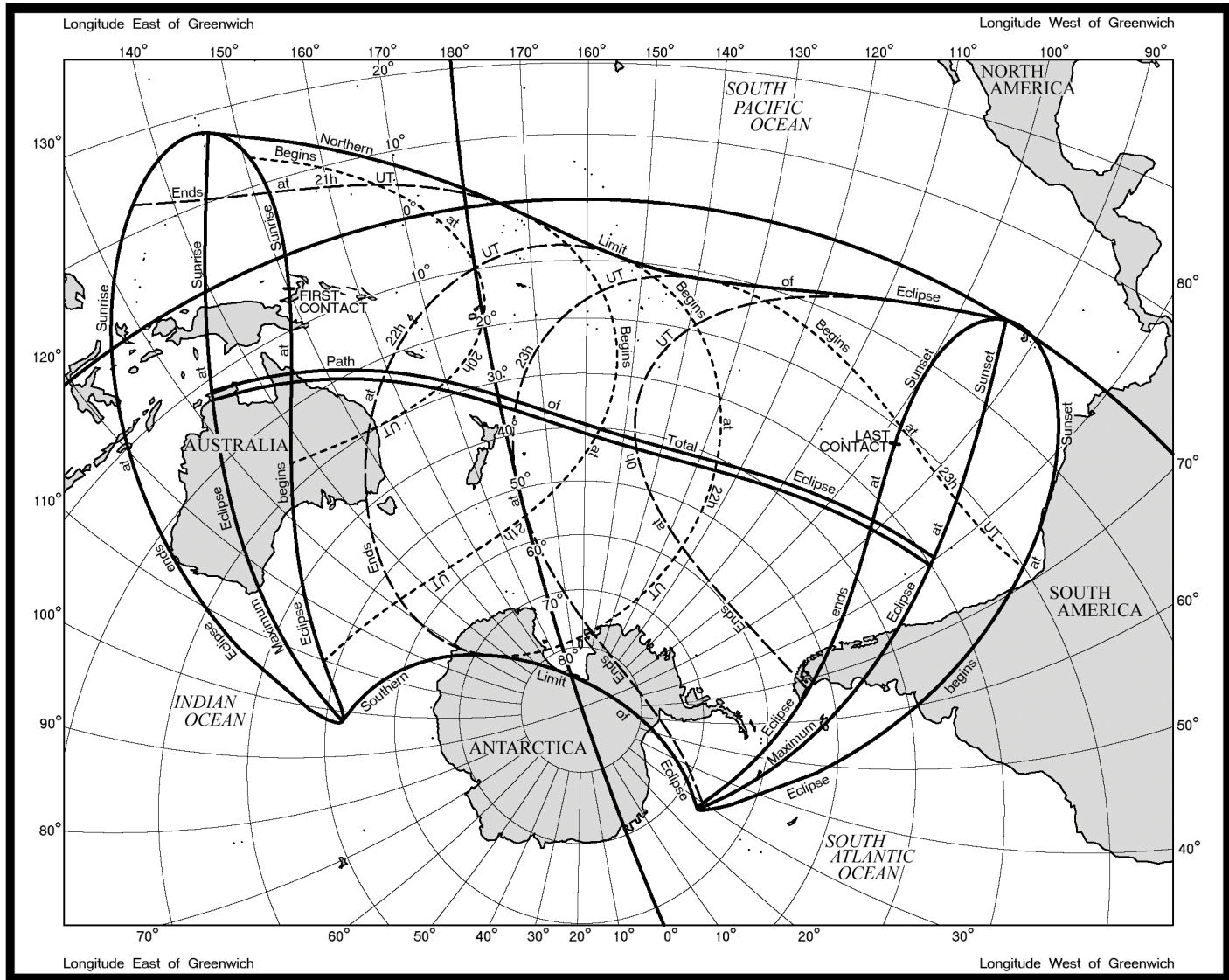


TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13-14



ASTRONOMICAL APPLICATIONS DEPT.
 U.S. NAVAL OBSERVATORY
 WASHINGTON, DC 20392-5420 USA