

MEASUREMENT OF THE NIGHT SKY BRIGHTNESS IN TURKEY

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We have started a project for measuring the night sky brightness on a national scale in Turkey.

The main aim is

- to measure the sky glow in selected urban, suburban, and rural areas, national parks, and wild life reserves,
- to look for dark sites which are good for public viewing of the night sky and for star parties, and
- to submit a report to the government on the extent of the light pollution and energy waste.

There are about 40 national parks, 30 nature parks, and 31 natural reserves in Turkey.

Among these, accessible regions have been selected where the level of light pollution will be measured.

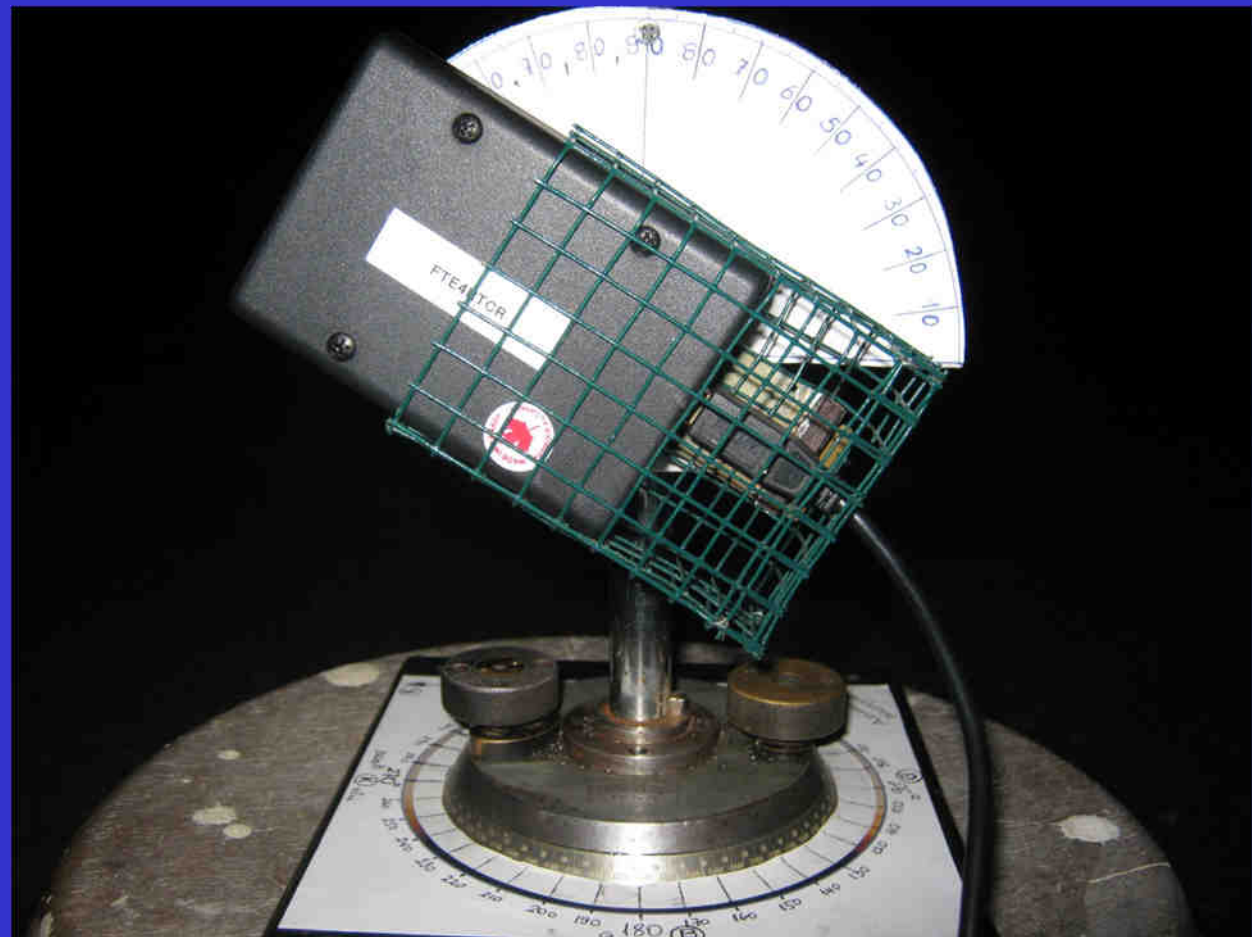
16 portable Sky Quality Meters (SQM) are now in use in selected regions such as Istanbul, Ankara, Izmir, Antalya...

