1. Hello my name is Shanette De La Motte and my pronouns are she/her. I have attached a companion script of this talk to the Indico page for those who may be hard of hearing, or would like to review the material later.
   Today I will report on the demographics as well as the steps taken to promote Diversity and Inclusion within the Belle II Collaboration.
   We want our collaboration to be an inclusive place for all people to do Particle Physics.

2. As a PhD student at the University of Adelaide in Australia, I'd like to begin with the acknowledgement of country.
   Acknowledgement of Country is an important practice in Australia that formally pays respect to the original custodians of the land.
   I acknowledge the Traditional Owners and Custodians of the lands I live and work on.
   I pay my respects to the Kaurna people and to Indigenous Elders past, present and emerging.
   Sovereignty has never been ceded.
   It always was and always will be, Aboriginal land.

3. Before going any further, it's important to define what is meant by Diversity and Inclusion.
   Diversity describes the large range of differences between people.
   These could be in gender, race, sexual orientation, ability, or socio-economic status, to name a few.
   We'd only need to look at the names and faces of those in the Zoom profiles at this conference to understand the diversity of wider society isn't necessarily seen in Physics collaborations.
   Thus, inclusion describes actions we can take to support **those who may not be seen as often**, to give them an equal opportunity in doing good physics.

4. Despite the Belle II experiment being in Japan, we can see diversity in the locations of our institutes. The aim of the Belle II Collaboration is to investigate the properties of b-quarks at the luminosity frontier. Belle II is a B-factory experiment with a detector at the SuperKEKB electron-positron collider. Our most recent Physics achievement is that we broke the world record for integrated luminosity recorded in a single month in May of this year, beating the original Belle and Babar results.

5. We'll now look at the demographics of Belle II, so we may examine our diversity. Today, we are comprised of over 1000 members, with institutions spread across 4 continents. Our collaboration represents a different view to other international experiments, with 37% of our members in Asian countries.
   In this bar chart on the right, we show the gender of Belle II collaborators, broken down by region. The regional grouping is to ensure anonymity of our institutes and is inspired by a similar study by ATLAS, seen on the left.
   The fraction of women in each of the regions of Belle II as of March this year, varies from 9.7% in America to 21.9% in Asia. Thus a higher fraction of women in regions geographically closer to the experiment. This could be due to a combination of factors, so it is difficult to answer why this is the case.

6. The next bar chart here shows the growth of our collaboration from when it began in 2011, broken down by gender. The gender gap in Physics is some of the highest in Science and Belle II is sadly no different. While our number of collaborators has almost doubled, our fraction of women has not increased at the same rate, going from 12% to 17%. This is

especially concerning, as if we extrapolate this trend, it will take 60 years to reach parity, beyond the lifetime of the experiment!
We've taken our data from our internal membership system, where we offer users the ability to declare their gender as male, female or other, with some leaving this option unspecified. We acknowledge that this method may pose some challenges to those in the queer community, whose identity might not be known publically or professionally. In the future, we'd like to give users the ability to declare their pronouns in their enrolment, so that we can be more sensitive in our use of language.

7. Now breaking down our collaboration based on their academic positions, we observe a larger fraction of women at postgraduate level, becomes much smaller at professional level. We see this lends evidence that we are not exempt from the wider "leaky pipeline" effect observed in Science, that we lose more and more women at each higher stage of academia. %Percentage of collaborators that are women drops as their career progresses from postgraduate to permanent faculty in a statistically significant way.

8. This next plot demonstrates the yearly involvement of women in our collaboration. Here we can compare the fraction of women overall, the fraction of women chosen for external conference talks, the fraction offering internal conference talks at our Belle II General Meeting and the fraction appointed to any leadership roles and as well as in a senior role. We roughly see the participation of women grow towards that of the overall collaboration, though we must acknowledge the choppiness in the trends due to the small number of women at each level.

9. I'd like to emphasise the importance of data taking in inclusion efforts. This quote from Nature Reviews Physics "Data on women in Physics" states that collecting high-quality data is the way forward in creating an inclusive workplace. We'd know as Scientists that it's through data collection and surveying that we learn where our discrepancies are and thus implement changes to rectify this! One such example is when we conducted a membership survey in 2018, so that collaborators may report their experiences at Belle II. This was inspired by a similar survey conducted by LHCb. It took ~6 months, and we received responses from around 240 of our collaborators, just over a ¼ of all members at the time. We learned that ~25% of the respondents have, at some point in their career, "withdrawn from consideration for a leadership role at Belle II (implicitly or explicitly) because of the impact it would have on [their] family life." This emphasised the need in our collaboration to be more respectful of work-life balance.

10. Now as I've demonstrated some of the issues within our demographics, we'll now move on to looking at the inclusion efforts to support minorities in gender, race and sexuality at Belle II, so that we may combat the trends seen in the previous slides.

11. In October 2017, we incorporated the phrase here into the Belle II Code of conduct, as a commitment to an open, diverse and inclusive working environment. The code of conduct is to be followed by all members who sign on to Belle II. Most importantly, it acknowledges that an array of experiences enriches, not diminishes, our learning and our workplace.

