Introduction

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HSG5 H->bb weekly meeting, 6 December 2011

Plan for WH/ZH paper

- Following plan by Phys.Coor. and Higgs convenors, CONF notes changed to papers
  - Only results from papers accepted for ATLAS combination to be released **end of January**
  - To be released at same time as CMS results
- Same CONF note editors:
  - Andy Mehta, Giacinto Piacquadio and Paul Thompson
- Editorial Board will need another element - 4 members for paper editorial boards
- Aiming for analysis approval in Higgs meeting Thursday next week (15 December)
  - Should have enough time for interactions with Ed.Board in January
- Links:
  - COM note (ATL-COM-PHYS-2011-1648): https://cdsweb.cern.ch/record/1404176?
  - SVN area for note: https://svnweb.cern.ch/trac/atlasgrp/browser/Physics/Higgs/HSG5/data_7TeV/ATL_COM_PHYS_2011_1648

Plan for WH/ZH paper

To-do list:

- Paul, Andy, Carl, Benedict:
  - Look into constraining JES using the M(W->jj) in tt->blv bjj
  - Establish procedure to get the Wbb shape in WH
- Michiel, Giacinto:
  - Acceptance uncertainty from theory
  - Theory uncertainty on signal shape and effect on p_T^H bins
- In parallel (Jonas, anyone else?):
  - Cross-check analyses if ready
  - Anything else?
- Would be happy if we can split tasks to converge in this timescale (see today's talks)

Next steps:

- Freeze cuts today – discussion after talk by Paul
- Final dress-rehearsal in next week's meeting

B-tagging uncertainty

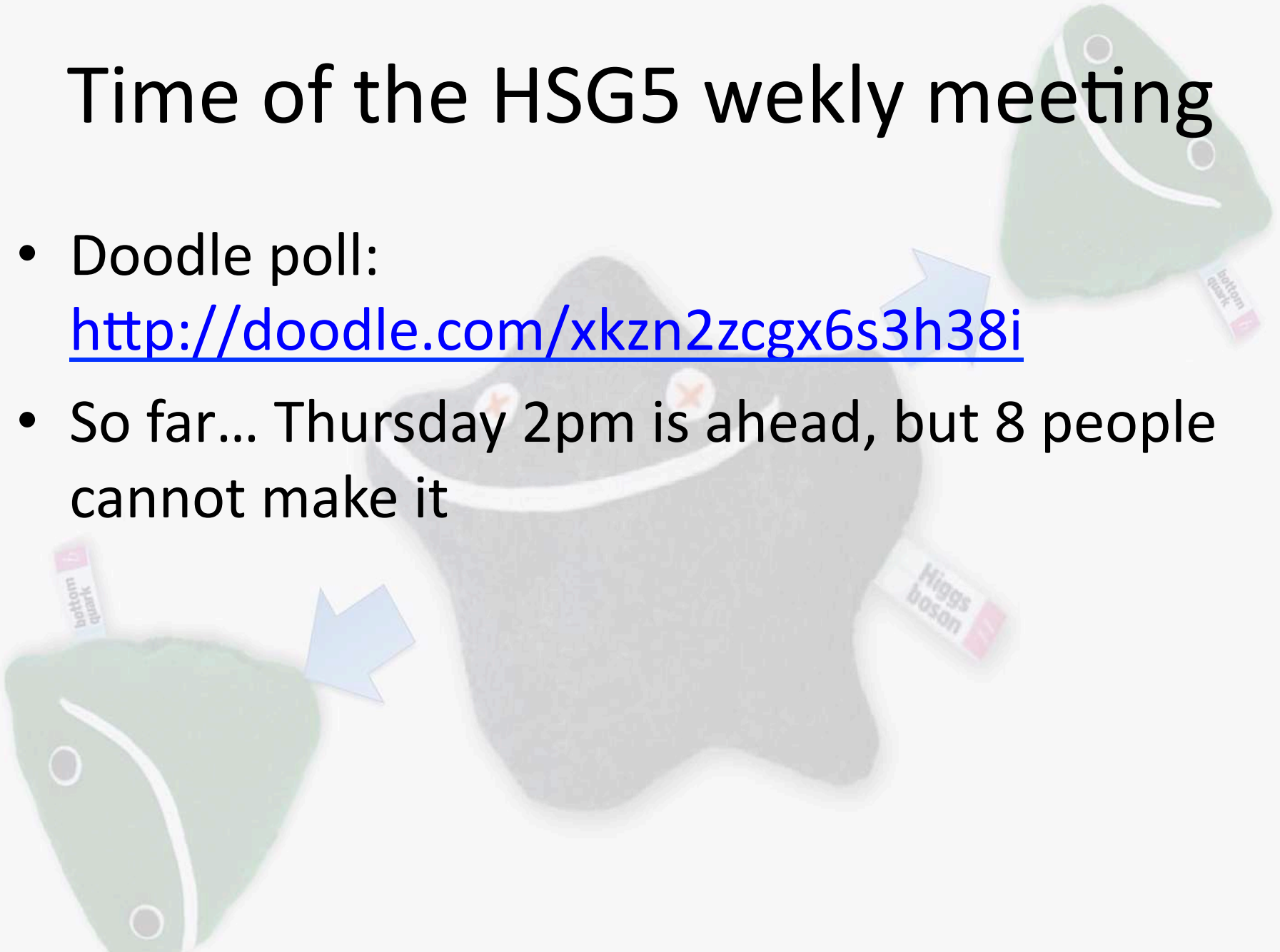
- Meeting yesterday with b-tagging convenors
- Plan is to use preliminary (MC11a) scale factors for now and replace asap with MC11b factors – smaller MC statistical uncertainty
- B-tagging convenors will revisit safety factor of 2x enhancement in errors of highest p_T^{jet} bin (>140GeV)
- Will get new scale factors by end of January
  - Will include more MC stats for pTrel templates
  - Will include combined results from pTrel and ttbar
  - Not for current paper!