Two fixed stations, with SQM-LEs, both in Istanbul, will start taking continuous measures by the end of October 2011.

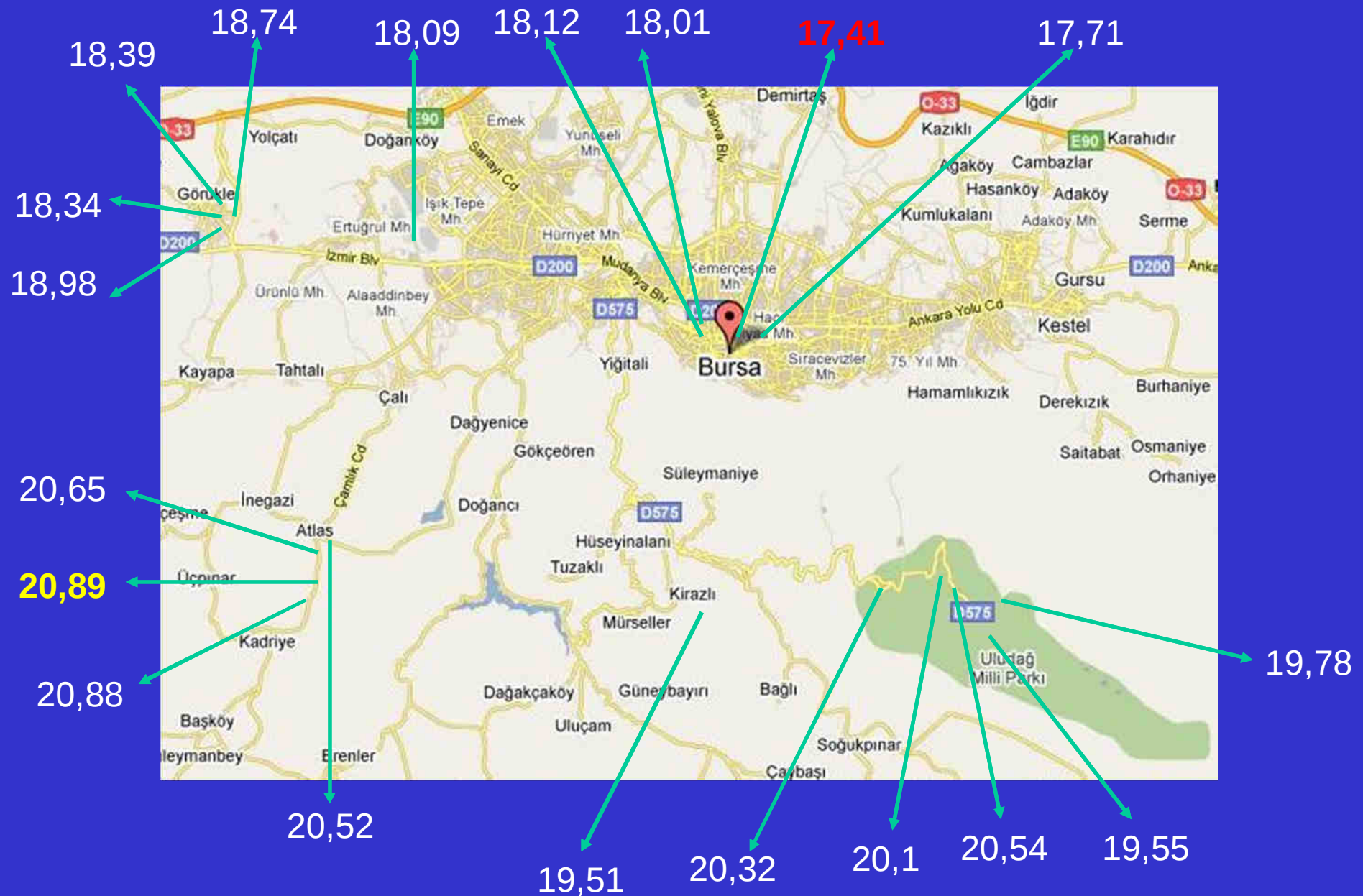
So far, measurements have been taken only in city centers.
Sampling will be enlarged and nearby towns and villages
will be included.