12. A year later in 2018, Belle II elected two diversity officer. Their roles promote an inclusive collaboration, to provide a safe and confidential point of contact to report issues, particularly those related to discrimination, bullying, or harassment, to support those from marginalised groups and ensure they are appropriately considered for positions of responsibility and to encourage and publicize the collaboration's events and efforts promoting equity.

13. External to the collaboration, Belle II is active on Facebook, Twitter, and Instagram. We use social media not only to publicise our achievements but also to bring attention to events such as International Women's Day, International Day of Women and Girls in Science, LGBTSTEM Day and in particular, Colo(u)r Blind Awareness Day, as seen in the posts on the top right. We encourage our analysts to use color schemes accessible to those colour vision deficiency, so that our plots may be interpretable by all. Details on this can be viewed in the backup slides.
    We'd like to extend our social media presence to include profiles of our collaborators, so that we may inspire more Scientists from underrepresented areas to join Belle II.

14. Belle II became an official supporter of LGBTQ+STEM Day in 2019. This means we have pledged to make all our members aware of our support for the queer community. We see the range of supporters on the top right and that we are the only supporter based outside of Europe and North America. We wish to help the organisers of LGBTQ+ STEM to publicise their efforts outside of the western community, in particular for other Japanese institutes, by ensuring our queer support posts are in both Japanese and English.
    We've also experiences some challenges: we had an incident where we used the Belle II pride display picture in a social media post with an unrelated photograph of our members – one such member was from a country with strict punishments regarding publicly supporting the queer community. This is a challenge in such a international diverse collaboration and highlights the importance of obtaining consent from those photographed before publicising. We will, however, continue to support be allies to our queer collaborators, despite the cultural and political opinions on the matter.

15. We've also made efforts to make our language more inclusive.
    Following similar changes within the Git, our computing and software groups have taken steps to remove or phase out the use of the word "slave" from our code. This is an outdated computing term that has deep racial connatations. In some cases, this is not as straightforward, such as when the word is used by external software like ROOT that has functions like "SlaveTerminate". We'd like to work with the CERN developers to rectify this issue.
    We've also followed suggestions to remove the word "master", which we have done in our automatic build machines for new operating systems. There is some resistance as it is very widely used, by many major technology organisations. Suggestions include using the term "main", for things such as your primary development branch in git. This is something you can implement in your own Git repos, where git branch -m allows you to effectively rename your branch. Examples of other language substitutions are to use primary and secondary instead of slave and master, as well as denylist/allowlist instead of blacklist/whitelist, something emphasised in our Belle II coding guidelines.

16. KEK, the laboratory at which Belle II is located, is very receptive and dedicated to the issues that are coming to light. We've ensured that our control room monitors are compatible for the differing kinds of colour vision deficiency, as seen in the image on the right.
    Another important example is KEK working on improving bathroom accessibility, having recently improved the dormitory bathroom provision for women. Furthermore, a bathroom close to the control room, which previously only had urinals has now been made a gender neutral and accessible bathroom, as was requested by the Belle II Institutional. This required considerable plumbing and construction efforts as it was three floors underground; this meant that those who couldn't use urinals had to ascend three floors just to use the bathroom when on a control room shift!

17. Of course, KEK has not had a lot of visitors due to the Coronavirus pandemic. We had to rapidly change our plans for our 2020 and 2021 Physics runs. We've had to rely on the hard work of local members, rather than visiting members to take hardware shifts and continue to take data. Despite this, we managed to actually break the worlds' instantaneous luminosity record in June last year.
    We've also had switch to online-only for our Belle II collaboration meetings, held three times a year. The only other time this happened was in 2011 after the Great East Japan Earthquake. There have been challenges in holding these meetings online, as I'm sure has been felt at this conference, with our collaboration split between multiple time zones – thus always at a bad time for someone. Meetings at unsocial hours may be more of a burden for those with dependents. We've attempted to ameliorate this with recordings, session replays and having some meetings split into multiple sessions to allow presenters to choose a friendlier time slot. When the time comes that we can visit KEK again, we must consider if collaborations keep some or all of their meetings remote. A totally remote conference will improve accessibility, for those who may have family commitments or are from underrepresented regions. However, we can't rule out the value of in person networking which simply can't be reproduced via Zoom.

18. Speaking of those with dependents, finding childcare can be challenging for visitors at KEK, especially with the language barrier. This can discourage caregivers, especially women, from pursuing research opportunities on campus. KEK has partially subsidized the cost of childcare, though currently this has only been available for Japanese collaborators. The Belle II secretariate has assisted in finding childcare for international visitors, though we want to continue to look into options that can better accommodate and publicise these possibilities.

19. Overall, we'd like to continue raising awareness of diversity and inclusion, not only to be a better collaboration for our members, but to make high energy physics a more inclusive space, and better the field of Physics as a whole. We would love to hear suggestions and share our ideas, as we've seen there is still a lot to be done!
    So, onwards towards equality for higher luminosity! As it is through support for underrepresented groups that we obtain more diverse approaches to analysis and thus better Physics.