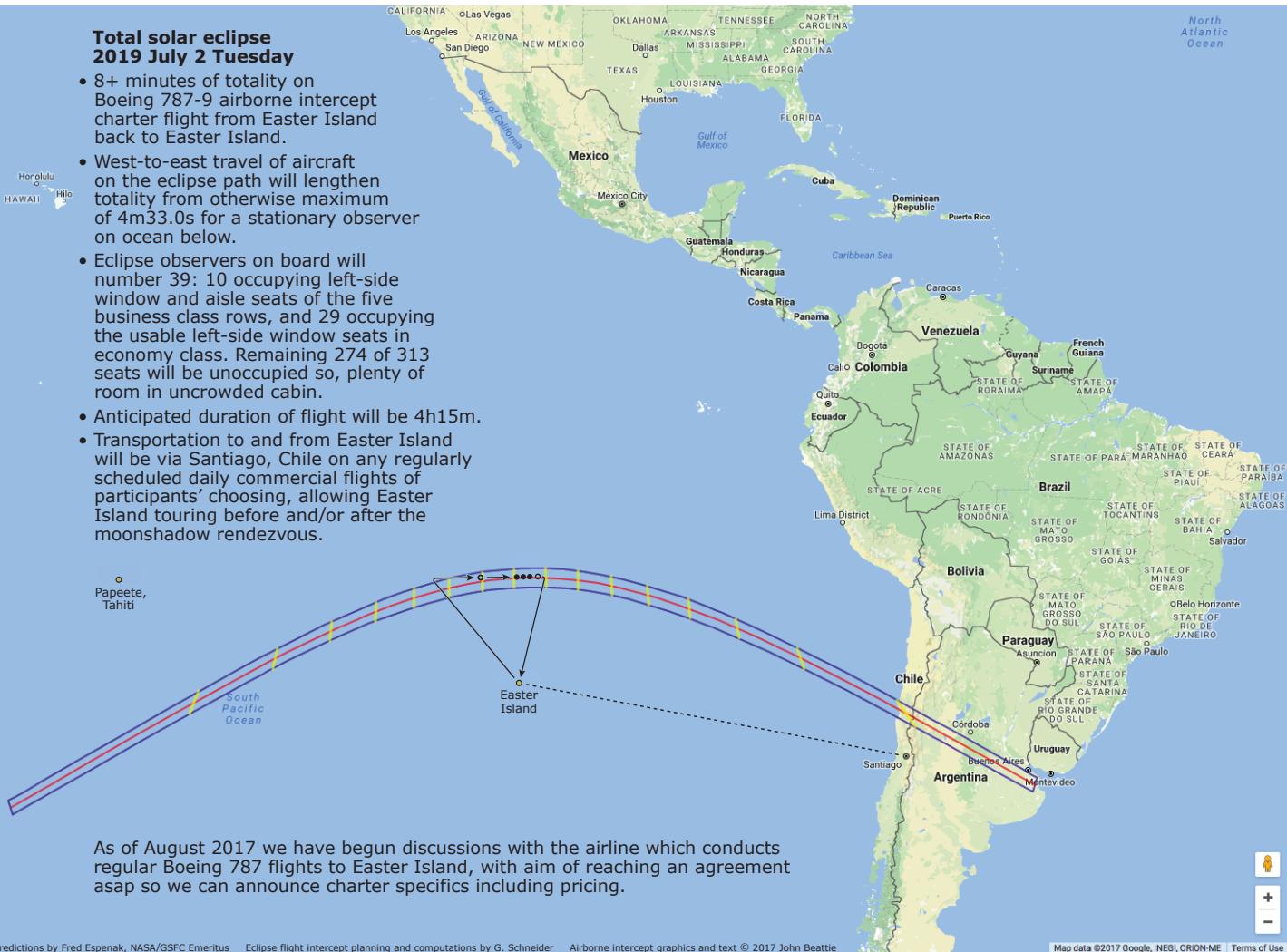


Total solar eclipse 2019 July 2 Tuesday

- 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 39: 10 occupying left-side window and aisle seats of the five business class rows, and 29 occupying the usable left-side window seats in economy class. Remaining 274 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

Map data ©2017 Google. INEGI. ORION-ME

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.

If no delay on takeoff, i.e., if wheels up at 16:42 UT as planned
If 15 minutes delay on takeoff, i.e., if wheels up at 16:57 UT
If 30 minutes delay on takeoff, i.e., if wheels up at 17:12 UT
If 45 minutes delay on takeoff, i.e., if wheels up at 17:27 UT

A wheels up
Easter Island
16:42 UT

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

C start totality

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

E end totality

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

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

last update 2017 August 28