Minutes of the 40th LHCb Resource Review Board Meeting
(CERN, Geneva, 25th April 2018)

Present

I. Bediaga (RENAFAE, Brazil)
Y. Gao (Tsinghua University, China)
P. Verdier (IN2P3, France)
R. Le Gac (CPPM IN2P3/CNRS, France)
A. Fischer, M. Gast (BMBF, Germany)
H. Mahlke, W. Ehrenfeld (BMBF/DESY-PT, Germany)
U. Uwer (University of Heidelberg, Germany)
A. Zoccoli, N. Pastrone (INFN, Italy)
A. Cardini (INFN and University of Cagliari, Italy)
A. van Rijn (NIKHEF, Netherlands)
D. Drewniai (Ministry of Science and Higher Education, Poland)
G. Stoicea (IFIN-HH, Romania)
I. Suleymanov (Ministry of Education and Science of the Russian Federation, Russia)
V. Egorychev (National Research Center, Kurchatov Institute, Russia)
V. Savrin (Institute of Nuclear Physics, Moscow State University, Russia)
M. Martinez-Perez (Ministry of Economy and Competitiveness, Spain)
E. Grauges (Universidad de Barcelona, Spain)
O. Schneider (EPFL Lausanne, Switzerland)
M. Turler (Swiss National Science Foundation, Switzerland)
A. Medland, S. Verth (STFC, United Kingdom)
T. Gershon (University of Warwick, United Kingdom)
M. Coles, S. Gonzalez (National Science Foundation, United States of America)
A. Markovitz (Observer, Fermilab, United States of America)

LHCb
C. D'Ambrosio, R. Lindner, C. Parkes, G. Passaleva, A. Schopper

CERN
G. Cavallo, C. Decosse, F. Gianotti, F. Hemmer, M. Krammer (Chairperson), E. Tsesmelis,
E. van Herwijnen (Scientific Secretary), T. Wengler

Scrutiny Group: F. Simon

Excused: F.D. Buzatu (Institute of Atomic Physics, Romania), V. Shevchenko (National Research Center, Kurchatov Institute, Russia), G. Blair (STFC, United Kingdom), E. Elsen, M. Steinacher (CERN)
Documents can be found in the RRB Indico pages; accessible via the LHC-RRB home page [http://cern.ch/committees/LHCRRB](http://cern.ch/committees/LHCRRB)


2. **Approval of the minutes of the last meeting.** M. Krammer, EP Department Head. CERN-RRB-2017-130

The minutes of the last RRB meeting CERN-RRB-2017-130 were approved.


Summary:

- LHCb run in 2017 was very smooth with detector working very well
- YETS activities completed successfully
- 2018 run starting very well
- LHCb continues to provide a wealth of excellent physics results
- LHCb is also preparing the ground for high statistics measurements in the upgrade phase

There were no questions arising from this presentation.

4. **LHCb Upgrade Status.** G. Passaleva, spokesperson CERN-RRB-2018-053

Summary:

- The march towards the LS2 upgrade is continuing
  - All subsystems progressing well - crucial steps forward were taken in critical projects
  - Schedule is tight and some delays represent major concerns
- Looking into the far future:
  - Expression of Interest for future upgrades submitted
  - Preparing a physics case document

There were no questions arising from this presentation.

5. **LHCC Deliberations (paper only).** T. Wengler, LHCC Scientific Secretary CERN-RRB-2018-054

Summary:

- The LHCC considers that LHCb has made excellent progress and the Committee congratulates the LHCb Collaboration on its achievements.
- 422 papers have been published to date, with new results including a measurement of the CP asymmetry in $B_s \rightarrow D_s K$, decays, searches for $\Lambda_c^+ \rightarrow p \mu^+ \mu^-$ and the inelastic $pp$ cross-section at 13 TeV.
- Only small service and repair works carried out during the YETS.
- This year’s aim: 2.5 fb$^{-1}$ to establish lepton universality violation.
- Good progress on Phase-I upgrades: all Velo sensors received and validated. Problems with the analog part of the SALT128 chip necessitating a redesign.
- Computing TDR to be submitted in time for the May LHCC session.
- The on-going Phase-I Upgrades must take priority.

The LHCC:
- **Congratulates** LHCb on its rich scientific output in 2017.
- **Acknowledges** the importance of an enlarged data set in 2018.
- **Is concerned** about the delays of the UT, in particular the SALT128 chip.
- **Supports** the efforts of the LHCb and UT management to successfully complete the UT installation in LS2.
- **Urges** LHCb to assign the highest priority to obtain a fully working SALT128 chip.

There were no questions arising from this presentation.

G. Cavallo, Finance and Administrative Processes Department

G. Cavallo presents the financial situation as of April 25.
The construction Common Fund has been closed and the reporting will stop as of 2019. At the beginning of this week the M&O A contributions from France (241 kCHF) and Russia (64 kCHF) have been received.

### 7. Budgets.
C. D’Ambrosio, LHCb Resources Coordinator

The 2017 M&O A Budget is well balanced, pluri-annual contributions were collected thanks to the motivated and punctual Funding Agencies and there are no cash flow issues. A small overspending was expected as a consequence of advancing some storage acquisitions for the demanding 2017 run.

The estimated costs on M&O A for the future years have been identified and quantified. A proposal has been worked out and presented internally to the national representatives and Collaboration Board. It has been submitted to the SG through April to September in preparation for the RRB in October 2017, where the plan was detailed (CERN-RRB-2017-110, -111), received a positive evaluation and approved.

Category B funds and resources are healthy and mostly managed by the specific projects. Following the study for LS2 and future M&O A budget levels, a similar analysis will to be carried out also for the sub-detector projects. A first impression is that funds will be mostly unchanged during LS2. However, more specific results will be made available during the year.

LHCb thanks the RRB and the SG for their support and advice.

There were no questions arising from this presentation.
8. Summary. M. Krammer

P. Verdiér: Congratulations to the LHCb Collaboration for the excellent results achieved this year and the excellent progress on the upgrade. Thanks to the Collaboration also for the clarity of today’s presentations. The results of the full Run 2 dataset are being looked forward to.

There being no further business, M. Krammer thanks the Funding Agencies and closes the meeting. The proposed dates for the next RRB are 29-31 October 2018.

Reported by: E. van Herwijnen