TSE2008: 01 August 2008 Total Solar Eclipse
A Flight into The Darkness of the Lunar Umbral Shadow
2m 51s ±10s of Totality in the Stratosphere
From the Pristine, Clear, and Particulate Free Skies of the High Polar (81°--83°) North from 35,000+ feet

DEPLOYMENT FLEXIBILITY
To Find the BEST Spot in the Area of Operations

TOTALITY PROLONATION
Aircraft Speed Extends the Duration of Totality

SKY DARKNESS
Much Higher Contrast, More Distant Coronal Visibility

REDUCED ATMOSPHERIC TURBIDITY
Vertical & Short Decline Above Tropopause

HORIZON REACH & VISTA
Apparent Horizon 30°, depressed 5°, altitude 35° ± 10 km

CLOUD OBSCURATION AVOIDANCE
Polar Sunrise/Sunset 30° ±10° - Virtually Assured

ENHANCED SKY TRANSPARENCY
Significantly Improved - Less Particulate Scattering

IMPROVED ASTRONOMICAL SEEING
“Natural” Increase with Increasing Altitude

PANCHROMATIC VISIBILITY
IR and UV “Windows” Open Up or are Enhanced

ESTHETIC, ETHICAL EXPERIENCE
There is nothing quite like it...

THE "WEATHER" — ACUNA MATATA
At high polar latitudes, such the 81°--83° N point of mid-eclipse impact, the tropospheric boundary between the troposphere below (where "weather occurs") and the stratosphere has typical heights of only ~ 8 km above mean sea level (compared to ~12 – 17 km at mid and low latitudes). Polar stratospheric (nosee) clouds are extremely rare and only form at very low temperatures (< -76 °C) during the polar winter, making the probability of cloud-free eclipse viewing nearly 100% at the minimum TSE2008 flight altitude of 35,000 ft (~10.7 km) in its area of operations. There, aerosol scattering of sunlight by airborne particulates is extremely low, giving rise to an exceptionally dark sky during totality, enabling eclipse viewing with significantly enhanced image contrasts. Moreover, the airmass along the line-of-sight to the Sun is significantly reduced (by ~ 75%), resulting in exceptional sky transparency, greatly reduced atmospheric turbulence, and better astronomical "seeing".

THE 01 AUGUST 2008 NORTH POLAR TOTAL SOLAR ECLIPSE FLIGHT: LTU 9999
The airborne venue of the TSE2008 polar flight, ~ 3 km above the high Arctic summer tropopause, removes the usual meteorological risks and logistical uncertainties which plague eclipse-chasers. From the high polar north, less than 7–10° from the North geographic Pole, TSE2008 will be observed from the pristine, dark, and cloud-free skies 35,000+ ft. above sea level. Flying above 344° of the Earth’s otherwise murky atmosphere, at Mach 0.85, the duration of totality will be extended to ~ 2m 51s ± 10s. We will launch a dedicated, round-trip, and non-stop eclipse observation flight from a major, and easily accessible, airport in central Europe, with the value-added attractions of (nominally) pre-totality overflights of Longyearbyen/Svalbard and the North geographic pole. The flight will depart from the Köln/Bonn airport in Germany at 0200 UT on 01 August 2008 and take to the sky with an LTU Airways A330-200 aircraft on a dedicated mission to centrally intercept the Moon’s fleeting shadow as it whisks across the Arctic Ocean. Flying northward from Germany, almost, about four hours, we will descend to low-altitude for a unique “flightsseeing” opportunity over Longyearbyen and the west coast of Svalbard. We will then cruise onward to overfly and circumnavigate the geographic North Pole before flying on to our precision rendezvous with the Moon’s shadow.

For additional technical details see: http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_08/TSE2008_EFLIGHT.html, contact: gsneider@mac.com
For information on limited sun-side window-row reservations and flight bookings contact Travel Quest International (travel@tq-international.com), and see: http://www.tq-international.com/NorthPoleFlight2008/NPFlightHome.htm

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