The measurements are made by colleagues from local universities and teachers from local schools.



Bursa and surrounding area (mpsas)



Some results

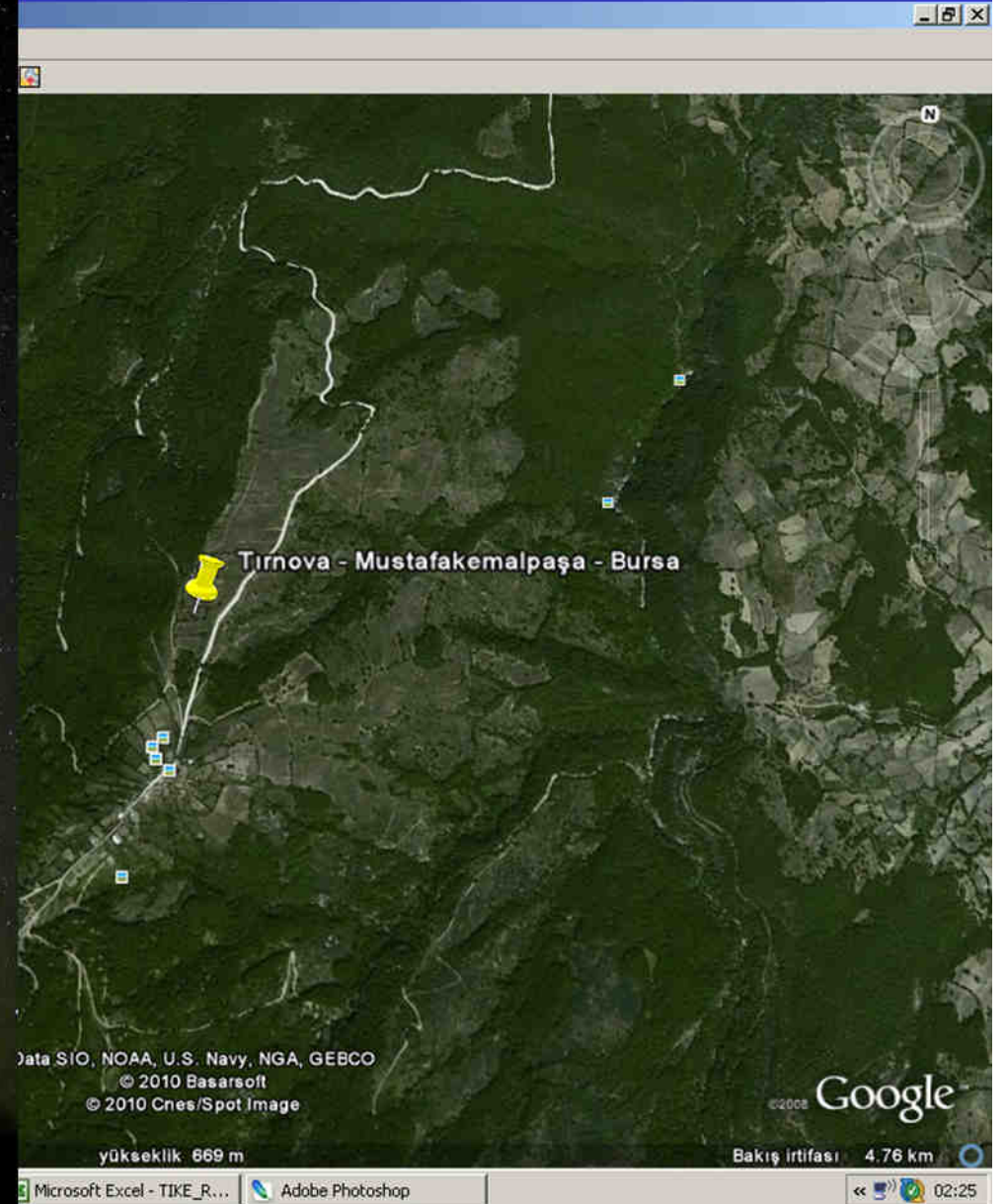
Mean values with standard errors from 0.01 to 0.14 mag/ arcsec²

