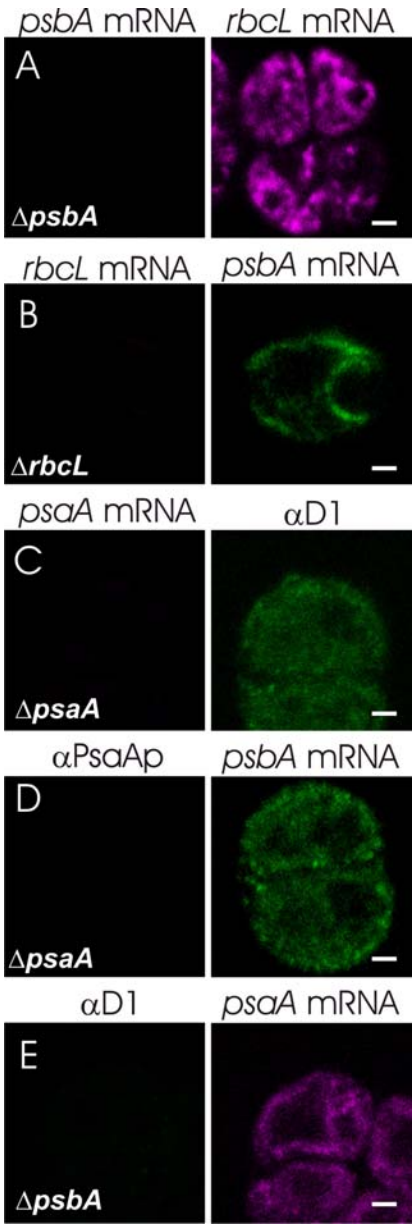
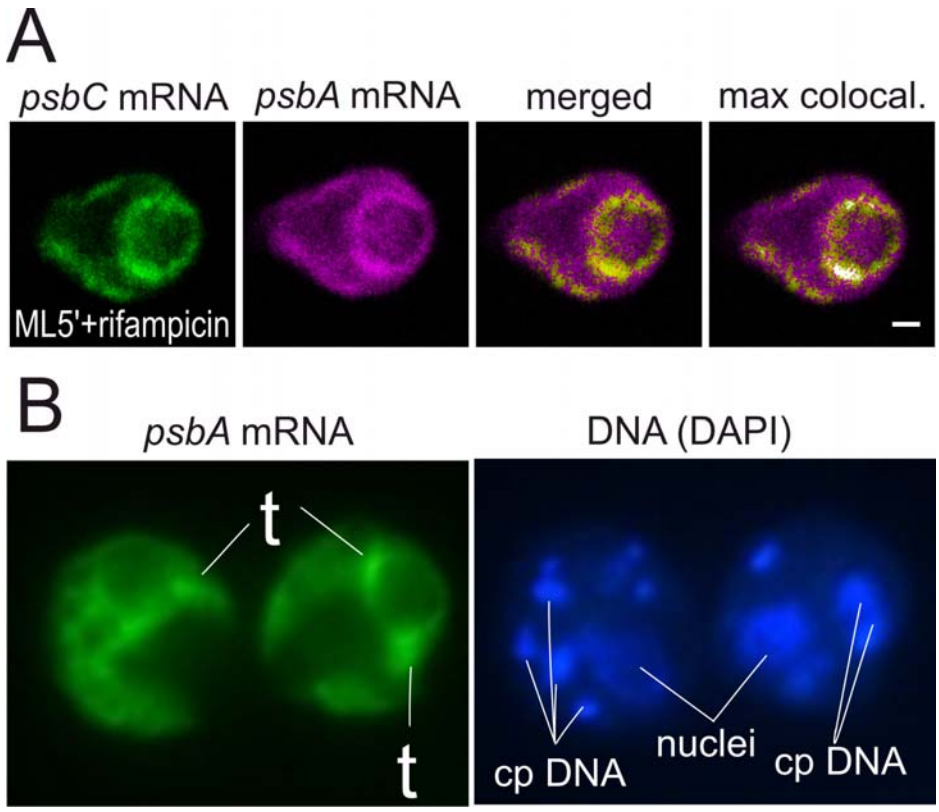
Supplemental Data. Uniacke and Zerges. (2007). Photosystem II Assembly and Repair are Differentially Localized in Chlamydomonas.



Supplemental Figure 1. Control experiments revealed high specificities of FISH and IF signals. Deletion mutants for the corresponding chloroplast gene lacked the fluorescence signals from the FISH probes against the mRNAs of (A) *psbA*, (B) *rbcL*, (C) *psaA*, and the IF signals from (D) PsaA and (E) D1. The right-hand images show the signal of other mRNAs or proteins as positive controls. Each image shows a 0.2 μm optical section. Bars = 1.0 μm.



Supplemental Figure 2. *psbA* transcription does not generate the localized *psbA* mRNAs in t-zones.
(A) In the presence of rifampicin, an inhibitor of the chloroplast RNA-polymerase, the *psbC* and *psbA* mRNAs colocalized in t-zones (90%, n= 20).
(B) Epifluorescence microscopy images show ML5' cells that were FISH-probed for the *psbA* mRNA and concurrently stained with DAPI to reveal of chloroplast nucleoids (cpDNA). In the right-hand image the *psbA* FISH signal in t-zones are indicated with "t". Nuclei are indicated. The upper t-zone of the right-hand cell does not stain with DAPI. Other chloroplast nuclei do not have strong *psbA* FISH signal.