Surface Oil Flow Visualization Demonstration of Separation Control at Low-Reynolds Regimes

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Goal:
To study DBD actuator array effectiveness in separation control over a NACA0012 airfoil at low-Reynolds regimes

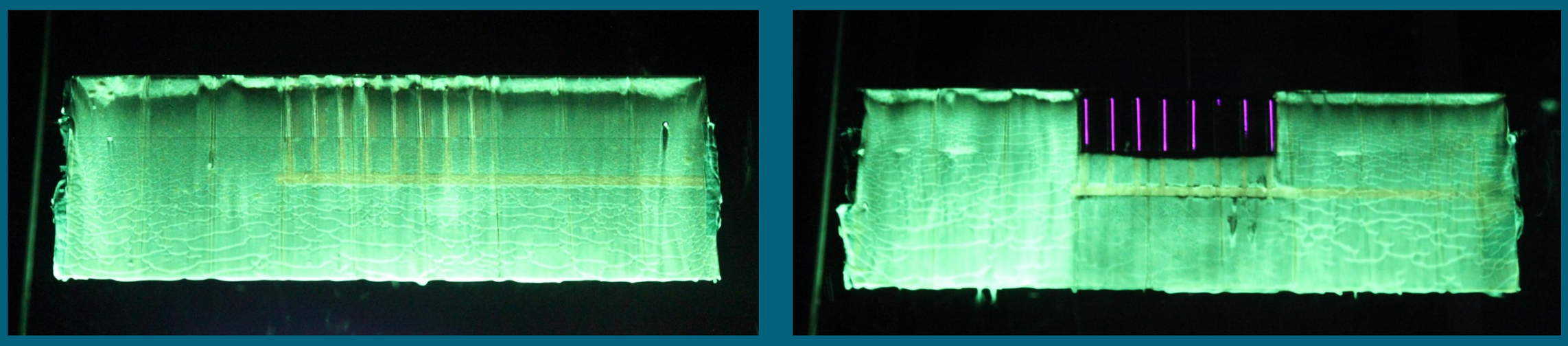

Fig. 1 Turbulent transition control at U=35 m/s, AOA=7 left: actuator off right: actuator on

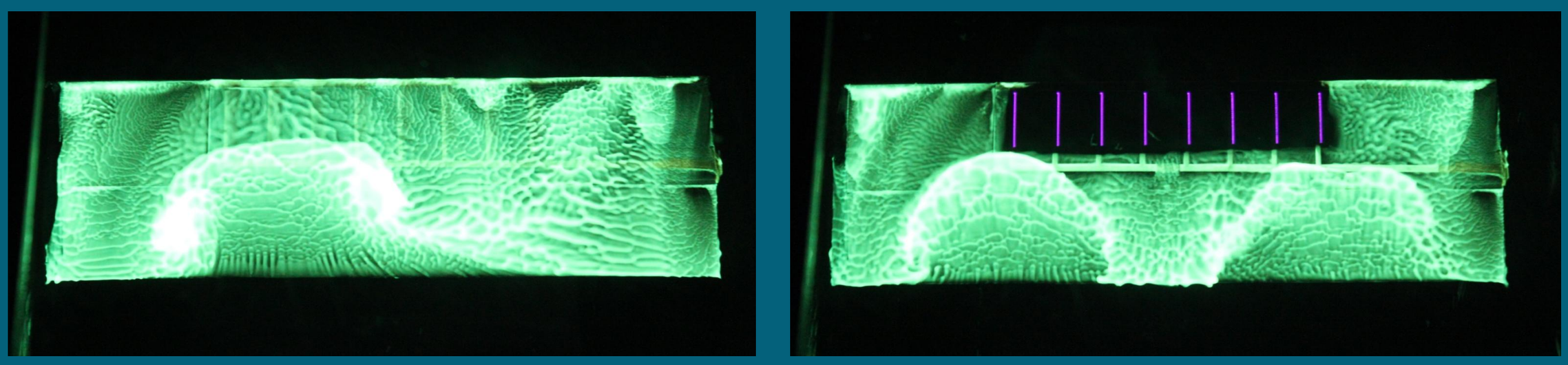

Fig. 2 Separation control at U=25 m/s, AOA=15 left: actuator off right: actuator on

