Abstract for an Invited Paper for the APR07 Meeting of The American Physical Society

Electroweak physics and Higgs Searches at the Tevatron Collider GERALD BLAZEY, Northern Illinois University

With the availability of an inverse femtobarn data set and improved analysis techniques, the Tevatron collider experiments have extended the exploration of the electroweak sector to higher precision measurements and the smallest cross sections detected at a hadron collider. Likewise, searches for the Standard Model Higgs have achieved significantly greater sensitivity. A new and the single most precise measurement of the W-boson mass has decreased the most likely mass of the Higgs. Tevatron measurements have now nearly completed the suite of boson and di-boson production cross sections and show evidence for electroweak single top production. As probes of the Standard Model these cross sections are interesting in their own right, however, they are also important background process in the search for the Higgs. A review of the new W-boson mass and results in boson, di-boson and single top production will be presented. The status of indirect measurements of the Higgs mass as well as direct searches for the Higgs will be discussed. These Higgs search results will be highlighted by presentation of the most recent combined Tevatron limits.