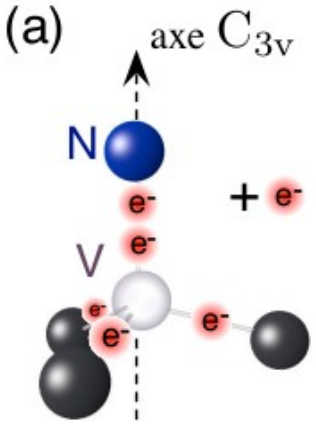
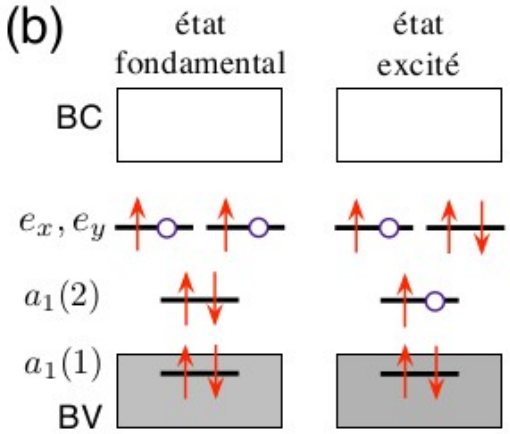
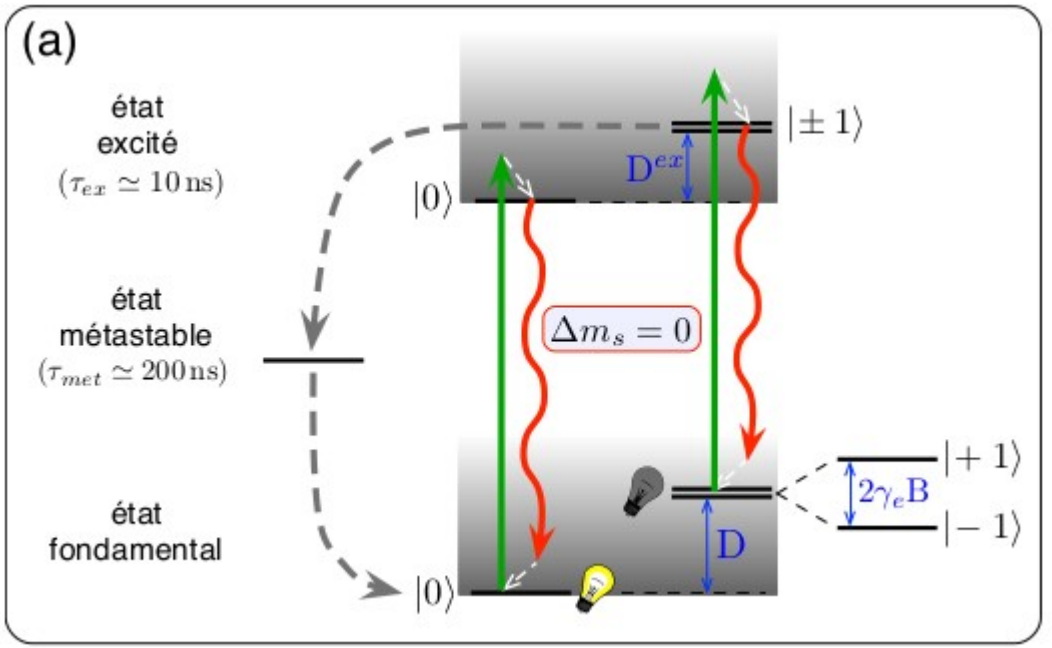
Reunion de groupe 18/12/19

