June 3, 2010

PROPOSAL

Helmholtz Alliance Mini-Workshop "Multiple Parton Scattering at the LHC", DESY Hamburg, 13-15 September 2010.

Multiple parton interactions are one of the most common, yet poorly understood, phenomena at the LHC. The results of the first LHC measurements differ substantially from predictions provided by Monte Carlo simulations. The modelling implemented in Monte Carlo generators aims to describe multiple scattering throughout the whole range of scales, from soft to hard. At the same time, much work is ongoing to improve theoretical understanding of multiple scatterings at both low and high p_T, and study the related phenomenology at the LHC.

Therefore it is extremely important to combine theoretical efforts in order to achieve a better description of multiple interactions, and, in general, the underlying event. The workshop we propose will bring together leading experts in the field of calculating high-p_T double parton scattering cross sections, modelling of multiparton scattering in Monte Carlo generators and studies of effects at small momentum scales, as well as experimentalists involved in the analysis of multiple scattering. During a two-and-a-half day event we plan to have concise presentations followed by discussion sessions. Moreover, the workshop is expected to serve as a "kick-off" meeting for establishing an Analysis working group on multiple interactions.

We intend to invite the following speakers:

-) from DESY and University of Hamburg:	-) from other institutions:	
	J. Butterworth	P. Skands
J. Bartels	J. Collins	D. Soper
M. Diehl	R. Field	J. Stirling
H. Jung	S. Gieseke	R. Thorne
	M. Seymour	D. Treleani
	T. Sjostrand	B. Webber

In order to cover the costs of travel and accommodation of invited key speakers we would like to ask the Analysis Project Board of the Helmholtz Alliance "Physics at the Terascale" for financial support of 4000 euros. Should any additional information regarding the proposed workshop be needed, please contact us.

Anna Kulesza (RWTH Aachen)
Zoltán Nagy (DESY)