

# CR-005 Parameters update

- **Primary rationale: correct TeV 1A luminosity number**
    - ▶ Falsely reported in TDR due the "clerical error"
    - ▶ Pending correction has been on CRR since inception (designated: **Administrative Change**)
  - **L numbers are result of Beam-Beam simulations**
    - ▶ GUINEA-PIG (crossed checked with CAIN)
  - **Top-level parameter table D\*0925325**
    - ▶ reported numbers supported by report D\*0938745 and D\*0973835 describing simulation parameters and results.
  - **Prep work for CR: update report D\*0973835**
    - ▶ Re-run and cross-check simulation results (all quoted Ecm)
    - ▶ All numbers changed!
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# Updated GP results (G. White)

|                         | TDR  | Update | Rel. diff. |
|-------------------------|------|--------|------------|
| 200 GeV                 | 0.56 | 0.59   | 6%         |
| 230 GeV                 | 0.67 | 0.73   | 8%         |
| 250 GeV                 | 0.75 | 0.82   | 10%        |
| 350 GeV                 | 0.99 | 1.03   | 4%         |
| 500 GeV                 | 1.79 | 1.79   | 0%         |
| <u>Lumi Up. 500 GeV</u> | 3.58 | 3.60   | 1%         |
| 1 TeV A1                | 3.65 | 3.02   | -17%       |
| 1 TeV B1b               | 4.90 | 5.11   | 4%         |



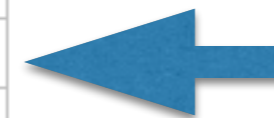
known error

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| <u>Lumi Up. 500 GeV</u> | 3.58 | 3.60   | 1%         |
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Confirmed!



known error

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Cross checked using CAIN by K. Yokoya  
( $<4\%$  differences)

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In the hands of many people, GUINEA PIG is a random number generator at the  $\pm 10\%$  (possible higher) level.

# Modified CR:

|                         | TDR  | Update | Rel. diff. |
|-------------------------|------|--------|------------|
| 200 GeV                 | 0.56 | 0.59   | 6%         |
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known error

- Correct 1 TeV A1 set in D\*0925325 (→ new release)
- **Do not change** other (published) numbers
- Update supporting report with Glen's results but
- Add note that this basically verifies TDR numbers
  - but does not exactly reproduce them