

Outreach Activities in the Belle II Collaboration

Toru Iijima

*Kobayashi-Maskawa Institute
Nagoya University*

for the Belle II Collaboration

August 5, 2016

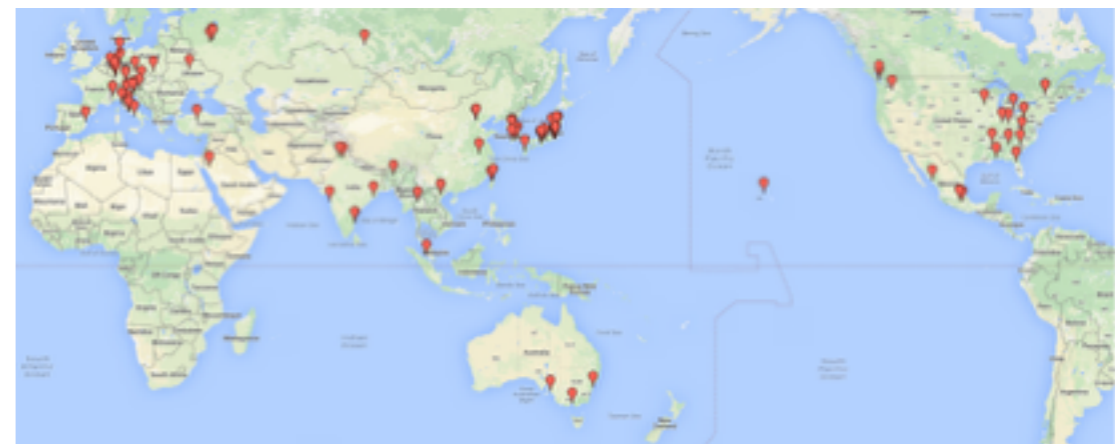
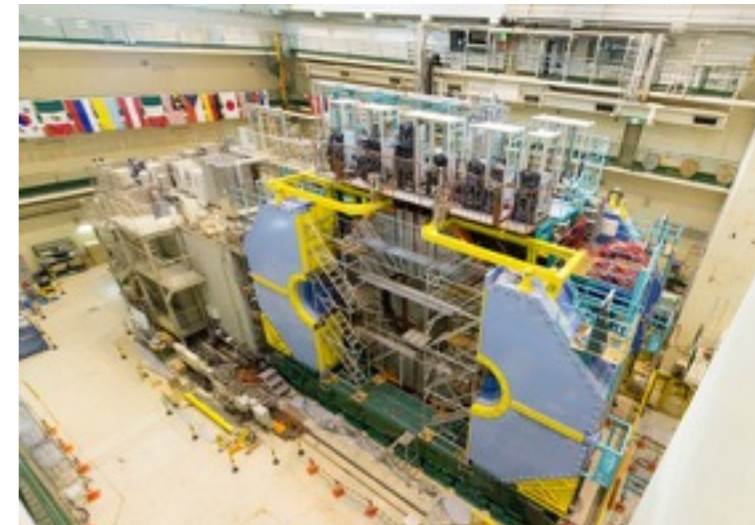


Kobayashi-Maskawa Institute
for the Origin of Particles and the Universe



SuperKEKB/Belle II

- New intensity frontier facility at KEK
 - Target luminosity ; $L_{\text{peak}} = 8 \times 10^{35} \text{cm}^{-2}\text{s}^{-1}$
 $L_{\text{int}} > 50 \text{ab}^{-1}$
 $\Rightarrow \sim 10^{10} \text{BB}, \tau^+\tau^-$ and charms per year !
- Will start collision w/o vertex detector in 2017, w/ full detector in 2018, to find
 - New Physics in decays of heavy flavor particles
 - New exotic states (X, Y, Z, ...)
 - and more !
- Belle II is run by truly international collaboration of 649 colleagues, 100 institutions, 23 countries/regions.



