

Effective path planning for long-distance flights is critically important when air streams significantly affect airship movement, as is the case for a ship or a zeppelin. Optimal control can save travel time, fuel consumed and avoid flying in unfavourable conditions by early warning. We implemented a numerical algorithm for computing time-optimal trajectory for a long-distance flight of a zeppelin in variable atmospheric flow. We tested the algorithm on both model tasks and real meteorological data. The result of our work is a software with graphical interface, which can compute optimal navigation instructions, obtain weather forecast automatically and plot outputs, which contain also an indication of computation precision.