

## Supplementary Information

**Hydride Conformers of the Nitrogenase FeMo-cofactor Two-Electron Reduced State E<sub>2</sub>(2H),**

**Assigned Using Cryogenic Intra-EPR-Cavity Photolysis**

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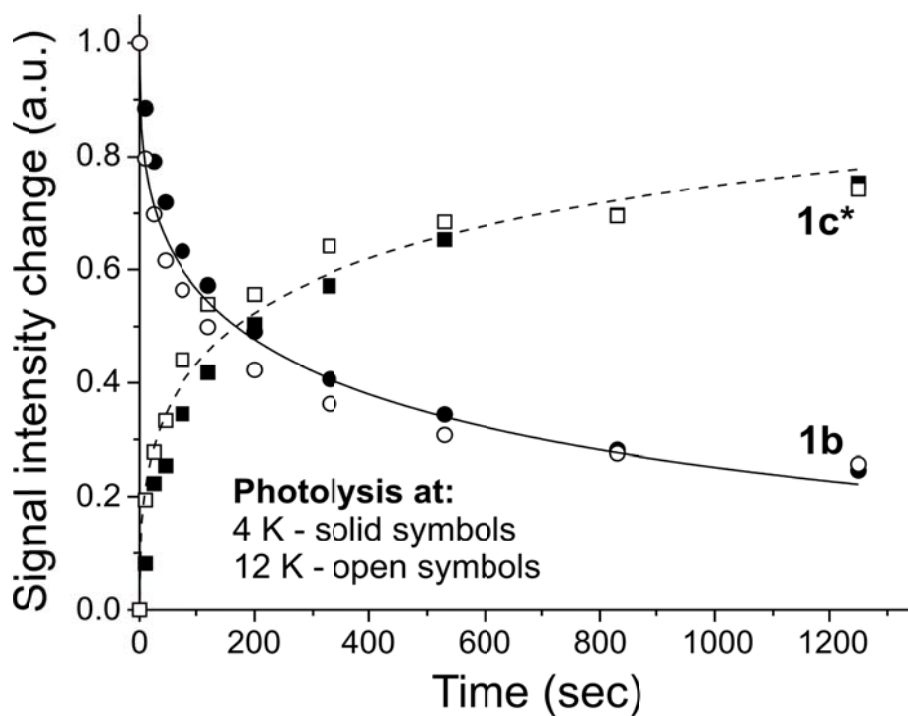
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Fig S1



**Figure S1.** Time courses of EPR signals 1b and 1c\* during irradiation of WT Ar turnover in H<sub>2</sub>O with 450 nm laser diode light at 4 and 12 K. Solid line is fit of combined 4 and 12 K photolysis data points of 1b signal with stretched exponential  $\exp(-(t/\tau)^m)$  decay parameters  $\tau = 458$  sec,  $m = 0.40$ . Dotted line is  $[1 - 1b(t)]$ . *EPR conditions:* the same as described in Materials and Methods except for 12 K data points that were obtained from spectra recorded at 12 K with microwave power of 10 mW.