The first particle collider after the LHC !

Belle II Outreach

- Formed in June 2015 to improve publicity of the project, for general public, students, scientific community, funding agency.
- Missions
 - Transmit information via
 - Public HP (for general audience)
 - Facebook, Twitter
 - Operate education programs
 - B-Lab, Belle Plus, ...
 - Archiving outreach materials
 - photos, movies, ...
 - Press release, news
- Close cooperation with PR office and outreach coordinators at KEK and also at other institutes

Organization

- Outreach coordinator (T.I)
- Managers for FB/Tw, HP, B-Lab etc.
- Liaisons from each subgroup (detectors, physics)

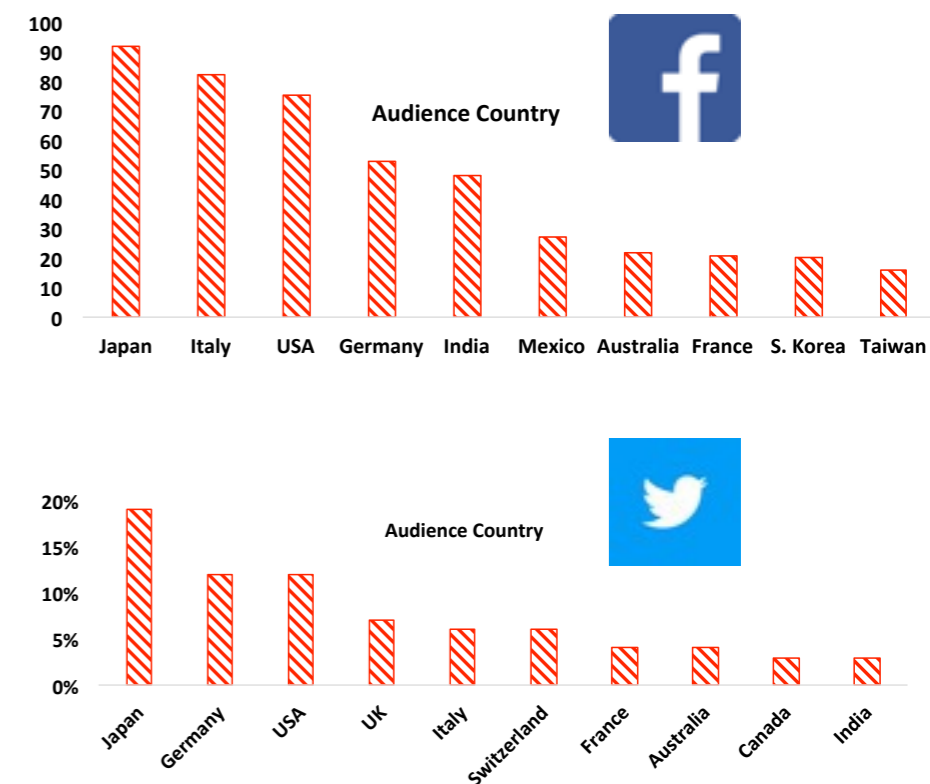
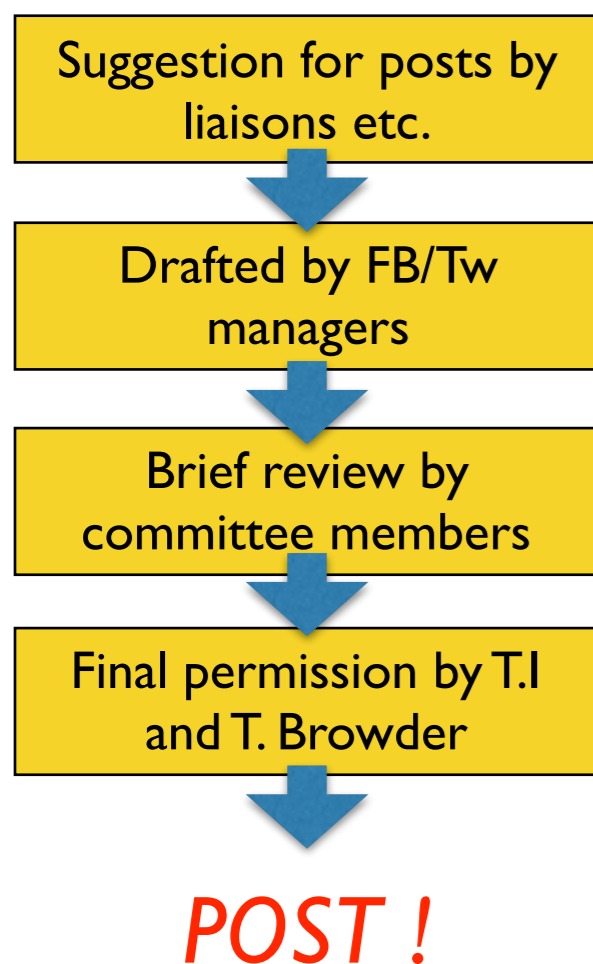
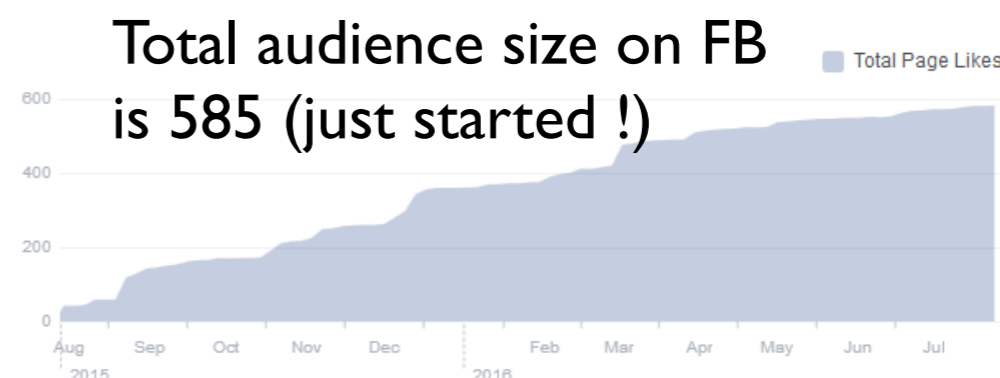


