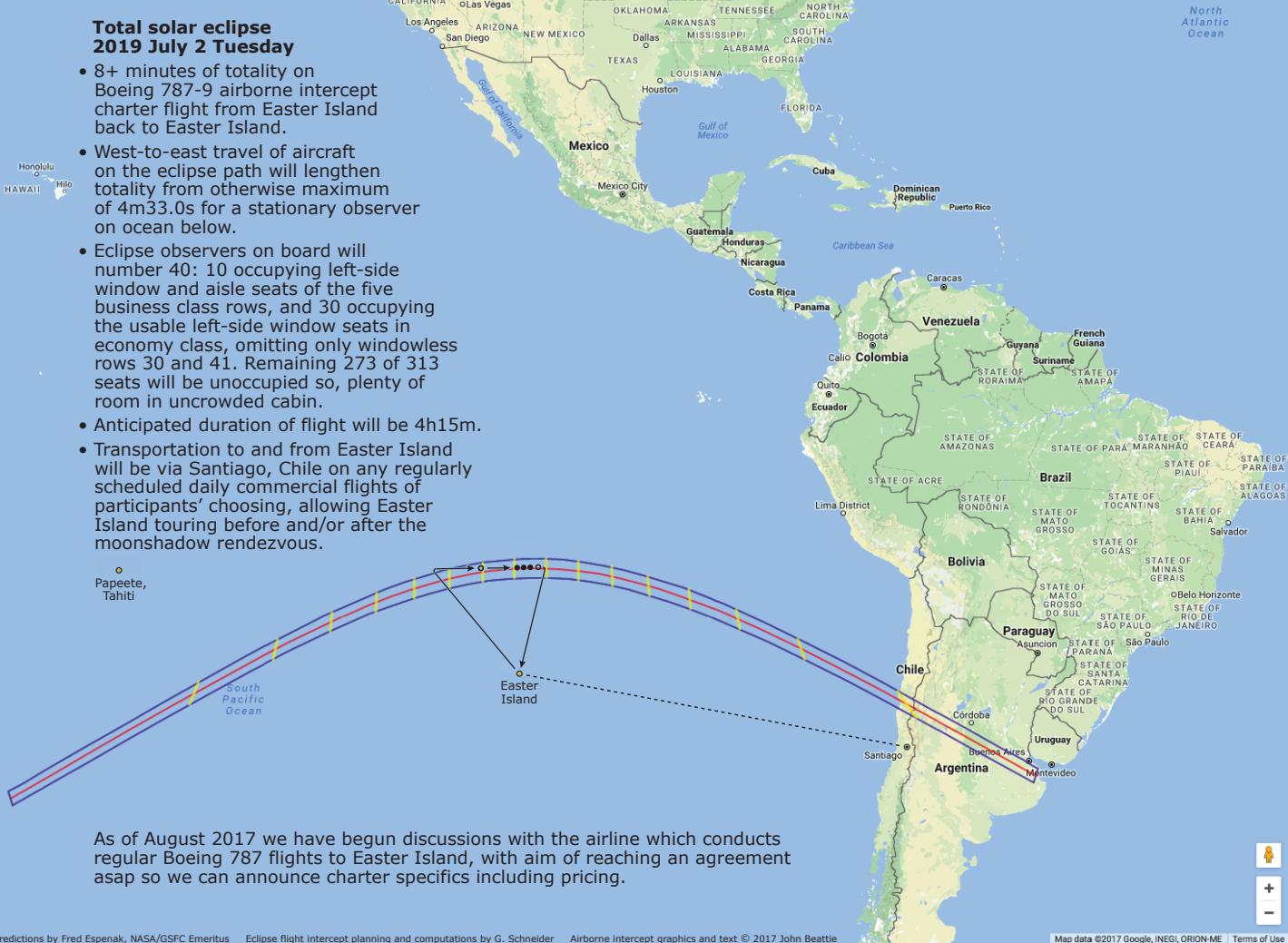


Total solar eclipse 2019 July 2 Tuesday

- 8+ minutes of totality on Boeing 787-9 airborne intercept charter flight from Easter Island back to Easter Island.
- West-to-east travel of aircraft on the eclipse path will lengthen totality from otherwise maximum of 4m33.0s for a stationary observer on ocean below.
- Eclipse observers on board will number 40: 10 occupying left-side window and aisle seats of the five business class rows, and 30 occupying the usable left-side window seats in economy class, omitting only windowless rows 30 and 41. Remaining 273 of 313 seats will be unoccupied so, plenty of room in uncrowded cabin.
- Anticipated duration of flight will be 4h15m.
- Transportation to and from Easter Island will be via Santiago, Chile on any regularly scheduled daily commercial flights of participants' choosing, allowing Easter Island touring before and/or after the moonshadow rendezvous.



As of August 2017 we have begun discussions with the airline which conducts regular Boeing 787 flights to Easter Island, with aim of reaching an agreement asap so we can announce charter specifics including pricing.

Google

Eclipse predictions by Fred Espenak, NASA/GSFC Emeritus Eclipse flight intercept planning and computations by G. Schneider Airborne intercept graphics and text © 2017 John Beattie

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Blue path of totality shown here is for sea level. Points B C D E F, the "totality run", show aircraft's intercept along eclipse path at 37,000-feet altitude, displaced 5.2 nm north from the sea-level path centerline (red) because sun is almost exactly due north at 49.6 degrees elevation. Our mid-intercept at point D is at location of maximum duration along the eclipse path.

18:50 UT
4m10.8s
of surface
centerline
duration
of totality
44.0° solar elevation

19:00 UT
4m21.8s
46.9°

19:10 UT
4m29.1s
48.7°

19:20 UT
4m32.7s
49.5°

19:30 UT
4m32.3s
49.3°

19:40 UT
4m28.1s
48.1°

19:50 UT
4m20.1s
45.8°

moon's shadow will be moving from southwest to northeast and east
this red line is the centerline, where totality has the longest duration

Projected 8m14s of totality is based on 488 knots cruising speed of Boeing 787-9 presuming no headwind or tailwind – in reality tailwind is likely in this region of Pacific at anticipated 37,000-feet altitude, averaging 55 knots which would lengthen totality to 9m03s – however, to be conservative we will expect "only" 8m14s.

A wheels up
Easter Island
16:42 UT

B start totality run
18:52:58 UT
17.33s 113.24w

C start totality
17.31s 109.58w

D mid-totality
19:22:58 UT
at location of
greatest eclipse
17.30s 109.00w

E end totality
19:27:05 UT
17.29s 108.42w

F end totality run
19:32:58 UT
17.27s 107.59w

G arrive back at
Easter Island
20:57 UT

(Easter
Island
UT-6)

Solar elevation of 49.6 degrees during totality will still be easy to view out the left side because of the huge, tall B787 passenger windows which measure 47cm by 27cm and slant inward at the top by an angle of 16 degrees from vertical – as long as each observer has his or her own window since the high sun angle will make observing impractical from middle seats or aisle seats. (Aisle seat participants in business class will move to the "extra" window in their row to observe.)

Participants taking advantage of the option for Easter Island touring as part of this adventure will be happy to note that unlike 2010 July 11, this eclipse isn't going to be total at Easter Island which therefore won't be having more visitors than usual – the period around 2019 July 2 Tuesday should be pretty much an ordinary time there.

100 nm

27.16s 109.42w
(Isla de Pascua / Rapa Nui / Hanga Roa / Mataveri / IPC)

last update 2017 August 31