

Électronique

III - Oscillateurs

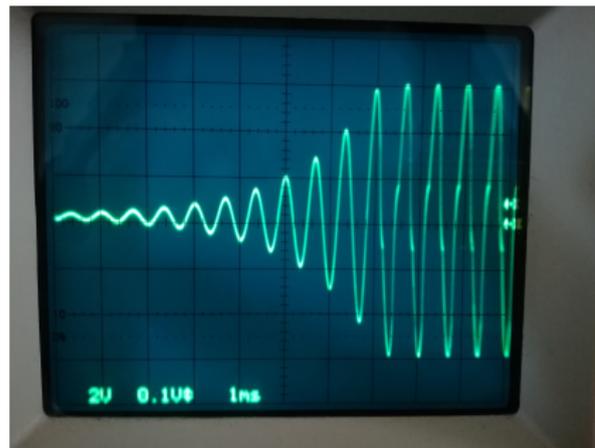
E. Saudrais

Jean Perrin PSI

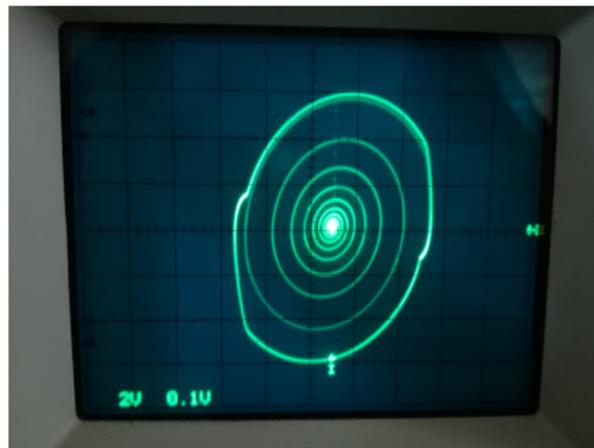
27 septembre 2023

[1] — Oscillateur à pont de Wien

Naissance des oscillations : $G > 3$



évolution de $v(t)$

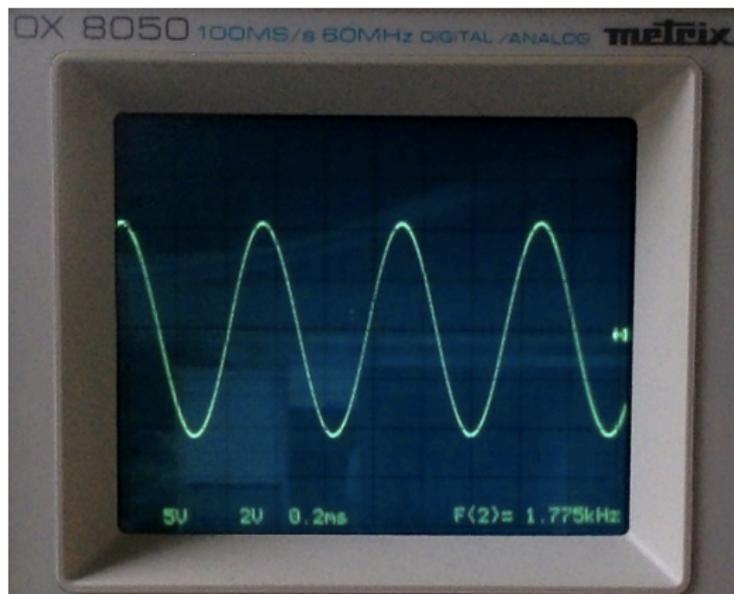


portrait de phase

[2] — Oscillateur à pont de Wien

Oscillations quasi-sinusoïdales

Le gain G est peu supérieur à 3

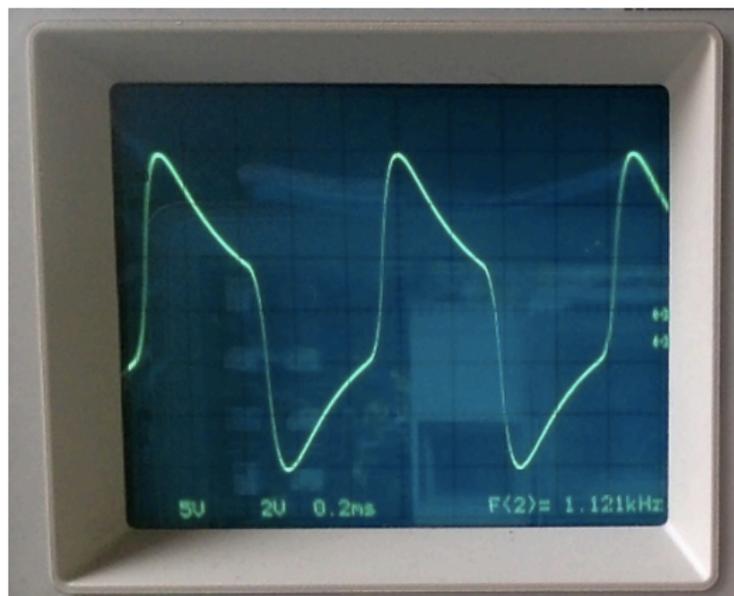


