SQM READINGS COMPARISON:

Note: The Unihedron SQM should be used under clear moonless skies for best accuracy. It is sensitive enough to be affected by the Milky Way, Zodiacal Light, and natural sky-glow. SQM readings are based on the following logarithmic scale:

\[ \Delta Q = 1.0 = 2.512 \times \text{brightness, measured in M/arc-second}^2 \] (magnitudes per square arc-second)

Higher numbers = darker sky. According to the Unihedron database, any reading higher than 21.0 is considered to be excellent conditions. The theoretical maximum reading of 22.0 is limited by natural sky-glow, and rarely seen anywhere on the planet. Following are some values for comparison:

Midtown Hong Kong (Dr. Constance Walker, NOAO) \( Q = 13.2 \)
Main Street USA in Disneyland (California) \( Q = 14.97 \)
Midtown Tucson, by Dan McKenna (instrumentation expert) \( Q = 18.5 \)
Suburban Tucson (Keith Schlottman, Xanadu Observatory) \( Q = 19.5 \)
Texas Star Party (Davis Mountains in west TX) \( Q = 21.76 \)
Full Moon up at Lowell Observatory (Brian Skiff, astronomer) \( Q = 18.0 - 18.5 \)
Best value for Lowell Observatory \( Q = 20.8 \)
Best value for Anderson Mesa \( Q = 21.8 \)
Fountain Hills, AZ (Gene Lucas, engineer) \( Q = 19.5 \)
Mount Wilson \( Q = 19.8 \)
Mount Palomar \( Q = 21.5 \)
Lick Observatory \( Q = 20.7 \)
Mount Lemmon \( Q = 21.5 \)
Mauna Kea \( Q = 21.75 \) (with Milky Way overhead \( Q = 21.66 \))

Readings at Heimhenge, New River, AZ (using Unihedron model SQM-L):

Nov 1, 2009, 6:45 pm, Full Moon rising, clear sky \( T = 26.0^\circ \text{C} \) \( Q = 18.50 \) (control)
Nov 5, 2009, 8:00 pm, no Moon, clear sky \( T = 26.0^\circ \text{C} \) \( Q = 21.10 \)
Jan 4, 2010, 7:30 pm, no Moon, clear sky \( T = 24.0^\circ \text{C} \) \( Q = 20.30 \)
Aug 9, 2013, 1:00 am, no Moon, clear sky \( T = 25.0^\circ \text{C} \) \( Q = 20.90 \)
Oct 25, 2014, 10:00 pm, no Moon, clear sky \( T = 25.5^\circ \text{C} \) \( Q = 20.61 \)
Jun 7, 2015, 11:00 pm, no Moon, clear sky \( T = 23.5^\circ \text{C} \) \( Q = 20.83 \)
Apr 2, 2016, 11:45 pm, no Moon, light haze \( T = 22.5^\circ \text{C} \) \( Q = 20.75 \)
Nov 30, 2016, 12:30 am, no Moon, clear sky \( T = 7.2^\circ \text{C} \) \( Q = 20.85 \)
Nov 11, 2017, 8:00 pm, no Moon, light haze \( T = 21.0^\circ \text{C} \) \( Q = 20.42 \)
Dec 14, 2017, 2:00 am, no Moon, clear sky \( T = 19.0^\circ \text{C} \) \( Q = 20.82 \)
Nov 1, 2018, 11:30 pm, no Moon, clear sky \( T = 23.0^\circ \text{C} \) \( Q = 20.57 \)

Heimhenge average to date: \( Q = 20.72 \)