

 $v_t + 0.007(uv_x + vv_y) = -p_y + -0.00052(v_{xx} + v_{yy}) + 0.00000(v_{xxx}^2 + v_{yyy}^2)$

Correct PDE
$$u_t + (uu_x + vu_y) = -p_x + 0.002(u_{xx} + v_{xy})$$

Identified PDE (clean data)