



# Collimation Readiness

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*On behalf of the LHC Collimation and OP teams*

# Aperture Reference for Nominal Cycle

## Aperture Measurements at 30cm Summary

M. D'Andrea, K. Dewhurst, P. Hermes, B. Lindstrom

We measured the aperture at 30cm using the usual approach by collimator scan and BBA. The usual issues from coupling between planes were observed, similar to the measurements in 2022. The results are as follows:

### **B1H: Bottleneck 2L5**

Collimator scan result  $-11.5$  sigma, BBA result  $>10$  sigma.

2022 result: 11.5 to 12.0 sigma

### **B1V: Bottleneck 3L1**

Collimator scan result 10.2 to 10.7 sigma, BBA result  $>10.8$  sigma.

2022 result: 9.5 to 10.0 sigma

### **B2H: Bottleneck 2R5**

Collimator scan result 12.0 to 12.5 sigma, BBA result 12.0 sigma.

2022 result: 12.5 to 13.0 sigma

### **B2V: Bottleneck 3R1**

Collimator scan result 9.9 to 10.4 sigma, BBA result  $>9.6$  sigma.

2022 result: 9.5 to 10.0 sigma

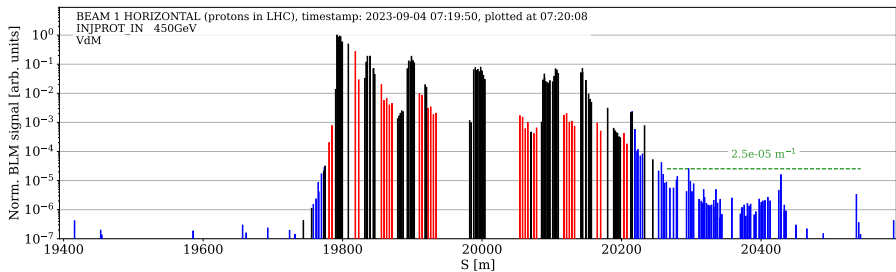
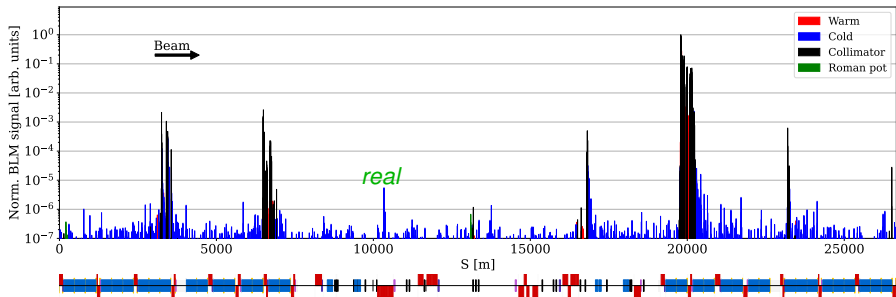
All bottleneck locations as expected, aperture values okay.

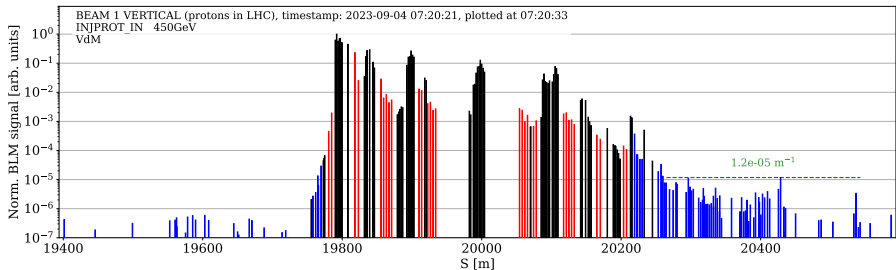
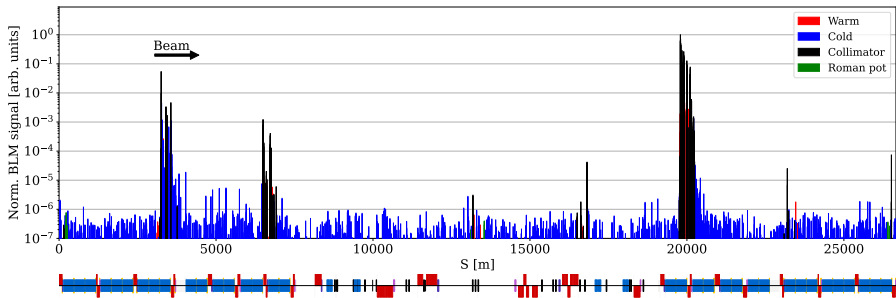
# Loss Maps Matrix for VdM

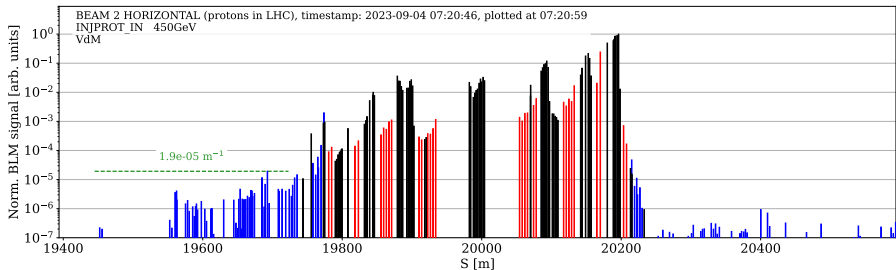
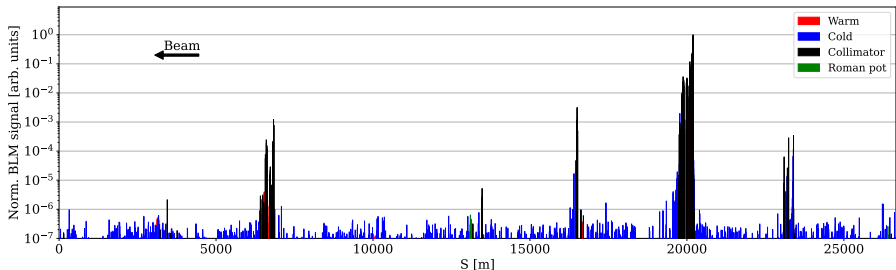
	450 GeV		6.8 TeV		
	Injection		Top Energy		
	Prot. IN	Prot. OUT	FT	QC	Collisions
B1H	✓	✓	✓	✓	✓
B1V	✓	✓	✓	✓	✓
B2H	✓	✓	✓	✓	✓
B2V	✓	✓	✓	✓	✓
+dp/p	✓	✓			✓
-dp/p	✓	✓			✓
ASD					✓

