

In memory of Jayme Tiomno

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It was indeed a very sad news to hear that Jayme had died in the morning of January the 12th, 2011.

Although I had been previously briefly acquainted with him, my first direct interaction with him and my most vivid recollection of him goes back to the dark days of the military dictatorship in Brazil when Jayme, along with many other distinguished Brazilian physicists (I believe this was the fate of more than 200 university professors), had just been ousted from his chair at the USP. At the time I was in the US on a sabbatical leave and a Brazilian friend had contacted me to invite me to spend some time in Brazil to help the many (then) young promising local physicists to overcome the momentous difficulties. It was a difficult time for me and an extended visit to Brazil made sense also in view of the traditional relationships between my Alma Mater, the University of Torino) and Brazilian physics. Before accepting the invitation, however, I felt my duty to check with senior Brazilian physicists how my going to Brazil would have been perceived. The chance was that someone would see it as an endorsement of the dictatorship which was certainly not the case. Indeed this happened; later on some stupid Italian colleague of mine tried to argue that my going to Brazil had been a move in support of the military. Luckily, as I say, I had contacted senior Brazilian physicists to make sure that no such ambiguity would arise.

Among them had been Jayme who enthusiastically had encouraged me to accept the invitation and who, when time came, made indeed quite clear what my intentions had been and his support in this venture.

At the time Jayme was already a very prominent international figure in physics whom I had had the venture to meet earlier when he had come to Torino to visit his very good friend and my mentor Gleb Wataghin. Gleb was then a very important person in Brazil given the major (and successful) work he had done to make physics take off in the country and most notably in São Paulo and meeting him for a young physicist (as I was then) had been very exciting but on very unequal footing. These contacts had, accordingly, been also very distant.

It was still later on (the Eighties) when we got to collaborate and work regularly together. At the time we shared to some extent the responsibility of tutoring a by now prominent Brazilian physicist who was taking his PhD under my guidance in Torino. We ended up writing several papers together (6 to be more precise) on a subject which was then pretty hot. It was a time of rather close relationship and exciting collaboration. Jayme came several times to Torino and I was often going to Rio. In fact, I remember when, during one such visit, at dinner, he and Elisa begged our pardon for their turning on the TV set: the Telenovela of the moment was going on the air and the plot that had been left open the day before was so exciting that they were very eager to find out what would have happened. A nice and very warm human weakness that it is so nice to discover in important men.

Because, indeed, Jayme was an important man and a great physicist. I frequently wondered what would have been the developments of physics in Brazil had the so many great physicists of the country been more eager to collaborate among them. But I also remember my beloved teacher at high school mentioning how so often great men work in isolation and have difficulty in coping with other strong characters. The course of honor of Jayme had indeed been quite spectacular and his achievements in physics quite remarkable. While it is impossible for me to give a reliable account of his accomplishments in physics (particle physics and general relativity being his main fields of interest), at least I have to mention one, muon decay and capture. He had a long and fruitful relationship with J. Wheeler and together they wrote seminal papers. It was Wheeler who wrote *"In this work I had the good fortune to have as a colleague Jayme Tiomno, a graduate student from Brazil, who started working with me and then completed his doctoral work with Wigner after I went off to Paris in 1949.* He also said *"His work on muon decay and capture in 1947-1949 was pathbreaking and would still merit recognition by some suitable award."* Indeed Wheeler proposed Tiomno for a Nobel price which never came and, as a matter of fact, Wheeler often insisted that the celebrated *"Tiomno-Wheeler triangle"* establishing a relationship between electron-muon (and their neutrinos) and nucleons ought to better be called the *"Tiomno triangle"*.

Tiomno was born in Rio on April 16, 1920 the son of Russian Jew immigrants so he had turned 90 last year having lived a long, respectable and laborious life. In the words of the Brazilian Minister of Science and Technology, Aloizio Mercadante, *"Ele deixou o exemplo imperecível de uma vida inteira dedicada ao conhecimento científico para o bem da espécie humana. É um dos nossos maiores orgulhos e uma fonte de inspiração permanente para todos os pesquisadores brasileiros, sobretudo para as novas gerações"*, and quite appropriately

continued "*O avanço da ciência no Brasil hoje tem raízes profundas no trabalho incansável e genial de cientistas como Jayme Tiomno*".

I said his life was long and very productive. Tiomno was educated at State College, Muzambinho, the Brazilian Federal University, Rio de Janeiro, and Princeton (PhD, Physics, 1950). He was Professor Emeritus at the Centro Brasileiro de Pesquisas Físicas (CBPF), Rio de Janeiro. His previous positions include: Full Professor, CBPF, Rio de Janeiro since 1952; Full Professor, Universidade de Brasília, 1965; Full Professor at USP, 1967-69; Full Professor at Pontifícia Universidad Católica do Rio de Janeiro, 1973-80; Visiting Researcher at Imperial College, London, 1959-60; ICTP, Trieste, 1967; Institute for Advanced Studies, Princeton, 1971-72; and Princeton, 1971. His awards include the Moinho Santista Prize for Exact Sciences in 1957 and the Grã-Cruz, National Order of Scientific Merit, Brazil, in 1994. He was a Full Member of the Academia Brasileira de Ciências and a Member of the São Paulo Academy of Sciences.

At the XXI *Brazilian National Meetings on Particles and Fields* which was held in the resort town of São Lourenço, (Minas Gerais), from 23 to 27 October, 2000, a homage session celebrated the 80th anniversary of Jayme Tiomno. The audience shared their scientific and personal experiences with him and traced back the importance of his work in the development of Physics in Brazil.

It would be improper of me to try to place Jayme's position next to the many great physicists of modern Brazil; there are by now so many that it would be unfair to quote one and not all of them. We could, however, mention that together with Cesar Lattes and José Leite Lopes, Jayme was one of the founders of the Centro Brasileiro de Pesquisas Físicas and in 1966 was among the founders of the Sociedade Brasileira de Física.

Not unexpectedly, however, he was also active in the field of physics teaching. Together with Leite Lopes he translated a book of Physics for high school of the North Americans physicists Oswald Blackwood, Wilmer Herron e William Kelly and back in 1963, together with Sanborn C. Brown and Norman Clarke he was the editor of *Why Teach Physics?* based on discussions at the International Conference on Physics in General Education held in Rio de Janeiro the second conference on education organized under the auspices of IUPAP (International Union of Pure and Applied Physics).

As all this shows, a complex, very knowledgeable personality and a great scientist.
Most of all, a good friend; another friend that has left us.

His memory, however, will last and remain with us.