A long time ago, in a galaxy far, far away...

ENGINE FAILURE AT THE BATTLE OF ENDOR: CAN THE MILLENIUM FALCON GLIDE SAFELY?

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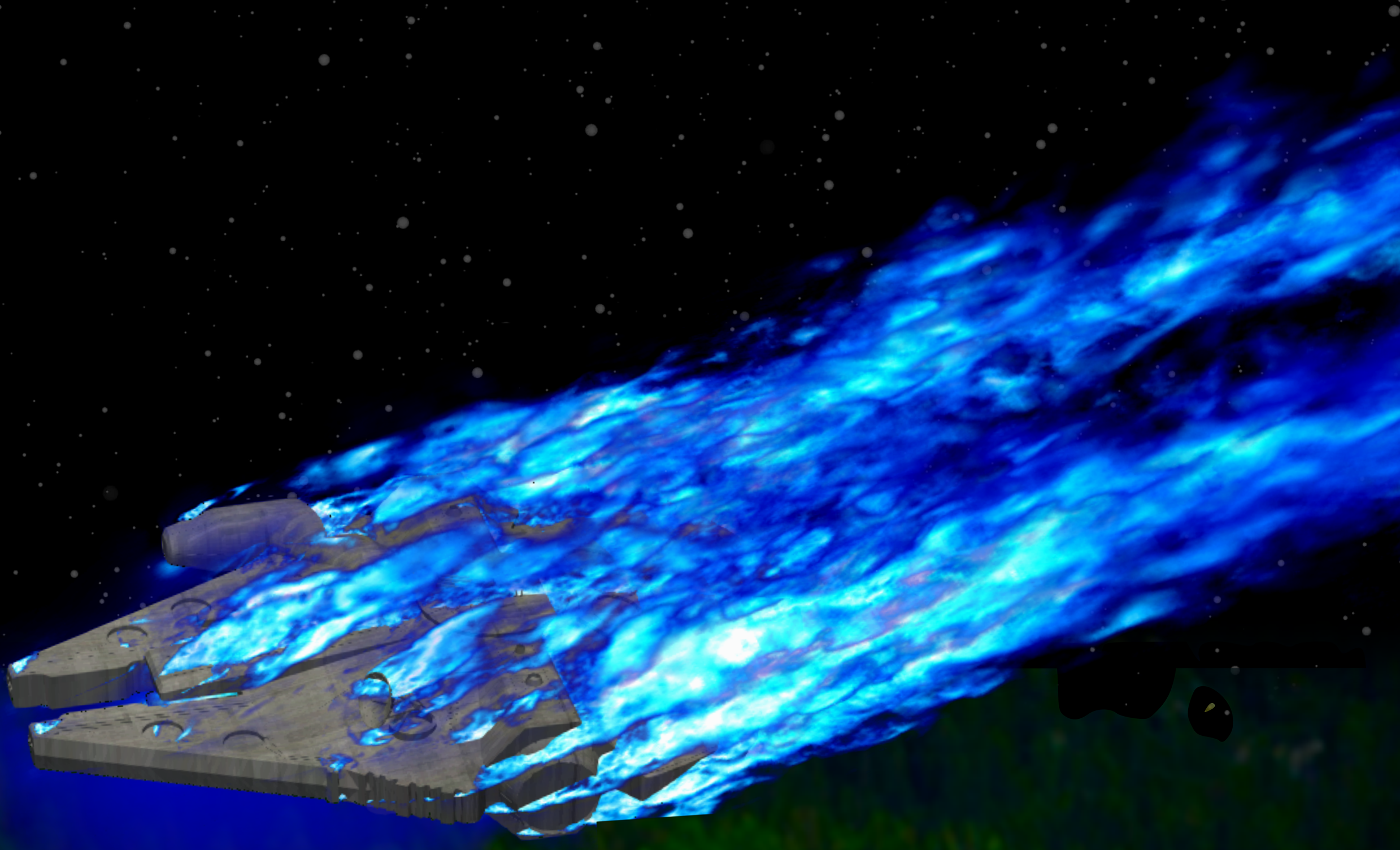

During the Battle of Endor, the Millennium Falcon, piloted by Han Solo and his co-pilot Chewbacca, played a crucial role in the Rebel Alliance's attempt to bring down the second Death Star. As they navigated barrages of laser fire and waves of TIE fighters, their actions became the stuff of legends. Yet, amidst the raging chaos, a hypothetical scenario unfolds: what dire consequences would ensue if the Falcon's powerful engines were to fail at an altitude of 2 km? To characterize the Falcon's glide performance, we conducted wall-modeled large-eddy simulations of the craft at a variety of angles of attack, finding that 20° was optimal. With a Reynolds number of 3e7 and a velocity of 300 m/s, the Falcon achieves a glide ratio of only 1.8, allowing it to coast 3.6 km to the ground. The flow is visualized with contours of velocity magnitude.