

Positronium

Andrea Grossutti, mat. 1237344

Alessandro Lovo, mat. 1236048

Leonardo Zampieri, mat. 1237351

December 12, 2019

1 Aims

Study the *Vespa* experimental apparatus, and in particular:

- Model the vacuum system behavior, finding the characteristic parameters;
- Obtain the current-voltage and the current-temperature characteristics curves of the filament;
- Draw the voltage-current characteristics curves of the gas discharge, enhancing their behavior as varying pressure;
- Find the Paschen curve, both in DC and RF condition;
- Measurement of plasma parameters through a Langmuir probe, both in stationary conditions and via ionic-sonic wave propagation.