

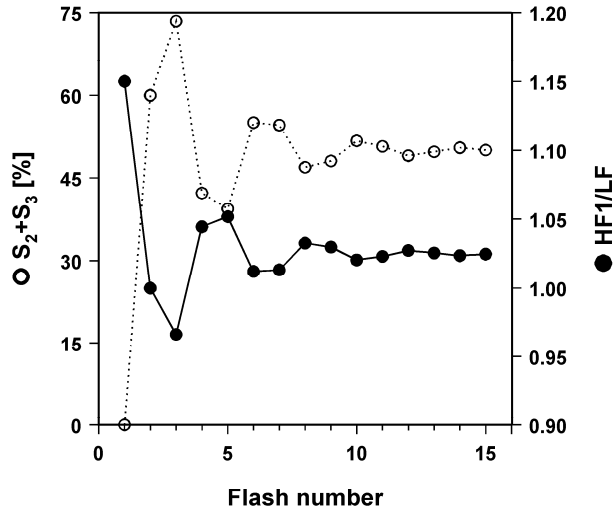


Fig. 3S. The predicted flash induced oscillations in F_m (●, normalized to LF), assuming that quenching of F_m is proportional to fraction of PSII centers in S_2 and S_3 states. The relative concentration of S_2 and S_3 at each flash was calculated from the analysis of the observed oxygen flash yields (Y_{O_2}) in *Chlorella*, induced by FRR ST protocol of 80 μ s duration and repeated at 1 Hz, as shown in Fig. 5 at the accompanying paper [Kolber, #13168]. The measured pattern of Y_{O_2} could be best modeled assuming that initially 40% of PSII centers were in S_0 and 60% in S_1 states. The FRR excitation protocol induced in 15% double-hits and misses in 10% of PSII centers during each S state advancement.