



**Figure 46.15:** Total and elastic cross sections for  $\Lambda p$ , total cross section for  $\Sigma^- p$ , and total hadronic cross sections for  $\gamma d$ ,  $\gamma p$ , and  $\gamma\gamma$  collisions as a function of laboratory beam momentum and the total center-of-mass energy. Corresponding computer-readable data files may be found at <http://pdg.lbl.gov/current/xsect/>. (Courtesy of the COMPAS group, IHEP, Protvino, April 2012)