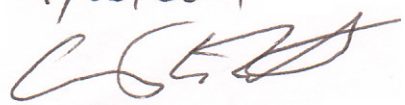
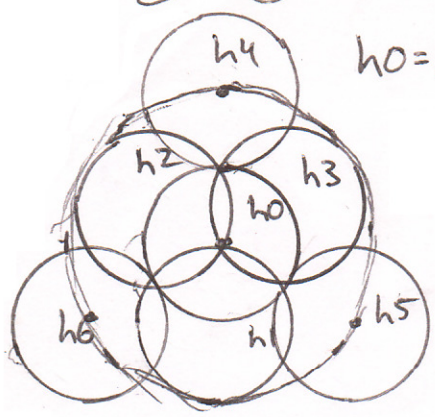
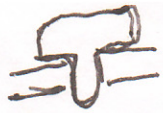
9/16/2014





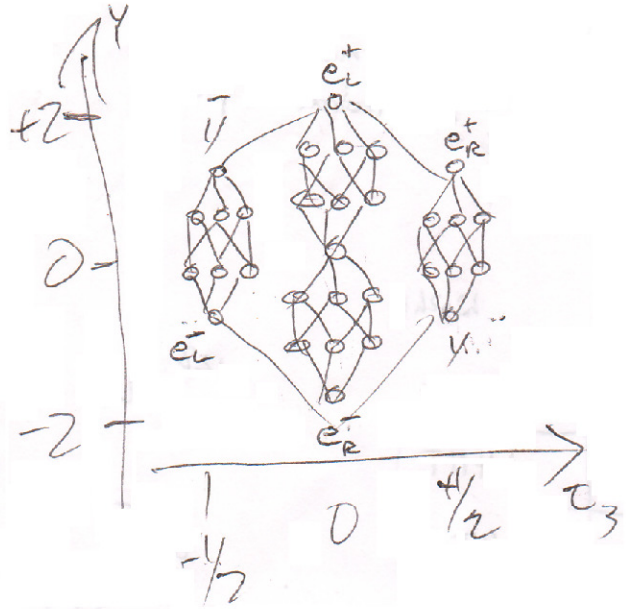

$h0 = \pm\frac{1}{2}$

| | |
|---|---|
| 000 | 0 |
| 001 | 1 |
| 010 | 2 |
| 011 | 3 |
| 100 | 4 |
| 101 | 5 |
| 110 | 6 |
| 111 | 7 |



fermion ex. electron

boson photon




h6h5h4

trihepton

h3h2h1

HHH HHT HTH THH HTT THT TTH TTT

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | $e^+$ | $\mu^+$ | $\tau^+$ | $\bar{\nu}$ | $\bar{\nu}$ | $\bar{\nu}$ | HHH |
| | u | c | t | b | s | d | HHT |
| | u | c | t | b | s | d | HTH |
| | u | c | t | b | s | d | THH |
| | $\bar{d}$ | $\bar{s}$ | $\bar{b}$ | $\bar{t}$ | $\bar{c}$ | $\bar{u}$ | HTT |
| | $\bar{d}$ | $\bar{s}$ | $\bar{b}$ | $\bar{t}$ | $\bar{c}$ | $\bar{u}$ | THT |
| | $\bar{d}$ | $\bar{s}$ | $\bar{b}$ | $\bar{t}$ | $\bar{c}$ | $\bar{u}$ | TTH |
| | $\nu$ | $\nu$ | $\nu$ | $\tau^-$ | $\mu^-$ | $e^-$ | TTT |

128
16·L

$2\sqrt{4\pi/N}$

"traverse"

$Q = \frac{1}{3}(h1+h2+h3) + h4+h5+h6$

$t_3 = \frac{1}{2}(h4+h5+h6-h7)$

$Y = \frac{2}{3}(h1+h2+h3) + h4+h5+h6+h7$

$u(1)_Y \times su(2)_L \times su(3)$ 246 GeV

B $W^{1,2,3}$ $G^{1,8}$ $M_t$ 174

$M_H$ 125

$M_Z$ 91

$M_{W^\pm}$ 80

H

Q = $\gamma$ $(W^+, W^-)$ $Z^0$ $H^0$

$\theta_W = 28.5°$

$G^{1,8}$

$h1, h2, h3$

$Q = t_3 + Y/2$

Q =