

CKM

1) How well can we control the uncertainties in gluonic penguin decays to search for new physics in CPV?

Charm

- 1) Why is the observed value of charm CP violation so large?
- 2) Are large effects $O(0.1\%)$ observable in $A_{CP}(D^0 \rightarrow K_S^0 K_S^0)$?
- 3) Partially electromagnetic $D^0 \rightarrow h l^+ l^-$ or $h^+ h^- \gamma$ more tractable theoretically, experimentally challenging due to low BF but not beyond Belle II and LHCb: differential distributions to study?
- 4) The $c \rightarrow u$ penguin has the same vertex as $b \rightarrow c \tau \nu$: is there a link to $R(D^{(*)})$?

Charm

1) W

2)

3)

4)

Anomalies

- 1) Given these fits what should the LHCb run 2 update on $b \rightarrow sll$ angular measurements look like?
- 2) Complex C_i : what is the scope for CP violation in $b \rightarrow sll$ and $b \rightarrow c\tau\nu$?
- 3) Can $b \rightarrow sll$ models have high p_t signatures $g_d(s) \rightarrow d^*(s^*) \rightarrow bll$?
- 4) Can there be models to introduce an isospin asymmetry in $b \rightarrow sll$?
- 5) How to make LQ theories UV complete?
- 6) Measuring $b \rightarrow c\tau\nu$ processes differentially i.e. q^2 to determine models better?
- 7) High p_t signatures: $di\text{-LQ} \rightarrow b\tau b\tau$?