

NIKOLA, PHYSICS AND FRIENDSHIP

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By concluding the third Adriatic Europhysics Study Conference on the DYNAMICS OF HEAVY ION COLLISIONS, held in HVAR in May 1981 (and that I had the honour and pleasure to chair), Walter Greiner addressed to Nikola Cindro, Director of the Conference, "... *thanks and congratulations (I quote) because you have shown scientific taste and (organization) STYLE.*"

It is such a "style" that I would like to mention in remembering the different aspects, scientific and human, of the Nikola's fine personality.

Since it was usual in our private conversations to speak not only in Italian and sometimes in English but also in French, I think I can refer to this quality, that Nikola had as a natural gift, what is called "*L'ésprit de finesse*".

Let me give a "historical" (for both of us) example. In 1997 at the International Summer School in Varenna also my 70th birthday was celebrated, together with the 100th anniversary of the Italian Physical Society(!), and Nikola wanted to have the pleasure of an after dinner speech in my honour. He mentioned the hard task to remember "... *when and where I met Renato first ...*". And this in spite of the fact that he had some practice in remembering that kind of events for many other friends.

In our case however "*I can't think of the place and the time we met first*". And he continued: "*Well, there are two solutions of this problem: -one, we know each-other from immemorial time; -two, when we met, none of us was overly impressed by the other, and we forgot about it!*"

I hope you all agree the first solution was right!"

Personally, of course, I agree with this solution also because, after the uncertainty of the initial time, our collaboration and our common feeling was so well established that it appeared very natural.

In any case one of the earlier occasions where we really met and start to define a scientific collaboration was in Varenna in 1974 at the summer school on "*Nuclear Spectroscopy and Nuclear Reactions*" directed by Henriette Faraggi and myself and where Nikola gave lectures on "*Narrow structures in continuum observed in heavy ion reactions*". And you all know the significance of that contribution in his scientific career. This is clear also in his contribution to the 1979 Summer School in Varenna on "*Nuclear Structure with heavy ion collisions*" held by R.A. Broglia, C.H. Dasso and myself, concerning the "*Orbiting clusters description of resonances in heavy ion reactions*" (in coll. with D. Pocanic). In fact Varenna was one of the places frequently attended by him and where we could meet and exchange opinions and advices. And certainly not only his precious advice but also his friendly and continuous support to my struggle for the installation of a Tandem accelerator in Legnaro, which opened the heavy ion era in Italy, started here and continued during all the time of my director of the Laboratory. I think I met Nikola at least twice in a year in that period and even later, both for short and longer time depending on our participation to specific Conferences and Schools: Varenna (1974, 1979, 1984, 1987, 1997); Hvar (1981, 1984); Dubrovnik (1987); Rauschholhausen (1997), Brioni (1991) and Rab (1999); or

during visiting stages either in Legnaro or in Zagreb or in different other Laboratories in France or In Germany. Along these years the various steps of the collaboration in the field of resonances in nuclear systems and their gross structures (*quasi-molecular states, orbiting cluster model ...*) in the more general frame of the dynamics of heavy ion reactions were performed as shown by the various common scientific articles until the last one in 2000 about “*The statistical analysis methods in the search of resonances in low-energy heavy ion reactions*” in collaboration with L. Vannucci, U. Abbondanno, A. Bologna, M. Bruno, M. D’Agostino, P.M. Milazzo, W. Scheid and G. Vannini (*Heavy Ion Physics 11, 219, 2000*), just after the Rab Conference and one year before his death.

I am not sure that Nikola (again in Varenna 1997) was completely right in saying that: “... *if were not for Renato and his hardheadedness –testardaggine as I would say in Italian – there would not be a Tandem and, by translation, little or no nuclear physics in Italy ...*”. And he himself tried to justify that exaggeration; but, in any case, this was a starting point of a strong cooperation of the Italian experimental nuclear physicists among them and with many other European and international research groups, which became very well established and successful. As mentioned before a pleasant example was the collaboration between Legnaro (*P. Boccaccio, A. Bologna, F. Gramegna, L. Vannucci and myself*), Trieste (*U. Abbondanno, F. DeManins, G.Vannini*), Bologna (*M. Bruno, M.D’Agostino, P.M. Milazzo*) and the Croatian Groups, passing through the German (*W. Greiner, W. Scheid*) and the French (*F. Haas, J.P. Coffin*) ones.

Without forgetting the extension to the Italian connection to Catania (*M. Lattuada, D. Vinciguerra*) and to Florence (*M. Bini, G. Poggi, P.R. Maurenzig, A. Olmi, N. Taccetti*) I am sure that *Zoran Basrak, Roman Caplar, Dinko Pocanic and Vladimir Paar* are aware of that collaboration and that *Walter Greiner, Werner Scheid and Florent Haas*, so as *Ivo Slaus* in the frame of the European Physical Society, could recollect more properly our common scientific adventure with Nikola.

But let me say, and I take this privilege from my long career and from my respectable age, which unfortunately prevents me to be present at the Split meeting, how much I was gratified in reading in their “*In memoriam*” of Nikola Cindro, introducing the issue of FIZIKA B dedicated to him, what *Zoran Basrak, Roman Caplar and Vladimir Paar* wrote in 2001:

“*The best summary of his activity was given recently by R.A. Ricci, the former President of the European Physical Society, saying that by his work and personality Nikola Cindro has set Zagreb and his country Croatia on the world map of fast neutron and heavy-ion physics.*”

But this is not enough. The personality of Nikola belongs to the elite of the scientists of great culture and with a lot of style.

There are people and men. Nikola was a man.

Thank you for accepting me in spirit in remembering him in spite of my physical absence.

Padova, 17th of September 2011

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