

Raymond Stora and les Houches

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Abstract

Raymond Stora was Director of the École de Physique des Houches from 1981 to 1986. This is a short reminiscence about his actions for les Houches during his career.

There is a long story between Raymond Stora and les Houches. Raymond's first visit to les Houches may be lost for me in the mist of history, but his role has been prominent for the development and the activities of the school for thirty years.

In the old times, when there was a single — two-month-long — summer school session each year, Raymond organized with Cécile De Witt-Morette the 1970 session "Statistical Mechanics and Quantum Field Theories". This was a mathematical physics oriented session, with lecturers such as H. Epstein and V. Glaser, E. Lieb and D. Ruelle, J. Glimm and A. Jaffe, to name a few, and participants such as R. Bott, A. Connes, J. Fröhlich, J. Klauder, K. Osterwalder, B. Simon, etc. Raymond came back the next summer for the "Particle Physics" session, organized by C. Itzykson and C. De Witt. His very precise — and originally neatly hand-written — lecture notes on "Lagrangian Field Theory" became quickly a classic, and — as pointed out to me by Cécile — were the first les Houches lecture notes to be republished (before the famous "Methods in Field Theory" and "Ill-condensed matter" volumes).

Of course, the main contribution of Raymond to les Houches came when he was appointed Director of the Ecole de Physique, a position he held from 1981 to 1986. These were times of changes, when financial support from institutions such as the scientific division of Nato was no longer automatically guaranteed. Raymond organized several "standard" les Houches summer schools (at that time usually "only" six-week long) on the core subjects of les Houches since its foundation in 1951: High Energy Physics — with the 1981 "Gauge Theory in High Energy Physics" session with M. K. Gaillard; "Recent Advances in Field Theory and Statistical Mechanics" with J.-B. Zuber in 1982 (which I was happy to attend in my young years), "Architecture of Fundamental Interactions at short distances" in 1985 with P. Ramond — , Mathematical Physics and General Relativity — with the 1983 session "Relativity, Groups and Topology II" session with B. De Witt (the first sequel of the RG&T session of 1963), the session "Critical Phenomena,

Random Systems and Gauge Theory" in 1984 with K. Osterwalder — , Condensed Matter with the "Chance and Matter" session of 1986 with J. Soulié and J. Vannimenus, the second historic session on this subject which had experienced tremendous advances since the first 1978 "Ill Condensed Matter" school — , last but not least Atomic Physics and Quantum Optics — with the "New Trends in Atomic Physics" session in 1982.

However, Raymond had a crucial role in opening the scope of les Houches to other areas of physics and to related fields. The 1981 session "Chaotic Behaviour of Deterministic Systems", organized with Iooss and Helleman, was probably the first serious and complete summer school on this subject, presenting all the impressive developments of the previous decade, from pure mathematics to experiments. The first "real" astrophysics school "Birth and Infancy of Stars" took place in 1983. A biology session on "cellular and molecular aspects of development in biology" was organized in 1984 which, following the first biophysics session in 1979, was an important step in the — not so easy — inclusion of life sciences in the program of les Houches. Finally, the first session of Applied Physics and Information Science, "Signal processing", organized in 1986, was also an important step.

Besides his involvement in science, everyone who has been in les Houches in this period remembers Raymond's involvement in the practical and social life of the school every summer. The les Houches Director often had to act as a director of some summer camp, and had to temper the relations between the participants, the people working for the School, and sometimes their relatives... Of course there was his love of mountains and his warnings to the newcomers at the start of each session about the dangers of mountaineering (advice that he did not always follow...). Raymond was used to bringing friends, colleagues and students with him on "courses" in the Mont Blanc massif every summer. According to Cécile, Raymond had also a large collection of Opinel (of all sizes) that he used as gifts. After being succeeded by J. Zinn-Justin, Raymond stayed as a member of the Administration and Scientific Board of les Houches until the end of the 1990s. Here he played an important role in offering councils and critics. It is in the Board that — myself now as a director — I mostly came to appreciate him and to rely on his experience as a member of the "les Houches family". Raymond modestly resigned from the Board when he felt that the weight of the former directors was becoming too important and that new generations should come in — and for this I respect Raymond very much.

Of course, Raymond's fame as an honest man and as a great theoretical physicist goes well beyond what he did for les Houches and for theoretical physics through his actions at les Houches! But for this too, Thank You Raymond!

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Figure 1: Raymond at the School, summer 1982 (courtesy of J.-B. Zuber)



Figure 2: Raymond in les Aiguilles Rouges, 1998 (courtesy of J.-B. Zuber)



Figure 3: Raymond with J.-B. Zuber and Cécile, 1998 (courtesy of J.-B. Zuber)



Figure 4: Raymond and R. Balian, 2001 (at the 50th anniversary of les Houches)