

**Imperial College
London**

Workshop on $b \rightarrow sll$ processes

April 2014

Welcome

Intention of the workshop is to exchange ideas and in general increase understanding among all of us

Ground rules

Presentations are meant as a way to come up with ideas.
Feel free to interrupt at any time

The convenor of a session should feel free to stop discussion that is not inclusive

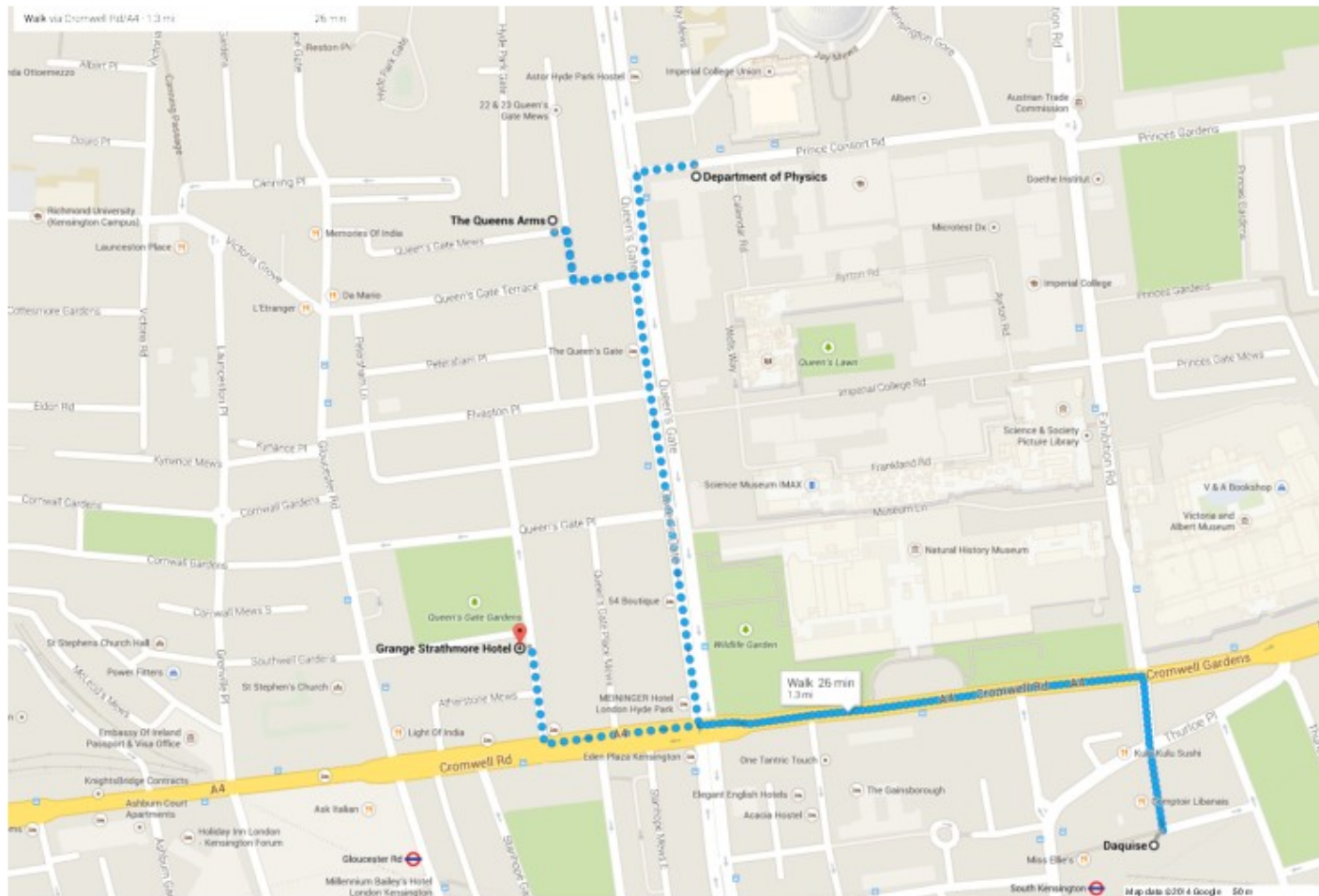
We have a set of “minute takers”. A summary should be available in about a week.

Just ask the locals for help with anything

Directions

Google Maps

<https://www.google.co.uk/maps/preview?oe=utf-8&client=firefox-a&channel=sl&q=sw7+2bw..>



Food and drinks

Lunch today and tomorrow is provided

Dinner tonight at “Daquise” also provided.

