

# PDFs and Low x at LHeC / FCC-he

Monday 30 Sep 2019, 15:00 → 16:00 Europe/Zurich

Vidyo (CERN)

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Geneva, June 14, 2012



## A Large Hadron Electron Collider at CERN

Report on the Physics and Design  
Concepts for Machine and Detector

LHeC Study Group



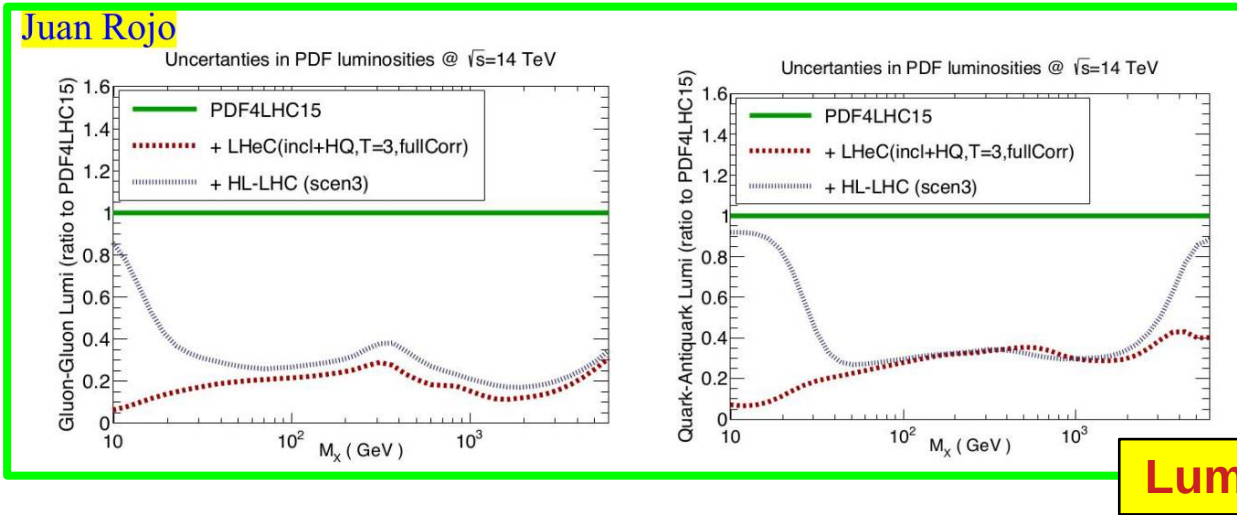
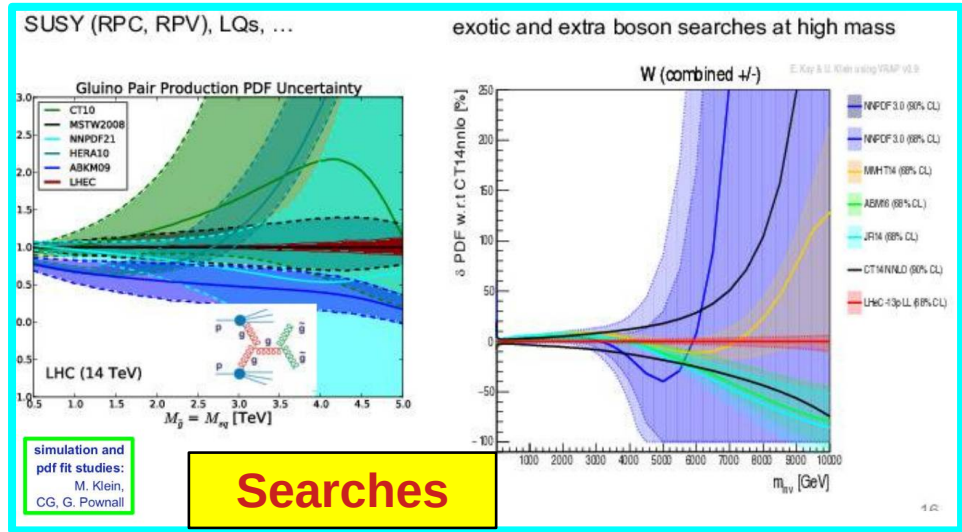
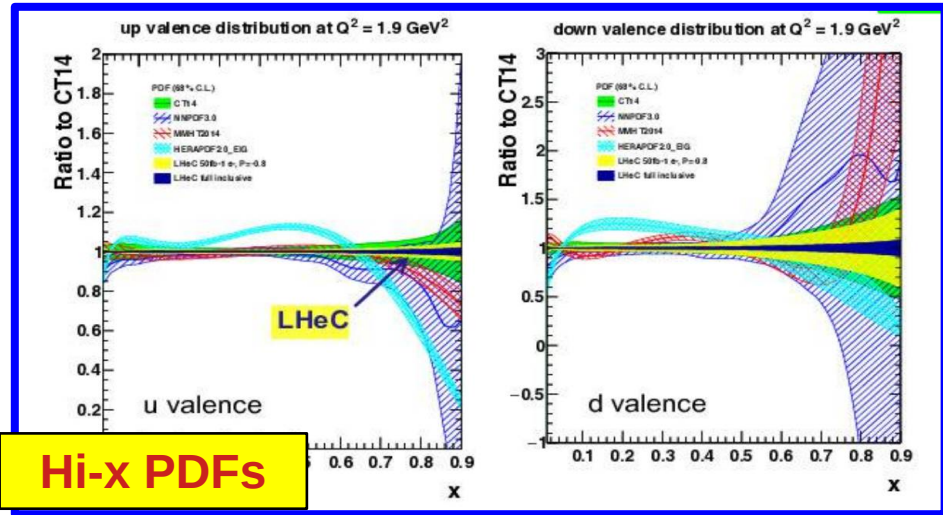
## II Physics

