

> ANNOUNCE: PEER REVIEW

GOALS TODAY:

- the SM w/ FLAVOR (comment for now)
- SPIN: this is weird, so we won't dig into it
 → see refs to be posted
- comment: CP vs C
 ↑ AMBIGUOUS! DEF
 some people mean FUP ALL
 GAUGES QM H's, not just spin
 OTHERS (ME) MEAN H.C.
 → LH → RH

the only int's w/ fermions ↑ up to 3 lines:

$$(L^\dagger)_{\dot{\alpha} a} H^a e_R^{\dot{\alpha}} \quad (+ \text{h.c.})$$

Y: 1/2 1/2 -1 ↗

$$(e_R^{\dot{\alpha}}) = e_R^{\dot{\beta}} e^{\dot{\alpha}\dot{\beta}}$$

QUARKS:

$$d_R^{\dot{\alpha}} = d_R^{\dot{\beta}} E^{\dot{\alpha}\dot{\beta}}$$

color index SUPER

$$(Q^\dagger)_{\dot{\alpha} m a} H^a d_R^{\dot{\alpha} m} \quad + \text{h.c.}$$

$$\begin{array}{cc} -1/6 & 1/6 \\ \hline 1/6 \end{array}$$

$$1/6$$

$$(Q^\dagger)_{\dot{\alpha} m a} H_b^{\dagger} E^{ab} u_R^{\dot{\alpha} m}$$

$$-1/6$$

$$-1/2$$

$$u_R^{\dot{\alpha}} = u_R^{\dot{\beta}} E^{\dot{\alpha}\dot{\beta}}$$

SV(2)