

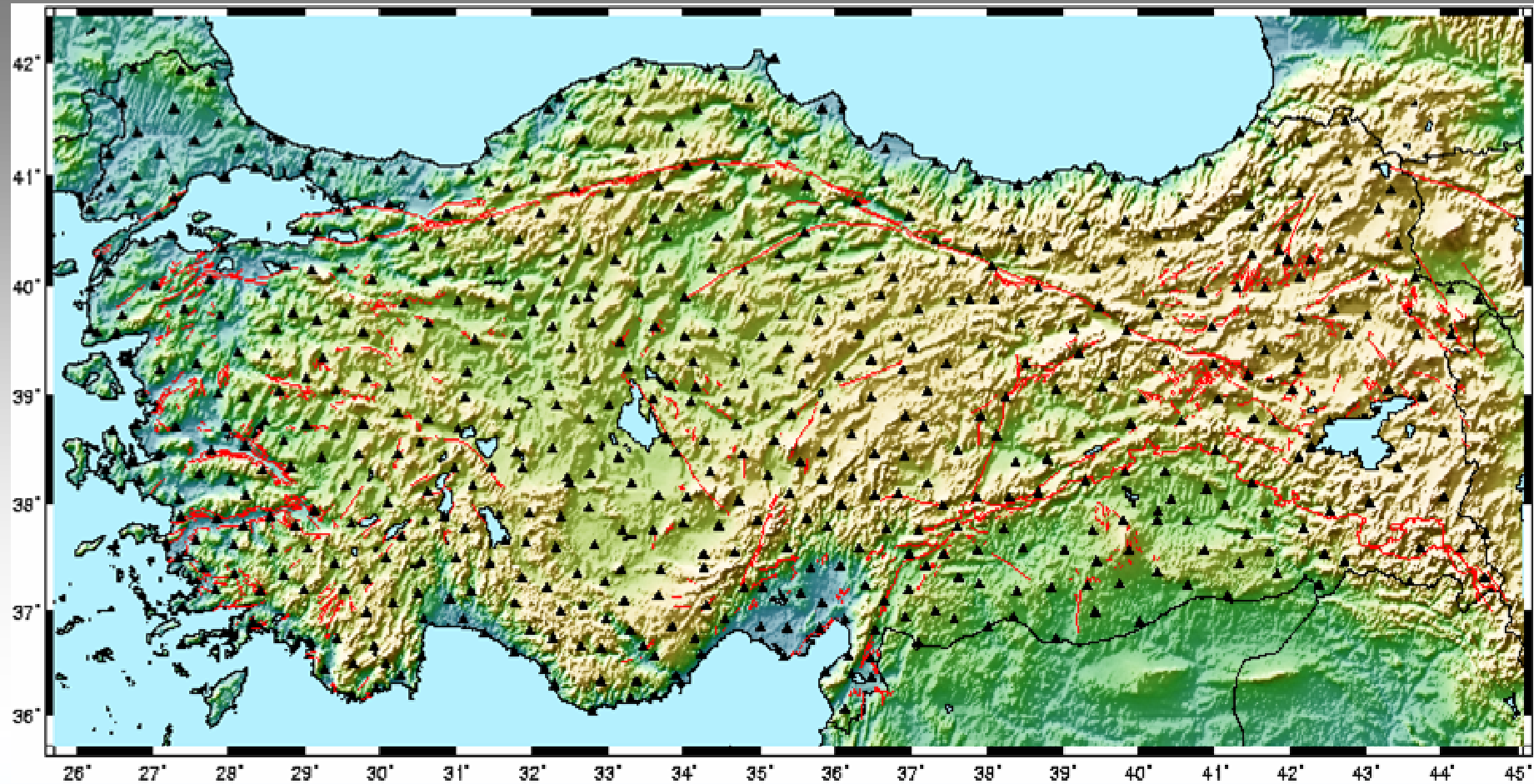
NATIONAL REPORT TURKEY 2005

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General Command of Mapping
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OUTLINE