Presentation du centre NV-



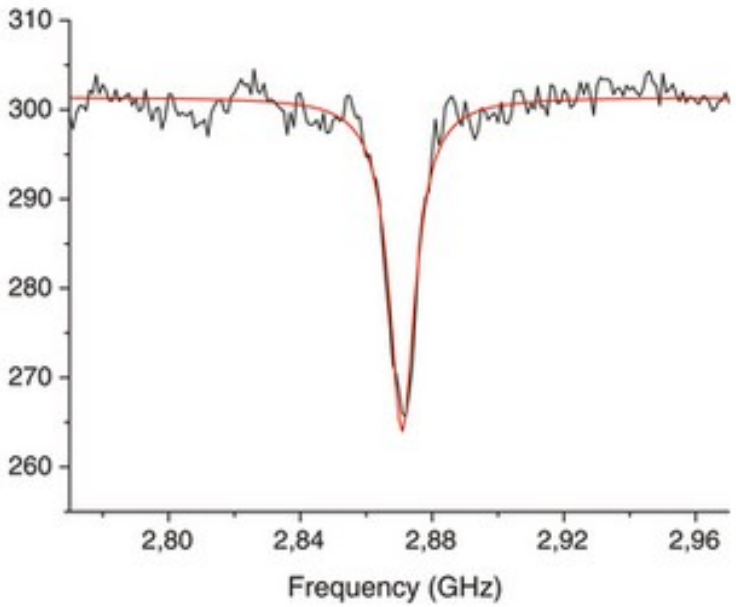




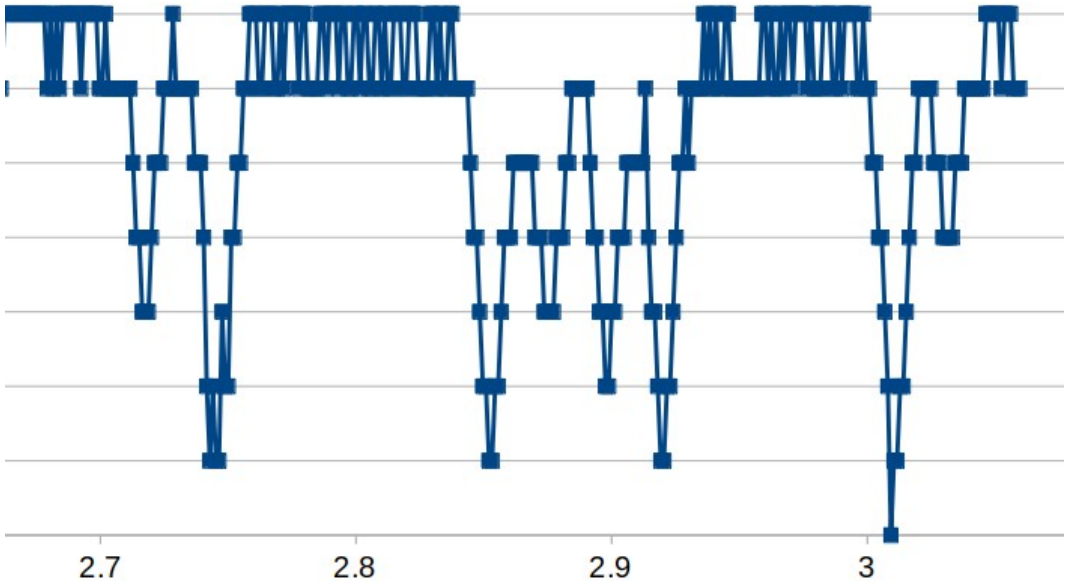
$$\hat{\mathcal{H}}_s = DS_z^2 + \gamma_e \mathbf{B} \cdot \hat{\mathbf{S}}$$

$$D = 2.87\,\mathrm{GHz} \text{ et } \gamma_e = 2.8\,\mathrm{MHz/G}$$

Optically detected magnetic resonnance



Sans champ magnetique



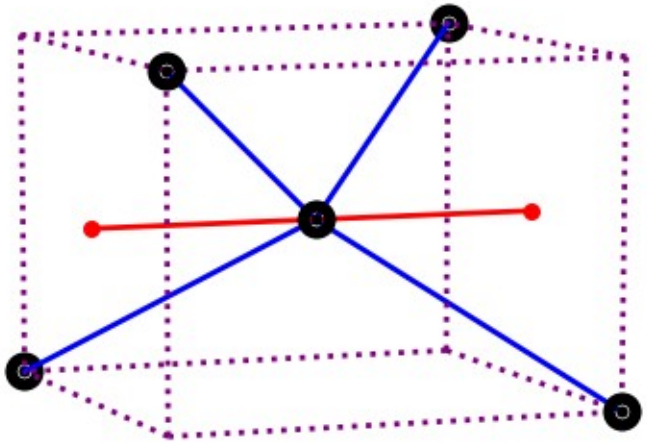
Avec champ magnetique

$$\hat{\mathcal{H}}_s = DS_z^2 + \gamma_e \mathbf{B} \cdot \hat{\mathbf{S}}$$

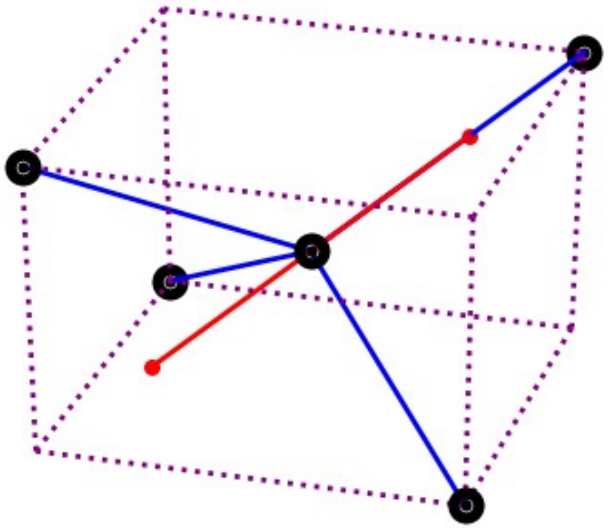
$$D = 2.87\,\mathrm{GHz} \text{ et } \gamma_e = 2.8\,\mathrm{MHz/G}$$

