Efficient solution of Poisson's equation with free boundary conditions

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II. INTERPOLATING SCALING FUNCTIONS

$\mathbf{r}_{i_1,i_2,i_3} = (i_1, i_2, i_3)$ i_1, i_2, i_3

$= (\mathbf{r}_{i_1, i_2, i_3}),$

[illegible] 3 [illegible]

[illegible] 1/8 [illegible]

[illegible] H [illegible] 16

[illegible] 17 ([illegible]) [illegible]

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APPENDIX: PROOF OF EQ. (6)

... (6).

$$\rho(\mathbf{r}) = \sum_{s_1 s_2 s_3} \rho_{s_1 s_2 s_3} \phi(\ldots_1)\phi(\ldots_2)\phi(\ldots_3). \quad (1)$$

... (1) ... (2) ...

$$\sum_{s_1 s_2 s_3} \ldots \rho_{s_1 s_2 s_3}$$

$$= \int \ldots \rho(\mathbf{r}) \ldots 0 \leqslant \ldots_1, \ldots_2, \ldots_3 < \ldots \quad (2)$$

... 19 ...

$$= \int \phi(\ldots) \ldots = \delta, \quad = 0, \ldots, \quad 1. \quad (3)$$

$$\int \phi(\ldots) \ldots = \int \phi(\,)(\ldots)$$

$$= \int \phi(\,) \sum_{=0} \ldots = \ldots$$