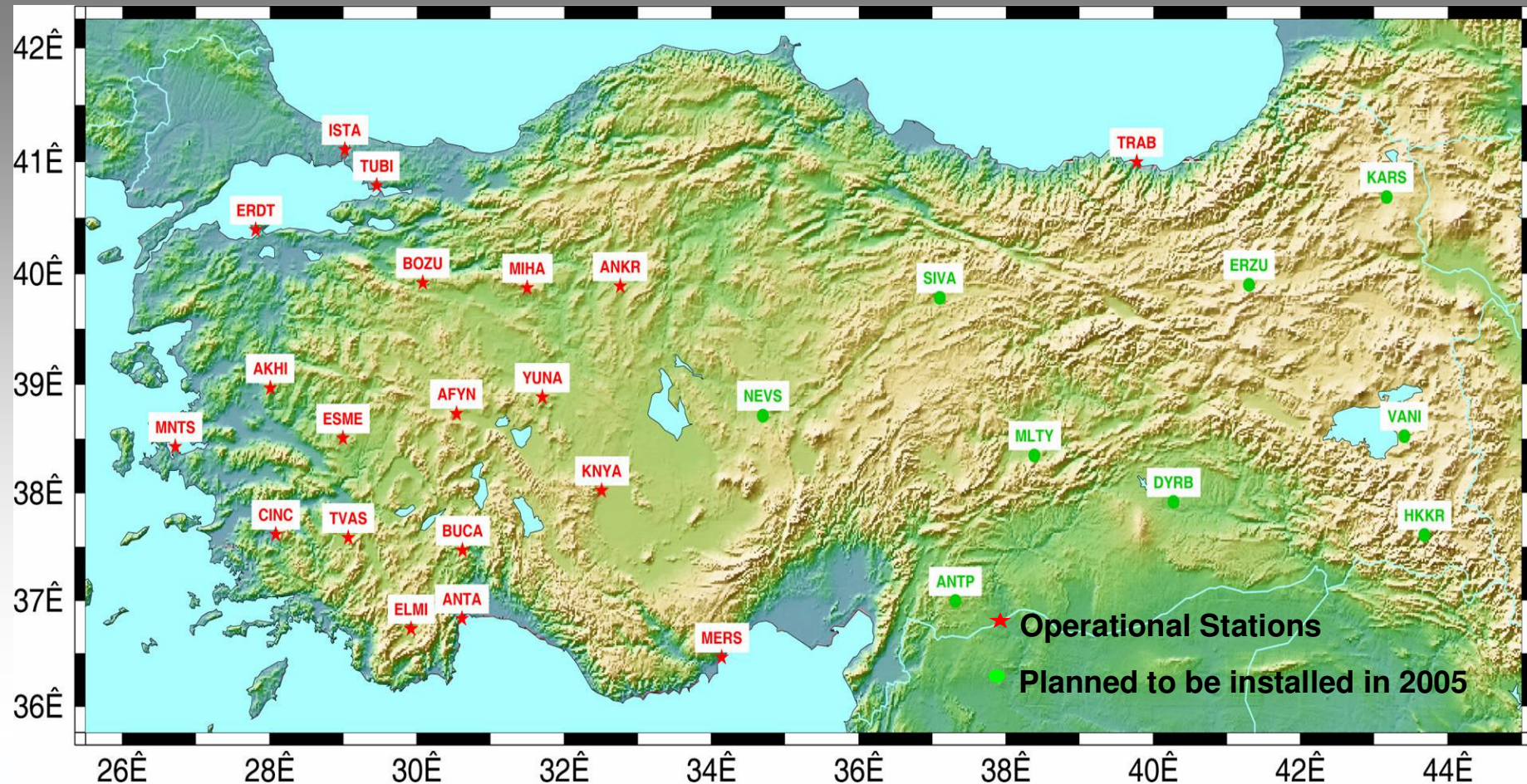
1. **Turkish National Fundamental GPS Network**
2. **Turkish Permanent GPS Network**
3. **Episodic GPS Observations for Geodynamics Studies**
4. **Turkish Geoid – 2003**
5. **Turkish Sea Level Monitoring System**
6. **Geodetic Database**

Turkish National Fundamental GPS Network



- Established in 2001
- Resurveyed due to earthquakes
- Total 600 Stations
- Coordinates/velocities in ITRF2000
- Connected to control Networks
- ED-50 → WGS84 transformation
- Analysis for ITRF2000 with new data

