

It is my great pleasure to have an opportunity to welcome you all at this “KEK theory center workshop on hadron physics at high-momentum beam lines of J-PARC”. If I understand correctly, this is the first occasion to discuss physics potential of high intensity high momentum beam line we are going to build at J-PARC in Tokai, together with theoretical and experimental physicists from all over the world.

I am particularly interested in the discussion at this workshop for the three reasons. Reason number one is that, there are many quantities in hadron reactions that are experimentally measureable. However, their theoretical interpretations are sometimes unclear, and also, it is sometimes not clear which observables need to be measured to achieve better understanding of fundamental physics, and which ones are not useful. Therefore it is extremely important to identify the observables to be measured to establish optimum experimental program at J-PARC. I hope that this workshop provides occasions to discuss experimental program from this point of view.

The second reason is; there has been a series of exotic hadronic states discovered by fixed target and collider experiments, such as penta-quark and tetra-quark states. We all have believed over many decades that there are only two categories of hadrons, mesons and baryons, and this paradigm is being changed. It is an urgent issue for the physicists in this field to understand those new hadronic states. I believe that the new beam line at J-PARC is eligible to play an important role in this endeavor. I also believe that close collaboration between theorists and experimentalists will be essential for this endeavor to be successful. Let me remind you that B factory at KEK is another driving force of the physics of exotic hadrons. By combining the results from B factory and J-PARC, KEK wishes to serve as a center of this study.

The reason number three for having a strong interest in this workshop is not a very scientific one. We have already commissioned in the construction of the high momentum beam line together with the COMET beam line before establishing a concrete physics program at this beam line. We have one approved experimental proposal of measuring mass shift of vector meson in nucleus at the high momentum beam line, which is a very interesting

experiment, of course, but this beam line seems too luxurious for the single experiment alone. Since this new facility is unique in the world, I hope that more people join from all over the world, and compete with each other for important physics accomplishments. I hope this workshop is an occasion for this.

I hope the workshop is successful, and all of you enjoy your stay in KEK Tsukuba. Thank you.