[F15-or] 입자물리분과-APCTP Benjamin W. Lee 특별 세션 – 권영준(연세대), 정우성(APCTP)
시간: 2017 년 10 월 26 일(목) 15:00 ~ 18:00
장소: 300C 호

Benjamin W. Lee 박사의 40 주기를 기념하여, Benjamin Lee 박사의 업적을 기리고, 이후 관련 분야의 발전을 되짚어본다. 특히 게이지 이론의 재규격화, 맵시 쿼크의 예측, 암흑 물질의 성질에 대한 초기 분석 등 현 시점에서도 의의가 큰 그의 업적들을 정리해 본다.

[프로그램]

15:00 ~ 15:36 The early days of the Standard Model - remembering Benjamin Lee/ 'T HOOFT Gerard (Utrecht Univ.),
15:36 ~ 16:12 A hard working genius / FUJIKAWA Kazuo(The University of Tokyo),
16:12 ~ 16:36 내가 아는 이휘소 박사/ 김제완 (서울대 명예교수),
16:36 ~ 17:00 Ben Lee in 1977 / 김진의 (서울대 명예교수),
17:00 ~ 17:24 The role of the Higgs-boson mass/ 최성열 (전북대),
17:24 ~ 17:48 Rare K and B decays as crucial keys to understand heavy particles /권영준 (연세대)

[초록]

15:00 ~ 15:36

The early days of the Standard Model - remembering Benjamin Lee

'T HOOFT Gerard (Utrecht Univ.)

In the 1960, the idea of renormalized quantum field theories was thought to be a difficult and confusing topic, so that most researchers were searching for more direct ways to understand the elementary particles. Yet there were several pioneers with a wider view on this subject, and Benjamin Lee was one of them. Then, in a rapid succession, new developments took place and new insights were found. Experimental and theoretical particle physics were still focusing on the same issues, so these were exciting times.

15:36 ~ 16:12

A hard working genius

FUJIKAWA Kazuo (The University of Tokyo)

As one of those privileged to have collaborated with the late Professor Benjamin W. Lee, whom friends simply called "Ben Lee", I would like to describe my experience with him. I wrote 2 papers with him as collaboration and one more, which was written by myself, but actually based on discussions with him. Based on these papers and related episodes, I would like to tell the "living Ben Lee" to the young generations of Korean physicists.

16:12 ~ 16:36

내가 아는 이휘소 박사

김제완 (서울대 명예교수)

내가 이휘소박사를 처음 만난 것은 45 년여전 뉴욕에서 이제는 작고하신 조순탁 교수와 함께였다. 그 이후 이휘소 박사와 물리적 관심사에 대해 그리고 개인적인 일에 대해서도 상의한 많은 기억이 있다. 이휘소 박사와의 개인적인 소회에 대해 몇가지 이야기하고자 한다.

16:36 ~ 17:00

Ben Lee in 1977

Jihn E. Kim (Kyunghee Univ., IBS, Seoul National U.)

Ben Lee was at the prime in his research career before the tragic accident in July, 1977. With S. Weinberg, he collaborated two important papers in that year one of which still remains as the opening example on the WIMPs.
On one Wednesday in mid-May, he, I and Fermilab theorists including visitors were informed of the PQ symmetry from Helen Quinn. After two months from this day, he passed away. At Fermilab on October 20-22, there was the Ben Lee Memorial Conference on "Unification of Elementary Forces and Gauge Theories" where several future Nobel Laureates participated. There, F. Wilczek and S. Weinberg announced a pseudoscalar with lifetime of 10^{-8} second. Many researchers from UPenn were there also, and UPenn became the mecca on the solutions of the strong CP problem, among which the "invisible" axion, still present in the Universe, has survived. The "invisible" axion I worked so long has a connection to Ben Lee.

17:00 ~ 17:24

The role of the Higgs-boson mass

Seong Youl Choi (Chonbuk National University)

In this honarary talk I review the content of two of the most renowned works by Benjamin W. Lee [B.W. Lee, C. Quigg, H.B. Thacker, Phys. Rev. Lett. 38 (1977) 883 and Phys. Rev. D 16 (1977) 1519]. Then, I describe their follow-up theoretical and experimental developments, leading to the eventual discovery of a Higgs boson at CERN in 2012.

17:24 ~ 17:48

Rare K and B decays as crucial keys to understand heavy particles

Youngjoon KWON (Yonsei University)

One of the important contributions of Benjamin Lee's to particle physics is study of rare meson decays to obtain information about yet-unknown heavier particles. In particular, by studying the properties of strange mesons, he was able to predict key properties of charm particles, of which the existence had not been established. This also had a substantial impact on later development of heavy-flavor physics, in particular in understanding physics of B mesons and its rare decays. In this talk, we briefly review Ben Lee's achievements in this and show a few crucial experimental findings in line of Ben Lee's theory in K and B meson systems.