# Wing Beat Compensation Guide

The wing beat compensation uses two different methods to compensate the movements of the wings of a bird. The first method is applied throughout the whole video and replaced by the second one under user-defined conditions. Those conditions are: **mass**, **slope x** and **slope y**. Explanation: two axes are calculated which connect the leftmost/ rightmost resp. the upmost/ downmost positions. Their slopes are slope x resp. slope y. Mass is the amount of bird mass located on the left-right axis.

Default (absolute) values are slope x=3, slope y=20, mass=50. The actual mathematical values correspond to 0.3 (16.7 °), 2 (63.4 °) and 0.5, but for program specific reasons they are multiplied by 10, 10 resp. 100. Slope x is a maximum value (at most value) while slope y and mass are minimum values (at least values).
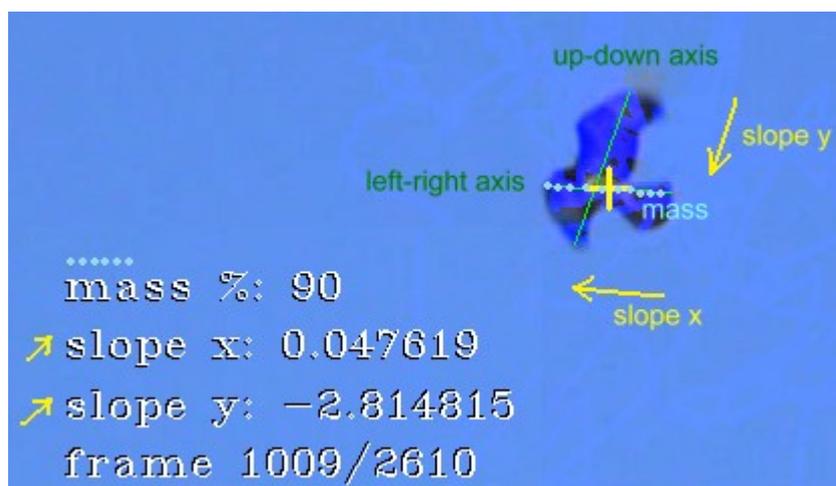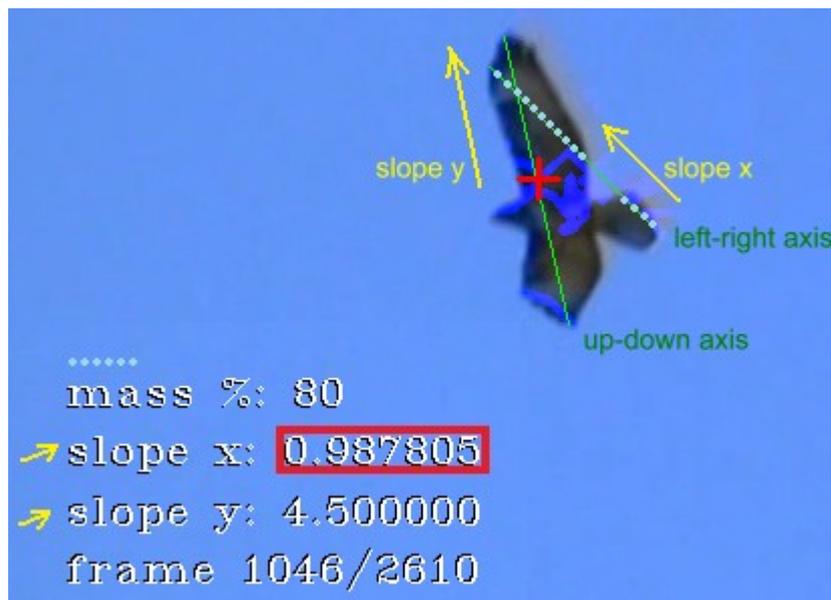
In picture 1 you can see a flight phase in which only two of the conditions are met: mass and slope y. Slope x is too big. Hence method 1 is applied (you can see that by the color of the cross which is red in that case). In picture 2 all condtions are met and thus method 2 is applied (yellow cross).

If you do not want to let method 2 take effect at any point of the video set the mass value to 120.