évolution de $v(t)$

[3] — Oscillateur à pont de Wien

Oscillations non sinusoïdales

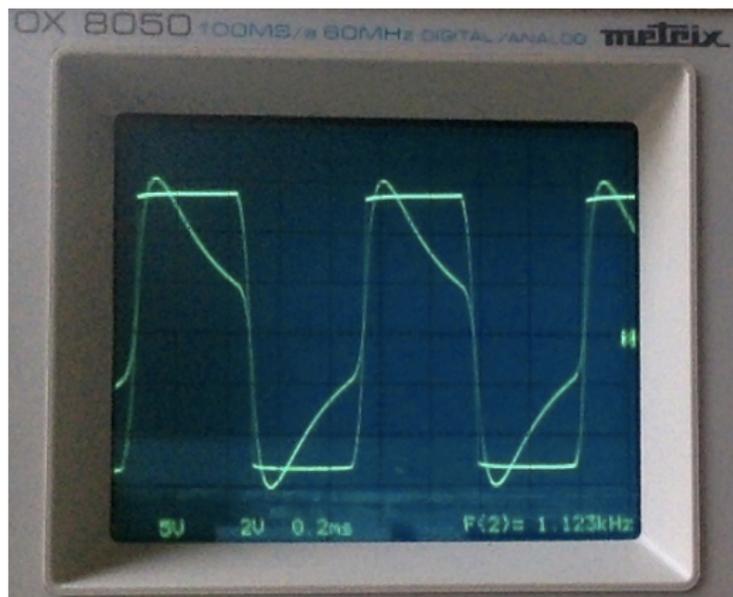
Le gain G est nettement supérieur à 3



évolution de $v(t)$

[4] — Oscillateur à pont de Wien

Oscillations quasi-sinusoïdales : saturation de l'ALI

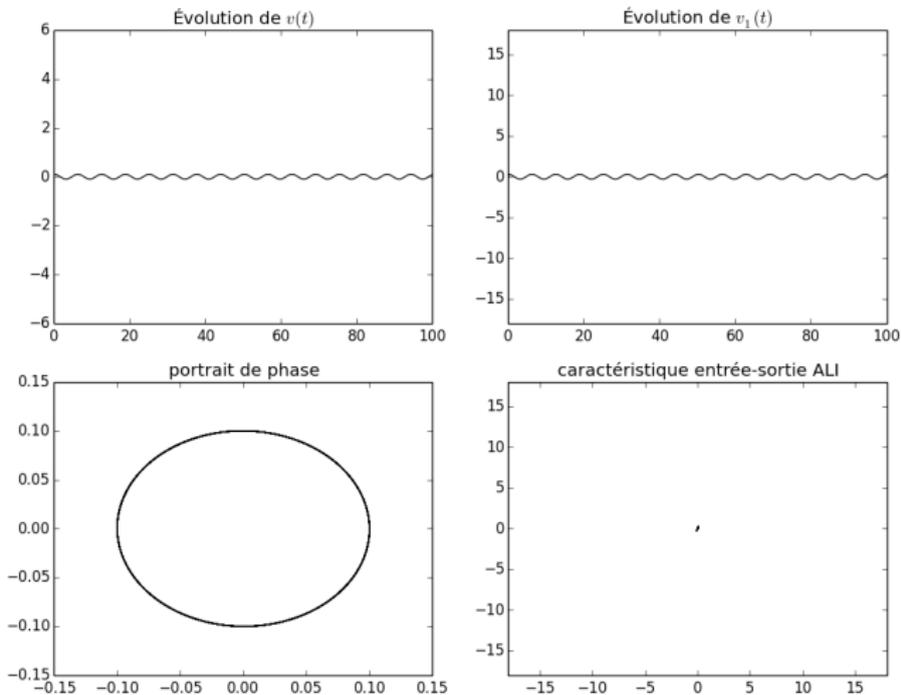


évolution de $v(t)$ et $v_1(t)$

- L'ALI est presque tout le temps saturé.
- La période des oscillations a augmenté.