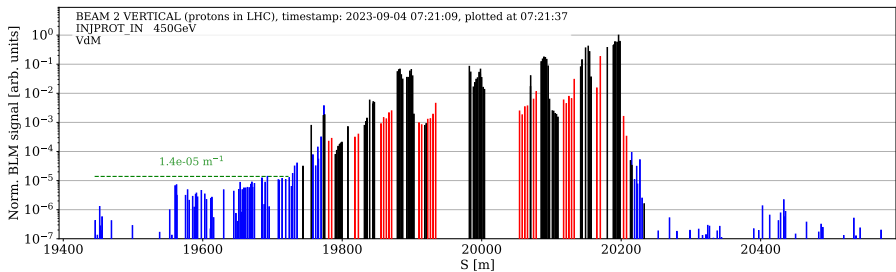
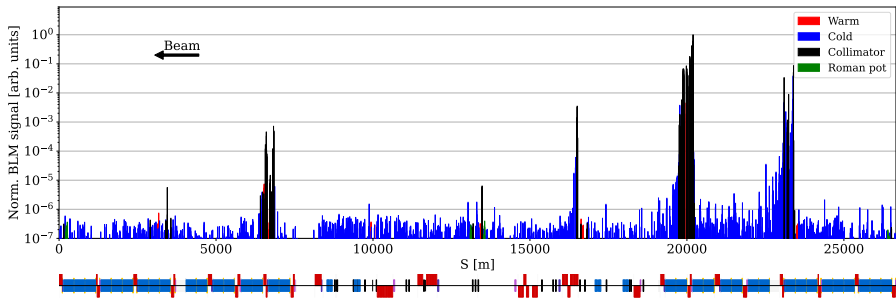


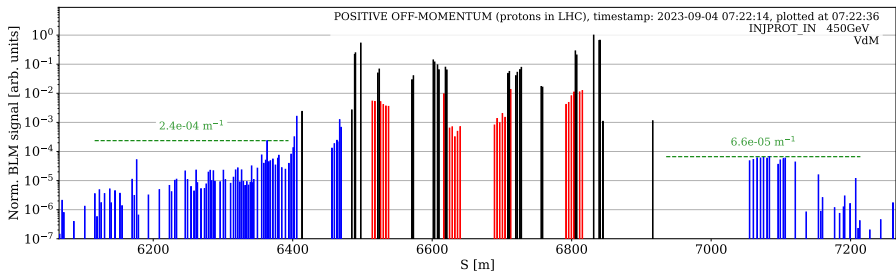
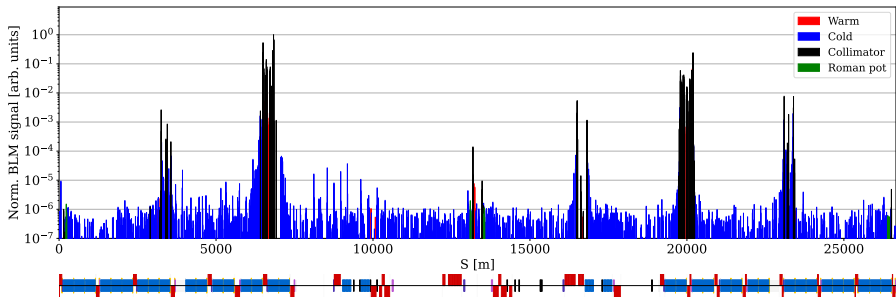
# VdM - Injection Protection IN

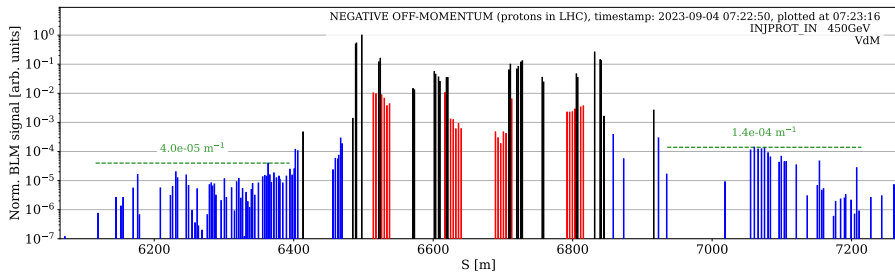
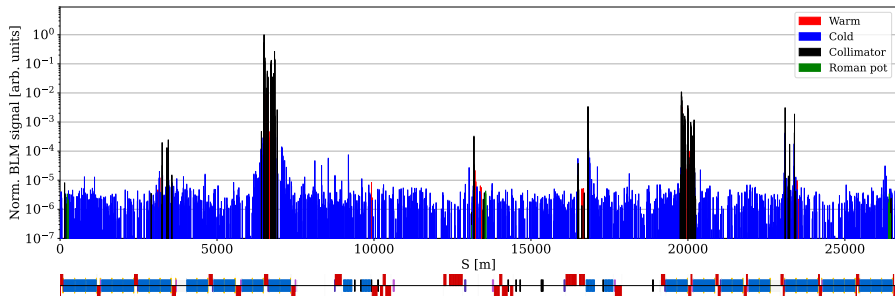