Other analyses

- Boosted VH:
  - COM note (ATL-COM-PHYS-2011-1648): https://cdsweb.cern.ch/record/1403076?ln=en
  - SVN: https://svnweb.cern.ch/trac/atlasgrp/browser/Physics/Higgs/HSG5/data_7TeV/ATL_COM_PHYS_2011_1638
  - Placeholder for intermediate results
  - I suggest we do the same for other analyses!
- ZH->vvbb, VBF, ttH

Time of the HSG5 wekly meeting

- Doodle poll: http://doodle.com/xkzn2zcgx6s3h38i
- So far… Thursday 2pm is ahead, but 8 people cannot make it



My to-do list

- Ask Ed.Board members to continue for paper
- Make SVN area for COM for other analyses
- Follow up on MC requests for ZH->vvbb, ttH, VBF/ggF
- Try to find better time slot for HSG5 meeting
- Anything else?

- Remember ATLAS and CMS Higgs seminar: main auditorium on 13 December at 14:00

Backup

December Note(?)

- First editorial board meeting – introduced issue
- **Not yet done:**
  - Run on all 2011 data (missed part of period M and some other data files)
  - Run on MC11b datasets – status?
  - Move to METRefFinal done in analysis software but unchecked
  - Apply recommended electron fudge factors (appeared on Friday – see text file attached to agenda)
  - Treatment of inefficiency due to bad muon trigger region in period L (trigger muon scale factors appeared on Saturday – attached to agenda)

- **Points of concern/to follow up**
  - Availability of MC11b datasets
  - Vertex multiplicity/MET/pile-up due to pythia 8 minbias events in mc11 (ongoing)
  - Data/MC agreement in 0-jet bin of WH analysis (note analysis cut on Njet>2)
  - b-tagging scale factors - p_T-dependence may sculpt signal, especially due to bin edges
  - Jet systematics – recommendations?

- **Reminder of timeline:**
  - Higgs approval: aim for 25, but no margin!
  - Circulation to ATLAS for 1 week for comments (up to 2 Dec. at latest)
    - Can be reduced to 3 days if we find a nice peak at 115 GeV, confirmed by H->γγ ☺
  - Public presentation plus 1 week for last comments (9 Dec. at latest)
  - CERN Council meeting starts 12 December