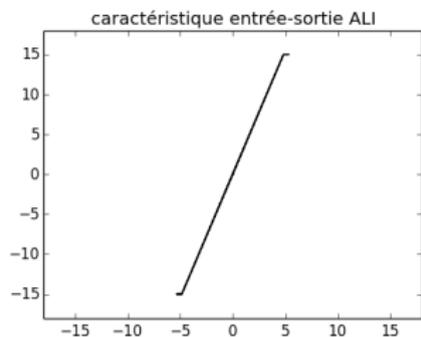
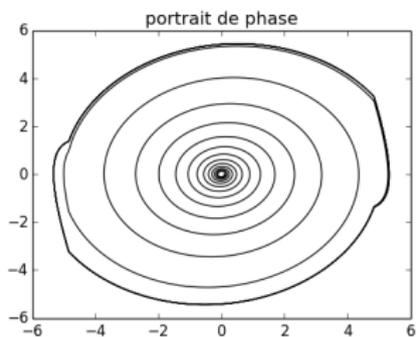
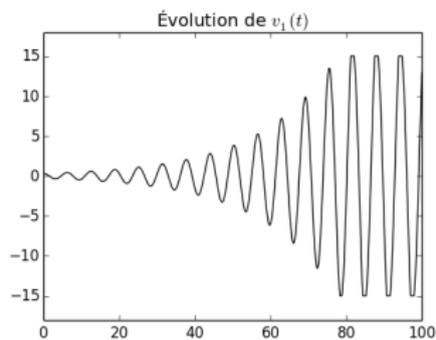
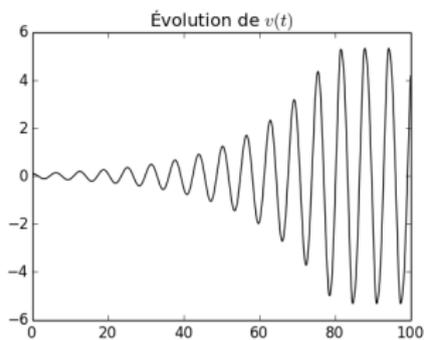
[5] — Oscillateur à pont de Wien

Cas $G = 3$



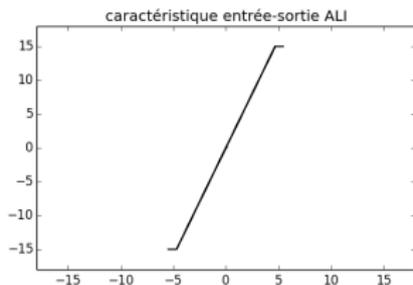
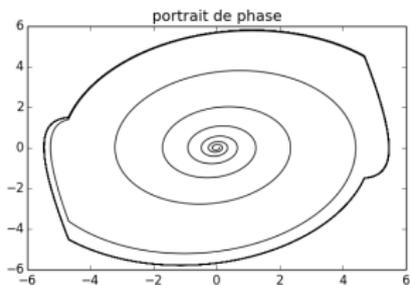
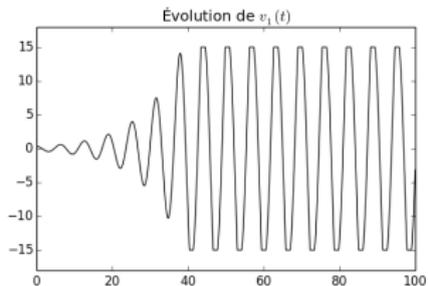
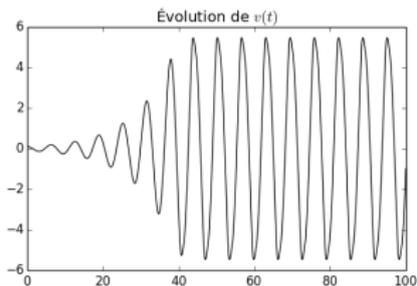
[6] — Oscillateur à pont de Wien

Cas $G = 3,1$



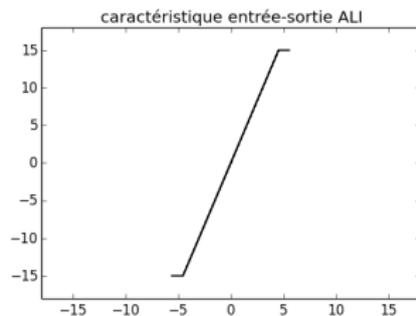
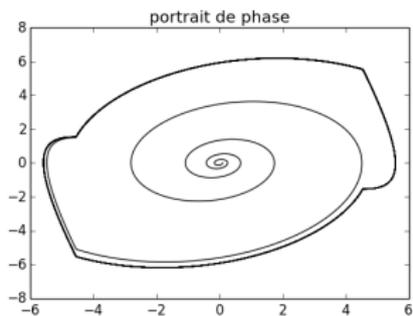
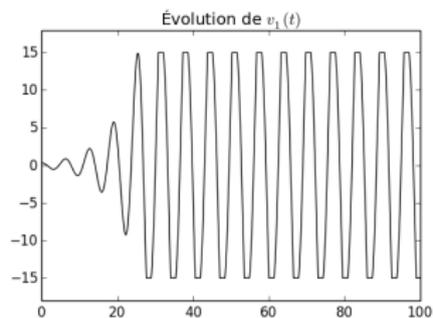
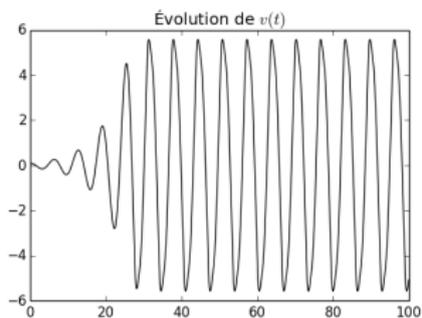
[7] — Oscillateur à pont de Wien