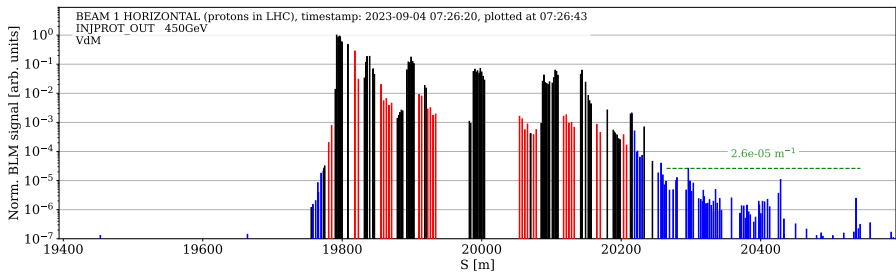
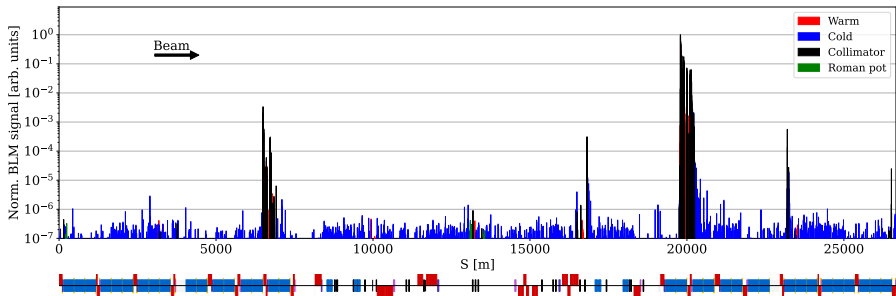


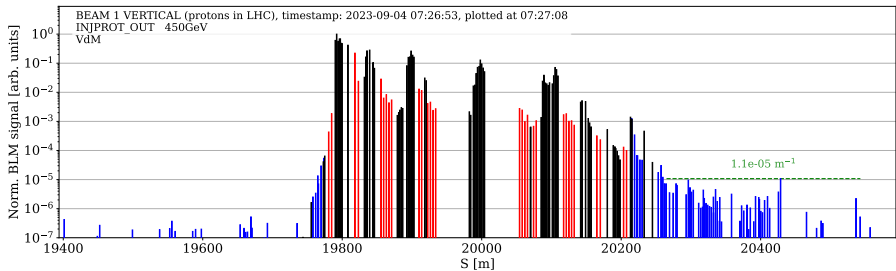
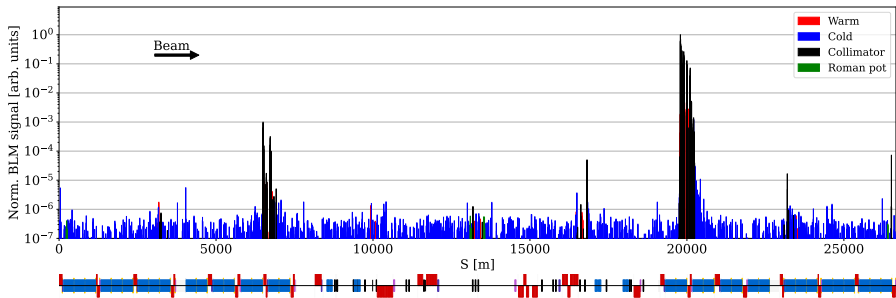


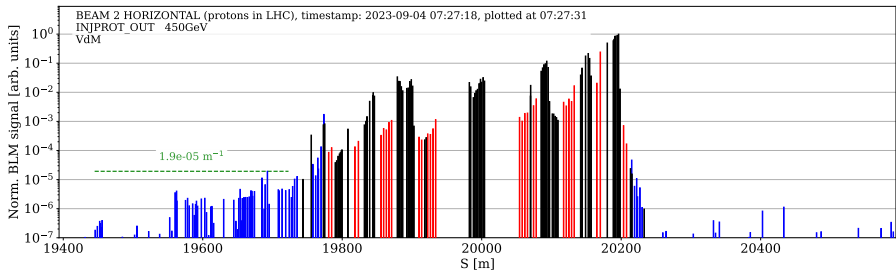
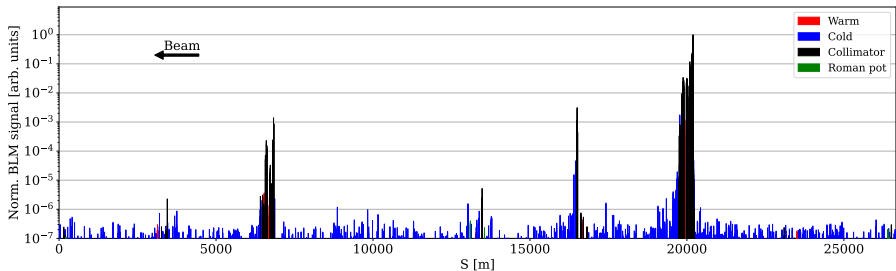


