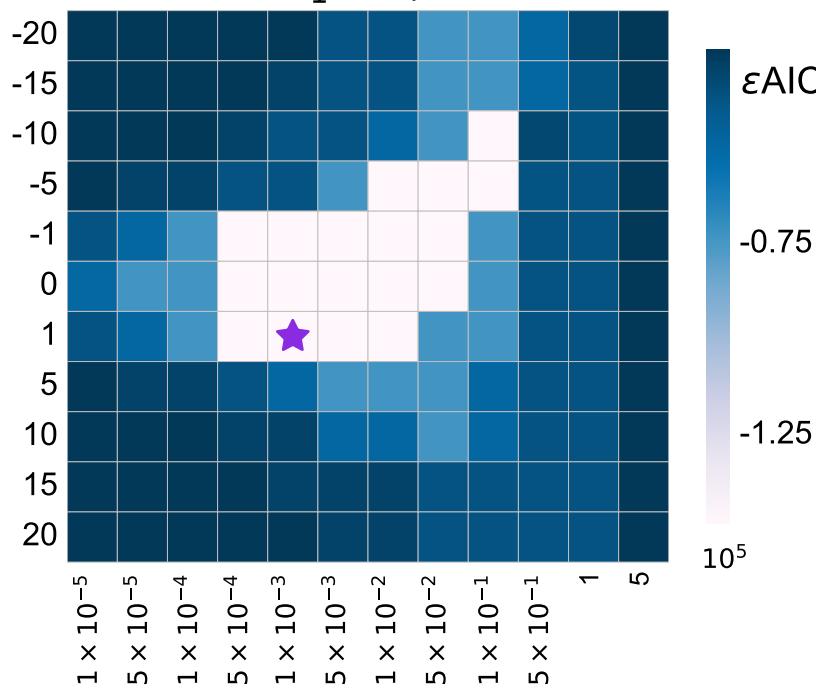
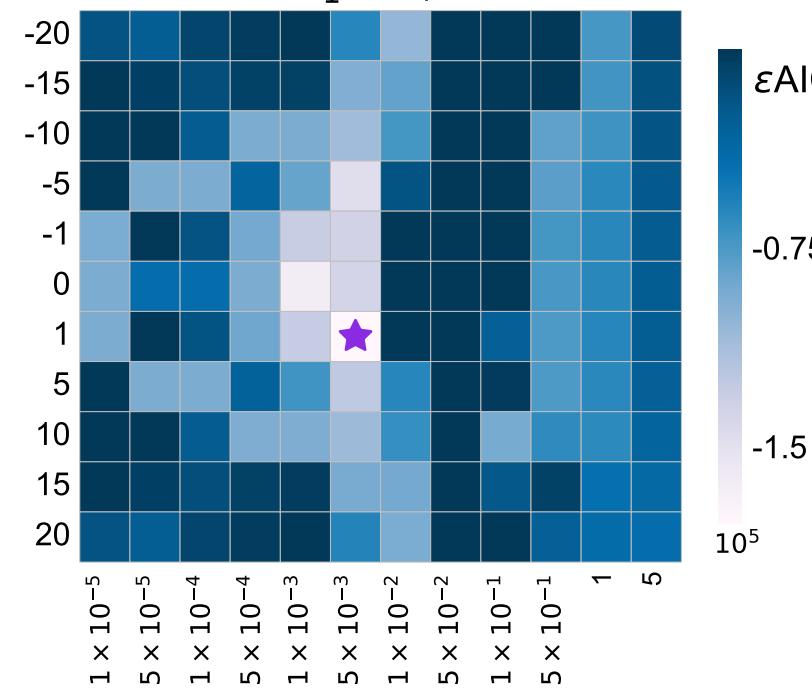
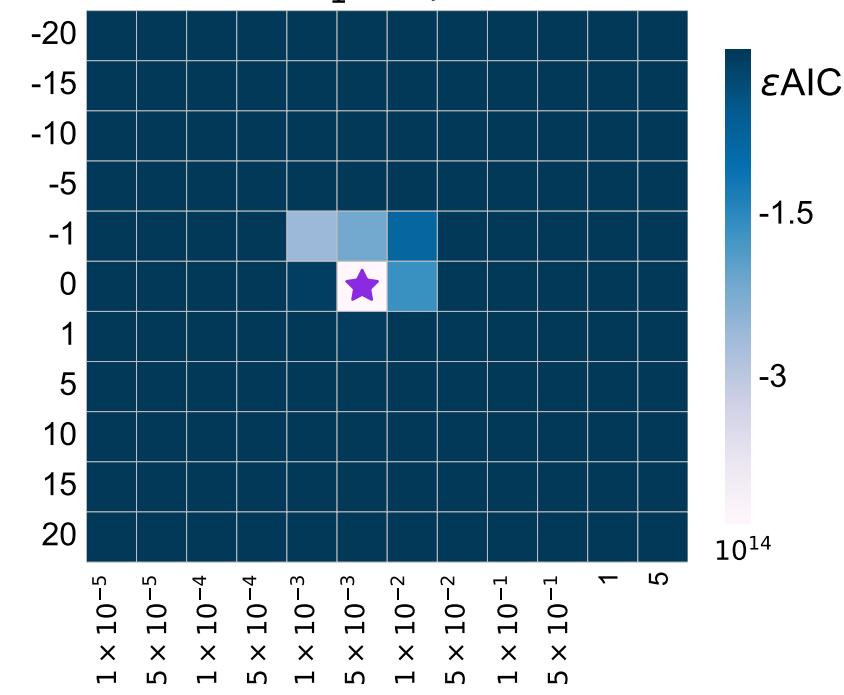
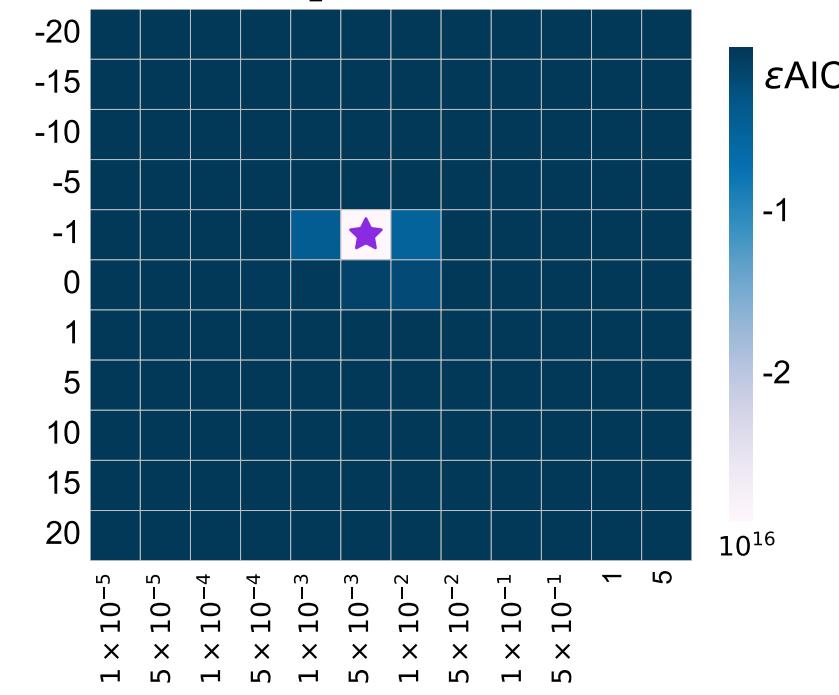
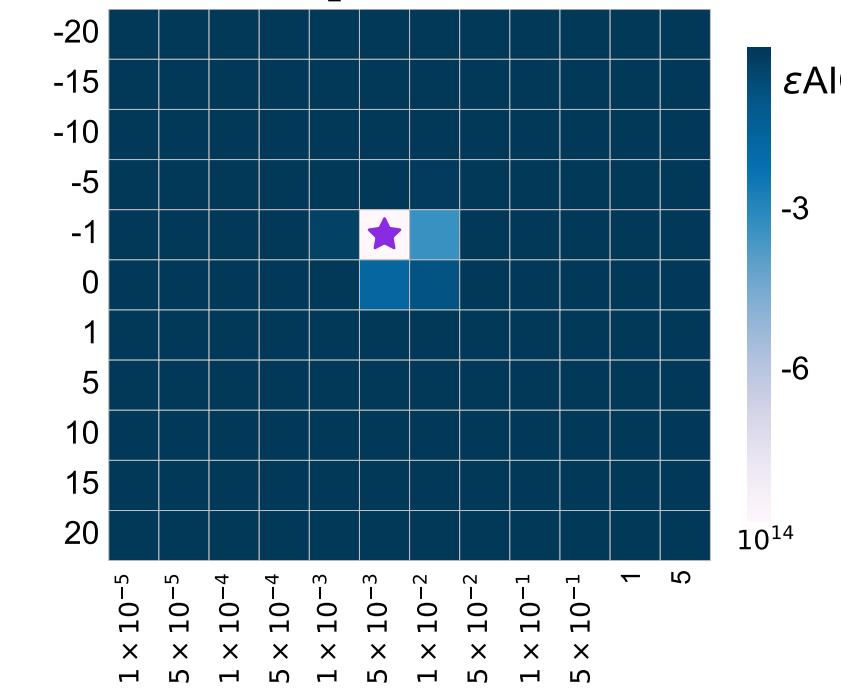


a *Cellular energy depletion*Grid search: $v_1 = 1, \Delta v = 1 \times 10^{-3}$ **b** *UAV obstacle avoidance*Grid search: $v_1 = 1, \Delta v = 5 \times 10^{-3}$ **c** *Beating chick-heart (I)*Grid search: $v_1 = 0, \Delta v = 5 \times 10^{-3}$ **d** *Beating chick-heart (II)*Grid search: $v_1 = -1, \Delta v = 5 \times 10^{-3}$ **e** *Beating chick-heart (III)*Grid search: $v_1 = -1, \Delta v = 5 \times 10^{-3}$ **f** *Fish community*Grid search: $v_1 = 0, \Delta v = 1$ 