Main Scenarios of CMN-Effects

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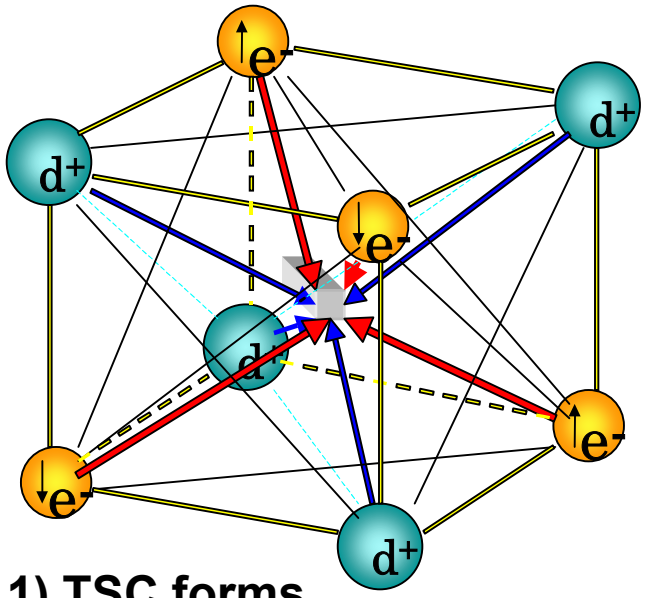
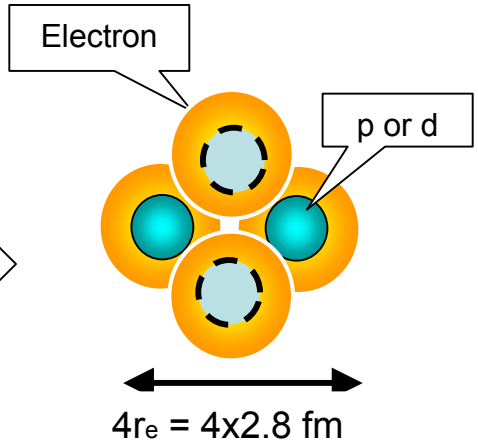
Major Results: Experiments vs. Theory

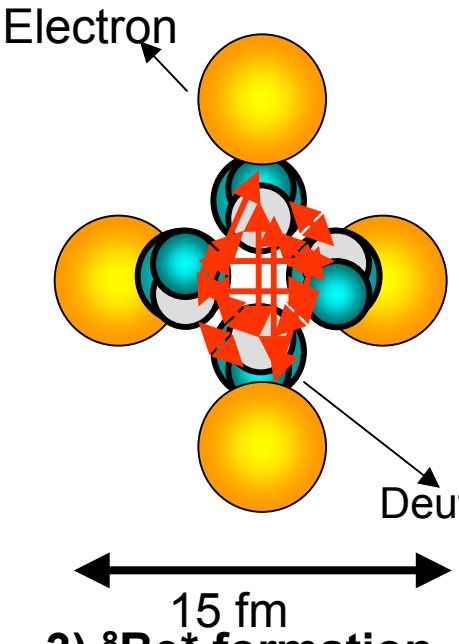
Item	Experiment Author/ Method/ Results	EQPET/TSC Model
Screening of d-d	Kasagi/beam/310eV Takahashi/3D/1E+9 <dd>	360eV by dde*(2,2) (1E+13) τ (0.1ms)
^{4}He Production	McKubre/El./30+-13MeV	23.8MeV/^{4}He by 4D → ^{4}Hex2 +47.6MeV
Maximum Heat	El Boher/El./24.8keV/Pd Gain ≈ 25	23 keV/Pd 46MeV/cc by 4d/TSC
Transmutation	Iwamura/Perm./Cs→Pr Miley/NiH/Fission-like Pro.	4d/TSC + M 4p/TSC + M reaction



