

I think I understand now how the Condon rules don't mention spin explicitly, but spin is something that has to be considered when using them to evaluate a matrix element. So for the integral of the coul.umb type  $[mm|nn]$ , spin would not be involved, but for the integral of the exchange type  $[mn|nm]$  spin would be involved. take the example where  $m=0$  and  $n=1$  for spin orbs. then,  $[mm|nn] = (mm|nn)$ . however,  $[mn|nm] = [01|10] = \int dr_2 dr_1 \alpha^*(r_1) \beta(r_1) \beta^*(r_2) \alpha(r_2) (00|00) = 0 * 1 = 0$  I imagine spin would be involved for the second type because of this fact. I'm not sure how to implement this though, because I know that I have my initial form covered, but I don't know how I would factor in the cancellations that result from spin. I have linked my implementation of the mathematics to this comment.