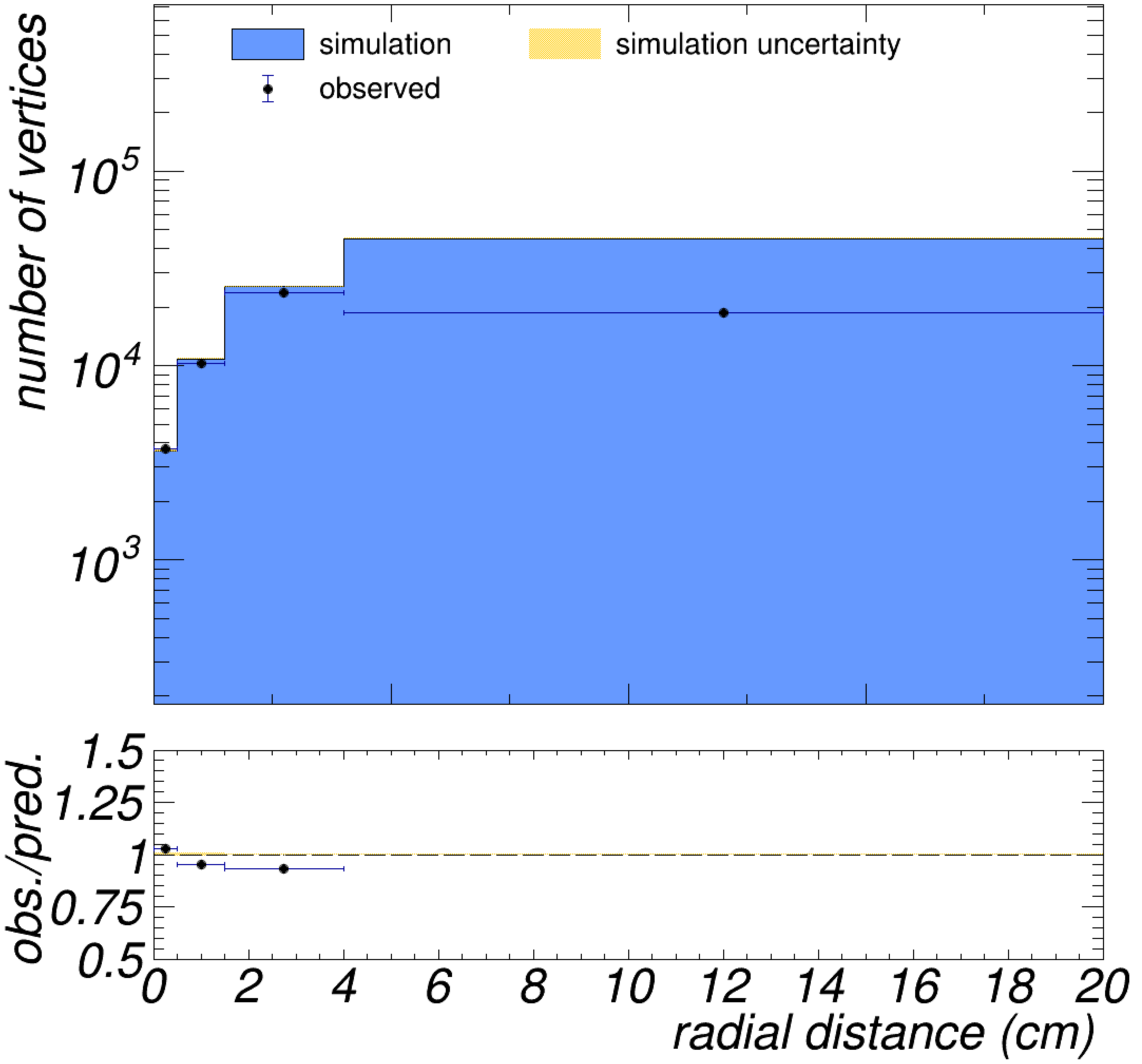K_S^0 vertex radial distance