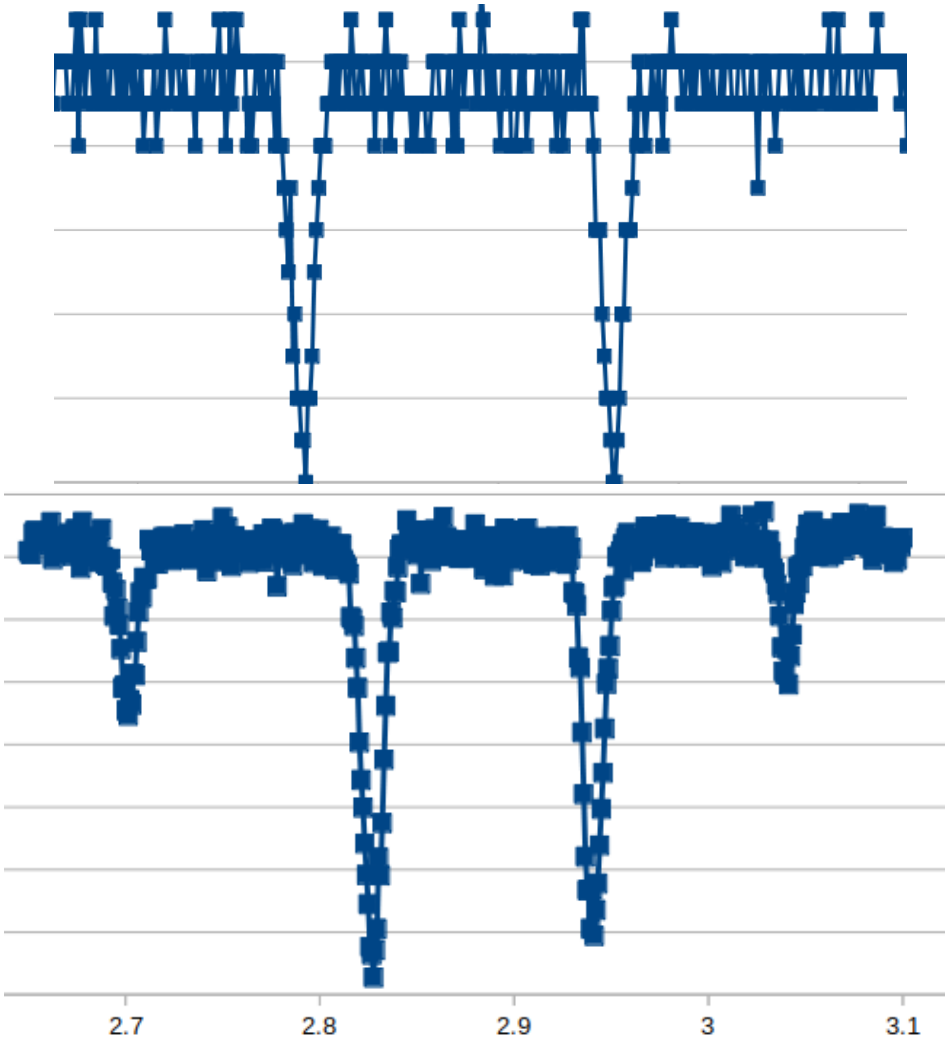
Orientation et degeneresecence

Direction
100

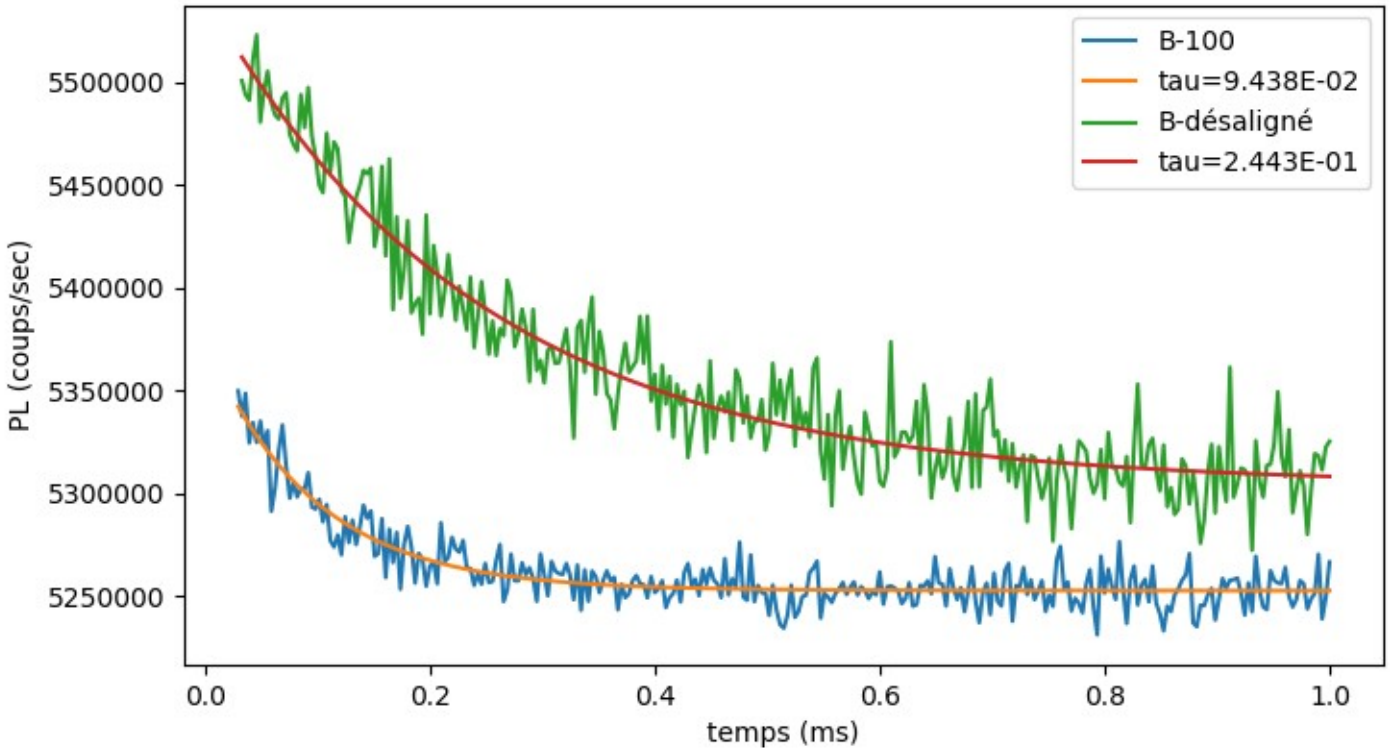


