



## **Remembering Héctor**

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Héctor Rubinstein arrived like a snow-squall one April evening to Stockholm, with his head boiling with new physics ideas and questions of how to start life as a Swedish physicist. This must have been around 1984, and his previous contacts with Sweden are well summarized by Lars Brink [1]. In Stockholm, he rapidly established contacts with Stockholm University and the Royal Institute of Technology (KTH), and he was a frequent guest spending many hours over coffee with us, giving his views about the world and in particular the world of physics. This was before the time of the internet explosion, and we were of course rightfully impressed with all the knowledge (and gossip) from around the world he provided us with. Rapidly, we of course also discovered Hector's strong views about virtually everything – he was very specific about what things he liked and what he didn't. This polarized world-view was not something we were used to in Sweden, and it rather quickly got him into conflict with many physicists in the Swedish academic structures – something that culminated in his famous article in the Swedish daily newspaper Dagens Nyheter, several years later.

As Brink explains, there were enough people in Sweden that would discover Hector's brilliance even in the midst of controversies. Besides Brink himself and Sven Kullander in Uppsala, who finally managed to make a chair materialize at Uppsala University, my recollection is that also Håkan Snellman at KTH, who among other things played a role in the Research Council in Sweden, was important in finding constructive solutions. The chair in Uppsala came as a relief for Héctor, but of course Uppsala University at that time had a structure that fitted him extremely badly. Not very long after being installed there, he came back to us at Stockholm University asking us for "asylum away from Uppsala", as he phrased it. I had already started to collaborate with him on some projects, and he was always a much welcome visitor in the theory group. With the help of Hans Hansson, we managed to get an office for him – something he was extremely grateful for. Of course he still went to Uppsala several days per week, teaching and taking care of graduate students there, one of which was Joakim Edsjö who you all have met at this Symposium. However, his fights with the faculty in Uppsala were always intense (there were always "scandals" and "disasters" he liked to report and discuss with us about), but in Stockholm he could rather concentrate on what he after all liked the most – research. The day after he formally retired, he appeared as usual at our Department, earliest among all researchers. Relived from all the ordeal he experienced with being an Uppsala professor, he gradually transformed into more of a mentor personality, always taking the time to discuss physics, and career choices, of or graduate students and postdocs.

The feature of Héctor's intellect I found most astonishing was in fact his almost perfect intuition. Of course his self-amplification of positive of negative mood sometimes made his views exaggerated, but the was always an element of, a sometimes inconvenient, truth in what he said. In particular, his completely frank opinion on people and on strategic issues in university life in Sweden was a very useful input for many people in his proximity, and he probably had a lot of power in more secluded ways than in formal decisive bodies.

I can remember one particular moment when his informal input was really influential. We had tried, together with colleagues in Stockholm, Uppsala and Luleå, to form a consortium (the PAN project - Particle Astrophysics in the North) with the aim of building a neutrino telescope in one of the clear lakes in Northern Sweden. There were many "scandals" and "disasters" along the way, and eventually it was found by Per Olof Hulth [2] and his colleagues that water quality was not good enough over a full year. Thus, the idea was dropped and the question surfaced of what to do then.

Some in PAN wanted to join DUMAND (the deep ocean neutrino experiment outside Hawaii), and Héctor visited a DUMAND collaboration meeting in Hawaii. The collaboration meeting was however to a large extent devoted to intense discussions about ordering of authors of the yet to be written physics papers of DUMAND, and very few young postdoc types were in fact in the collaboration. These two facts made Héctor immediately draw the conclusion that this was not a good experiment to join. Under unclear circumstances the Swedish research Council came to the same conclusion and turned down a proposal to join. I would not be surprised if Héctor played a role, through his informal channels, in that decision. This was around the same time, in 1992, when the AMANDA collaboration and the Swedish group joined later that year. The DUMAND experiment failed due to technical problems and was dismantled rather rapidly, whereas as you know IceCube has now grown to a successful, main activity in neutrino physics. It is a pity that Héctor cannot be with us now and witness the hopefully soon coming first astrophysical neutrino events detected in IceCube.

The departure of Héctor from us was as tumultuous as his arrival in 1984. Of course we had noticed that he had gradually become physically weaker after his severe heart problems. However, his intellect was as clear as ever, and even the day before he passed away he visited our Department and discussed physics with Edvard Mörtsell (the main Editor of these Proceedings). The day after, a Saturday, I got the shocking message that he was gone. After these many years I had, as I know many of my colleagues also had, difficulties to accept the tragic fact that our physics world suddenly was a lot duller. We rather soon decided that the memory of such a remarkable and unique person as Héctor should be honored by something very special, and the idea of this Symposium took form.

My sincere thanks to everybody in the local and the international organizing committees for jointly making this happen. In the spirit of Héctor, most of the talks at the Symposium were on new ideas and directions in physics, but also with some more personal recollections. The financial support from the Oskar Klein Centre at Stockholm University, the Swedish Royal Academy of Sciences through its Nobel Institute for Physics, NORDITA, Stockholm, SISSA Medialab, Trieste and LMU, Munich is gratefully acknowledged.

## References

- [1] L. Brink, these Proceedings.
- [2] P.O. Hulth, these Proceedings.