Abstract Submitted for the DNP07 Meeting of The American Physical Society

Quark Model of Heavy Baryons MUSLEMA PERVIN, Physics Division, Argonne National Laboratory, WINSTON ROBERTS, Physics Departement, Florida State University — We use a nonrelativistic quark model to examine the spectrum of heavy baryons. The model provides a good description of the known states in the heavy  $\Lambda_Q$ ,  $\Sigma_Q$  and  $\Omega_Q$  spectra, and it successfully predicts, without fitting, a number of states recently seen. When applied to the heavy cascade  $(\Xi_Q)$ spectrum, the model can be used to determine the sextet-antitriplet mixing in the known states. We briefly discuss some aspects of this mixing. This work is supported by the U. S. Department of Energy, Office of Nuclear Physics, under contract No. DE-AC02-06CH11357.

> Muslema Pervin Physics Division, Argonne National Laboratory

Date submitted: 02 Jul 2007

Electronic form version 1.4