Thanks for your dinner choices – the last ones can be made tonight

Dinner tomorrow is on your own

We will provide a few suggested places in the neighbourhood

Dinner

Poll "Dinner at b -> s ll workshop"

<http://doodle.com/7z9f9iy8ps46usie>

	Dumplings - Meat	Dumplings - Cheese, potato & onion	Dumplings - Cabbage	Main - Pan fried fillet of cod with horseradish sauce. Served with fresh spinach, and stewed carrots	Main - Beef roulade stuffed with bacon, pickles and prune. Served with buckwheat and beetroot	Main - Veal escallops sautéed with fresh tomato, garlic, white wine, cream. Served with stewed carrots and egg noodles	Main - Vegetarian - stuffed cabbage leaves
Ulrik Egede		OK		OK			
Sebastian Jaeger			OK		OK		
Aoife Bharucha			OK	OK			
Adrian		OK		OK			
Alex Shires		OK					OK
Martino Borsato		OK				OK	
Patrick Owen		OK			OK		
Danny	OK				OK		
Tamsin Nooney		OK					OK
Sam Cunliffe	OK				OK		
Francesco Polci			OK		OK		
Tom Blake	OK				OK		
Alexander Khodjamirian		OK			OK		
David Straub		OK		OK			

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Dinner

<http://doodle.com/7z9f9iy8ps46usie>

	Dumplings - Meat	Dumplings - Cheese, potato & onion	Dumplings - Cabbage	Main - Pan fried fillet of cod with horseradish sauce. Served with fresh spinach, and stewed carrots	Main - Beef roulade stuffed with bacon, pickles and prune. Served with buckwheat and beetroot	Main - Veal escallops sautéed with fresh tomato, garlic, white wine, cream. Served with stewed carrots and egg noodles	Main - Vegetarian - stuffed cabbage leaves
Participant 15	OK			OK			
Lars Hofer		OK				OK	
Sam	OK					OK	
gudrun			OK	OK			
RomanZ						OK	
Mikolaj Misiak			OK		OK		
Diganta Das	OK					OK	
Uli Haisch	OK					OK	
Christoph Bobeth			OK		OK		
Christoph Langenbruch	OK				OK		
Mitesh	OK				OK		
Count	9	9	6	6	11	6	2

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A small present from LHCb

arXiv.org > hep-ex > arXiv:1403.8044

Search or Article-Id

High Energy Physics - Experiment

Differential branching fractions and isospin asymmetries of $B \rightarrow K^* \mu^+ \mu^-$ decays

LHCb collaboration: R. Aaij, B. Adeva, M. Adinolfi, A. Affolder, Z. Ajaltouni, J. Albrecht, F. Alessio, M. Alexander, S. Ali, G. Alkhazov, P. Alvarez Cartelle, A.A. Alves Jr, S. Amato, S. Amerio, Y. Amhis, L. An, L. Anderlini, J. Anderson, R. Andreassen, M. Andreotti, J.E. Andrews, R.B. Appleby, O. Aquines Gutierrez, F. Archilli, A. Artamonov, M. Artuso, E. Aslanides, G. Auriemma, M. Baalouch, S. Bachmann, J.J. Back, A. Badalov, V. Balagura, W. Baldini, R.J. Barlow, C. Barschel, S. Barsuk, W. Barter, V. Batozskaya, Th. Bauer, A. Bay, J. Beddow, F. Bedeschi, I. Bediaga, S. Belogurov, K. Belous, I. Belyaev, E. Ben-Haim, G. Bencivenni, S. Benson, J. Benton, A. Berezhnoy, R. Bernet, M.-O. Bettler, M. van Beuzekom, A. Bien, S. Bifani, T. Bird, A. Bizzeti, P.M. Bjørnstad, T. Blake, F. Blanc, et al. (632 additional authors not shown)

(Submitted on 31 Mar 2014)

The isospin asymmetries of $B \rightarrow K^* \mu^+ \mu^-$ and $B \rightarrow K^* \mu^+ \mu^-$ decays and the partial branching fractions of the $B^0 \rightarrow K^0 \mu^+ \mu^-$, $B^+ \rightarrow K^+ \mu^+ \mu^-$ and $B^+ \rightarrow K^{*+} \mu^+ \mu^-$ decays are measured as functions of the dimuon mass squared, q^2 . The data used correspond to an integrated luminosity of 3.6 fb^{-1} from proton-proton collisions collected with the LHCb detector at centre-of-mass energies of 7 TeV and 8 TeV in 2011 and 2012, respectively. The isospin asymmetries are both consistent with the Standard Model expectations. The three measured branching fractions, while individually consistent, all favour lower values than their respective Standard Model predictions.