	mag/arcs ²	NELM
• Sultanahmet-Ist.....	17.0	3.1
• Bahçeşehir-Ist.	17.2	3.3
• Sarayburnu-Ist.....	17.3	3.4
• Ataköy-Ist.....	17.3	3.4
• Ankara Kalesi	17.75	3.8
• İ. Ü. Gözlemevi	17.2	3.3
• AÜG	18.8	4.6
• EÜG	19.9	5.3

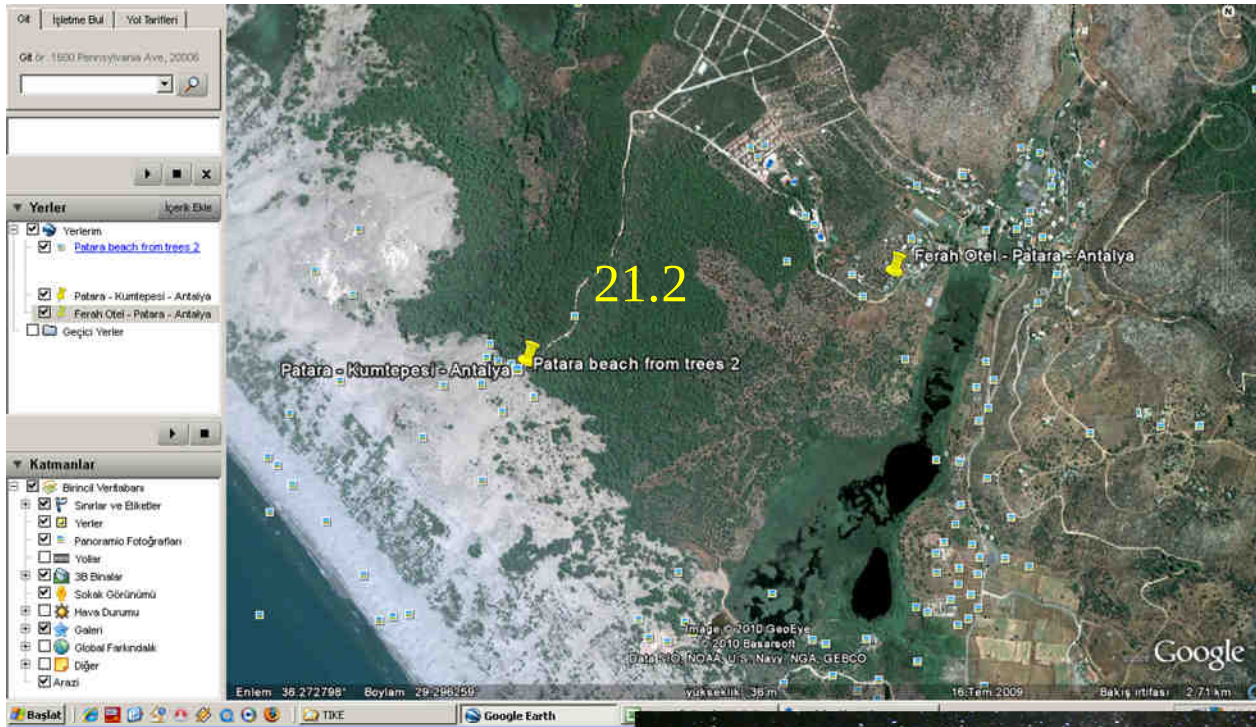
Some Dark Regions

	mag./arcs ²	NELM
Dilek Yarımadası Milli Parkı	20.3	5.7
Bursa Uludağ Milli Parkı Yolu	20.3	5.7
Denizli Honaz Dağı Milli Parkı	20.7	5.9
Nemrut Mountain	21.0	6.1
Bursa Tırnova (Mustafakemalpaşa)	21.2	6.2
Antalya Patara (Kaş İlçesi)	21.2	6.2
