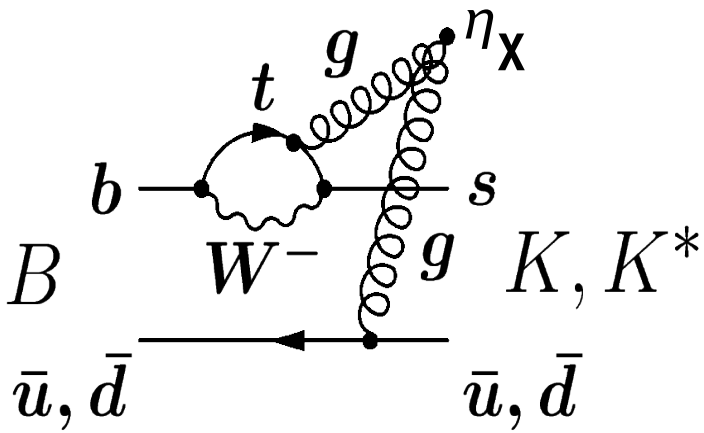
$B^{\pm} \to \eta_X K^{\pm}$



$B^{\pm} \to (K_s K^{\pm} \pi^{\mp}) K^{\pm}$

$\pi^{\pm}\pi^{\mp}$

$B^{\pm} \to (\eta \pi^{\pm} \pi^{\mp}) K^{\pm}$,

$\gamma\gamma$

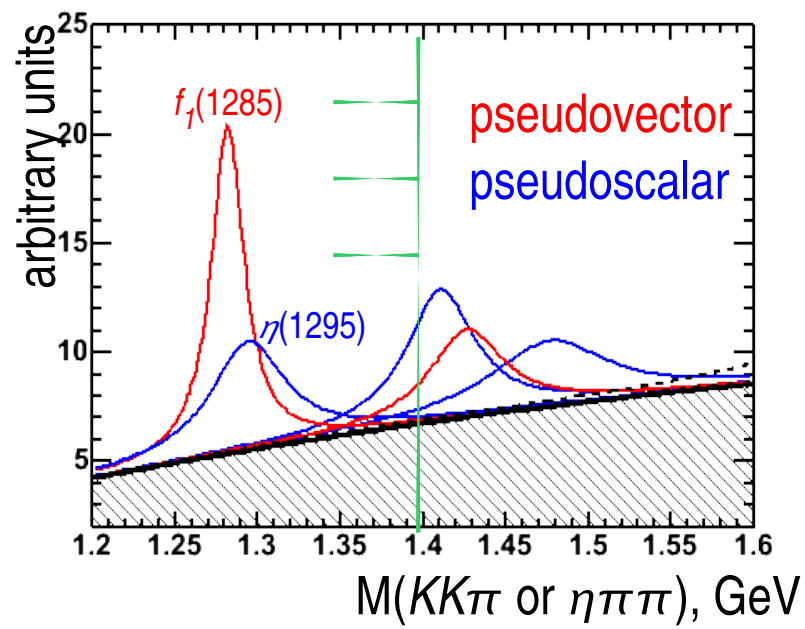
Any of these could be gluonium or evidence of new physics (through a loop diagram)

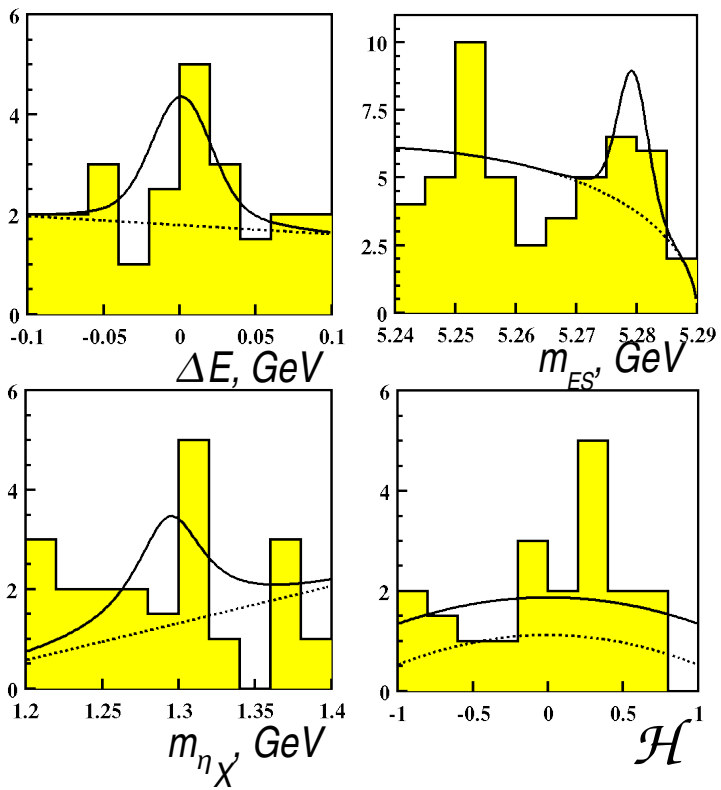
Fit measures N of:

- f1(1285)
- η(1295)
- η(1405)
- f1(1420)
- η(1475)K
- qq background
- bb background

⇒

- m_{ES}
- ΔE
- Fisher
- $m_{\eta X}$
- $\cos(\theta_{helicity})$





$B^{\pm} \to (\eta\pi^{\pm}\pi^{\mp})K^{\pm}$, $\gamma\gamma$

Blinded projection plots

$N_{\eta(1295)K^+} = 14 \pm 9$

$N_{f_1(1295)K^+} = 1 \pm 6$

$BR(B^+ \to \eta(1295)K^+) \times BR(\eta(1295) \to K^0K^-\pi^+) < 2.1 \times 10^{-6}$, 90% C.L.

$BR(B^+ \to f_1(1285)K^+) \times BR(f_1(1285) \to K^0K^-\pi^+) < 1.2 \times 10^{-6}$, 90% C.L.

$BR(B^+ \to f_1(1285)K^+) < 2.0 \times 10^{-5}$, 90% C.L.