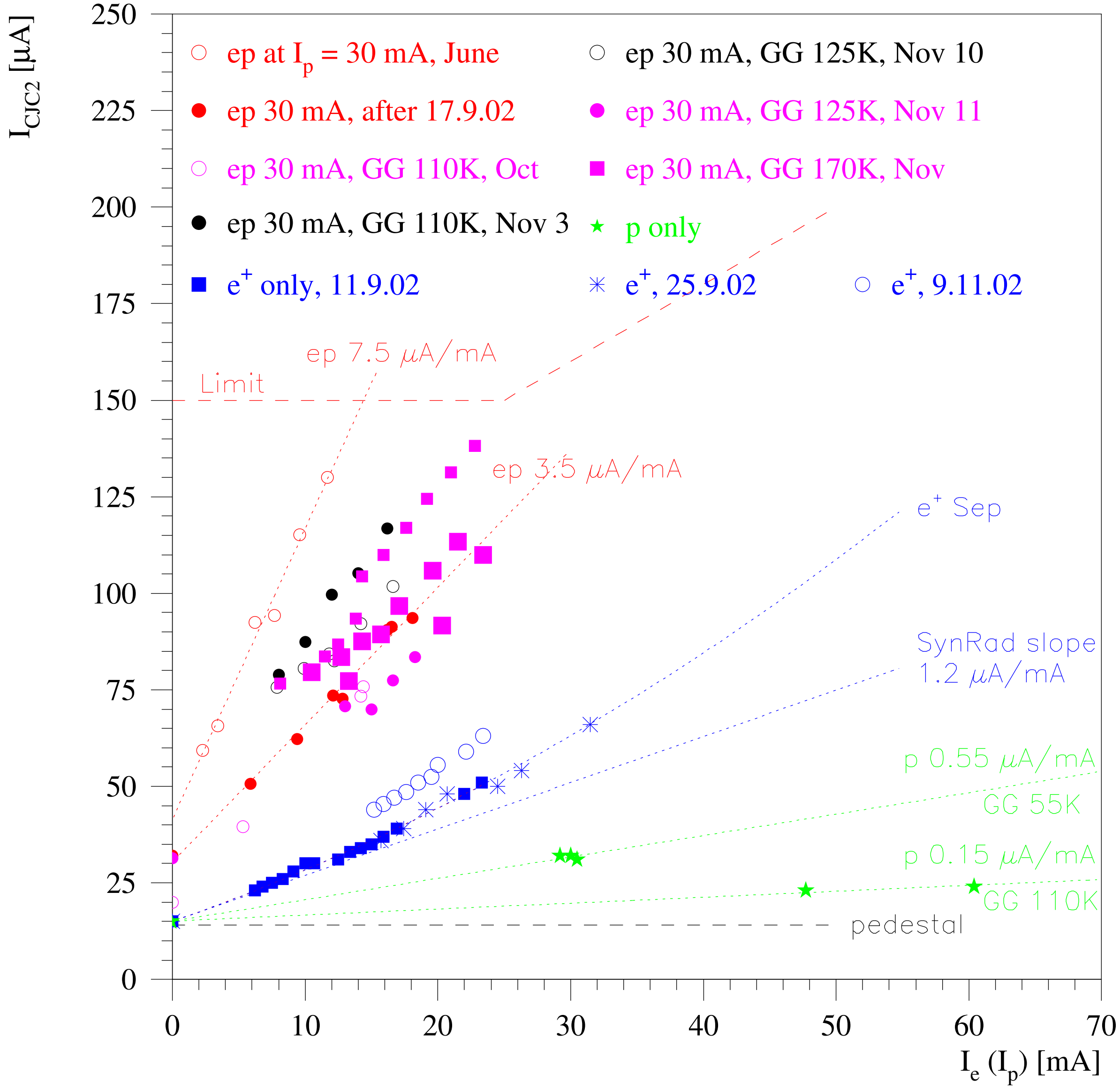
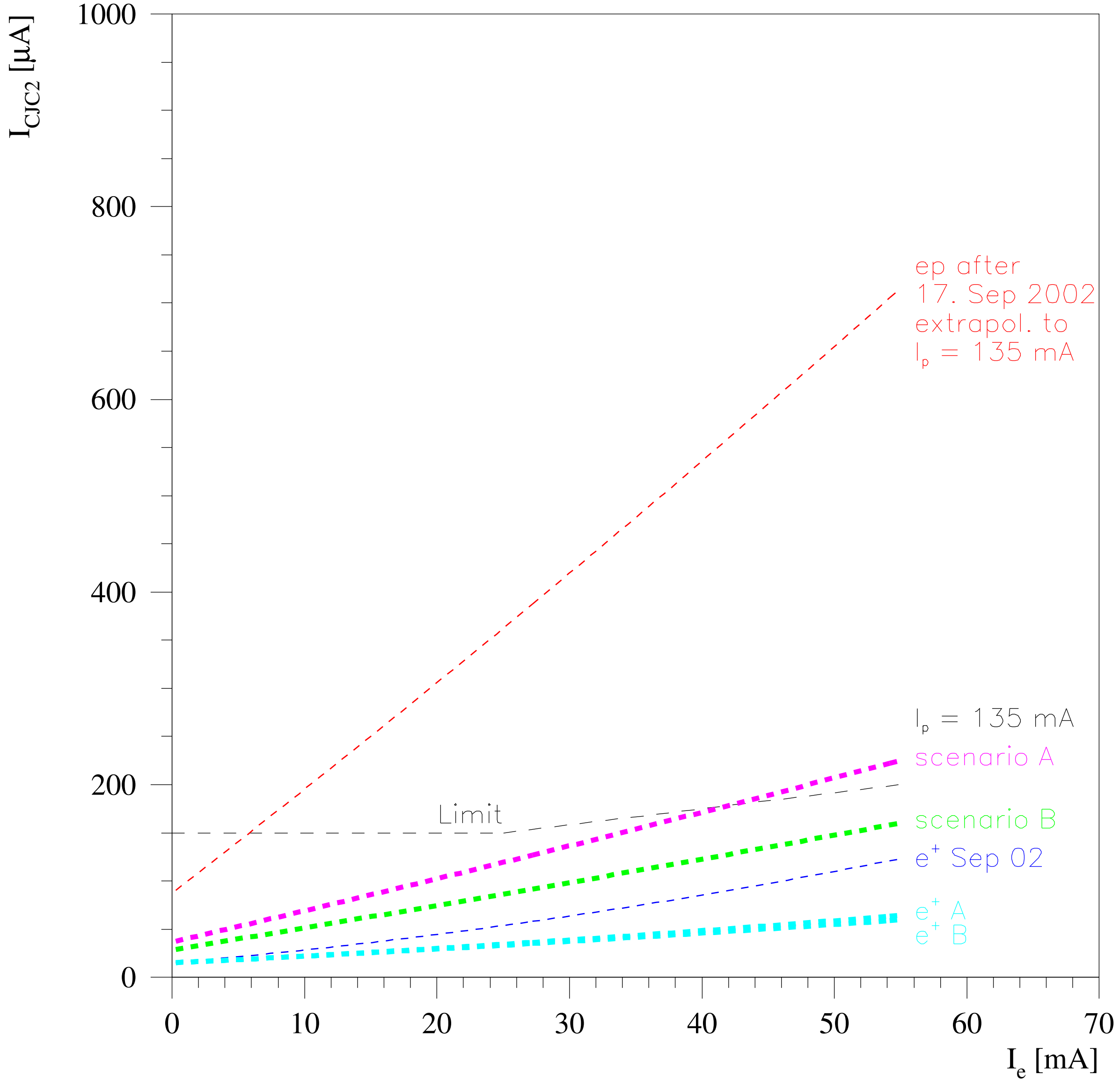
Chamber current vs beam current



