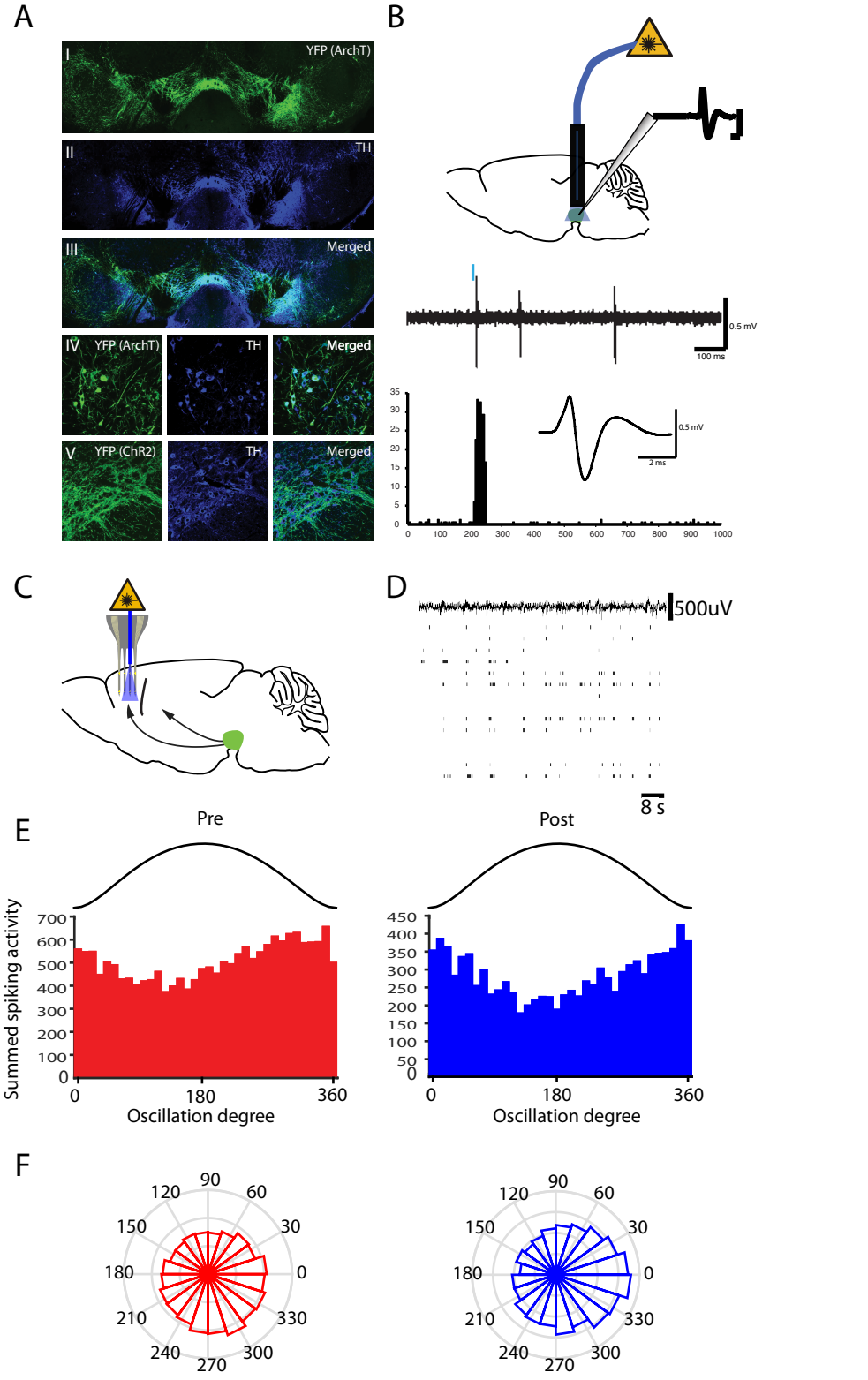

Fig. 2 Activation of opsin-expressing DA neurons in VTA and influences on PFC activity (A) Confocal images demonstrating expression of YFP selectively in TH-Positive neurons of mice injected with either AAV-ArchT(I - IV) or ChR2 (V). (B) In the anaesthetised preparation, using a fibre optic directly above the VTA and a glass recording electrode (top panel), single unit of a putative DA neurons were recorded (middle panel) that fired action potentials upon stimualtion with blue light (bottom panel). (C) Schematic of the recording setup used to record neural activity in PFC. (D) example of a typical of LFP (above) and spiking activity (shown as a raster, below) in mouse PFC. (E) PSTH of the summed activity of neurons (below) during the theta oscillatory cycle (above) before (left) and after (right)DA stimulation. (F) Polar plots exhibitig the phase preference of PFC neurons to the theta cyle beforre (left) and after (right) DA stimulation.