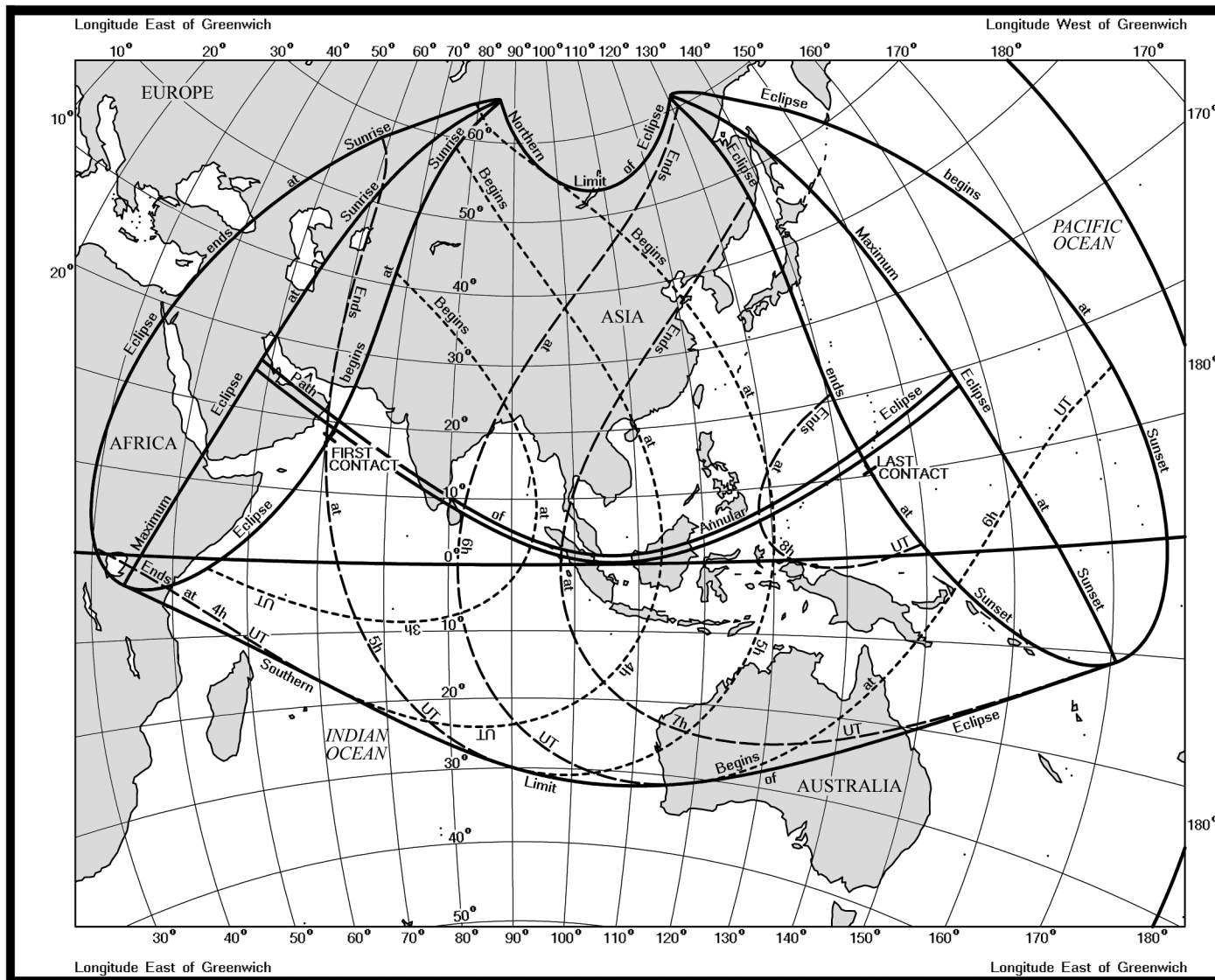


# ANNULAR SOLAR ECLIPSE OF 2019 DECEMBER 26



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