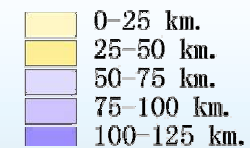
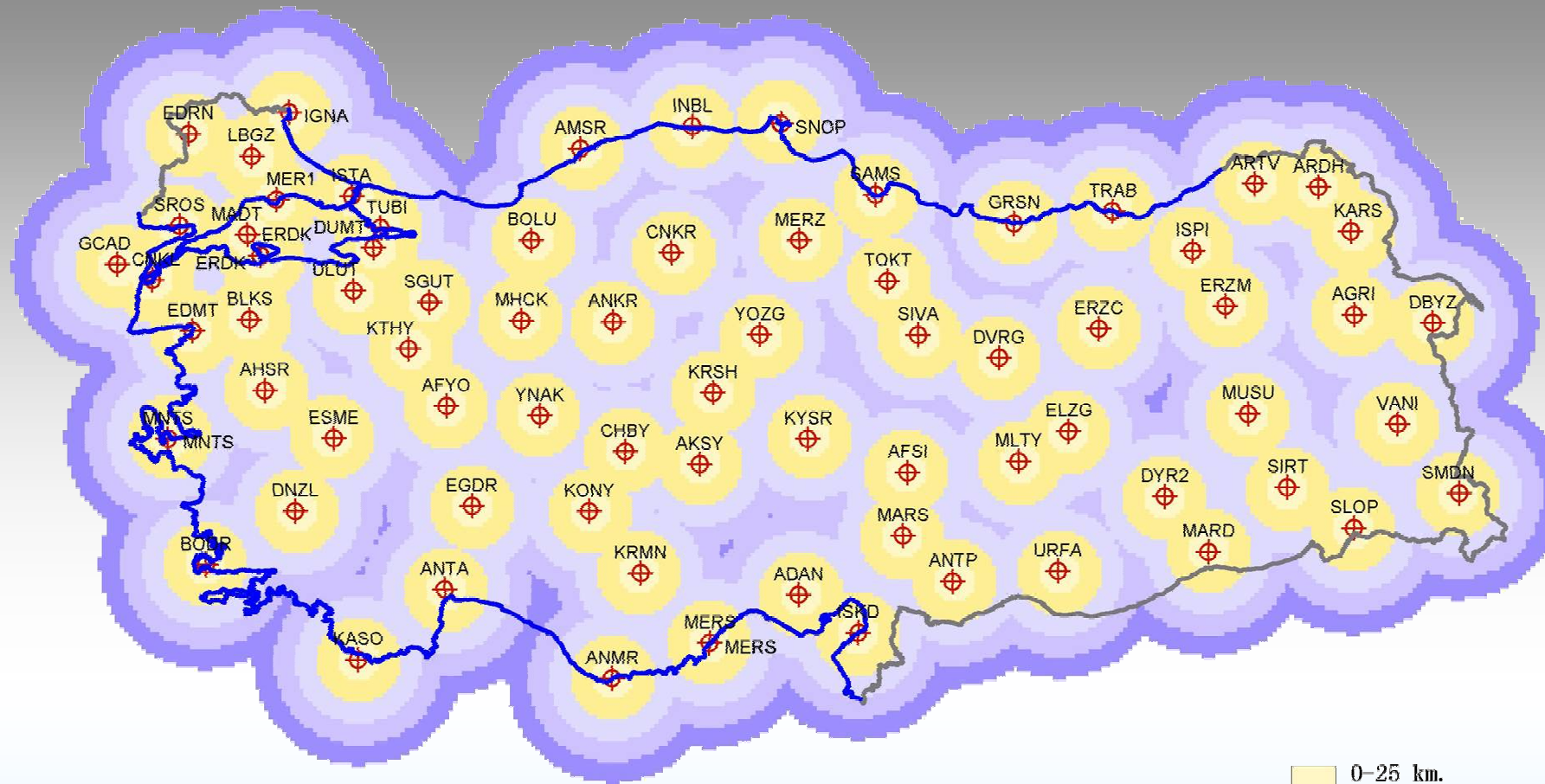
Turkish Permanent GPS Network