PR office and outreach coordinators
(KEK and other institutes)

Facebook & Twitter

S. Sandilya, T. Pedlar, M. Takizawa,
R. Seddon, K. Miyabayashi et al.

- Regularly update, twice a week (Wed. and Sat.)
- Based on inputs from collaborators (mainly subgroup liaisons), contents are prepared by FB/Tw managers, briefly reviewed by the committee members.
- Japanese FB/Tw are also operated.



Public Home Page

C. Sfienti et al.

- In preparation to transmit information to general audience.
- Utilize commercial hosting service
 - Simple domain name (belle2.jp)
 - Free from lab. regulations
 - Easy maintenance
- Contents
 - Physics
 - SuperKEKB
 - Detectors
 - Collaboration
 - News (Blog like)
 - Video and twitter feed on
 - Link to educational programs



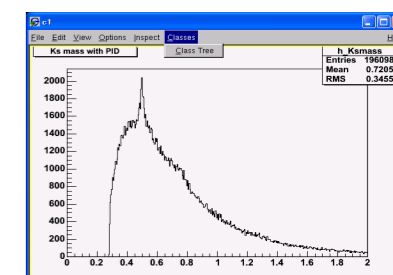
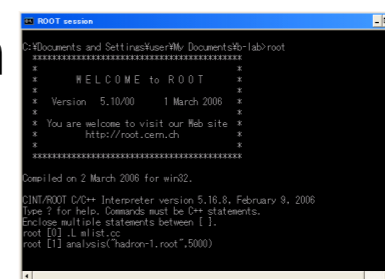
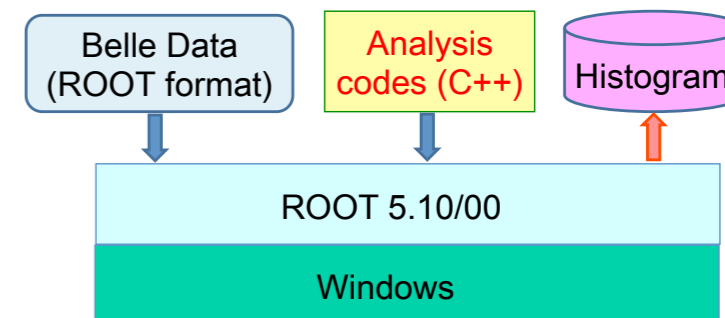


B-Lab

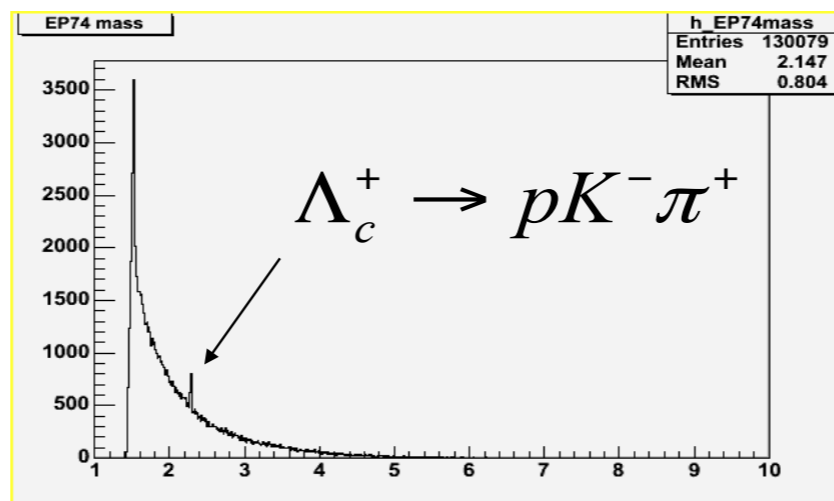


<http://belle.kek.jp/b-lab/b-lab-english>

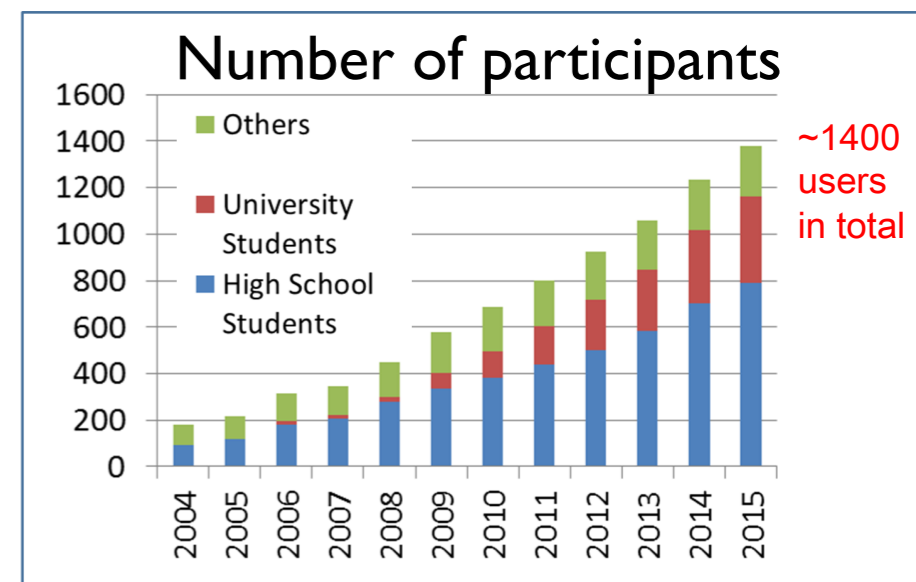
- Open data analysis program using Belle data.
- Started in 2004 by the Belle collaboration.
- Open 1.3fb^{-1} data in ROOT format with information on momenta, charge and PID for new particle (new resonance) searches.
- Will be modified and used also for Belle II (“B-Lab2”).