Kayseri Uzun yayla	21.3	6.3
Kocaeli Sarısu Deresi (Kandıra)	21.4	6.3
TÜBİTAK Ulusal Gözlemevi	21.6	6.4

21.16



Uğur İkizler



**Antalya-Patara,
“home” to sea turtles,**

Uğur İkizler

21.2



HONAZ MİLLİ PARKI (National Park)

29'17'05" E, 37'40'43" N
2528 m

Altitude 90° : 20.7
Altitude 60° : 20.6
Altitude 30° : 20.4

29'16'28" E, 37'40'47" N,
2250 m
90° : 21.0



Tahsin Demirciler

20.84

20.89

20.97

20.97

20.91

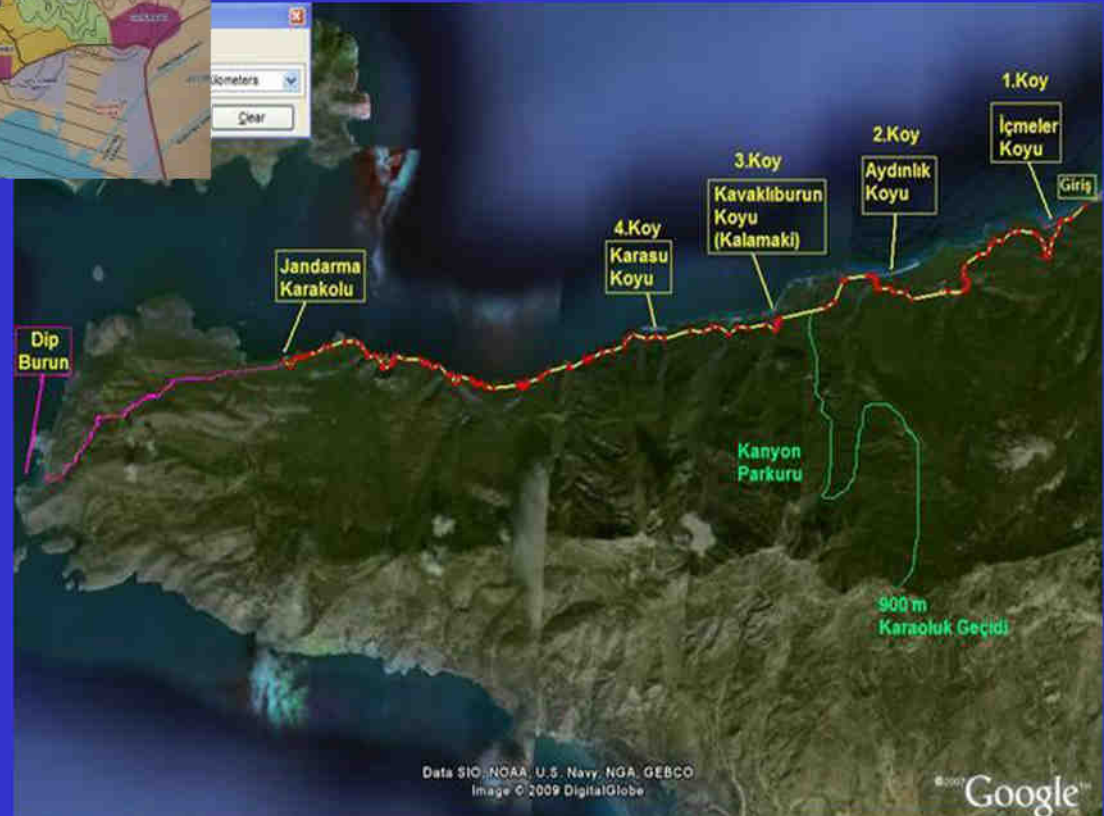
21.02

21.02

21.02



Dilek Yarımadası Milli Parkı-KALAMAKİ (National Park)