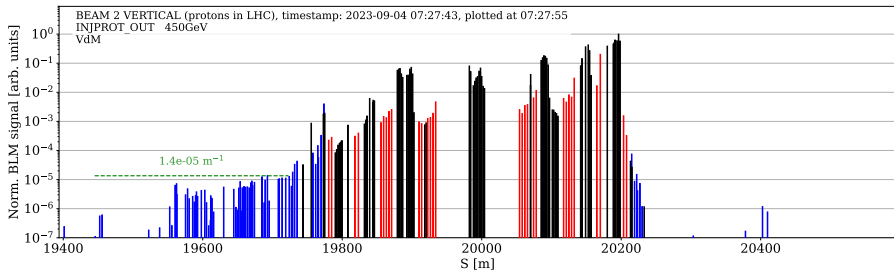
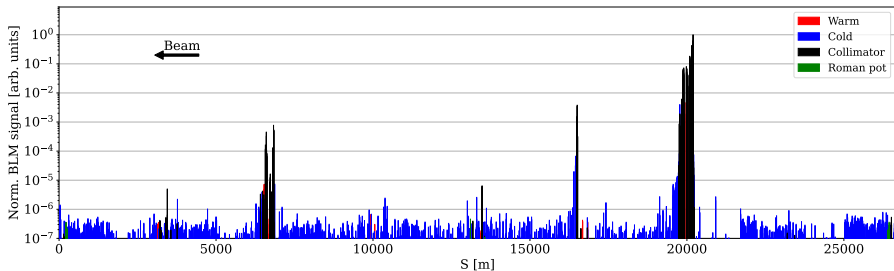
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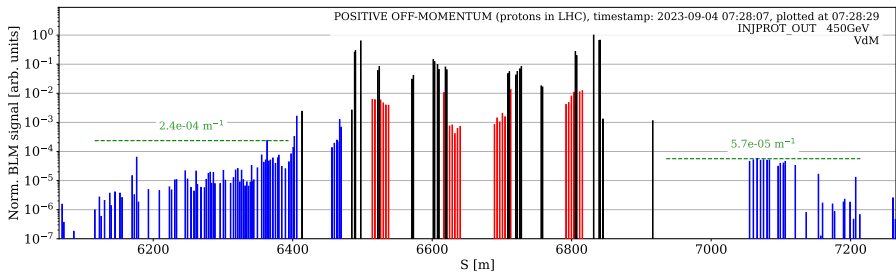
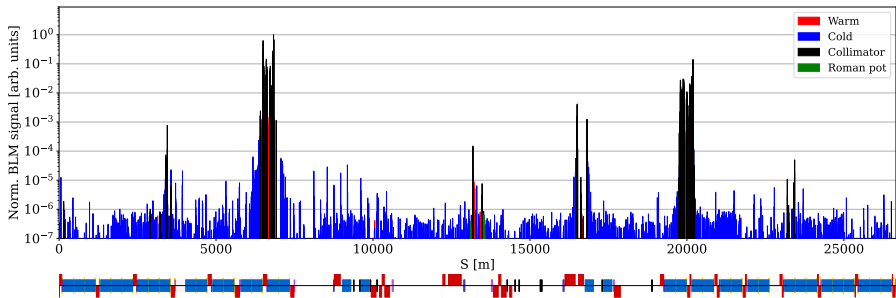


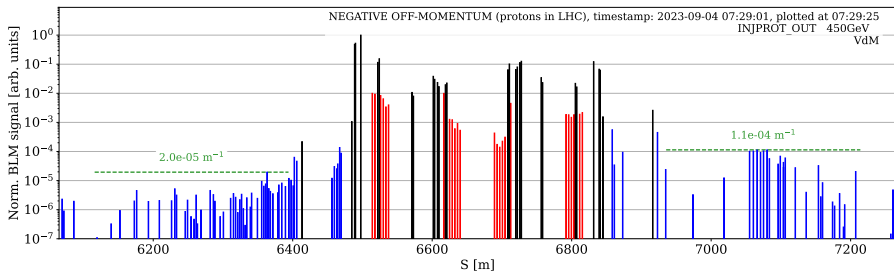
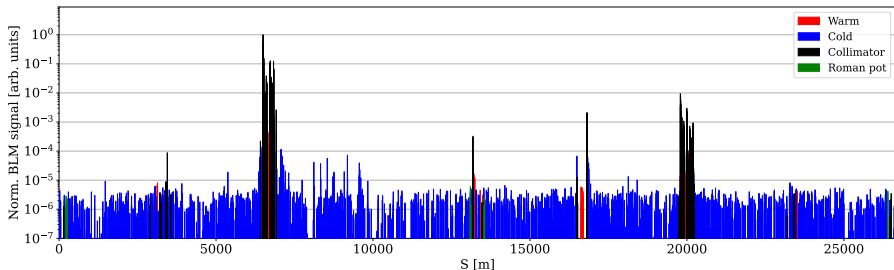




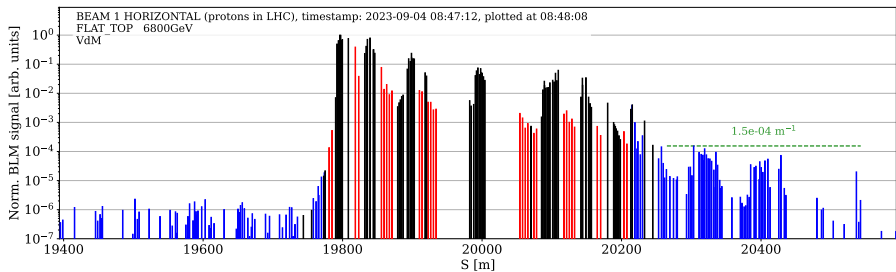
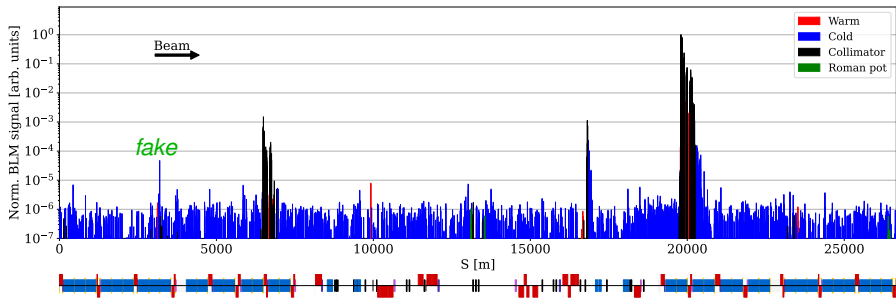




