Magn. Reson. Discuss.,
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# *Interactive comment on* "Room temperature hyperpolarization of polycrystalline samples with optically polarized triplet electrons: Pentacene or Nitrogen-Vacancy center in diamond?" *by* Koichiro Miyanishi et al.

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Since I am interested in DNP, but mostly working in EPR, I have a few questions and comments:

1) Section 3.2. mentions a cavity. Could you give some details, i.e. the bandwidth? Would frequency sweeps be possible in principle? What is the maximum electron Rabi frequency you can achieve?

2) Section 4.1. The measurement in Figure 3 (b) (optically polarized NV Powder spec-



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trum) took 7h. I have no experience at all with these systems and setups, but I was wondering why it takes so long?

3) Figure 3 (f) I do not think it is absolutely necessary, but since you already use EasySpin to simulate the triplet spectra, it would be straight-forward to include the non-equlibrium populations (either via "Exp.Temperature" in EasySpin version 5 or via "Sys.Pop" in version 6 (developer version)).

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