➤ Initiated in 1999

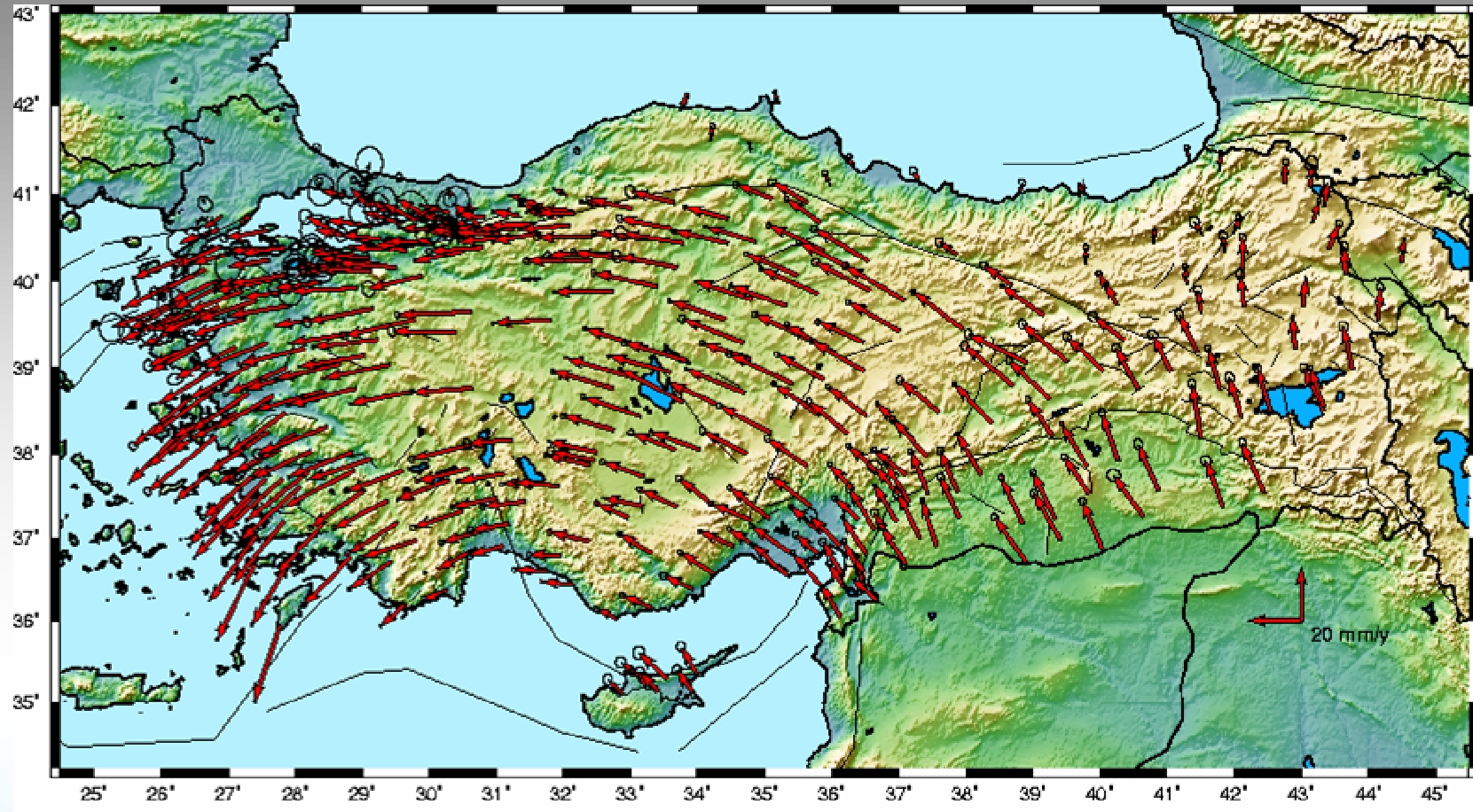
➤ 19 station as of May 2005 ➤ Time series analyzed on monthly basis