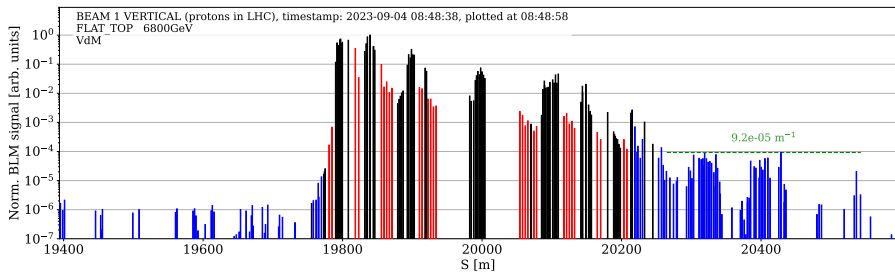
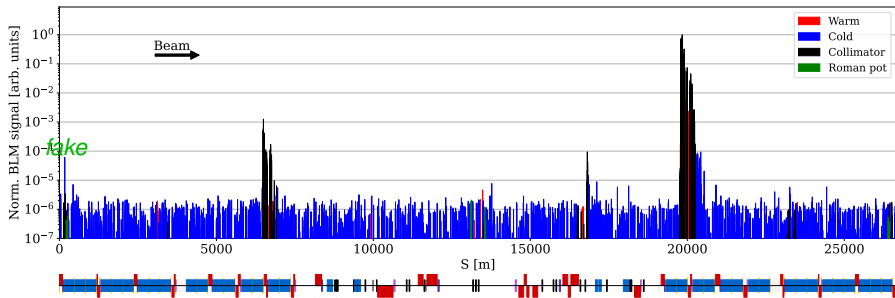


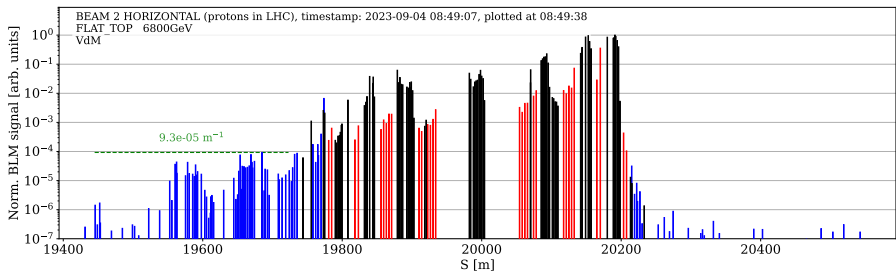
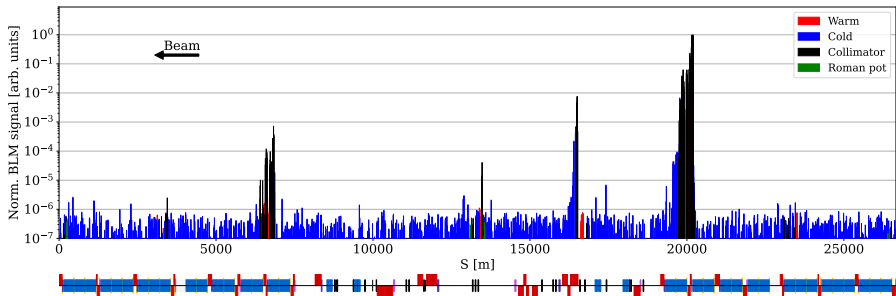


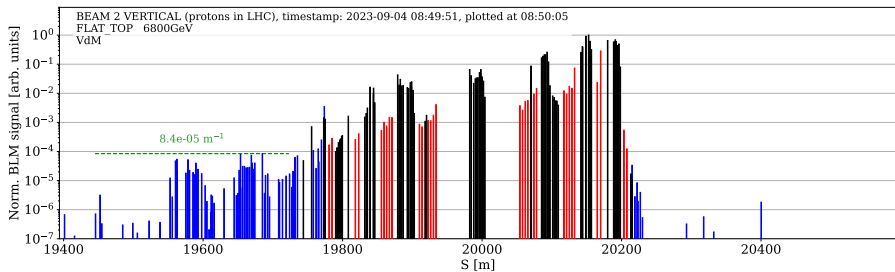
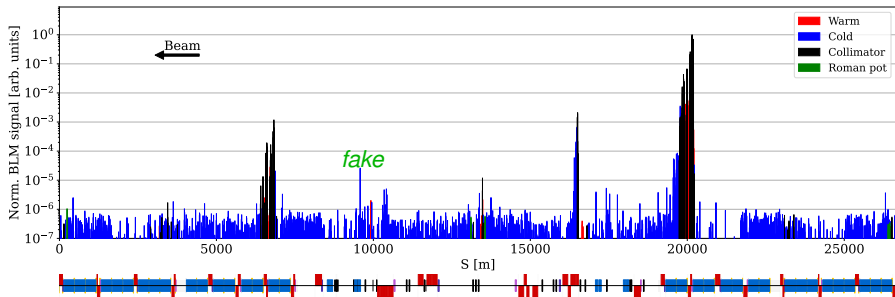
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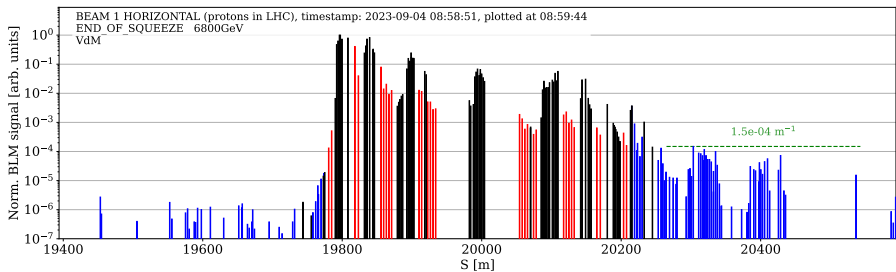
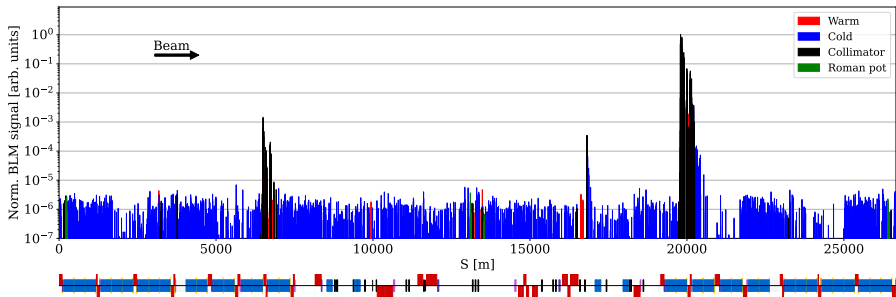