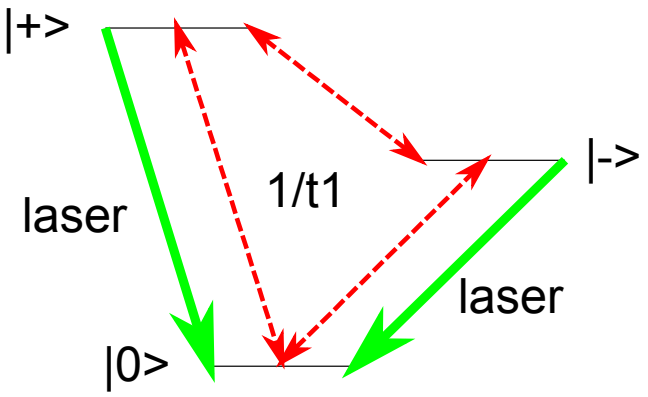
Direction
111



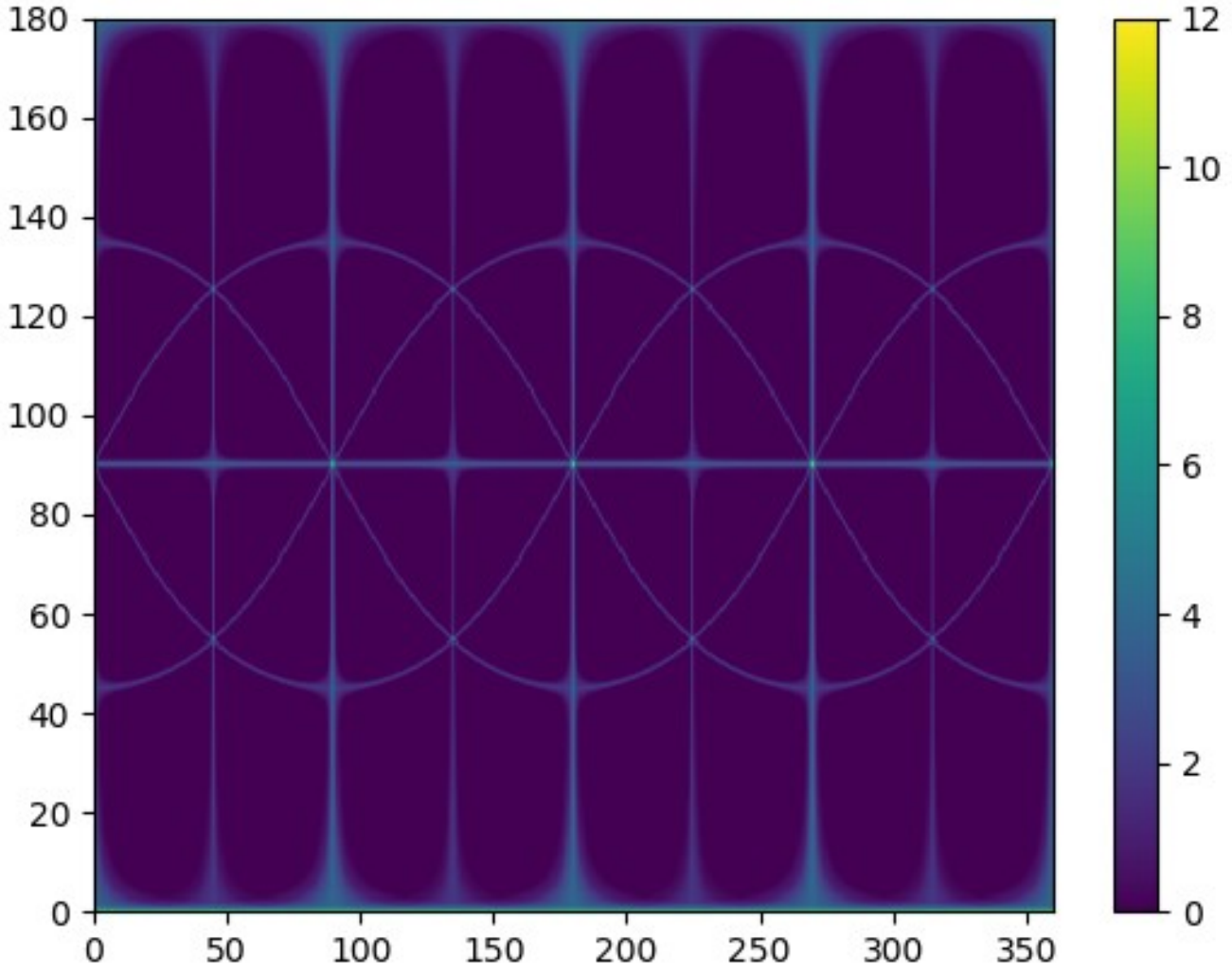


Interaction dipolaire magnetique, Modification du temps de vie de spin