Comments: 23 pages, 4 figures, 7 tables

Subjects: High Energy Physics - Experiment (hep-ex)

Report number: LHCb-PAPER-2014-006, CERN-PH-EP-2014-055

Cite as: arXiv:1403.8044 [hep-ex]

(or arXiv:1403.8044v1 [hep-ex] for this version)

A small present from LHCb

arXiv.org > hep-ex > arXiv:1403.8044

Search or Article-Id

High Energy Physics - Experiment

Differential branching fractions and isospin asymmetries of $B \rightarrow K^* \mu^+ \mu^-$ decays

LHCb collaboration: R. Aaij, B. Adeva, M. Adinolfi, A. Affolder, Z. Ajaltouni, J. Albrecht, F. Alessio, M. Alexander, S. Ali, G. Alkhazov, P. Alvarez Cartelle, A.A. Alves Jr, S. Amato, S. Amerio, Y. Amhis, L. An, L. Anderlini, J. Anderson, R. Andreassen, M. Andreotti, J.E. Andrews, R.B. Appleby, O. Aquines Gutierrez, F. Archilli, A. Artamonov, M. Artuso, E. Aslanides, G. Auriemma, M. Baalouch, S. Bachmann, J.J. Back, A. Badalov, V. Balagura, W. Baldini, R.J. Barlow, C. Barschel, S. Barsuk, W. Barter, V. Batozskaya, Th. Bauer, A. Bay, J. Beddow, F. Bedeschi, I. Bediaga, S. Belogurov, K. Belous, I. Belyaev, E. Ben-Haim, G. Bencivenni, S. Benson, J. Benton, A. Berezhnuy, R. Bernet, M.-O. Bettler, M. van Beuzekom, A. Bien, S. Bifani, T. Bird, A. Bizzeti, P.M. Bjørnstad, T. Blake, F. Blanc, et al. (632 additional authors not shown)

(Submitted on 31 Mar 2014)

The isospin asymmetries of $B \rightarrow K \mu^+ \mu^-$ and $B \rightarrow K^* \mu^+ \mu^-$ decays and the partial branching fractions of the $B^0 \rightarrow K^0 \mu^+ \mu^-$, $B^+ \rightarrow K^+ \mu^+ \mu^-$ and $B^+ \rightarrow K^{*+} \mu^+ \mu^-$ decays are measured as functions of the dimuon invariant mass squared. The measurements are performed with data collected by the LHCb detector in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV.

arXiv.org > hep-ex > arXiv:1403.8045

Search or Article-Id

High Energy Physics - Experiment

Angular analysis of charged and neutral $B \rightarrow K \mu^+ \mu^-$ decays

LHCb collaboration: R. Aaij, B. Adeva, M. Adinolfi, A. Affolder, Z. Ajaltouni, J. Albrecht, F. Alessio, M. Alexander, S. Ali, G. Alkhazov, P. Alvarez Cartelle, A.A. Alves Jr, S. Amato, S. Amerio, Y. Amhis, L. An, L. Anderlini, J. Anderson, R. Andreassen, M. Andreotti, J.E. Andrews, R.B. Appleby, O. Aquines Gutierrez, F. Archilli, A. Artamonov, M. Artuso, E. Aslanides, G. Auriemma, M. Baalouch, S. Bachmann, J.J. Back, A. Badalov, V. Balagura, W. Baldini, R.J. Barlow, C. Barschel, S. Barsuk, W. Barter, V. Batozskaya, Th. Bauer, A. Bay, J. Beddow, F. Bedeschi, I. Bediaga, S. Belogurov, K. Belous, I. Belyaev, E. Ben-Haim, G. Bencivenni, S. Benson, J. Benton, A. Berezhnuy, R. Bernet, M.-O. Bettler, M. van Beuzekom, A. Bien, S. Bifani, T. Bird, A. Bizzeti, P.M. Bjørnstad, T. Blake, F. Blanc, et al. (632 additional authors not shown)

(Submitted on 31 Mar 2014)

The angular distributions of the rare decays $B^+ \rightarrow K^+ \mu^+ \mu^-$ and $B^0 \rightarrow K_S^0 \mu^+ \mu^-$ are studied with data corresponding to 3 fb^{-1} of integrated luminosity, collected in proton-proton collisions at 7 and 8 TeV centre-of-mass energies with the LHCb detector. The angular distribution is described by two parameters, F_H and the forward-backward asymmetry of the dimuon system A_{FB} , which are determined in bins of the dimuon mass squared. The parameter F_H is a measure of the contribution from (pseudo)scalar and tensor amplitudes to the decay width. The measurements of A_{FB} and F_H reported here are the most precise to date and are compatible with predictions from the Standard Model.

Comments: 27 pages, 11 figures, 2 tables

Subjects: High Energy Physics - Experiment (hep-ex)

Report number: LHCb-PAPER-2014-007, CERN-PH-EP-2014-056

Cite as: arXiv:1403.8045 [hep-ex]

(or arXiv:1403.8045v1 [hep-ex] for this version)