

• INITIAL STATE

TWO-NUCLEON OVERLAP

$$\begin{cases} \text{PP-KO} & \langle {}^{14}\text{C}(J^{\pi}) \vec{r}_1 \vec{r}_2 | {}^{16}\text{O}_{g.s.} \rangle \\ \text{PH-KO} & \langle {}^{14}\text{N}(J^{\pi}) \vec{r}_1 \vec{r}_2 | {}^{16}\text{O}_{g.s.} \rangle \end{cases}$$

E. Barbieri, W. Dickhoff

PRC 65 064313 (2002)

E. Barbieri, W. Dickhoff, C.J., F.D. Pacati (2004)

PRE 70 014606 (2004)

- effects of nuclear fragmentation have been obtained in a self consistent way
- LRC hh-DRPA in a large SH basis
- SRC+TC defect functions. The projection out of the space where LRC are calculated is computed exactly
- consistent calculation of PP and PH-KO