### 3 Precision QCD and Electroweak Physics

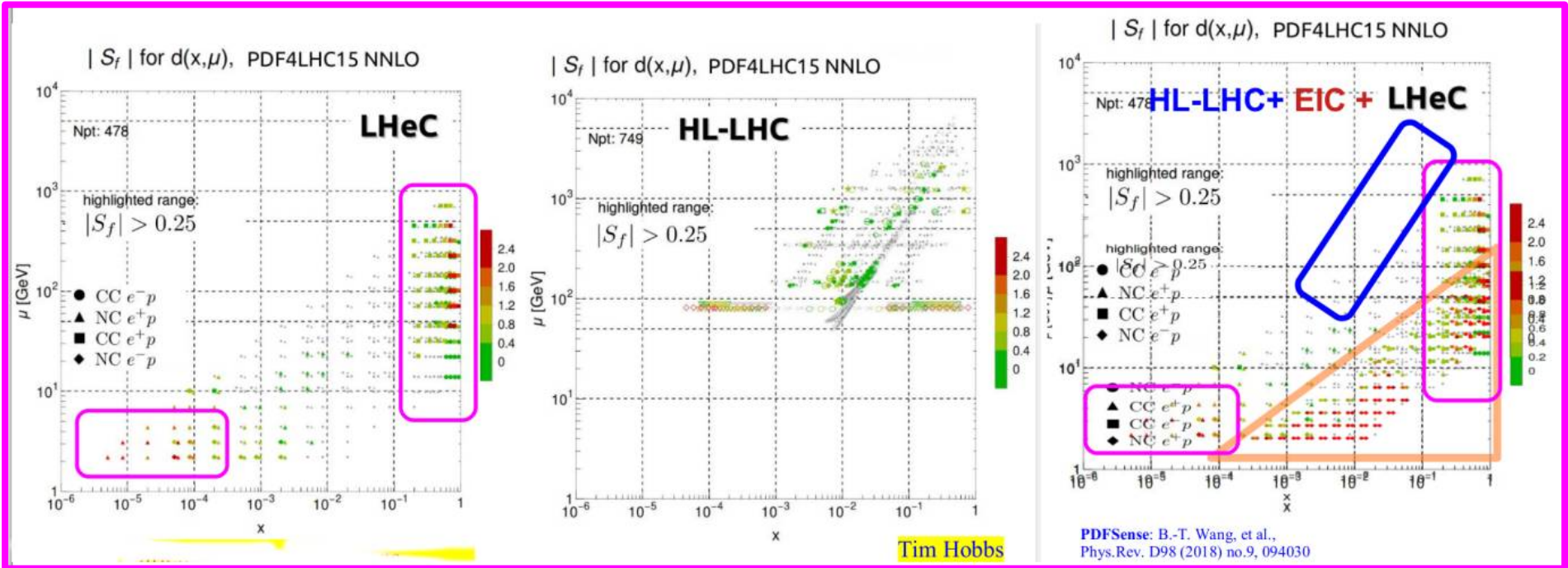
3.1	Inclusive deep inelastic scattering . . . . .	
3.1.1	Cross sections and structure functions . . . . .	
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3.2.4	Strange quarks . . . . .	
3.2.5	Releasing PDF constraints . . . . .	
3.2.6	Top quarks . . . . .	
3.3	Gluon distribution . . . . .	
3.4	Prospects to measure the strong coupling constant . . . . .	
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3.5	Electron-deuteron scattering . . . . .	
3.6	Charm and beauty production . . . . .	
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update will be shorter  
need to be selective

