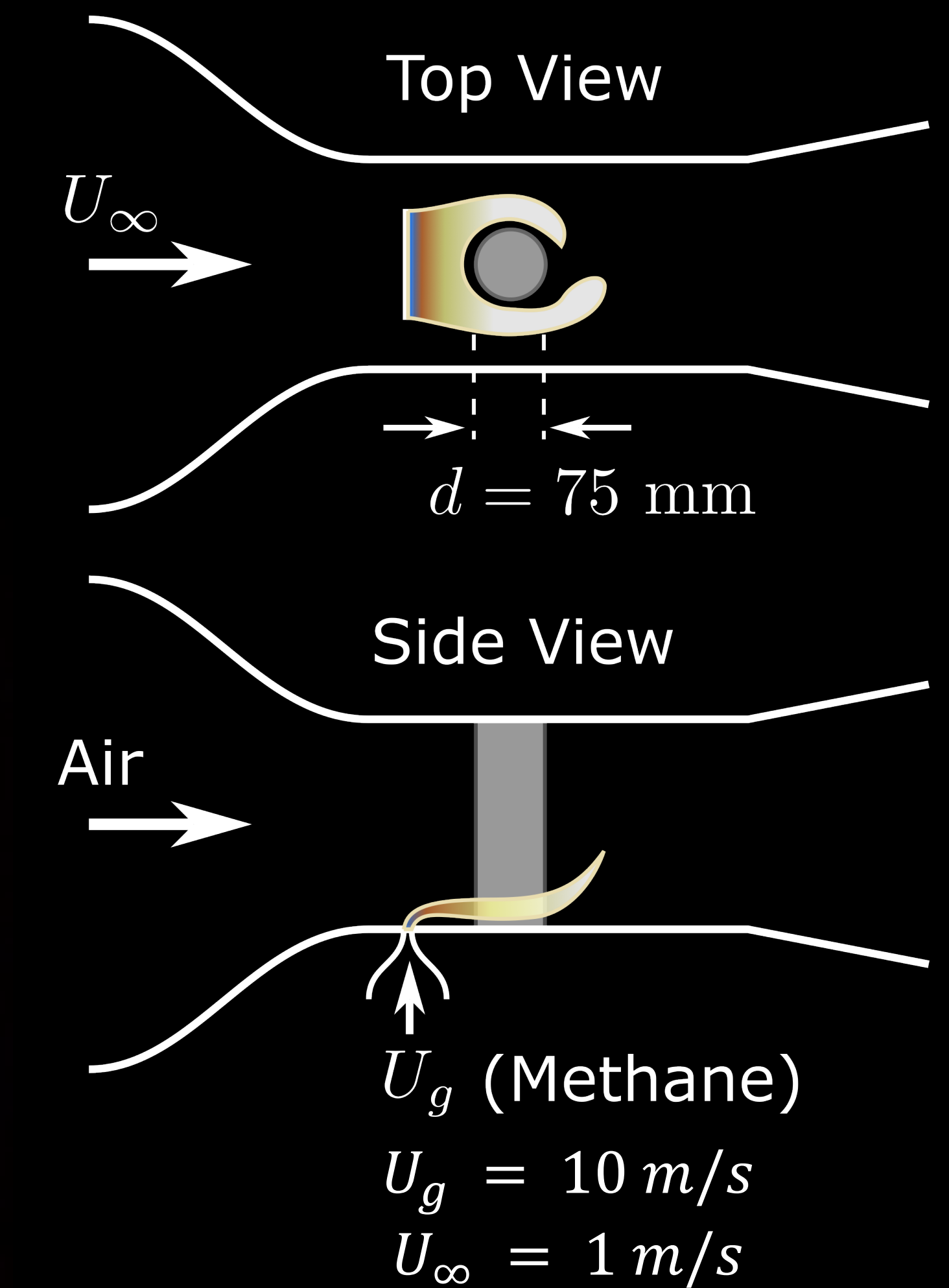


# Parting the Flames: Interactions of a Flame Sheet with a Juncture Flow

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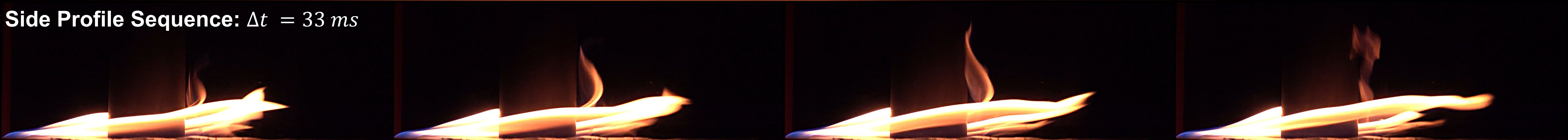
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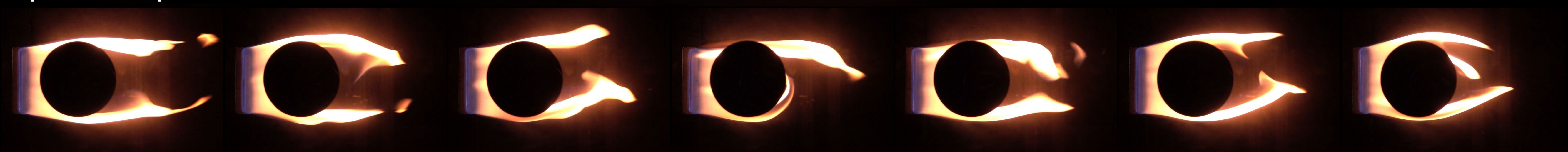


A diffusion flame sheet interacts with the three-dimensional juncture flow created by the intersection of an aluminum cylinder with the laminar wall boundary layer in a low-speed wind tunnel. The flame filaments twist into the horse-shoe vortex system (above, center), climb up the leeward side of the cylinder as the flow recirculates in the wake (bottom, side profile sequence), and flap back and forth with the vortex shedding from the cylinder (bottom, top profile sequence).

Side Profile Sequence:  $\Delta t = 33 \text{ ms}$



Top Profile Sequence:  $\Delta t = 167 \text{ ms}$



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