Turkish Permanent GPS Network



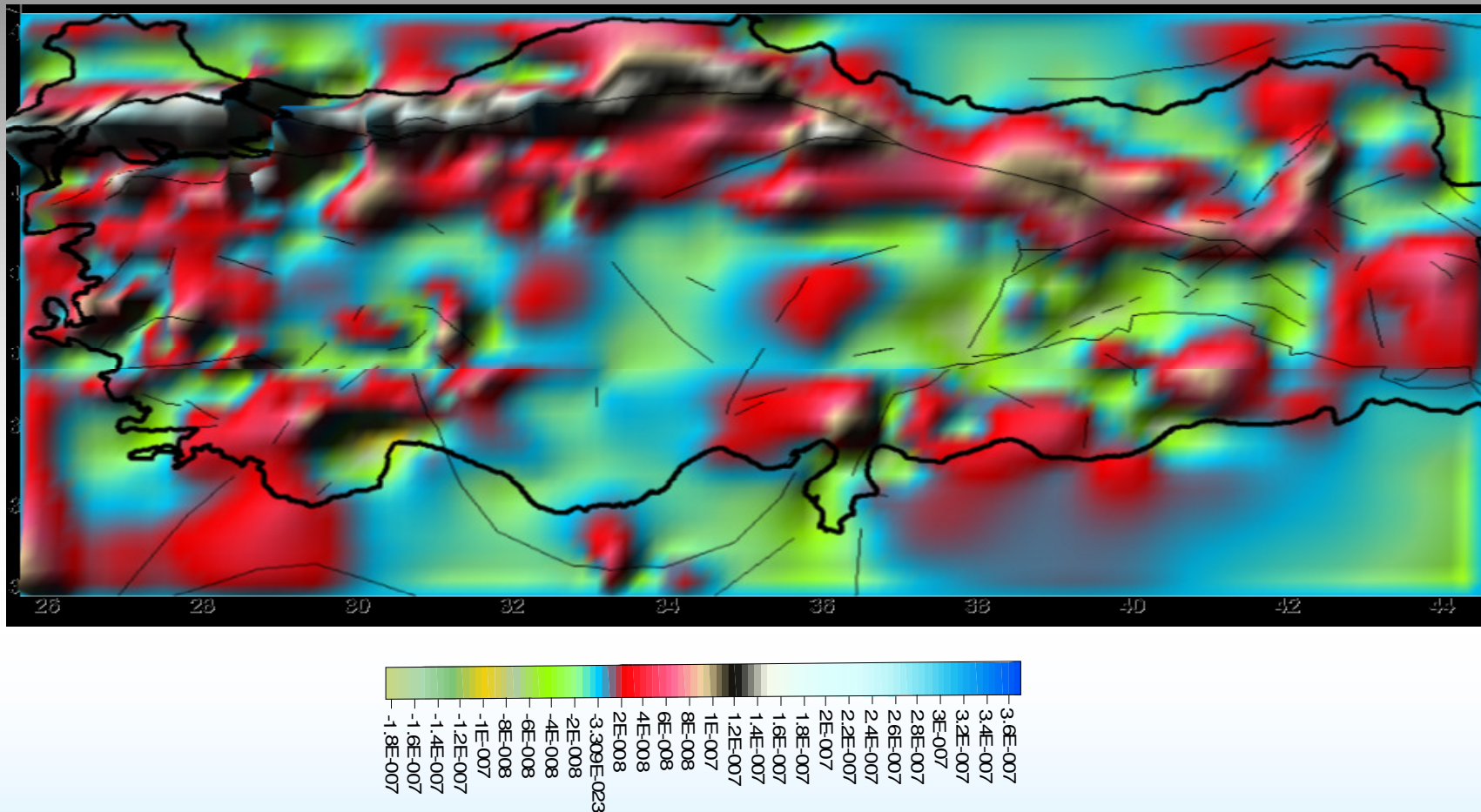
- 16 stations planned at the beginning
- Increase number of sites up to 80 stations

Horizontal velocity field of Turkey and surrounding regions in a Eurasia – fixed frame