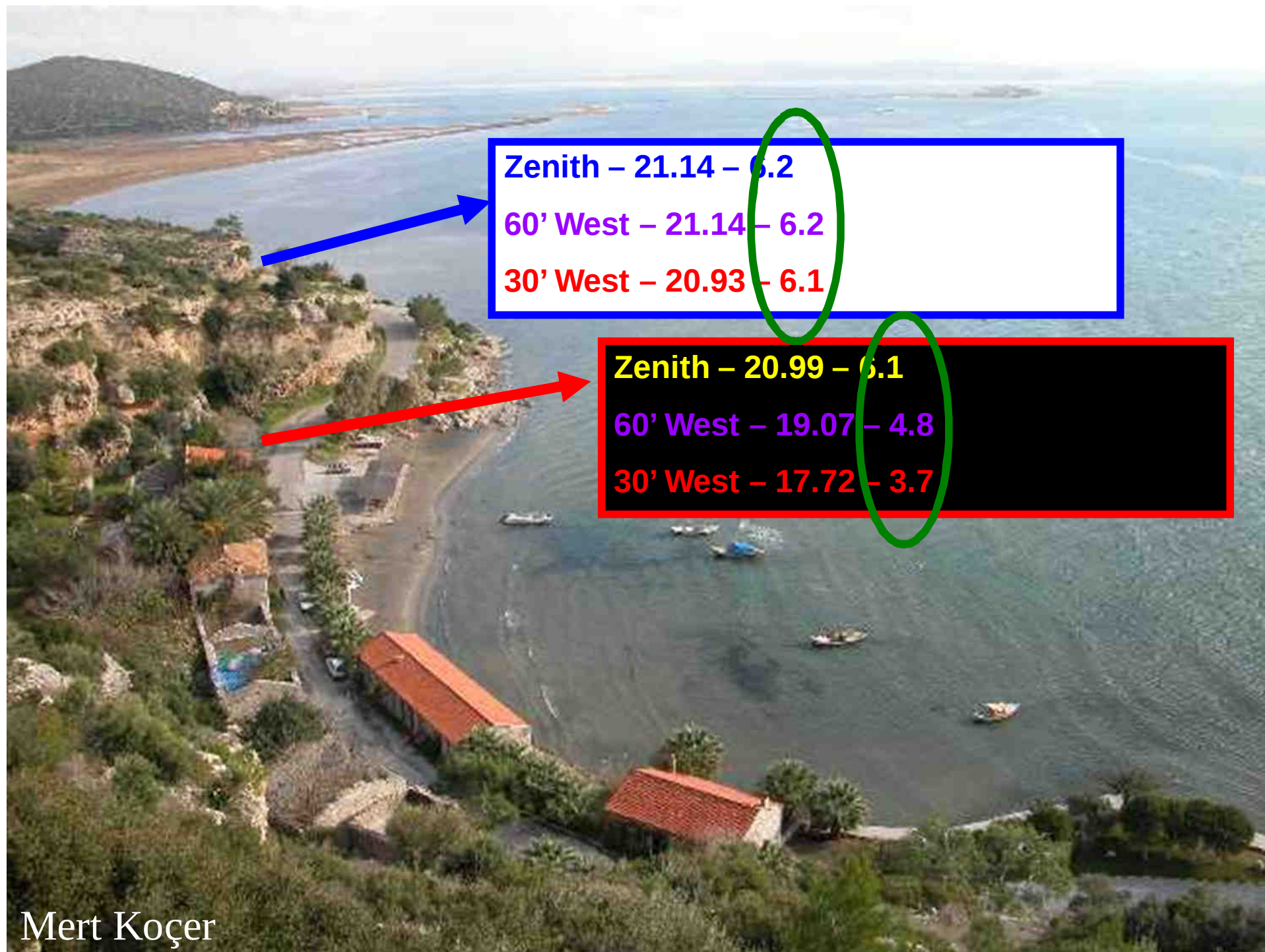


Dilek Yarımadası Milli Parkı)- KALAMAKİ (National Park)