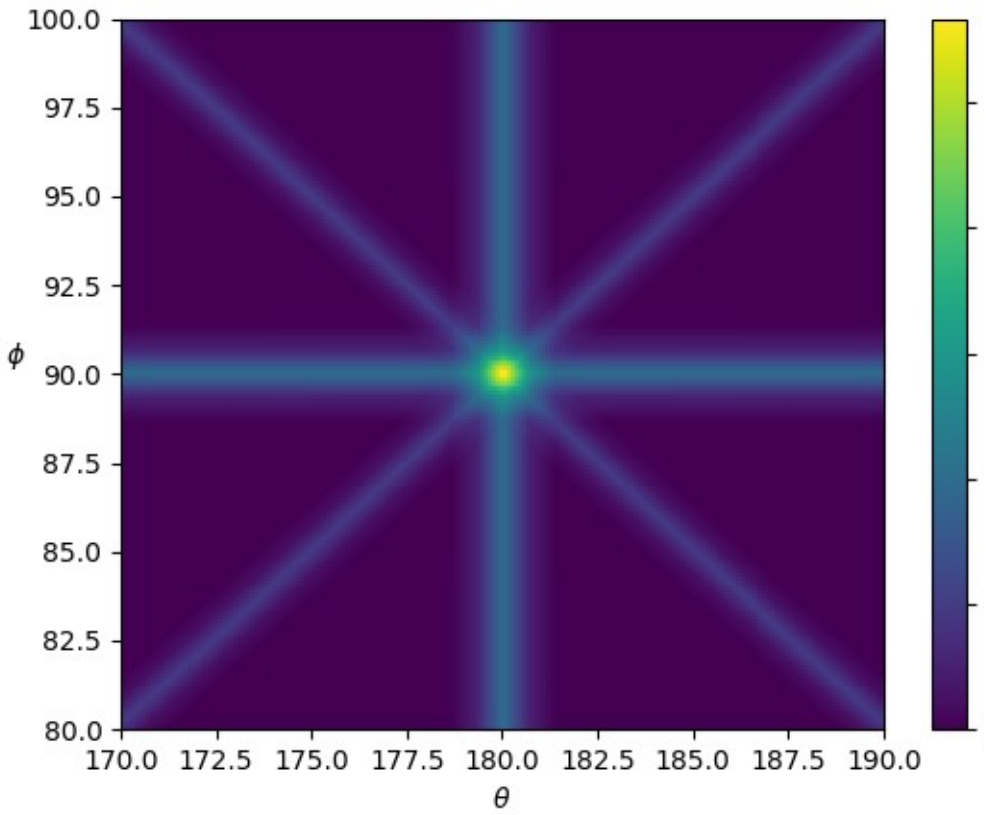




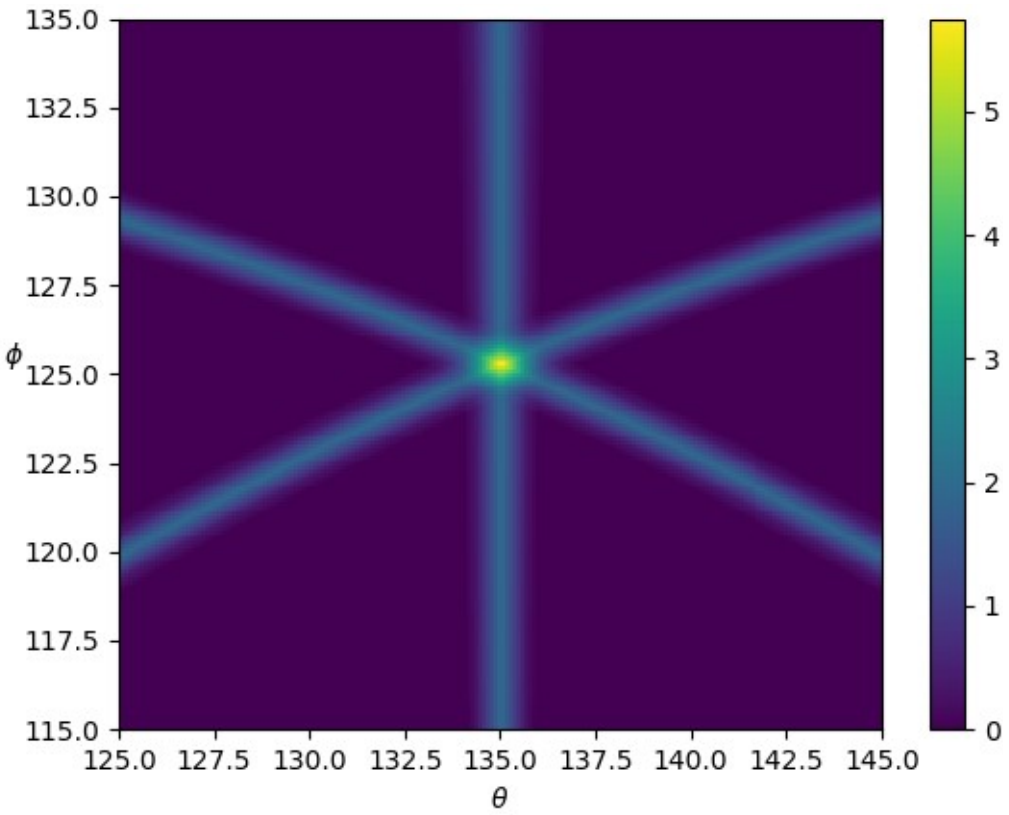
Carte angulaire de degeneresecnce