3.6.3	Charm and beauty production in DIS . . . . .	
3.6.4	Determination of the charm mass parameter . . . . .	
3.6.5	Intrinsic heavy flavour . . . . .	
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3.9.3	Determination of the weak mixing angle . . . . .	



Preliminary Suggestions

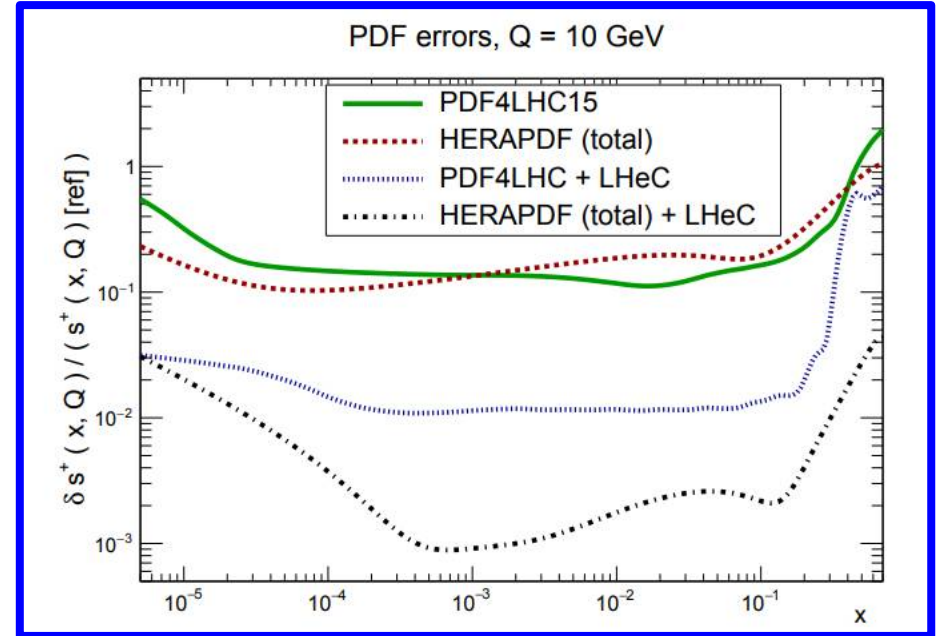
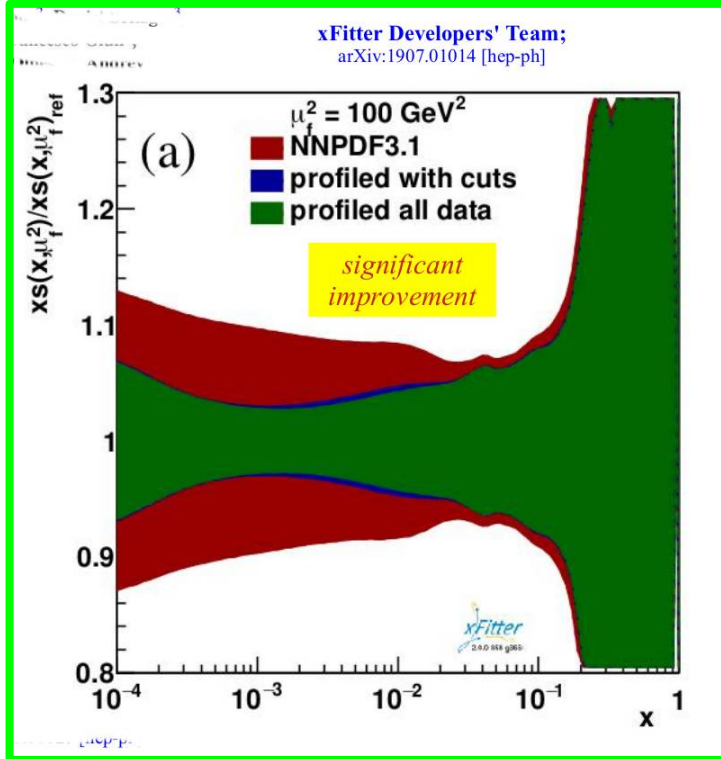