- GG beam pipe at 110 K since 9.10. and at 170 K since 12.11. No big improvement.
- e^+: NL 19 m collimator re-adjusted 11.11.
- p: base pressure reduced by factor 3 after firing TSPs, activating NEGs.

Extrapolation to $I_p = 135\,\text{mA}$



- Conditions from mid-Sep '02 extrapolated to $I_p = 135\,\text{mA}$.
- A: improve vacuum by factor 3.3, reduce SynRad by 1.8 (coating ABS4).
- B: improve vacuum by factor 5.3, reduce SynRad by 1.8
- e^+-only contribution Sep '02
- e^+-only contribution in A and B.

Summary and requests

- Recent running at $20 \times 20\mathrm{mA}^2$ was hampered by recurring background spikes (1–3 per hour).
- The vacuum between the IP and NR 11 m must be improved by a factor 5 for running at design current.
- Running with the GG beampipe at 110 and 170 K has not helped. We would like to go back to 55 K, using the kryo-pump effect to run at higher beam currents.
- The gas source is not precisely localized yet.
- Parasitic and dedicated background studies must continue.
- We propose to install a rest gas analyzer at NR 3.6 m for close-by and in-beam mass spectroscopy.
  It can be installed on 19./20.12., then using the Christmas brake for pumping.
- The 4 month shutdown can only start if sufficient remedies are found and prepared.