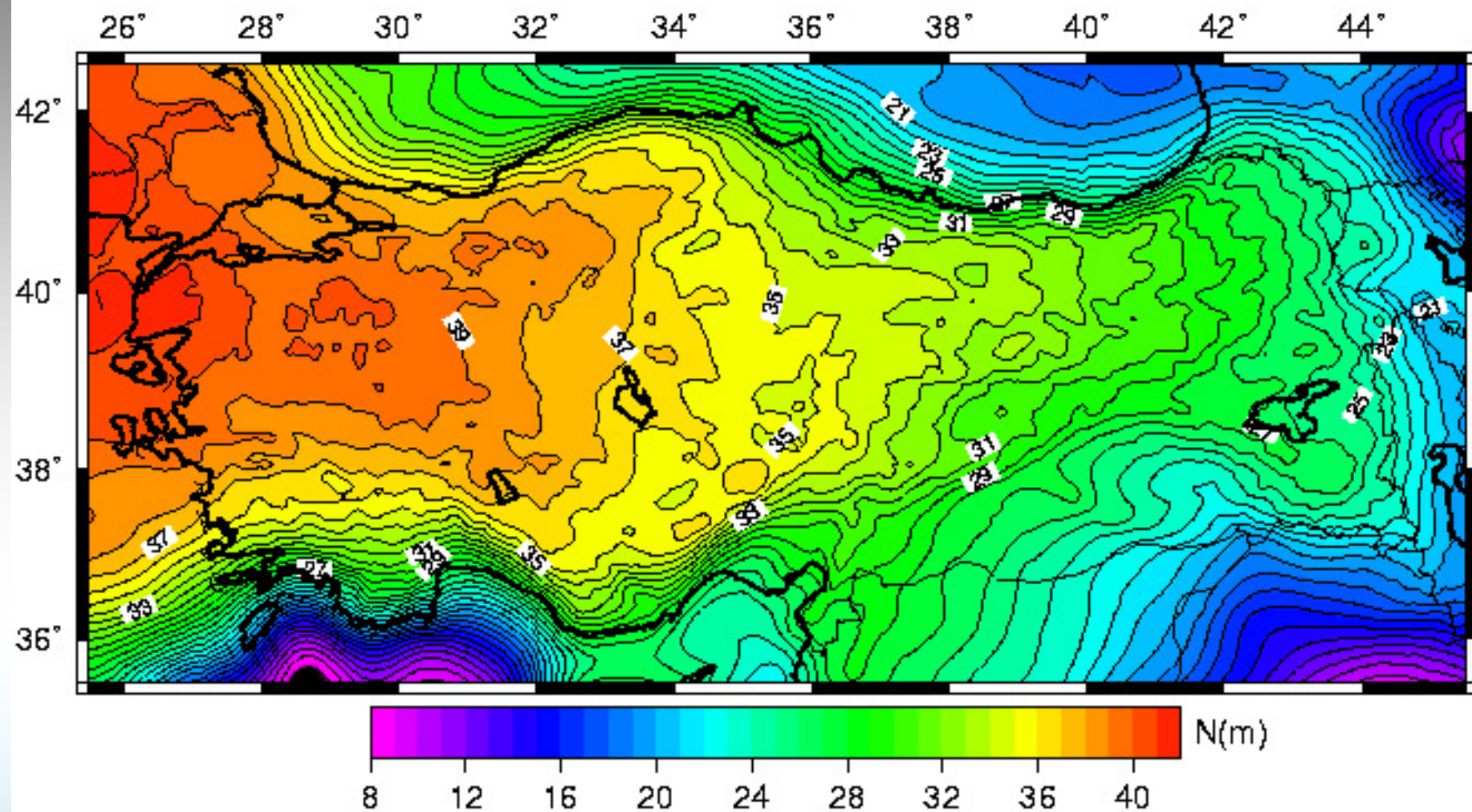
- Tectonically active area
- Bounded by Africa and Arab plates (south) Eurasia global plate (north)
- Anatolia moving ccw ~2.5 cm/yr (horizontal)
- Qualified by GPS observations since 2002