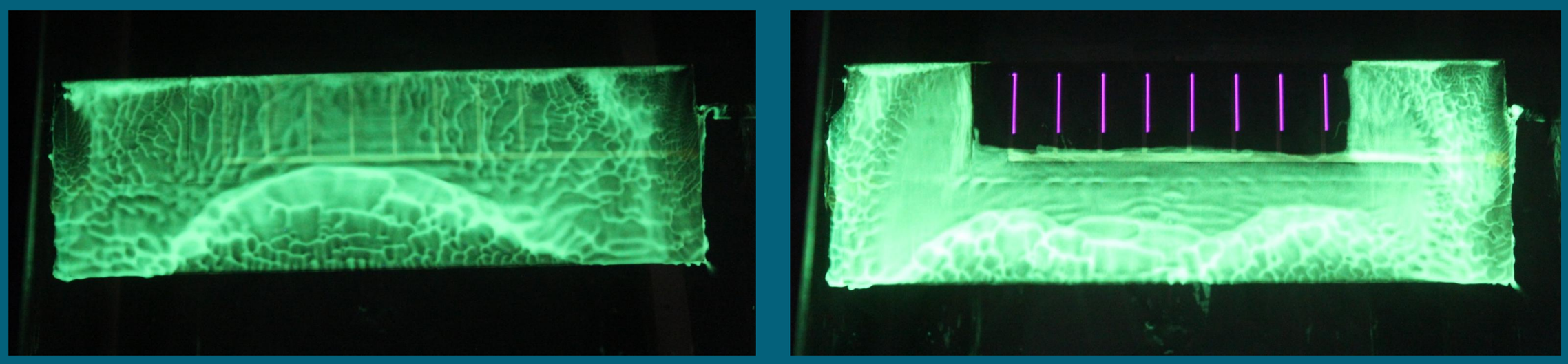

Fig. 3 Separation control at U=25 m/s, AOA=17 left: actuator off right: actuator on

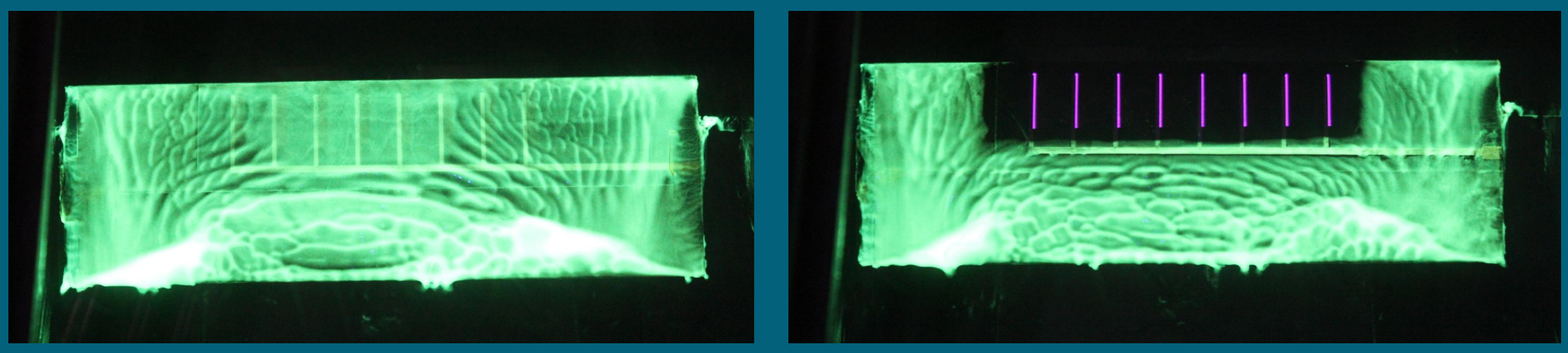

Fig. 4 Separation control at U=25 m/s, AOA=20 left: actuator off right: actuator on