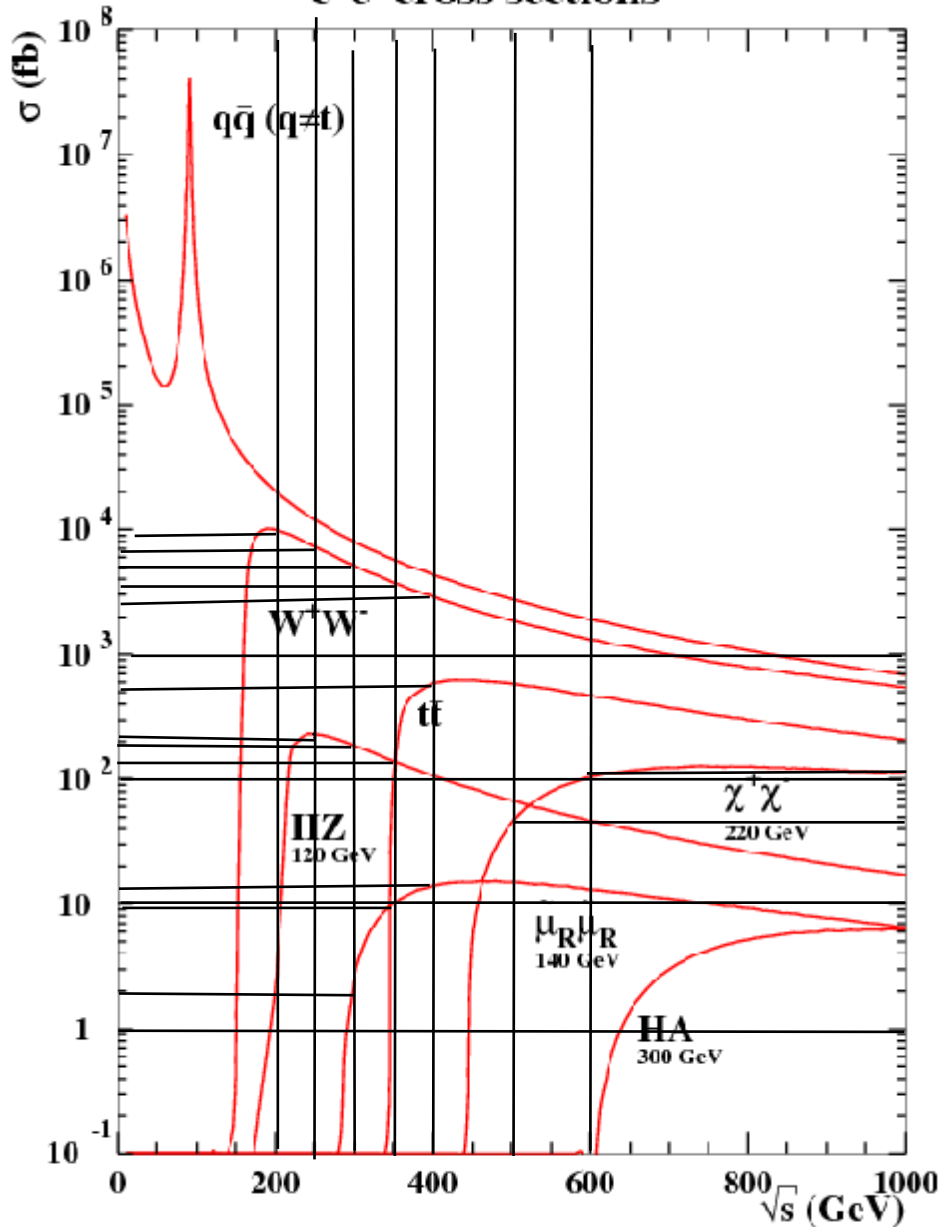


e^+e^- cross sections



```
[talman@x201 maple]$ more param-stripped-50km
% E[GeV] betyst xisat Lbb_actual Nb_actual Prf counts/day
      WW      HZ      tt
125 & 0.010 & 0.1 & 0.507 & 63.2 & 50.0 \\ 3036 111 0
150 & 0.010 & 0.11 & 0.293 & 35.3 & 50.0 \\ 1465 52.7 0
175 & 0.010 & 0.12 & 0.185 & 21.6 & 50.0 \\ 740 19.2 18.5
200 & 0.010 & 0.12 & 0.124 & 14.1 & 50.0 \\ 471 12.4 62
225 & 0.010 & 0.13 & 0.000 & 9.7 & 50.0 \\ 0 0 0
```

```
[talman@x201 maple]$ more param-stripped-70km
% E[GeV] betyst xisat Lbb_actual Nb_actual Prf WW HZ tt
125 & 0.010 & 0.1 & 0.50652 & 86.9 & 35.6 \\ 3036 111 0
150 & 0.010 & 0.11 & 0.29313 & 48.6 & 35.6 \\ 1465 52.7 0
175 & 0.010 & 0.12 & 0.18459 & 29.7 & 35.6 \\ 740 19.2 18.5
200 & 0.010 & 0.12 & 0.12366 & 19.4 & 35.6 \\ 471 12.4 62
225 & 0.010 & 0.13 & 0.08685 & 13.3 & 35.6 \\ 193 6.2 34.5
```

```
[talman@x201 maple]$ more param-stripped-100km
% E[GeV] betyst xisat Lbb_actual Nb_actual Prf WW HZ tt
125 & 0.010 & 0.1 & 0.50652 & 120.9 & 25.0 \\ 3036 111 0
150 & 0.010 & 0.11 & 0.29313 & 67.5 & 25.0 \\ 1465 52.7 0
175 & 0.010 & 0.12 & 0.18459 & 41.2 & 25.0 \\ 740 19.2 18.5
200 & 0.010 & 0.12 & 0.12366 & 26.9 & 25.0 \\ 471 12.4 62
225 & 0.010 & 0.13 & 0.08685 & 18.4 & 25.0 \\ 193 6.2 34.5
```

```
[talman@x201 maple]$ more param-stripped-140km
% E[GeV] betyst xisat Lbb_actual Nb_actual Prf WW HZ tt
125 & 0.010 & 0.1 & 0.50652 & 165.6 & 17.9 \\ 3036 111 0
150 & 0.010 & 0.11 & 0.29313 & 92.5 & 17.9 \\ 1465 52.7 0
175 & 0.010 & 0.12 & 0.18459 & 56.5 & 17.9 \\ 740 19.2 18.5
200 & 0.010 & 0.12 & 0.12366 & 36.8 & 17.9 \\ 471 12.4 62
225 & 0.010 & 0.13 & 0.08685 & 25.2 & 17.9 \\ 193 6.2 34.5
```

SUGGESTED CEPC AND SPPS DATA RATE PROJECTION FORMAT

R. Talman, 21 January, 2015

INTERPRETATION

-
1. By scaling RF power inversely with R, most of the entries are independent of C.
 2. The zeros in the t,t columns are because the beam energy is below threshold.
 3. To avoid a lot of zero entries a huge "overvoltage" (80 MV) has been assumed for all entries.
 4. The zeros in for E[GeV]=225 in the C=50 km table are because the "overvoltage" (80 MV) is insufficient.

REQUEST

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4. e+e- entries broken out channel by channel.
 5. p,p rates broken out similarly.

HUMOR

-
6. "day" = "Chinese day"
= "10⁵ inverse fb @ 10³⁴ luminosity"
= 10,000 s
approx = 24 x 3600 = 86,400 s

TOLD YOU SO

-
7. Note that "bigger" is "cheaper".