Episodic GPS Observations for Geodynamics Studies

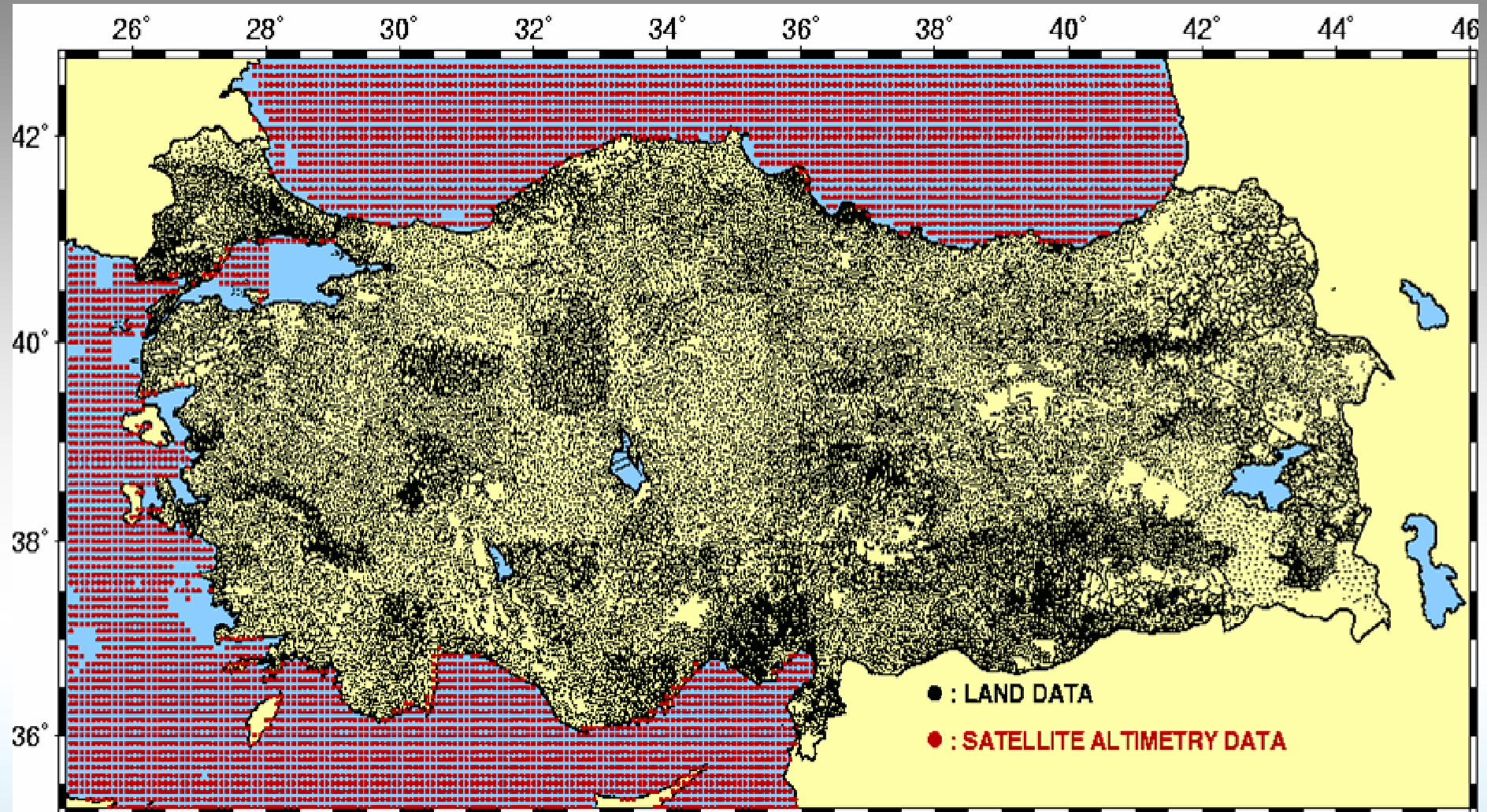


- Shear strain rates across Turkey calculated (in rad/yr)
- Earthquake prone areas are quite evident

