

Supplemental movie

Chloroplast movement was induced by blue light microbeam irradiation. Cells were observed under red light at $165.5 \mu\text{mol m}^{-2} \text{s}^{-1}$. Images were obtained at 1 min intervals. The video movie is constructed with 24 images per second. The size of the microbeam spot is the same as that of the white circle shown in each frame. The timing of the transition from dark to light, or from light to dark, is indicated as a flash of a white circle.

Supplemental movie 1 Chloroplast movement induced by microbeam irradiation in wild type and *jac1-1* plants.

After dark incubation for 20 min, plants were irradiated with blue light at $5.6 \mu\text{mol m}^{-2} \text{s}^{-1}$ for 1 hour, then in darkness.

Supplemental movie 2 Chloroplast movement in wild type and *phot2-1jac1-1* double mutant plants induced by microbeam irradiation.

After dark incubation for 20 min, plants were irradiated with blue light at $3.8 \mu\text{mol m}^{-2} \text{s}^{-1}$ for 1 hour, and then at $94 \mu\text{mol m}^{-2} \text{s}^{-1}$ for 40 min.