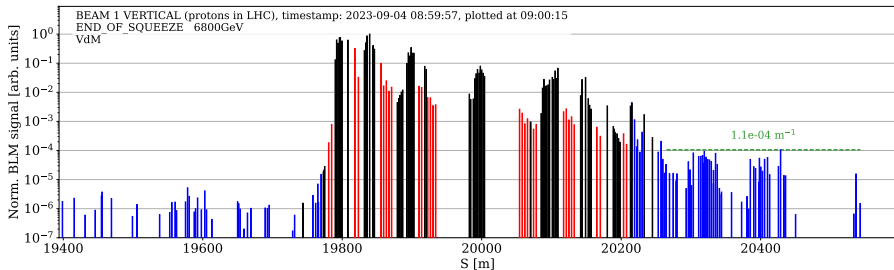
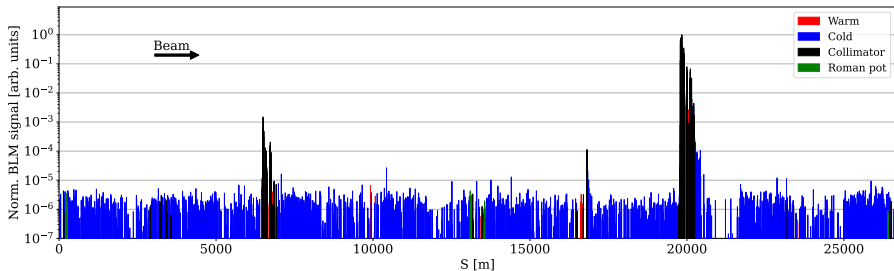


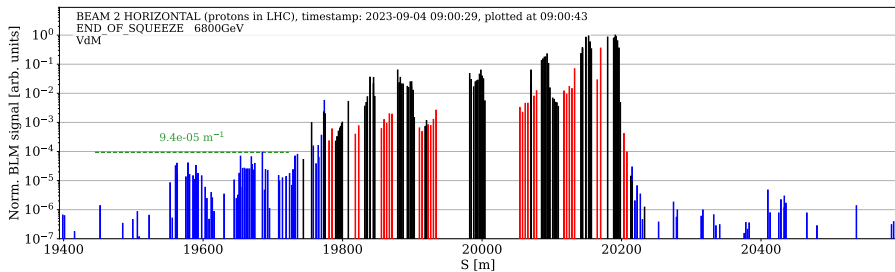
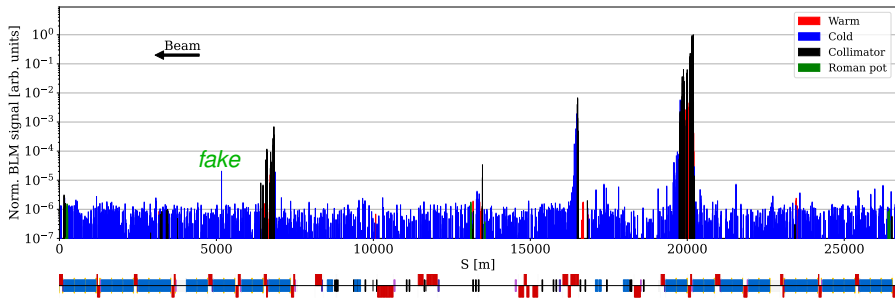


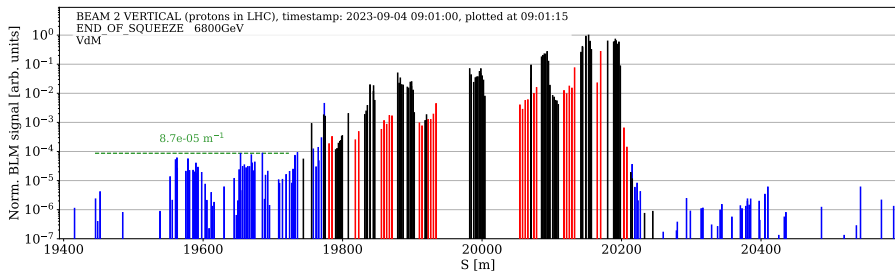
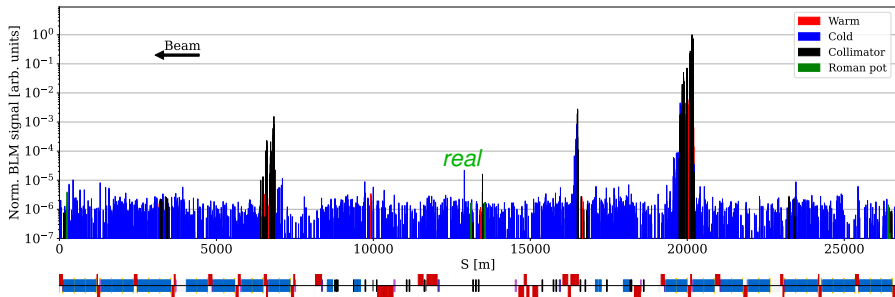


