Membership functions χ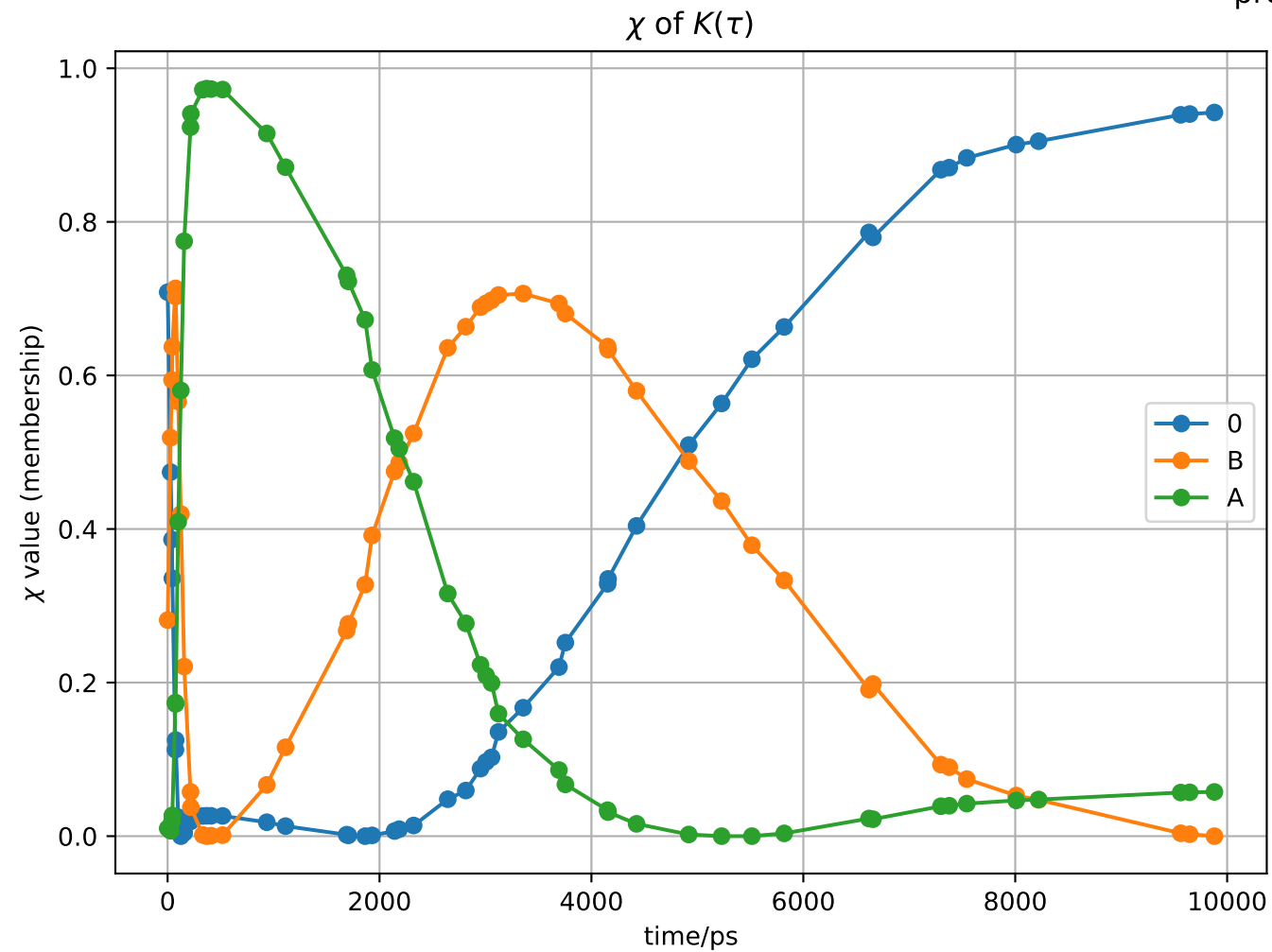 and species -product ansatz