



# Highlights of the Belle II Computing

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⇒ SuperKEKB accelerator :  
LER/HER beam circulation was successfully done as scheduled

Belle II detector :  
Right now, CDC(Central Drift Chamber is being installed

⇒ Main Computer @ KEK was entirely replaced in August 2016  
→ Belle II distributed computing core services are being reconfigured (almost done)  
→ the next large-scale MC production is scheduled from this November

⇒ SINET5 improved the connection of Japan-USA, Japan-Europe

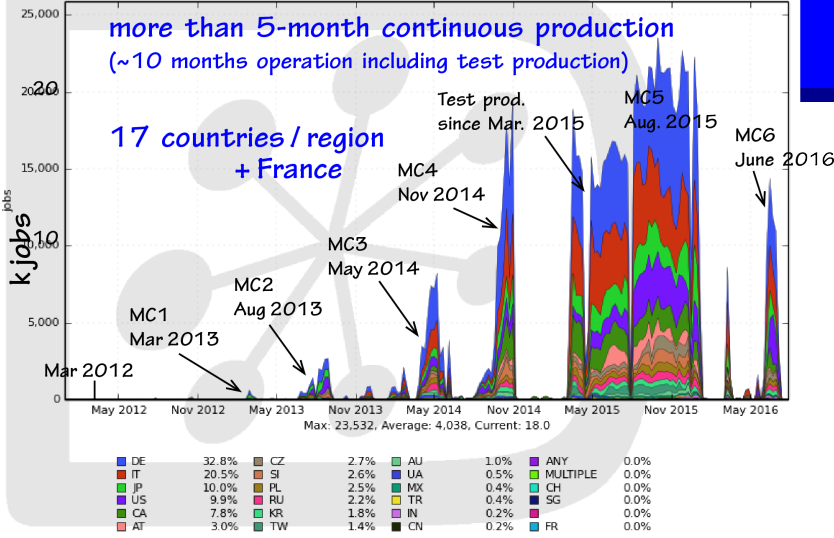
⇒ KEK LHCONE connection is now fully configured  
Network @ other sites will contribute to the performance improvement  
(INFN-Napoli, PNNL, etc.)  
→ next data transfer challenge is scheduled to complete the performance test



# Belle II distributed computing

Running jobs by Country

239 Weeks from Week 52 of 2011 to Week 30 of 2016



## Aiming for the discovery of new physics

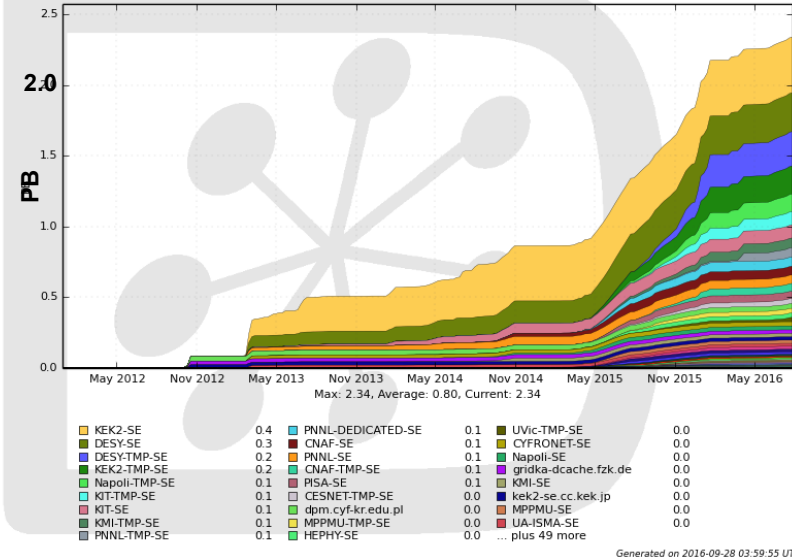
- ~6kHz @ online storage
- ~100kB / event for raw data @ offline storage, ~10kB / mDST
- Raw data : more than 10PB/year @ full luminosity

## Computing resources

- Grid : CREAM-CE, ARC-CE, HTCondor-CE
- Clusters w/o middleware : ssh or DIRAC SiteDirector
- Cloud : VMDIRAC, CloudSchedule, Dynamic Torque
- Others : Spontaneous pilot instantiation, VOINC

Produced and Registered data by Destination

239 Weeks from Week 52 of 2011 to Week 30 of 2016



## Storage elements

- STORM, DPM, Bestman2, dCache, DIP, XRootD  
(38%), (29%), (19%), (14%) : 2.1PB (as of 2016 Feb)

## Catalogue

- AMGA (Metadata) + LFC (Replica)
- DFC (for development instance)

## Extended

- Automated "Production system"  
based on Transformation system

Plan to start the next large-scale MC production from November.