Doing cool things at the future International Linear Collider

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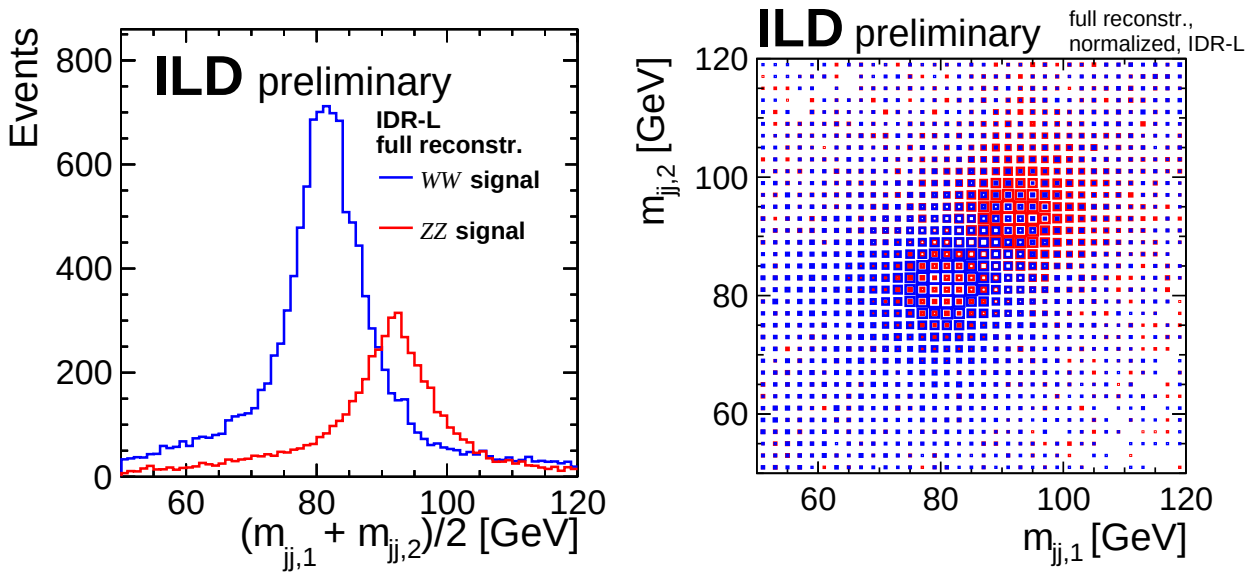
Abstract

My cool abstract that makes every expert read this report.

Contents



(a) **(b)**

Figure 1: Cool plots. (a) This one is nice. (b) But this one is also nice.

Table 1: A table that shows numbers.

Level	$\epsilon_{WW/ZZ}[\%]$			
	full m_{VV} range		$m_{VV} > 500\,\text{GeV}$	
	IDR-L	IDR-S	IDR-L	IDR-S
Full reconstruction	71.1	71.5	73.0	72.9
Cheated overlay	79.6	79.4	84.6	84.0
Cheated jets	86.3	85.9	86.2	85.6
Cheated bosons	88.4	88.1	86.6	86.1
No semi-leptonic events	94.4	94.3	92.6	92.5

1 Introduction

I am motivated to do my work and so should you be.
Here is what I will talk about in section 2 and the rest.

2 Example main text section

Previous studies have shown that I can cite stuff [1].
Plotting things makes them visual (see fig. 1).
In contrast, tables can sometimes be a bit dense and should be used with caution (see tab. 1).
It is trivial that equations are important in physics so one could write one like this

$$p_{\nu,\parallel} = \frac{1}{2 \cdot D} \cdot \left(-A \pm \sqrt{A^2 - BD}\right) \tag{1}$$

and describe all its symbols.
And one can even write many aligned ones

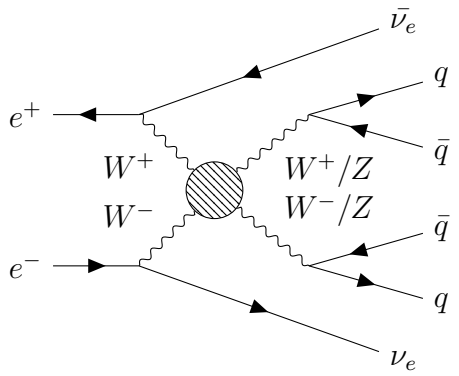


Figure 2: Pseudo Feynman diagram of vector boson scattering in the $\nu\bar{\nu}q\bar{q}q\bar{q}$ final state at e^+e^- colliders.

$$A = p_{\text{vis},\parallel} \cdot (2p^2_{\text{vis},\perp} + m^2_{\text{vis}} - m^2_X) \tag{2}$$
$$B = 4p^2_{\text{vis},\perp} \cdot E^2_{\text{vis}} - (2p^2_{\text{vis},\perp} + m^2_{\text{vis}} - m^2_X)^2 \tag{3}$$
$$D = E^2_{\text{vis}} - p^2_{\text{vis},\parallel} \tag{4}$$

and also remember to describe all symbols used!
Sometimes it can be helpful for long formulas and e^+e^- collisions to define shortcuts (see end of `Preamble.tex`).
If Feynman-diagrams are necessary (they are) then one can even do that (see fig. 2).

3 Conclusion

We know some stuff and that is cool. But we want to know more stuff.
So I had this idea to figure something new out. I did it in a cool way. And got some crazy results.
Now we know more about the thing. And that can potentially be relevant at some point in human history.

4 References

[1] Christian Fleper et al. “Scattering of W and Z Bosons at High-Energy Lepton Colliders”. In: *Eur. Phys. J.* C77.2 (2017), p. 120. DOI: 10.1140/epjc/s10052-017-4656-5. arXiv: 1607.03030 [hep-ph].

5 Acknowledgments

Special shout-out to coffee!

6 Appendix

6.1 Potentially interesting details

For plots, figures and calculation that:

- are too detailed for main text
- are side remarks
- are slightly different versions of plots shown in the main text (but not different enough to need to be there)
- coooooouuuuuld be interesting if someone tries to repeat my study...