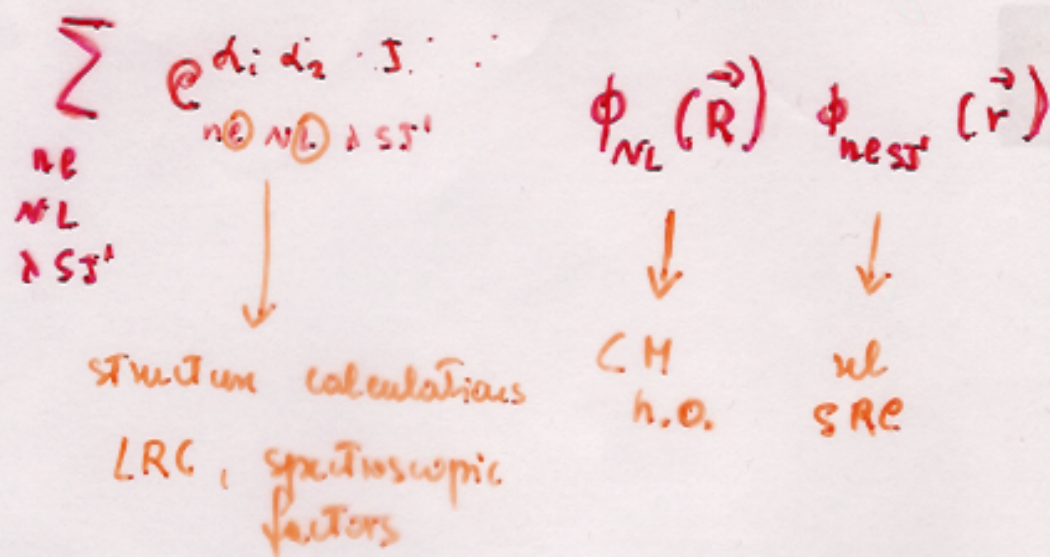


# TWO-PROTON OVERLAP FUNCTION (TOF)

$$\langle {}^{14}e(J^\pi) \vec{r} \vec{R} | {}^{16}O_{g.s.} \rangle =$$



$$\vec{r}_1 \vec{r}_2 \rightarrow \vec{r} \vec{R}$$

$d_i = \{n_i, l_i, j_i, m_i\}$  q.n. for s.p. states  
 in an extended SH basis

$$\phi_{hess}^{corr}(\vec{r}) = \phi_{hess}^{uncorr}(\vec{r}) + D_{esj}^{DEF}(\vec{r})$$

$\downarrow$  h.o.  $\downarrow$  defect function

SRC are introduced by the addition of the defect functions from the Bethe-Goldstone equation to the uncorrelated partial wave for the relative motion.

DIFFERENT DEFECT FUNCTIONS AND DIFFERENT CORRELATION EFFECTS FOR DIFFERENT RELATIVE STATES

$\rightarrow 2s+1 \ell_{j_1} \quad \ell = s, p, \dots \quad 1s_0 \quad 3p_{0,1,2}$