Tim Hobbs

Complementary

Preliminary  
Suggestions

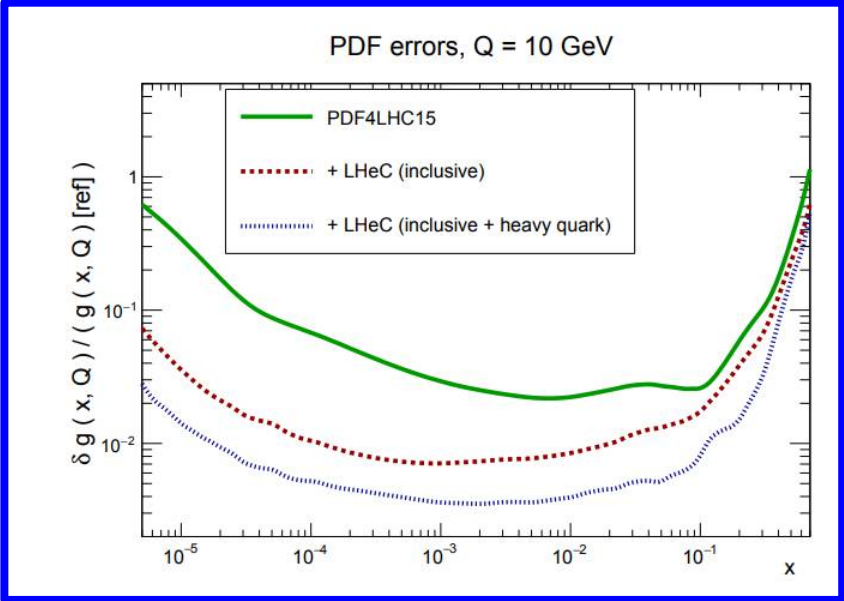
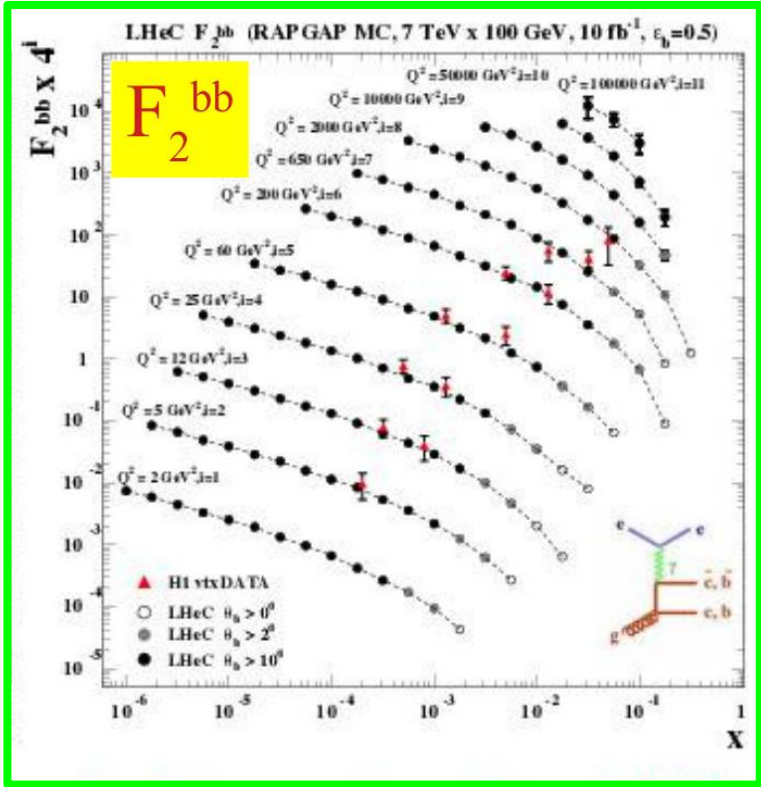
Strange



Preliminary  
Suggestions

R.A. Khalek, S. Bailey, J.Gao, L. Harland-Lang, J. Rojo,  
arXiv:1906.10127 [hep-ph]

# Heavy Quarks



R.A. Khalek, S. Bailey, J.Gao, L. Harland-Lang, J. Rojo,  
 arXiv:1906.10127 [hep-ph]

Preliminary  
 Suggestions