Lecture at a high school



$\Lambda_c^+ \rightarrow pK^-\pi^+$ discovered by a group of high school students



Please visit poster #834 by S. Nishida et al.

Belle-Plus



7

- Summer (high school) student program to offer real experience of science at KEK.
- Started in 2006, and held every year (except for 2010).
- About 20 students stay in KEK for 4 days to take
 - Lectures on particle physics
 - (Super)KEKB and Belle(II) tour
 - Experimental or theoretical course
 - CR experiments
 - Calculation of Feynman diagrams
 - others
- Presentation



More details in poster #834 by S. Nishida et al.

Cooperation with KEK/IPNS PR Office

Belle II outreach works in close collaboration with KEK PR office and KEK/IPNS outreach coordinator.

- Transmission of news, topics, press release
- Lectures on SuperKEKB/Belle II
- KEK Science Cafe
- Creation of multimedia materials

Installation Of The Belle II TOP Detector Completed

Published on 2016/05/16



Just after completing the installation of the TOP Detector

© KEK/IPNS

On May 11th, all modules of the TOP Detector were installed.

The TOP Detector is part of the cylindrical barrel of the Belle II detector. It is a newly built detector for precision identification of pi and K mesons.

The TOP detector system consists of 16 modules. Each module contains finely polished quartz, MCP-PMT (Micro Channel Plate Photo Multiplier Tube) photo-detectors, and high-speed readout electronics.

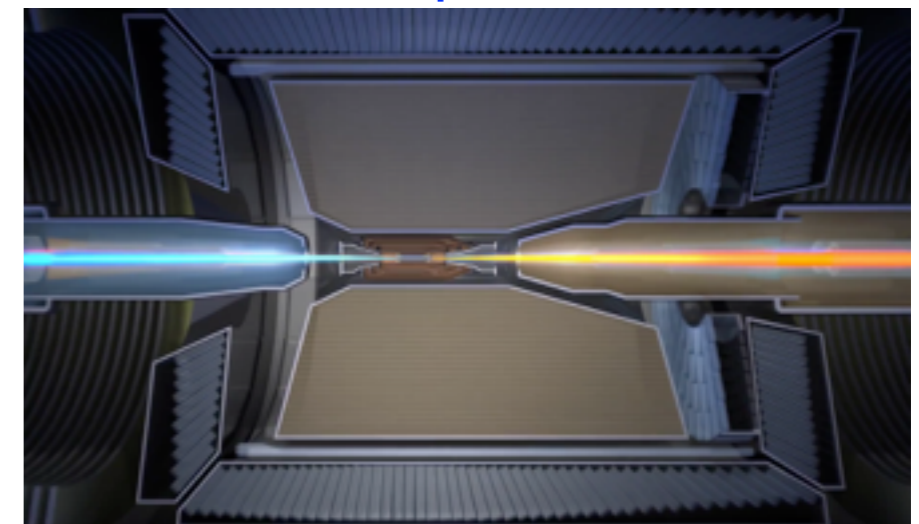
The TOP detector system is being built by an international collaboration of researchers from Japan, the US, Italy and Slovenia. The mechanical installation of the 16 modules was done by a team from Nagoya University and KEK.

Movie “A Search for New Physics
- The Belle II Experiment”

KEK public lecture



KEK Science Cafe



Please listen to the talk by S.Takahashi tomorrow !

