

# PGF5112 - Plasma Physics I

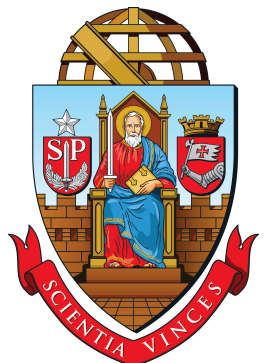
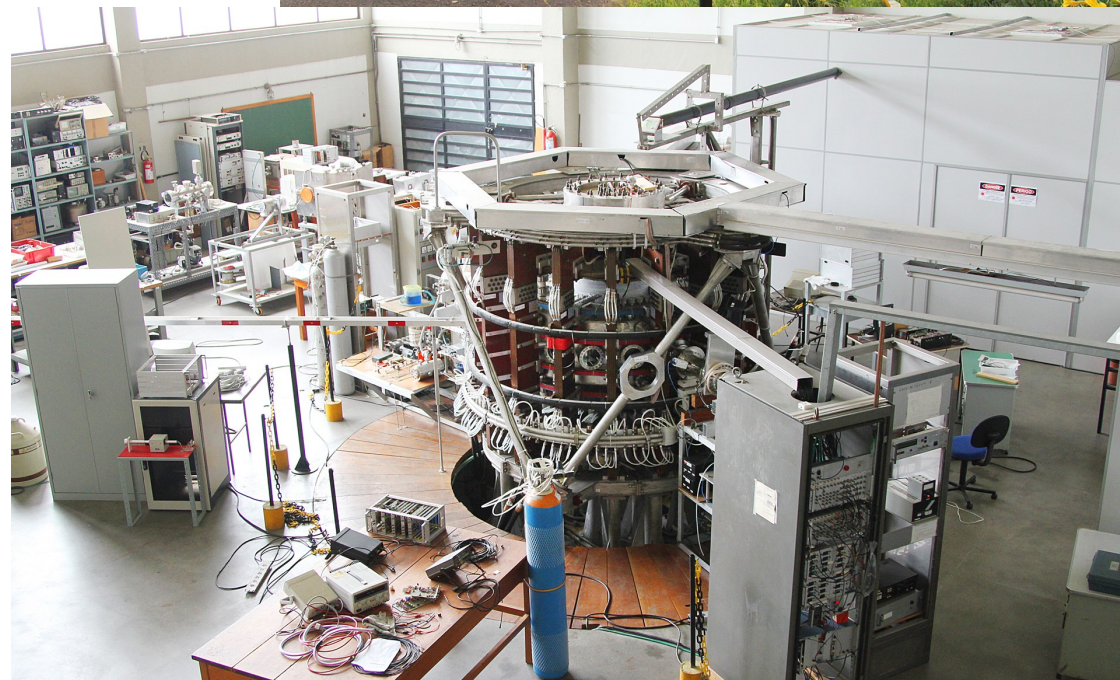
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- **Average values and macroscopic variables**
  - *Average values and the moments of a distribution function*
  - *Average velocity and peculiar velocity*
  - *Particle flux*
  - *Momentum flow tensor*
  - *Pressure tensor*
  - *Heat flow*
- **Macroscopic/fluid transport equations**
  - *General transport equation*
  - *Conservation of mass*
  - *Conservation of momentum*
  - *Conservation of energy*
  - *The cold plasma model*
  - *The warm plasma model*
  - *The hot plasma model*

# Exercises

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- **Average values and macroscopic variables (Bittencourt, Ch. 6)**
  - 6.1, 6.2 and 6.3
- **Macroscopic/fluid transport equations (Bittencourt, Ch. 8)**
  - 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.10 (*there is a mistake in the equation*) and 8.11

# References

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- **Average values and macroscopic variables**
  - *Bittencourt, Ch. 6*
- **Macroscopic/fluid transport equations**
  - *Bittencourt, Ch. 8*