An aerial photograph of the Menderes Delta, showing a large body of water with a sandy beach and some buildings on the left. A text box with a red border is overlaid on the right side of the image. A red arrow points from the text box to the beach area, and two blue arrows point from the text box to the water. The text inside the box is in Turkish and discusses the impact of night lights from facilities near the delta on the local wildlife.

Menderes Deltası yakınlarında kurulan tesislerin gece ışıkları deltada yaşayan canlıları olumsuz etkilemektedir.



Zenith - 21.14 - 6.2

60' West - 21.14 - 6.2

30' West - 20.93 - 6.1

Zenith - 20.99 - 6.1

60' West - 19.07 - 4.8

30' West - 17.72 - 3.7

21.6

6.4

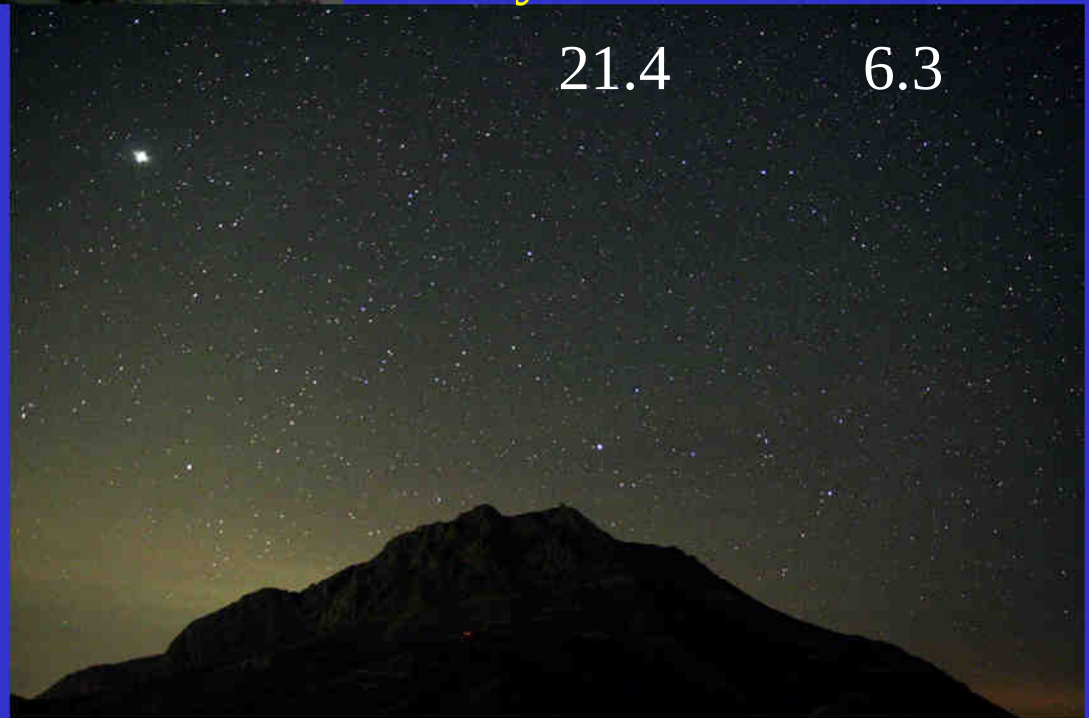
TÜBİTAK National
Observatory, Bakırlıtepe,
Antalya

A flat area at the foot of
the mountain (known as
Saklıkent) has been a site
of Sky Fest since 1998

21.4

6.3

Uğur İkizler



National sky fest- Saklıkent, Antalya



Thank you for your attention!



TÜBİTAK National Observatory
www.tug.tubitak.gov.tr