Work plan of doctoral studies

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After spending a long time struggling for adapting to the new environment and thinking about my doctoral studies, I finally manage to work out this plan. I would like to explain my motivations for study, my basic PhD goal as well as my personal goal; and also give a rough idea on how to achieve it and present a rough time-line.

Motivations

Why am I study? Our chairman Mao once addressed a speech to the oversea Chinese students at Soviet Union. He said at the beginning: “The world is ours, and the world is also yours. But in the end it is yours. You young people, full of vigor and vitality, are in the bloom of life, like the sun at eight or nine O’clock in the morning. Our hope is placed on you. The world belongs to you”. So I was always thinking, as a young people, when it is the time, how can I contribute to the society and hold the future of our land? The answer for me right now is simple: by acquiring as much knowledge and skills as possible.

Why here in Heidelberg? Because it is believed that Germany is a more advanced and developed country than China. Also here in Heidelberg, it is one of the center of high energy physics in the world.

Goals

What is my personal goal? A PhD degree is always the basic, and this is the goal where I can connect my personal goal with the hope to put forward the university, which is written on the window in the first floor. So the basic goal of my doctoral studying including: working on the design of the KLauS chip, assembling it into the HCAL base unit and characterizing the HBU for the AHCAL experimental prototype.

In order to accomplish this and make full use of the platform with considering my limits, there are lots of things I want to learn and study. Here gives a rough lists:

1. Physics: particle physics, basic of solid-states physics
2. Detector: principles of different kinds of detectors, large detector systems
3. ASIC design: mixed-mode design(FE, ADC, TDC, digital)

There are also other personal goals which are not directly related to the PhD. But I still want to mention it here. One is trying to improve my English and expression skills. As I concerned, this is more difficult than achieving a degree, which indicates that I need patience and awareness. The other one is trying to find out my life choice. I am not expected to get this fully done in the three years, since I am the young people who is full of vigor, vitality and bunches of choices.

How

How can I accomplish these goals related to my PhD? There are different ways and procedures for different tasks. Regrading to learning, taking related lectures or seminar if possible and self-studying are the methods for all tasks. Discussion is another way, since I have been benefited a lot from Wei and other colleagues.

Besides, I was thinking, in some cases, I can present or share what I learned by self-studying in the group meeting. For example, recently, I read some CALICE analysis notes regrading the particle flow

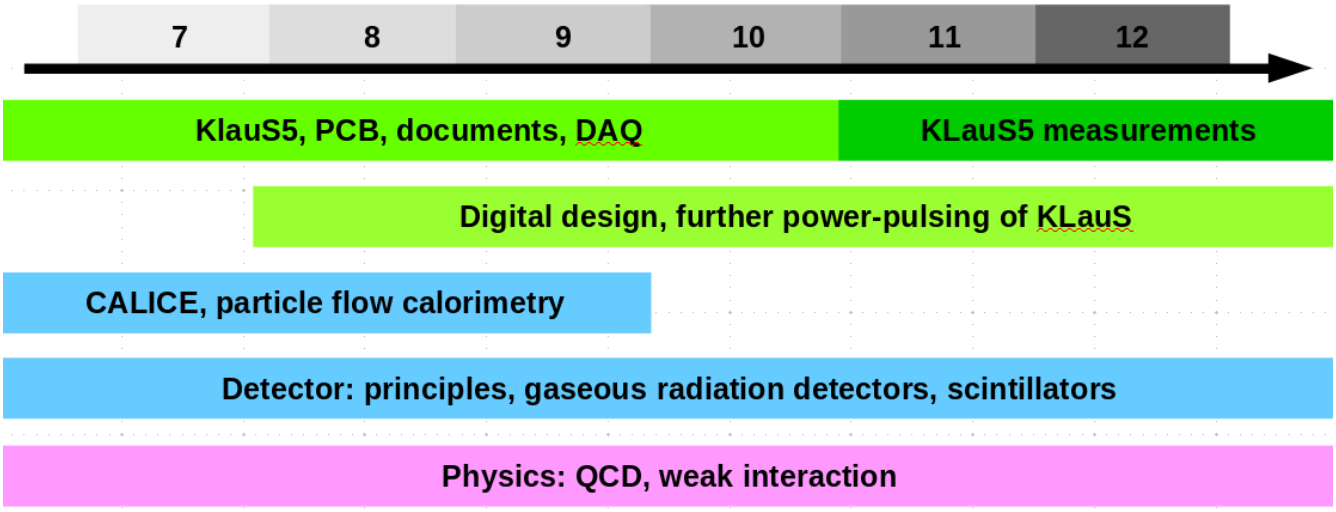
calorimetry. I get lots of confusion and potentially many misunderstandings. It will be a grate if my misunderstandings can be corrected and confusion can be answered by the expert like Hans-Christian or other colleagues.

A rough procedure for carrying on my doctoral study is list below:

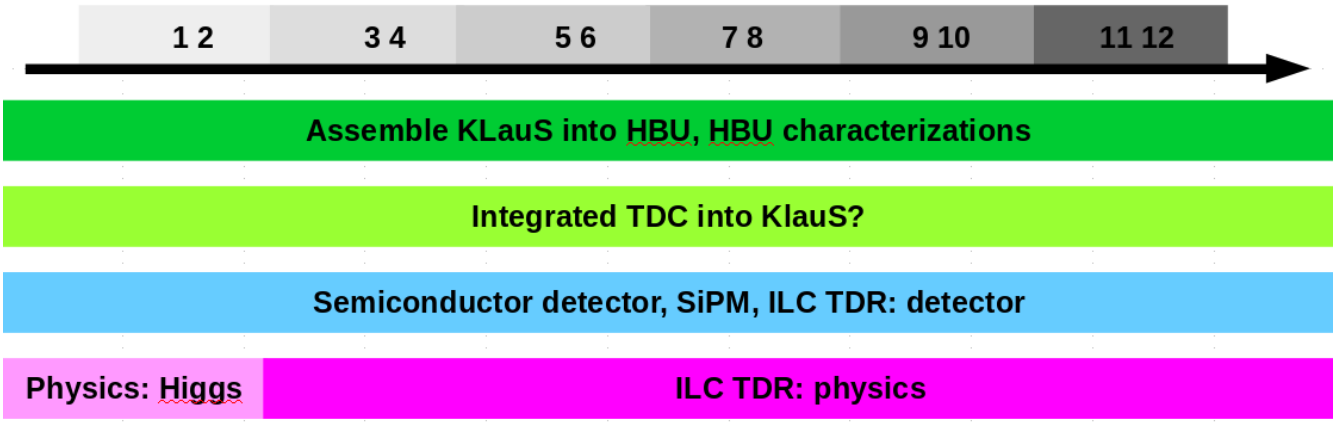
1. Design of KLauS version 5 with 36-channel and characterize it
2. Assemble the KLauS5 into the HBU and test its functionality and performance
3. Further study the power-gating features and design the KLauS chip to fulfill the 25 uW/Ch power budget and make it a stable version for HBU

Time-line

For the second half of 2017



For the 2018



For the 2019 and 2020, Let's see.

Student:	Advisor:
Date:	Date: