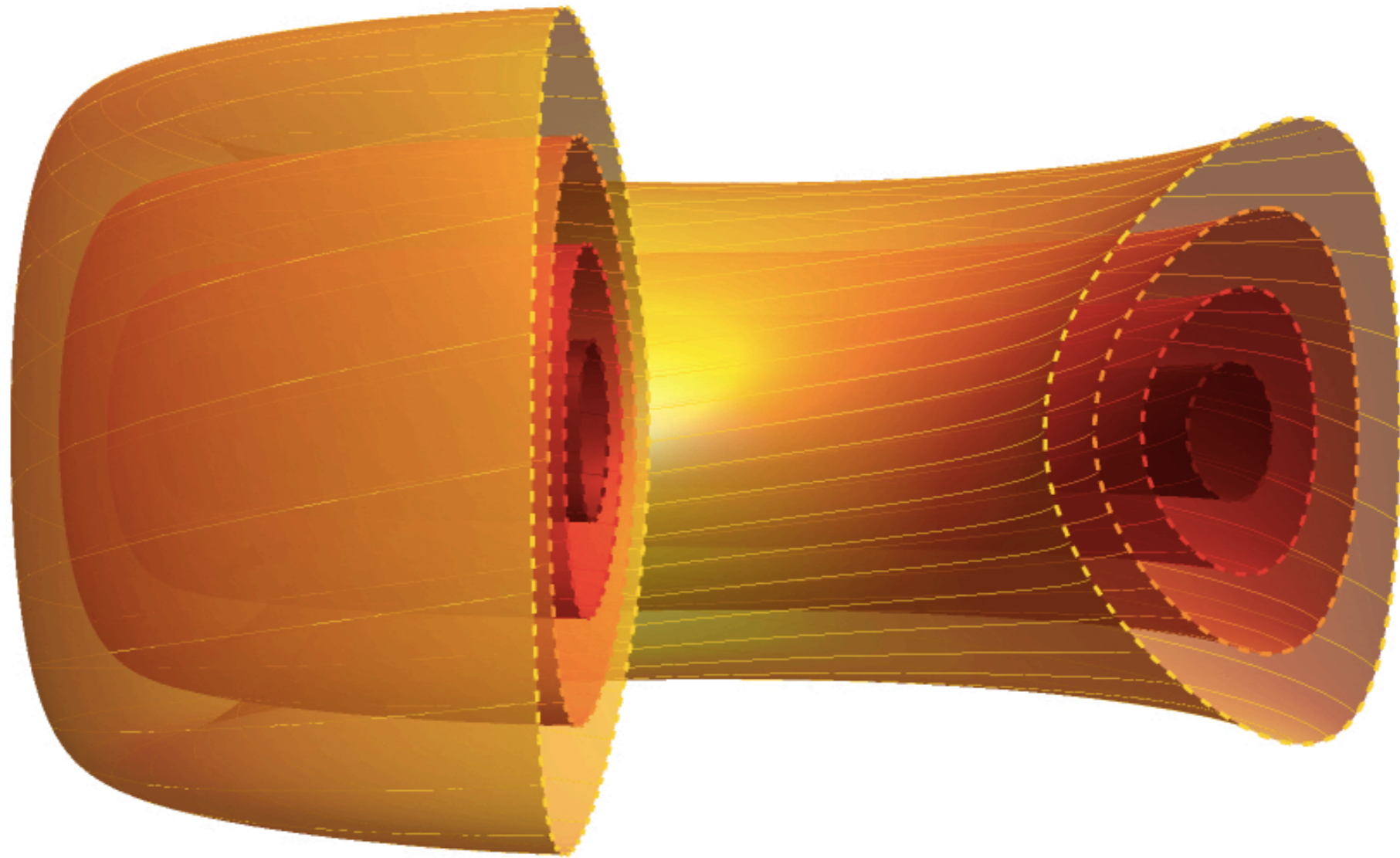


TSVV 2: Negative triangularity

April meeting



Justin Ball
26 April 2022

Agenda

- **General updates**
- Roundtable discussion with team members
- Comments, questions?

General update

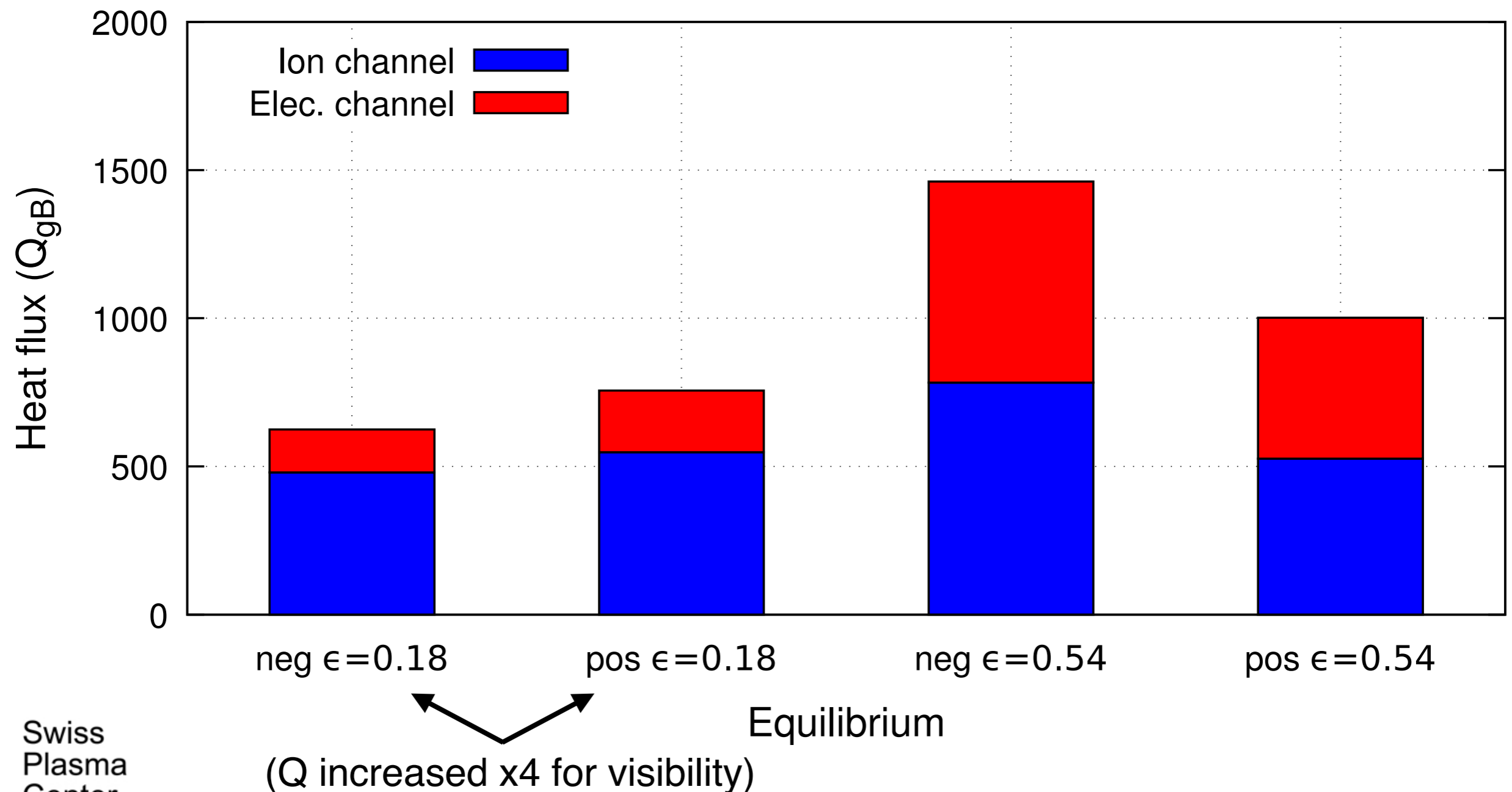
1. Any impact from collaboration restrictions with Russian institutions?

Agenda

- General updates
- **Roundtable discussion with team members**
- Comments, questions?

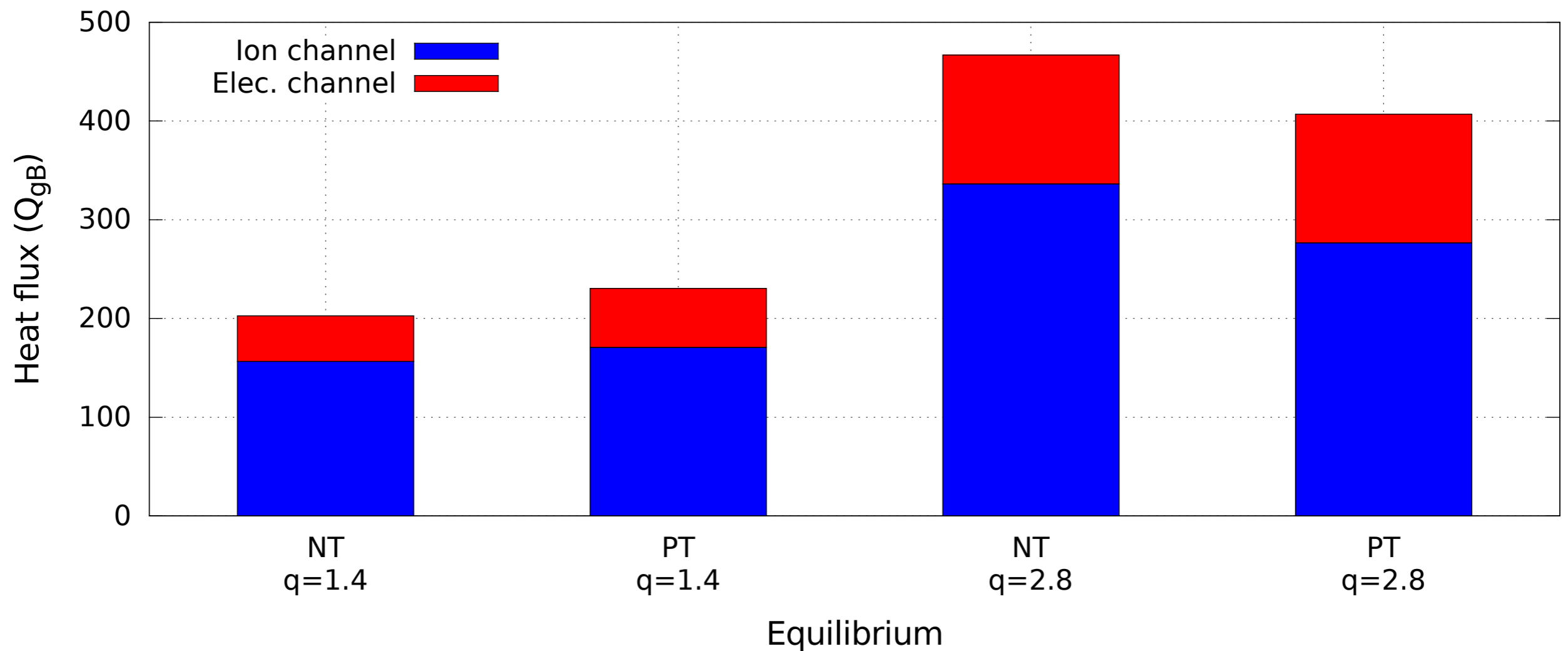
Cyclone Base Case parameters w/o collisions

- Unlike at standard aspect ratio, at tight aspect ratios NT appears to be **destabilizing**



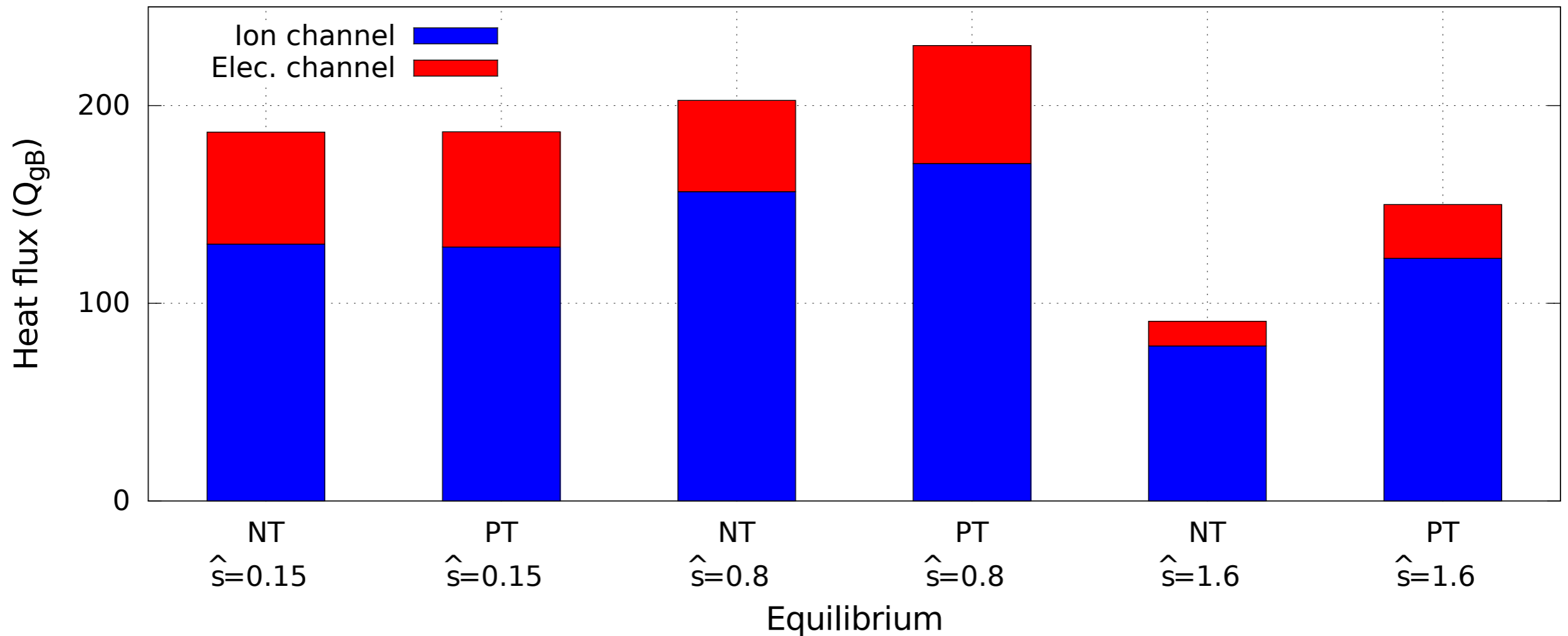
Cyclone Base Case - safety factor scan

- Local value of safety factor can make NT destabilizing



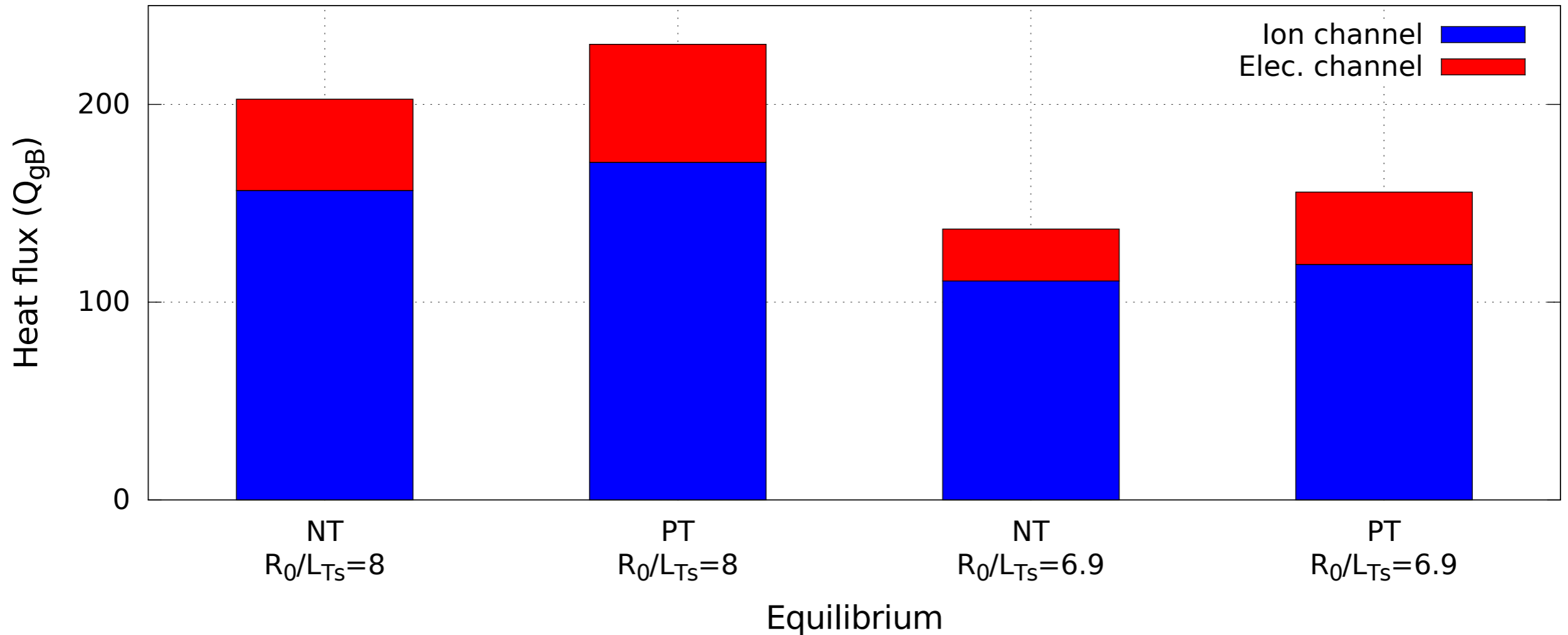
Cyclone Base Case - magnetic shear scan

- Stronger magnetic shear increases impact of NT, possibly by shortening parallel length of turbulence



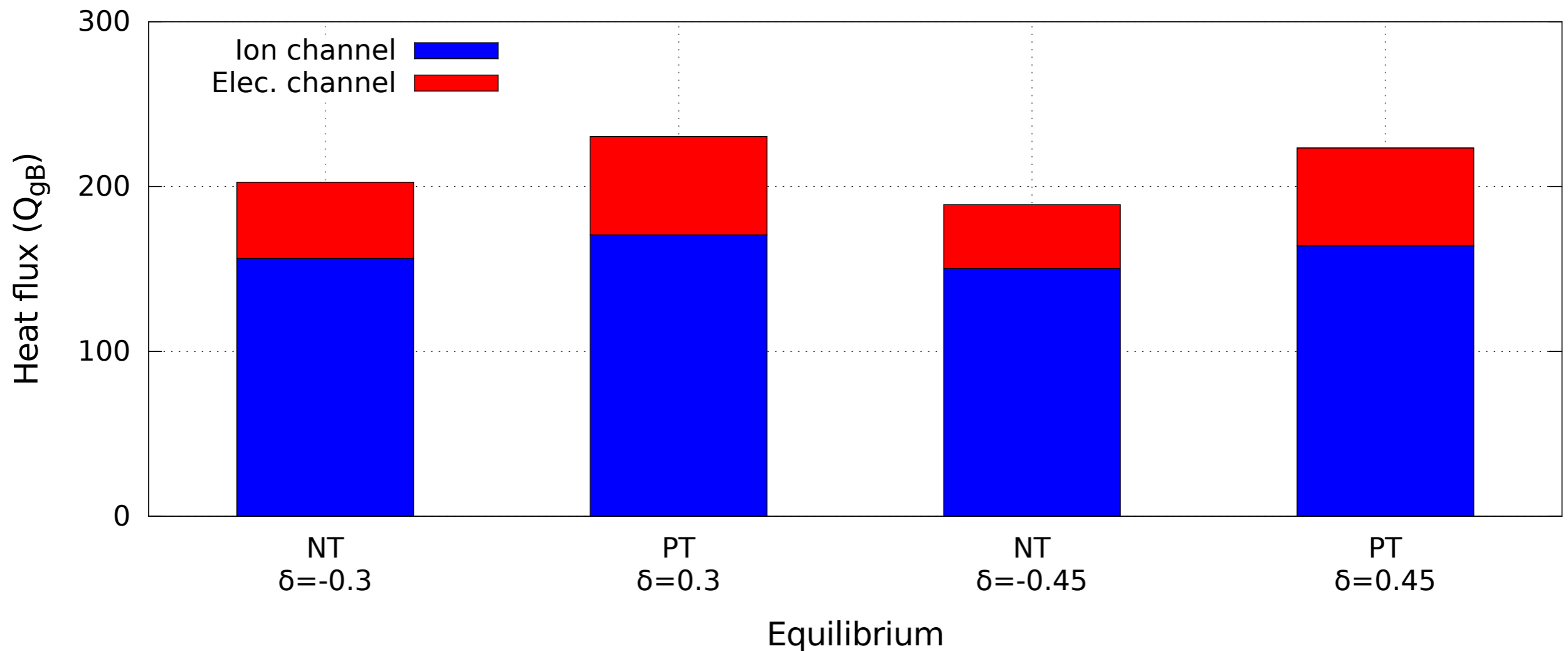
Cyclone Base Case - driving gradients scan

- Strength of driving gradients has little impact



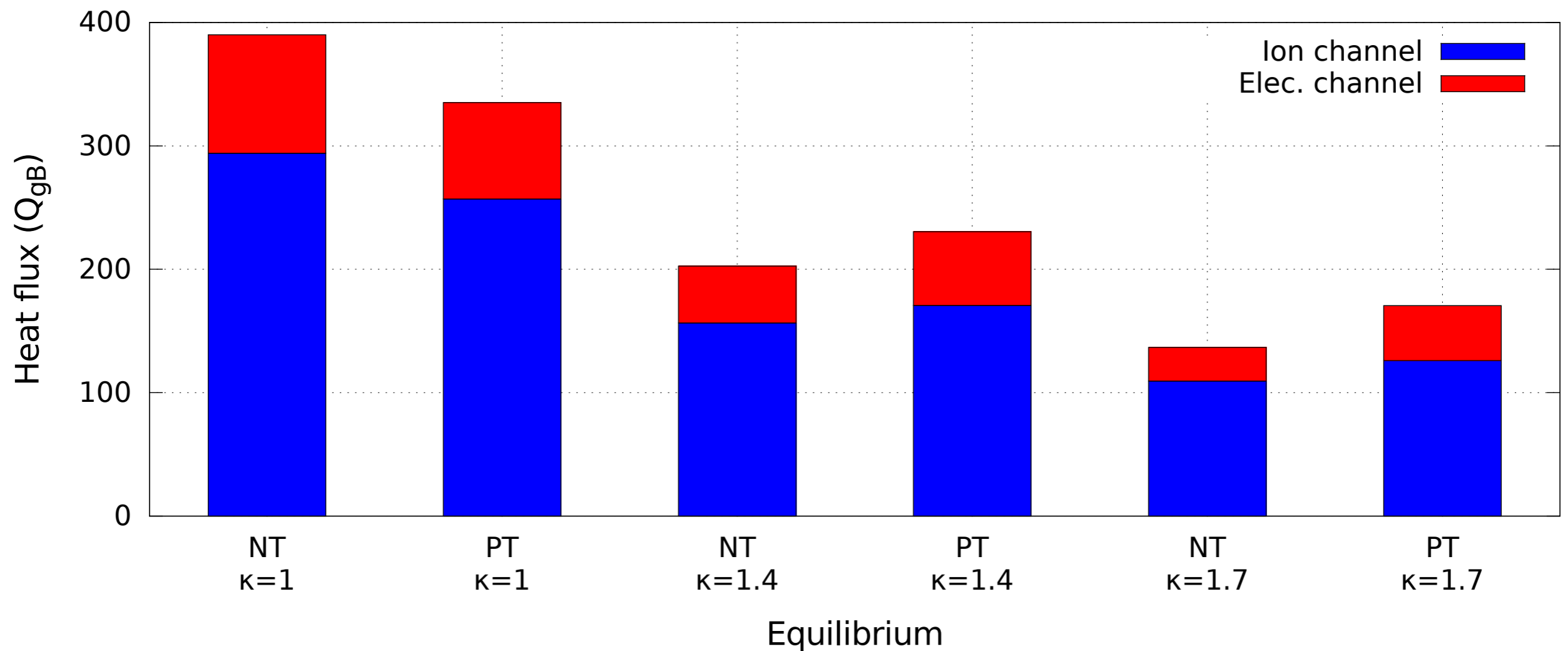
Cyclone Base Case - triangularity scan

- Magnitude of triangularity seems to have fairly small impact, but this is roughly consistent with the fact that $|\delta|$ was only increased by 50%)



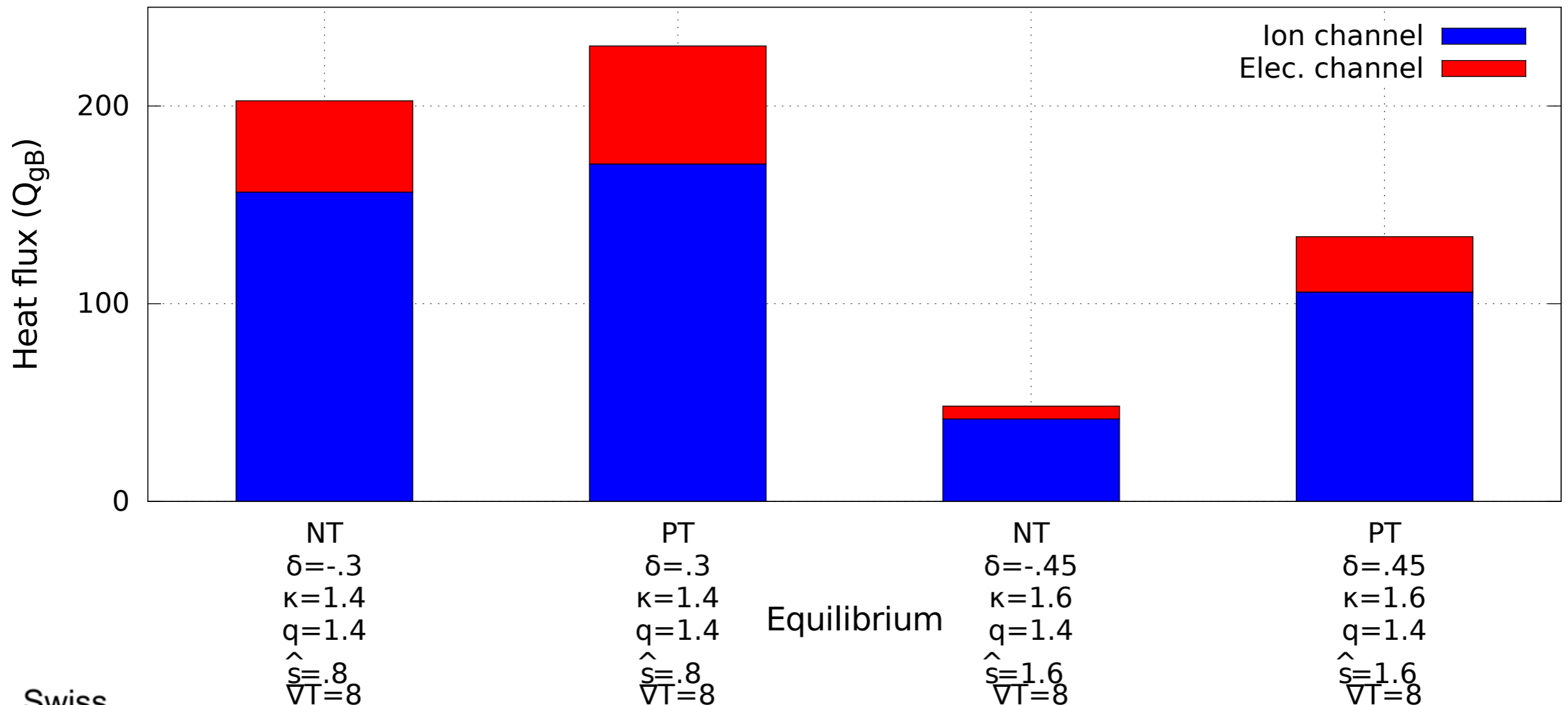
Cyclone Base Case - elongation scan

- Elongation can make NT stabilizing or destabilizing



Cyclone Base Case - optimal parameters

- Leveraging these trends it is possible to dramatically increase the beneficial effects of NT (12% reduction in heat flux to 64% reduction)



Agenda

- EUROfusion updates
- Roundtable discussion with team members
- **Comments, questions?**