Press release

The 1st press release from the SuperKEKB/Belle II project: “First turns and successful storage of beams in the SuperKEKB electron and positron rings” (March 2, 2016)

- Original press release both in English and Japanese from KEK
- Press conference at KEK
- Followed by local press release in each country/region.

DESY



IHEP



KEK



PNNL



INFN



at more
institutes

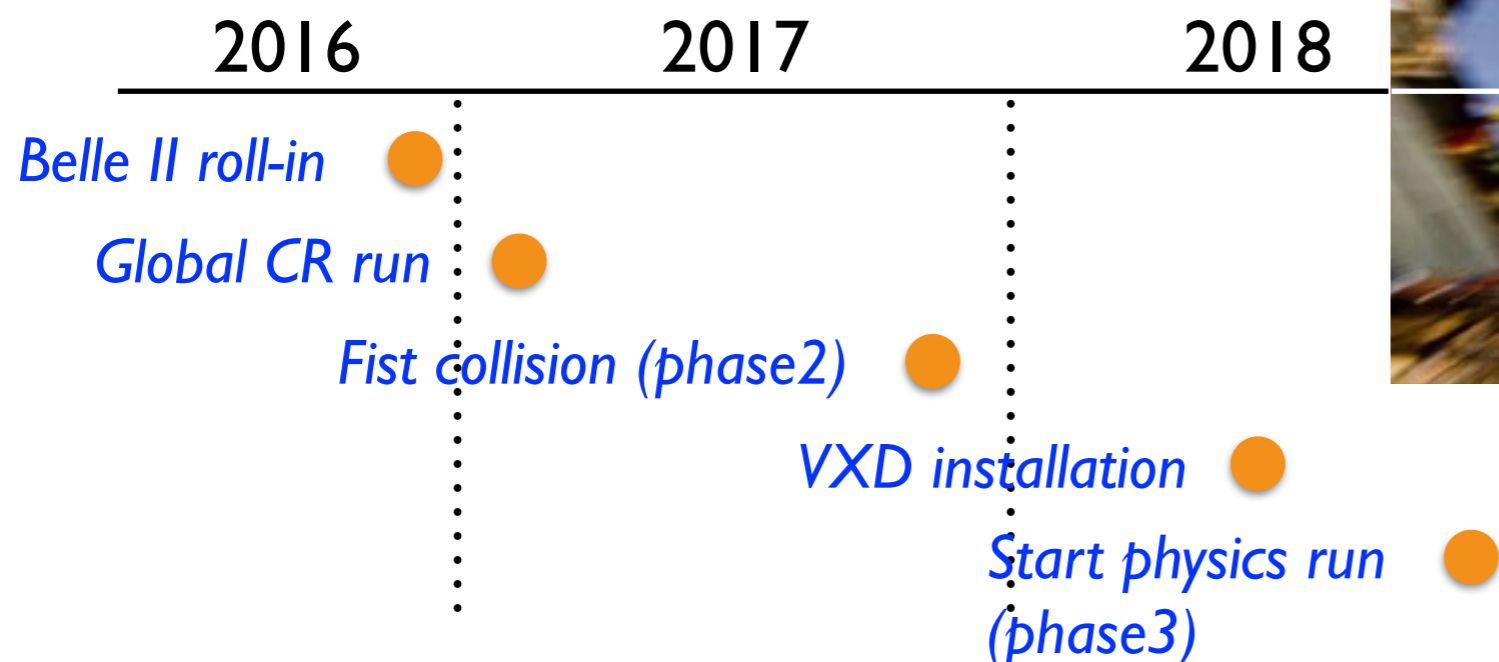


Summary

- Belle II experiment is coming up !
- Belle II is ramping up outreach and educational activities to appeal to the international particle physics project.
- We are happy to share information and expertise for outreach and education.

Belle II is gaining momentum !

Coming events (milestones)



*Stay Tuned for
Belle II Outreach !*

Backup Slides

