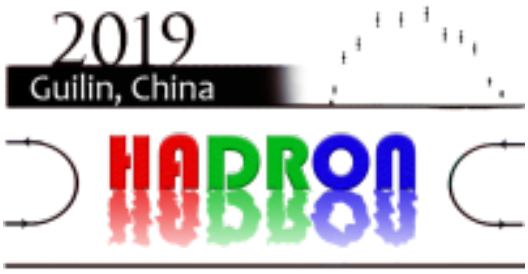

Contribution ID: **235** Type: **Poster**

First Observation of hc->hadrons

Based on $(4.48 \pm 0.03) \times 10^8$ ψ' events, collected with the BESIII detector at the BEPCII storage ring, five h_c hadronic decays are searched for via the process $\psi' \to \pi^0 h_c$. Three of them, $h_c \to p\bar{p}\pi^+\pi^-$, $\pi^+\pi^-\pi^0$, and $2(\pi^+\pi^-)\pi^0$, are observed for the first time with significances of 7.4σ, 4.6σ, and 9.1σ, and their branching fractions are determined to be $(2.89 \pm 0.32 \pm 0.55) \times 10^{-3}$, $(1.60 \pm 0.40 \pm 0.32) \times 10^{-3}$, and $(7.44 \pm 0.94 \pm 1.52) \times 10^{-3}$, respectively, where the first uncertainties are statistical and the second systematic. No significant signal is observed for the other two decay modes, and the corresponding upper limits of the branching fractions are determined to be $B(h_c \to 3(\pi^+\pi^-)\pi^0) < 8.7 \times 10^{-3}$ and $B(h_c \to K^+K^-\pi^+\pi^-) < 5.8 \times 10^{-4}$ at the 90% confidence level.

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