Cas $G = 3,2$



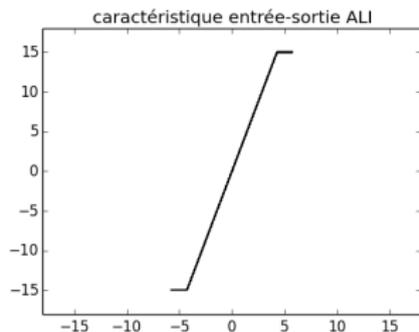
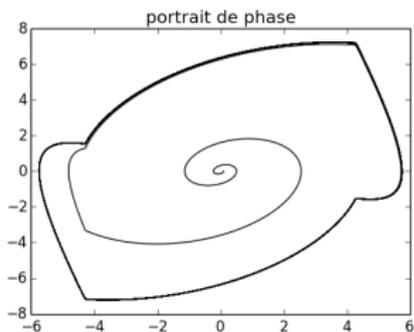
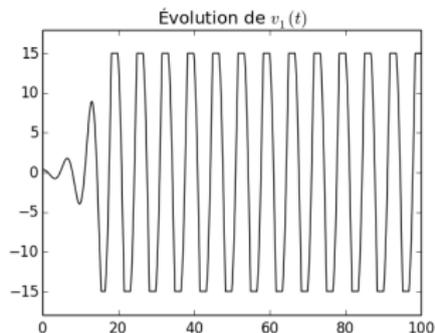
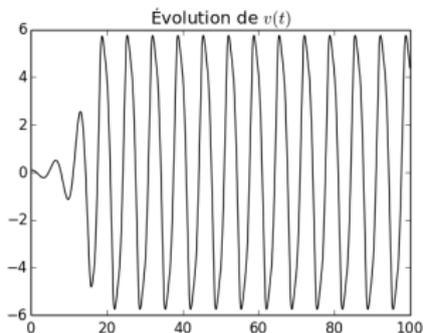
[8] — Oscillateur à pont de Wien

Cas $G = 3,3$



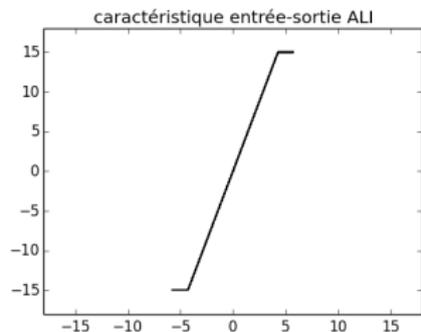
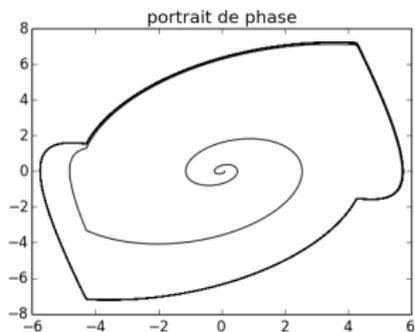
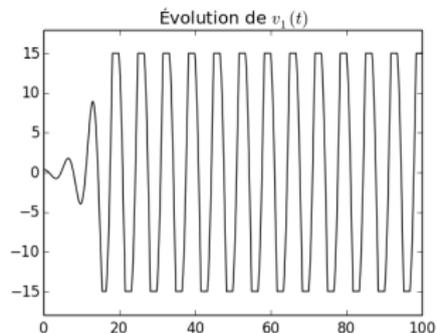
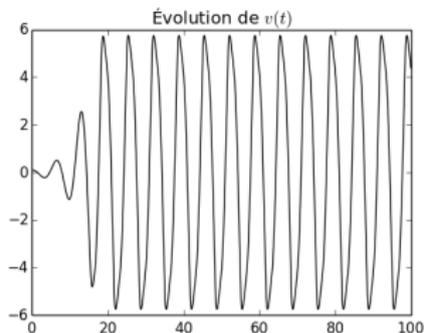
[9] — Oscillateur à pont de Wien

Cas $G = 3,5$



[10] — Oscillateur à pont de Wien

Cas $G = 4$



[11] — Oscillateur à pont de Wien

Cas $G = 5$

