W2D2 Memo #5 14 November 2018

Hello all,

We are right at the start of World Wide Data Day! Be sure to check the schedule one more time at https://quarknet.org/content/w2d2-videoconferences-2018#sched to be sure you know when your videoconference will be.

Here is the news:

- IMPORTANT for two groups: I have just found out that Indico will be down 06:30-07:15 UTC tomorrow. I do not know if this directly affects Vidyo but I have moved the 07:00 videoconference for **Karditsa-1st** and **Thessaloniki** to 07:15 as a precaution. (Read the notice, if you like: https://bit.ly/2qL3gDd.)
- A small number of groups dropped out; we now have 77 around the world. Quite a lot! Dave Trapp, who will join many of our videoconferences to help with tech aspects, made a map with all our institutes, which is on the Indico page. It is also attached.
- Of those 77 groups, 41 have passed Vidyo tests and many of the others did not need one. There a few that never tested it...hopefully they will join us and be OK.
- General rules for Vidyo: mute if you are not speaking, keep background noise and talk down to as close to zero as you can, use the Chat feature if your audio is not working well.
- We start in about an hour!

Extra! Discussion points for **moderators** (of interest to teachers too):

- If you are not too familiar with the W2D2 measurements, check the screencasts: https://www.screencast.com/t/VN7cQits for ATLAS and https://www.screencast.com/t/mPwIbd44 for CMS. They should catch you up quickly.
- In looking at both PHI and THETA plots (especially PHI), please stress the importance of statistical variation in results. Use the sqrt(N) rule if you like to help with this.
- Students should see a very different result from THETA than from PHI. You are the explainer. At the simplest, you can point out that all f the initial momentum (or "motion", if the students are not familiar with momentum) is along the beam (z) axis. For some groups, you can go as far as pointing out that, for example, the

Z can be made from the collision of a quark and and an antiquark, with the antiquark carrying a much smaller fraction of the momentum of than the quark, thus biasing the net momentum of the Z toward the beam axis.

- The THETA result is less pronounced in our ATLAS data than in CMS data. I believe this is because of the way the skims were made.
- Please keep explanations short; make sure we have time for general Q&A within the 30 min videocon.
- You will have a QuarkNet staff member or fellow - or more than one - to help you in the videocon. They can handle sharing desktops and managing the schedule. They can also act as commentators to keep it lively.

Well, that is enough! Have a great World Wide Data Day!

Wait! One more thing! Teachers, please count and record the number of students in your W2D2 class! We'll need it later!

Have a great time,

Ken

P.S. Those doing a CMS measurement: it is not too late to plan on sending images and student quotes to Marzena Lapka at CERN for CMS social media. Here e-mail is marzena.lapka@cern.ch. And have your students tweet their experience with #W2D2_18!