# VdM - Tune Change



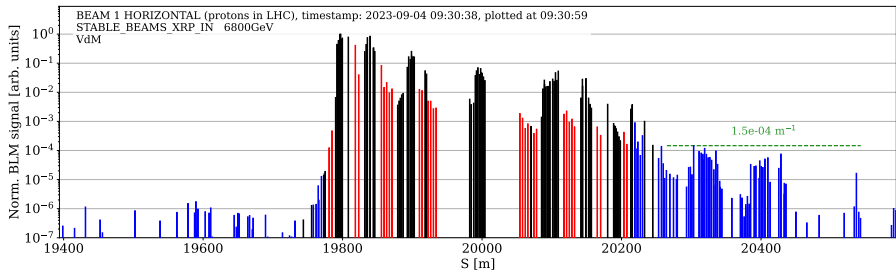
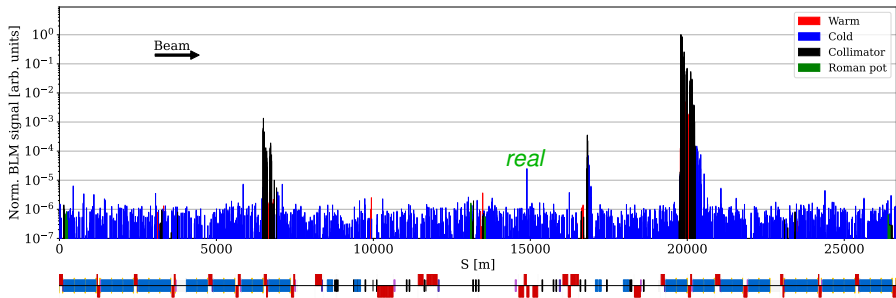


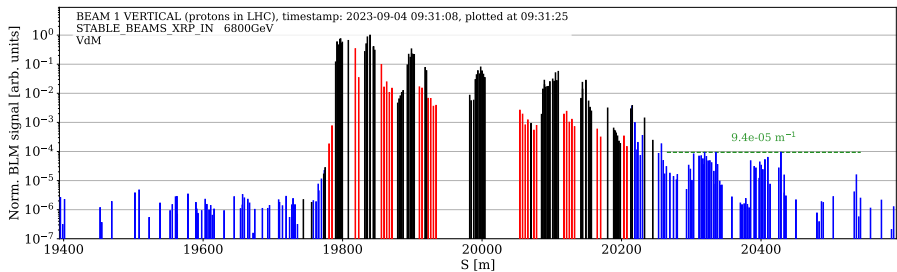
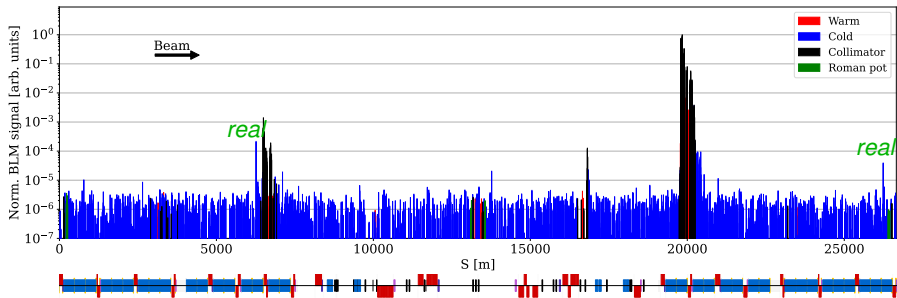


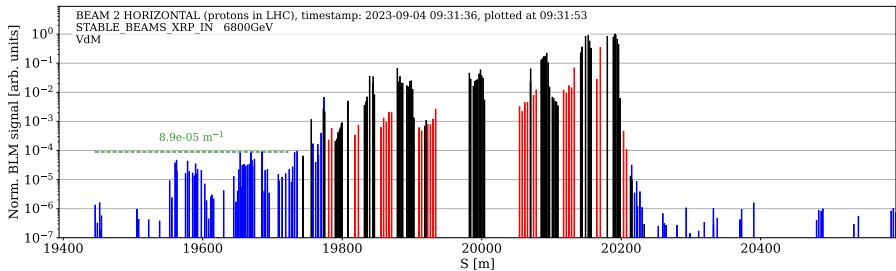
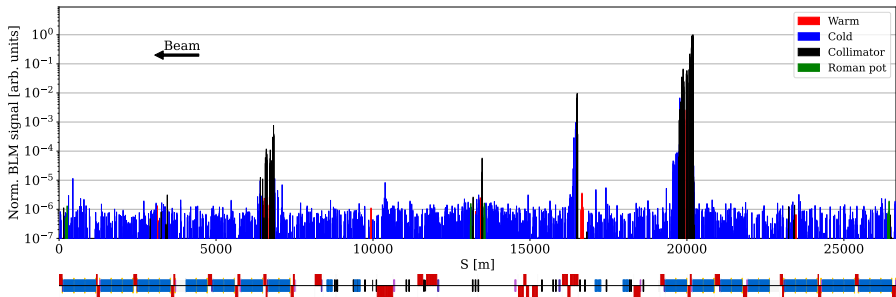