Carte de degenerescence - Zoom

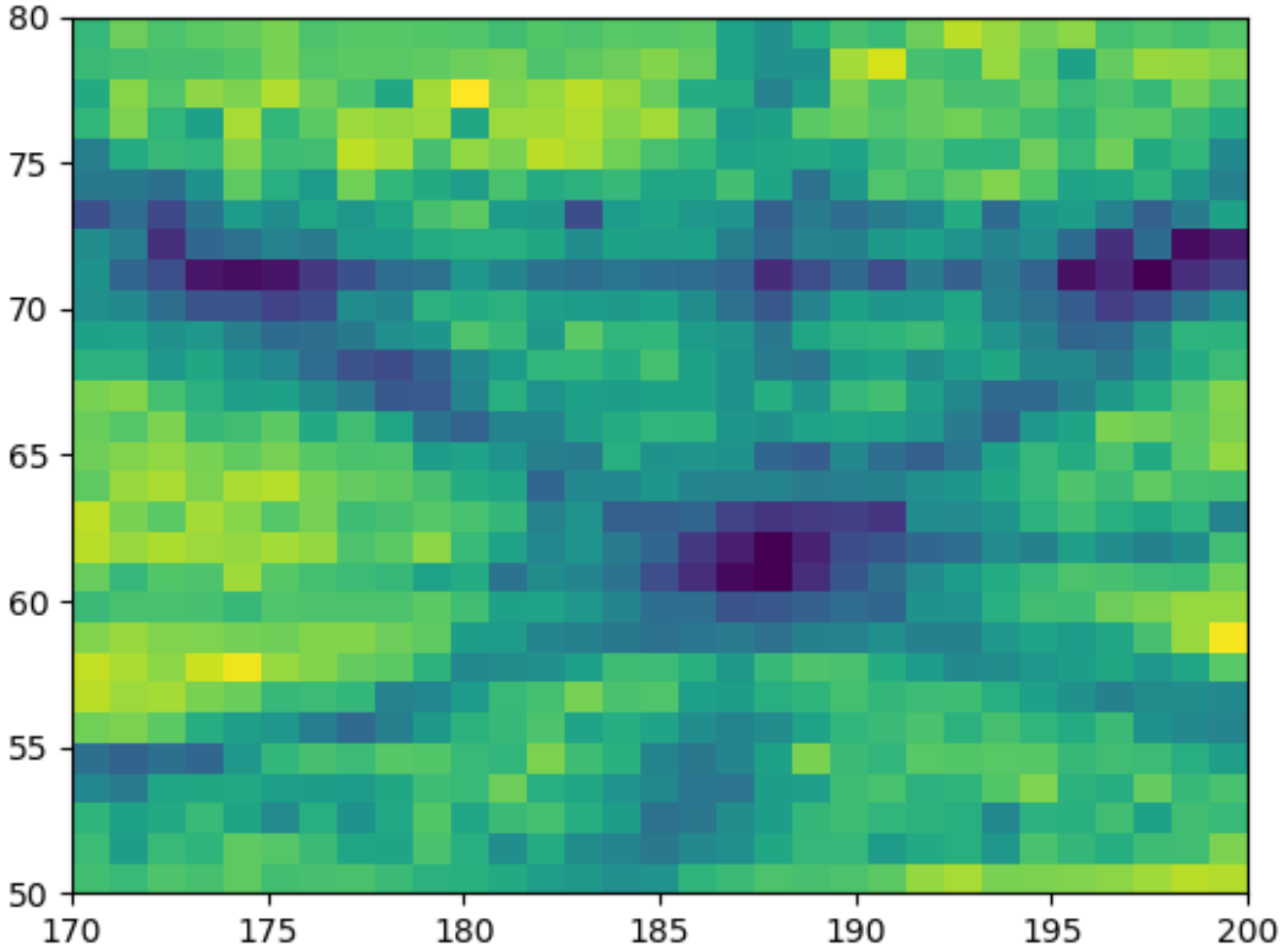


100

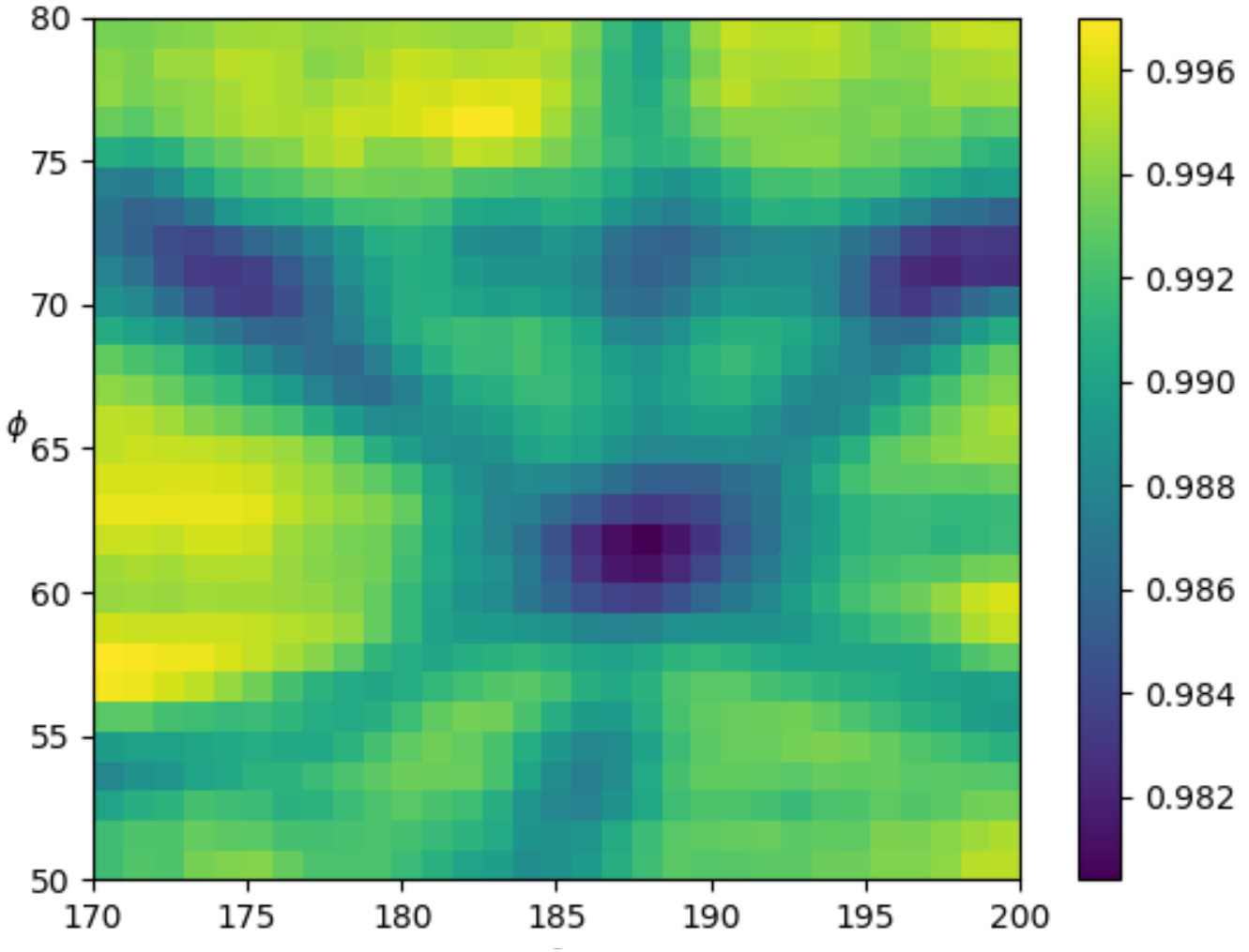


111

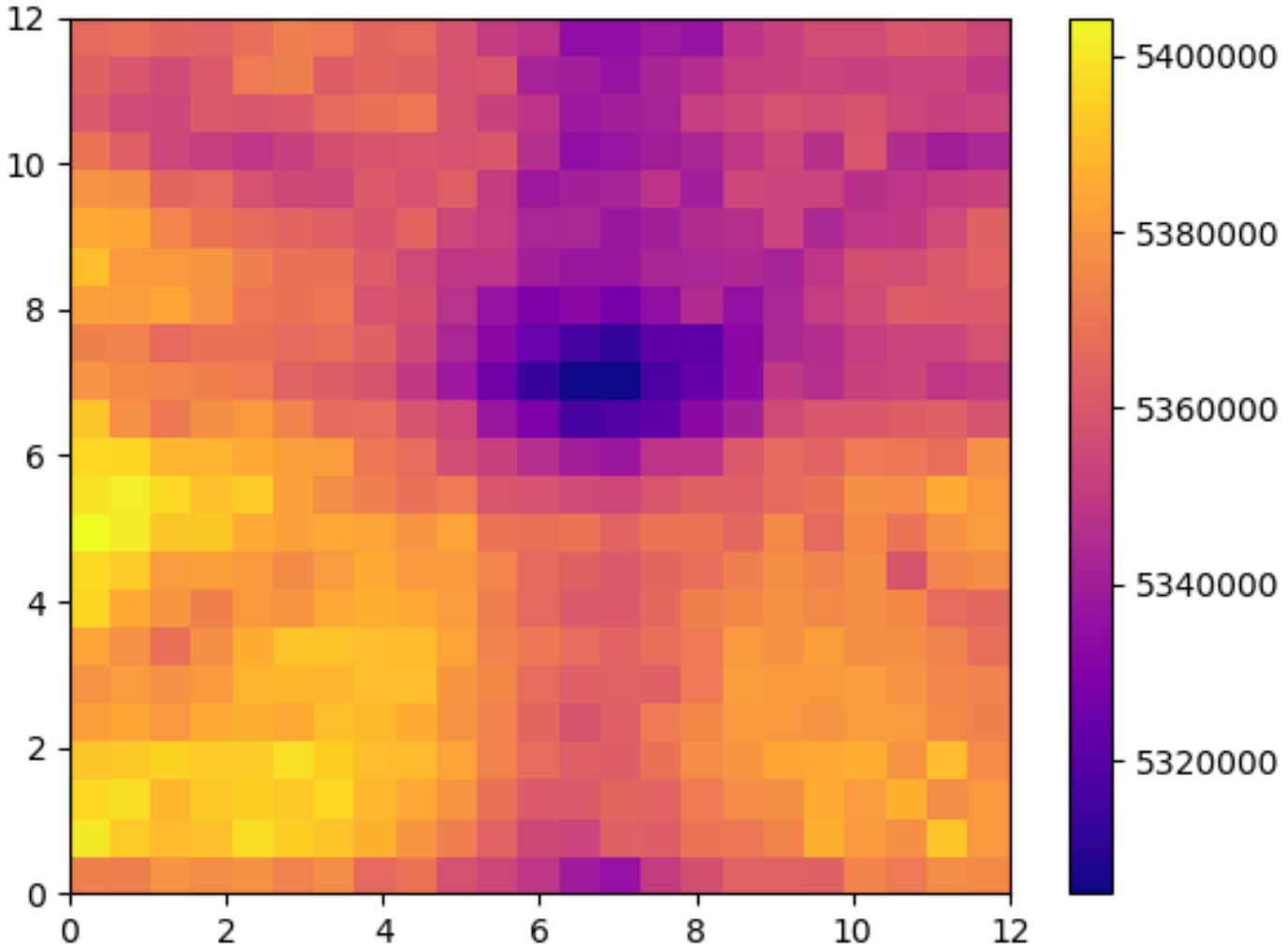
Carte experimentale 1



Carte experimentale 1 - Smooth



Carte automatisee



La suite

Approfondissements :

- **Modele micrscopique**
- **Influence du champ transverse**
- **Stucture hyper-fine**

Applications :

- **Mesure de la concentration de NV**
- **Magnetometrie**