

## Kees Thesis

- p. 6: billion collision events per second recorded?  
A bit confusing
- Can have full stop (i.e., period) in footnotes
- Footnotes 2 & 3 in Chap. 1?
- Need a bit more in Eq. 1.5: the equation of motion  
ignoring charge density
- barn unit is area, p. 17
- Footnote 11, p. 21: people are preparing for 150+ collisions  
per bunch crossing!
- top of p. 23: why not enlightening? One can always  
learn from any calculation!
- Eq. 1.22: what is  $\otimes$  symbol?
- p. 25: not a "constant distribution"; a  $\delta$ -function distribution  
(always the same measured value)
- Placement of Fig. 2.1 is unfortunate (use t! or h! tags)
- Need a - sign in Eq. 2.1
- Eq. 2.40: just ignoring  $t$ -functions? restricting to  $p > 0$ ?
- p. 41: resolved vs. unresolved: good!
- footnote 2, p. 42: just say it's the first approximation  
and one can consider more resolved gluons but that  
is beyond what is needed here
- Section 3.2: can also have emission collinear to  
resolved gluon
- In Eq. 3.22, there is no resolved gluon yet,  
that happens with refactorization of soft function  
and then a gluon jet function is resolved

- what is Eq. 4.4?
- p. 53 cites: the Frye paper appendices has them

TODO

- p. 60: Why is the anomalous dimension the coefficient of  $2/\epsilon$ ?
- Why is Eq. 4.94 the lowest order renormalization group equation?
- Eq. 4.102: Don't forget the  $\mathcal{O}(\alpha_s^0)$  term: which is just 1!
- Footnote 9, p. 62: update/remove
- Title? Why TBD? :-

TODO