

LIU-SPS review for BI



- Systems with no further spending expected
 - Head-tail
 - Fast BCT
 - BGI
- Systems – active:
 - Diamond BLM
 - Orbit system upgrade
 - Optical fibre infrastructure
 - BSRT mechanical integration (LS2+)
 - Internal beam dump
- Budgets and EVM
- Conclusions and outlook

Lars Jensen - on behalf of BE/BI

Fast ring BCT (complete – sort of)

- Done:
 - New electronics and software installed and commissioned (front-end in ECA5)
- To do:
 - Detector move to 319 proposed (LS2) – cable cost to be estimated
 - OP handling of PPM settings yet to be included

BGI (complete)

- Status:
 - Software development well advanced with fruitful discussions with OP-SPS about integration
 - BGI H and V available for operational use
 - BI software commissioned and systems calibrated towards BWS
- To do:
 - Full OP integration
 - Radiation concerns LSS5 means V device will now be installed close to 517 (upstream of dump)

Electronics for Diamond BLMs

Status (BC 64041)

- TID to be launched for VFC procurement (Q4/2018)

Plans (2018/LS2)

- Commissioning systems during Q4/2018
- See with clients about best use (applications and offline data)

Upgrade SPS Orbit (MOPOS) and with fibres

Status reviews:

<https://indico.cern.ch/event/739085/>

OP integration:

<https://indico.cern.ch/event/745820/>

BI electronics and software (64046):

2018:

- BI firmware and software development on-going
- Full SPS sextant installation

LS2:

- Full installation and hardware commissioning

2021:

- Start beam commissioning with old electronics
- Commission new system with beam

Optical fibre infrastructure (EN-EL) (64724):

- Installation on schedule
- Spending profile updated

BSRT (LSS5) - 64042

- Done:
 - BI and OP software implementation on-going
 - Some worries for SEU (radiation) -> resets
 - Mechanical design for LSS5 solution (516) (BI/MME) advancing well
- To do (2018):
 - BSRT calibration towards BWS
 - Finalise design with replacement chamber for LSS5
 - Radiation concerns after LS2 (dismantle electronics?)

BTV for TPSC4 – 64042 (40kCHF)

Change of scope (new unfunded request)

- Done:
 - Requirements clarified (EDMS 1749883)
- To do:
 - 2018: order cables and electronics
 - 2019: produce mechanics and install
 - 2020: commission

Internal beam-dump for BI (64045)

- Status
 - Reviews:
 - <https://indico.cern.ch/event/696456/>
 - <https://indico.cern.ch/event/736060/>
 - DIC/DEC requests sent
 - Higher than expected radiation levels downstream of dump:
 - <https://indico.cern.ch/event/750526/>
 - Review layout for BI -> new ECR
- To do
 - 2018 (BTV upstream):
 - Finish integration study
 - Purchase optics
 - LS2:
 - Produce tank, install and hardware commission
 - Dismantle other systems (BGI, BLM, BWS) before relocation

LIU-SPS Budgets and EVM

Budget Code	Charged to Budget Code (CHF)	Annual Commitment (CHF)	Annual Open Commitment (CHF)	Payment Budget (CHF)	Pipeline (CHF)	Commitments incl. Pipeline (CHF)	Balance (Including Pipeline) (CHF)	Balance (Excluding Pipeline) (CHF)
64040	875.21	875.21	0.00	0.00	0.00	875.21	-875.21	-875.21
64041	2,199.78	2,199.78	0.00	33,000.00	0.00	2,199.78	30,800.22	30,800.22
64042	2,935.45	8,573.44	5,637.99	74,000.00	0.00	8,573.44	65,426.56	65,426.56
64043	1,007.14	1,437.24	430.10	1,000.00	0.00	1,437.24	-437.24	-437.24
64045	118,052.90	118,052.90	0.00	146,000.00	0.00	118,052.90	27,947.10	27,947.10
64046	170,540.47	202,414.77	31,874.30	263,000.00	13,132.00	215,546.77	47,453.23	60,585.23

Code	Spare (2018)	Spare 2019
64041 (diamond)	~20 kCHF	
64042 (BSRT/TPSC4)	~20 kCHF	
64045 (SBDS)	~ (TBD)	

EVM

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Conclusions and outlook

- Completed (spending-wise)
 - Fast BCT project complete
 - Head-tail complete
 - BGI system complete
- On-going:
 - Diamond BLM project to be completed (2018)
 - SBDS for BI: review layout with cables
 - MOPOS upgrade (LS2): close look during Q4/2018 and LS2
 - Fibres (EN-EL) on track
 - BSRT (MME study)
 - TPSC4 on track