Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Search for invisible decays of low-mass Higgs bosons at BaBar MARK DERDZINSKI, Lawrence Berkeley National Laboratory, BABAR COLLABORATION — We search for a light scalar particle produced in single-photon decays of the $\Upsilon(2S)$ and $\Upsilon(3S)$ resonances through the process $\Upsilon \to \gamma + A^0$, $A^0 \to$ invisible. Such an object appears in supersymmetric extensions of the Standard Model, such as NMSSM, where a light CP- odd Higgs boson naturally couples strongly to b-quarks. If in addition there exist a light stable neutralino, decays of A^0 could be preferentially to an invisible final state. We search for events with a single high energy photon and a large missing energy and momentum, consistent with a 2-body decay of Υ.

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Date submitted: 11 Jan 2013 Electronic form version 1.4