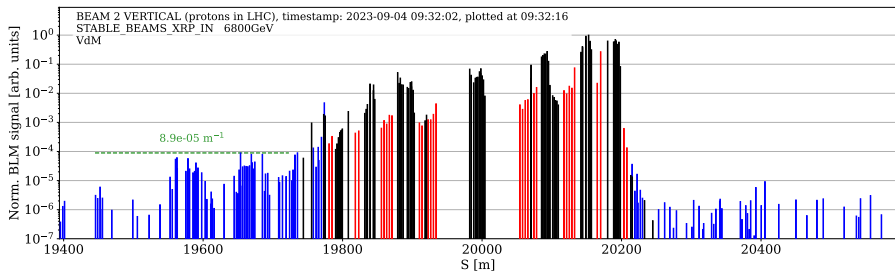
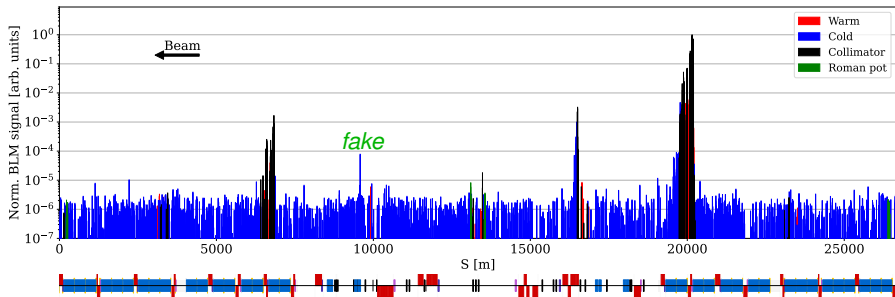


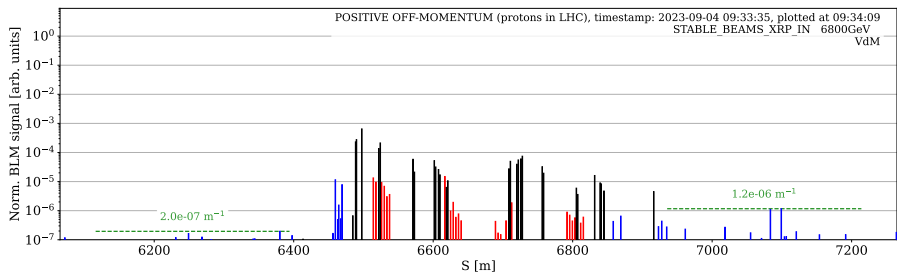
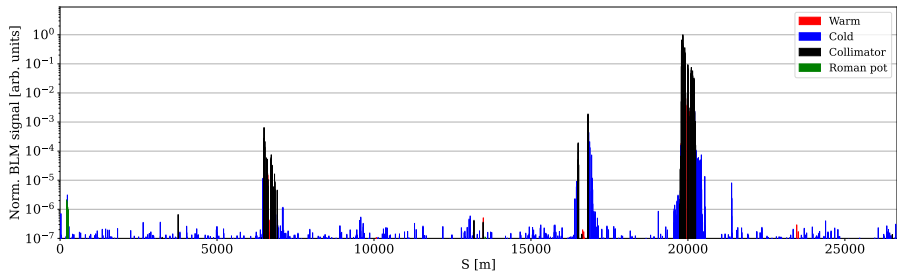
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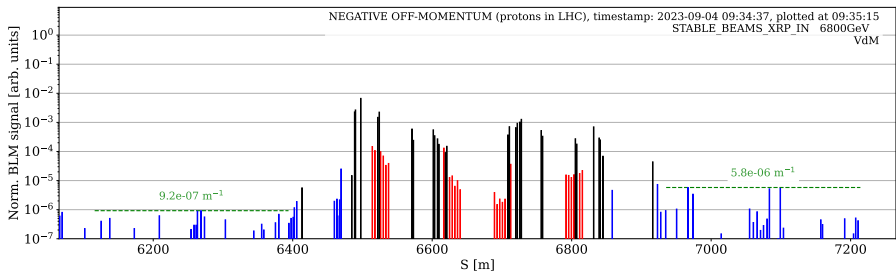
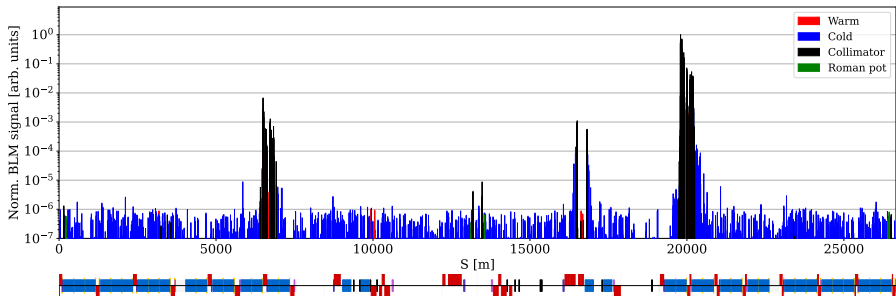


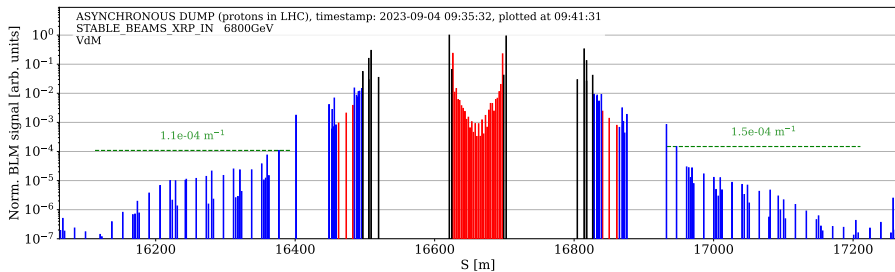
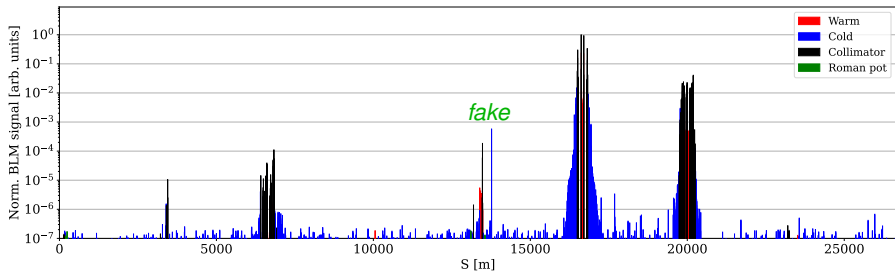
















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