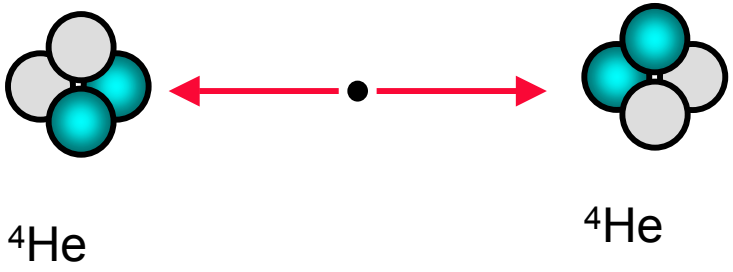
1) TSC forms



2) Minimum TSC



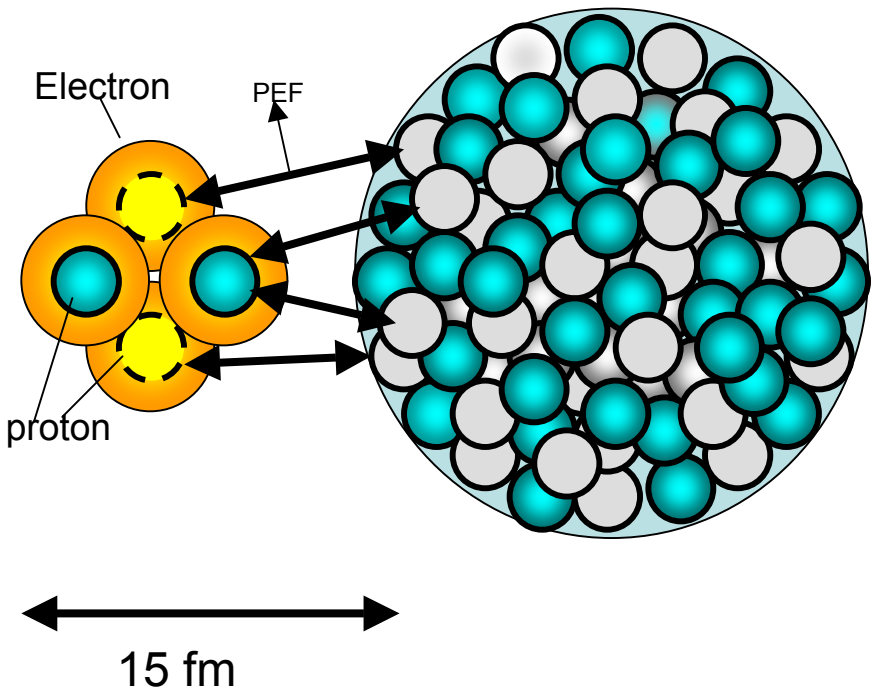
3) ^{8}Be* formation



4) Break up

Fig: Semi-classical squeezing motion of TSC

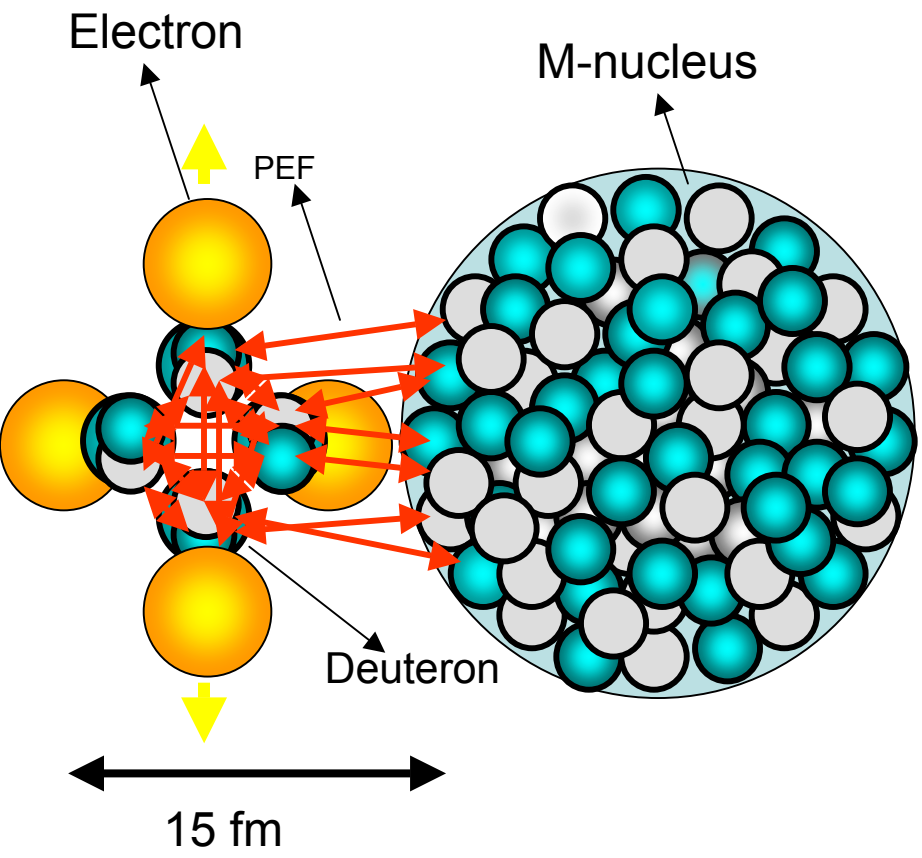
M + TSC
Nuclear Interaction Mechanism



- Topological condition for Pion-Exchange (PEF)
- Selection of pick-up number of protons (+ neutrons for 4d/TSC) from 4p/TSC
- M + (1-4)p(or d) capture reaction

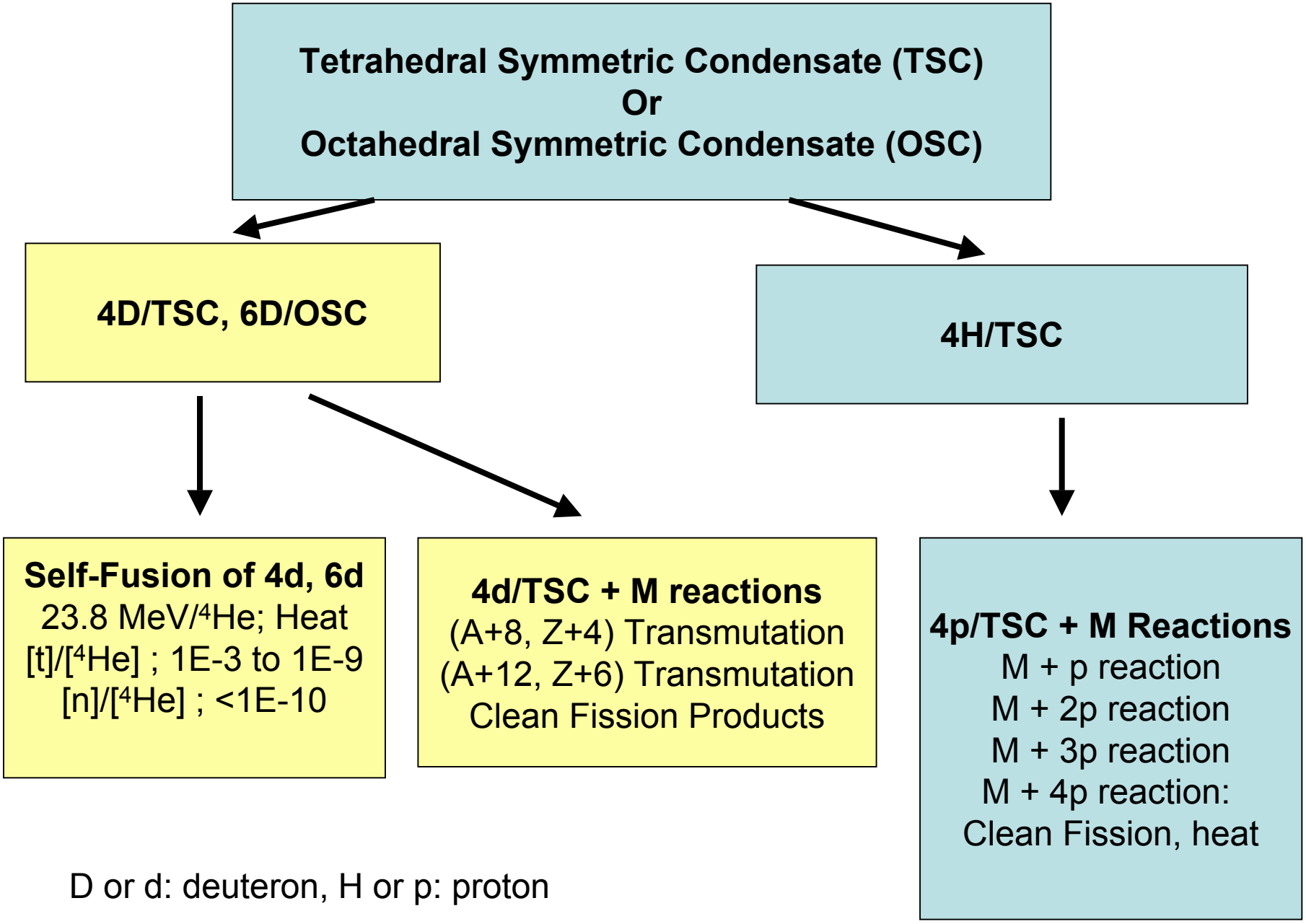
Re: classical electron radius = 2.8 fm

M + 4d/TSC
Nuclear Interaction Mechanism



- Over-minimum sate of 4d/TSC
- Admixture of 4d/TSC to form $^{8}Be^{*}$
- M + $^{8}Be^{*}$ capture reaction
- Strong force exchange (PEF) between M and $^{8}Be^{*}$

Re: Classical electron radius = 2.8 fm


Tetrahedral Symmetric Condensate (TSC)
Or
Octahedral Symmetric Condensate (OSC)
4D/TSC, 6D/OSC
4H/TSC
Self-Fusion of 4d, 6d
23.8 MeV/[4]He; Heat
[t]/[[4]He] ; 1E-3 to 1E-9
[n]/[[4]He] ; <1E-10
4d/TSC + M reactions
(A+8, Z+4) Transmutation
(A+12, Z+6) Transmutation
Clean Fission Products
4p/TSC + M Reactions
M + p reaction
M + 2p reaction
M + 3p reaction
M + 4p reaction:
Clean Fission, heat
D or d: deuteron, H or p: proton

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