Turkish Geoid 2003

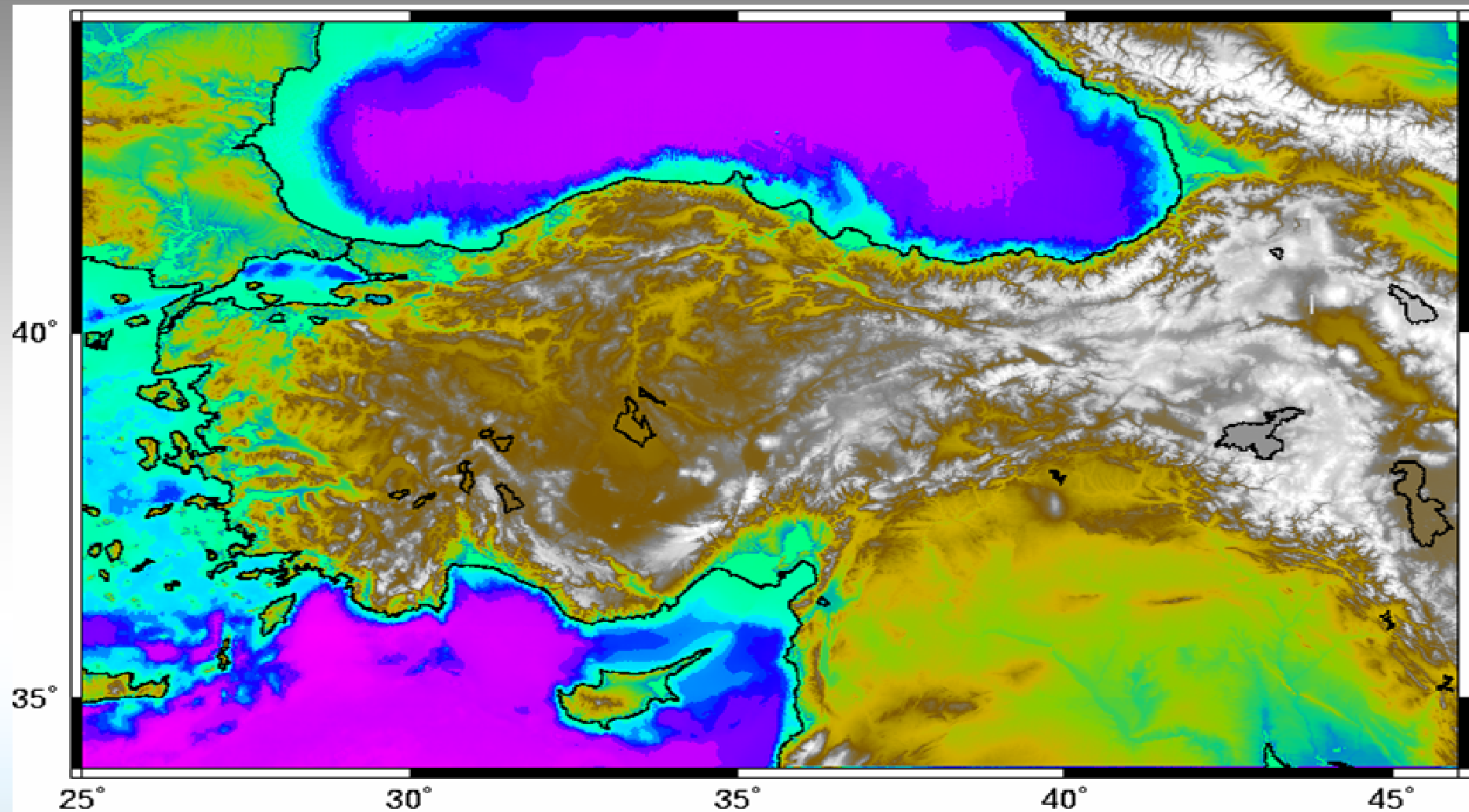


Turkish Geoid 2003



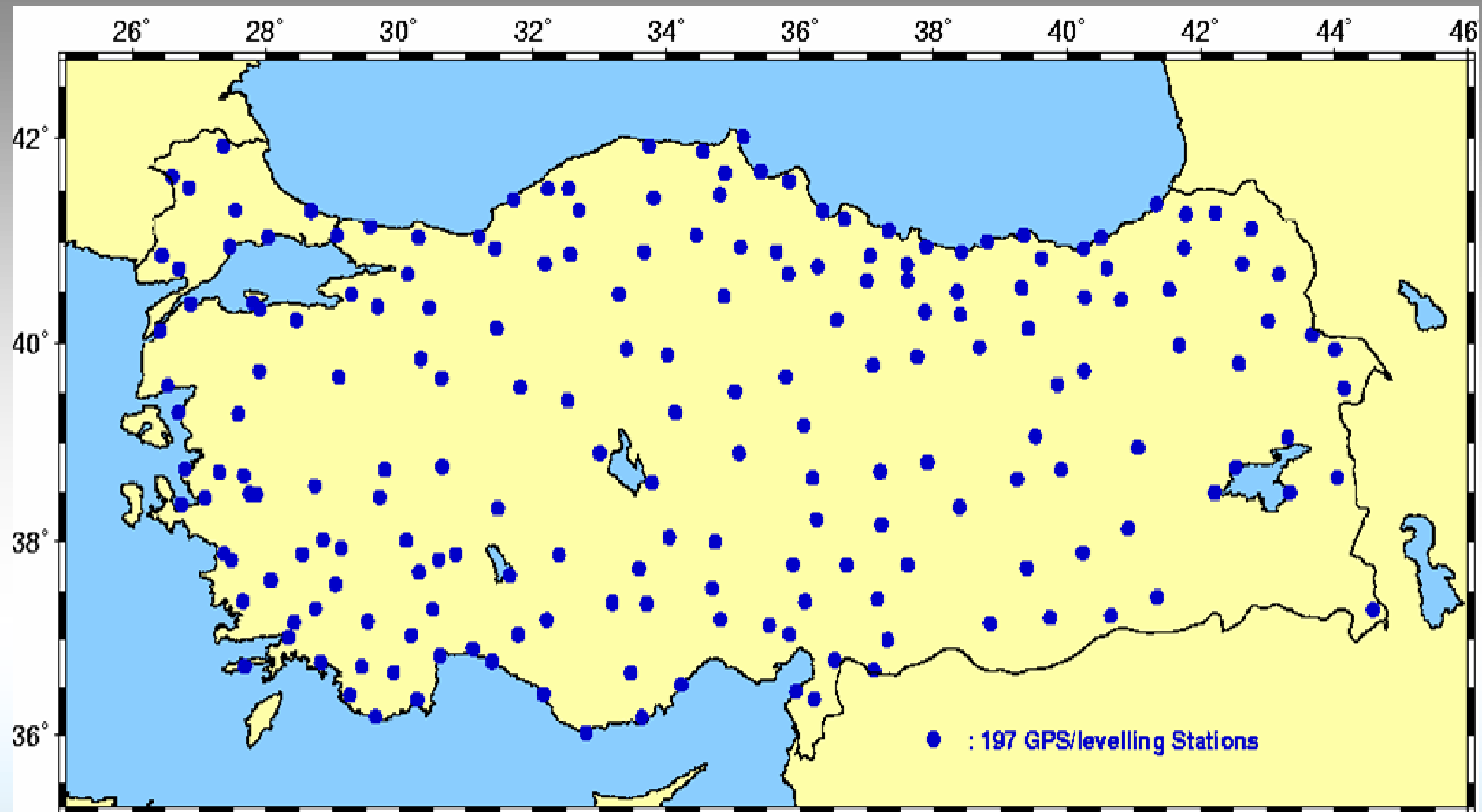
➤ The gravity data used in TG03 geoid determination

Turkish Geoid 2003



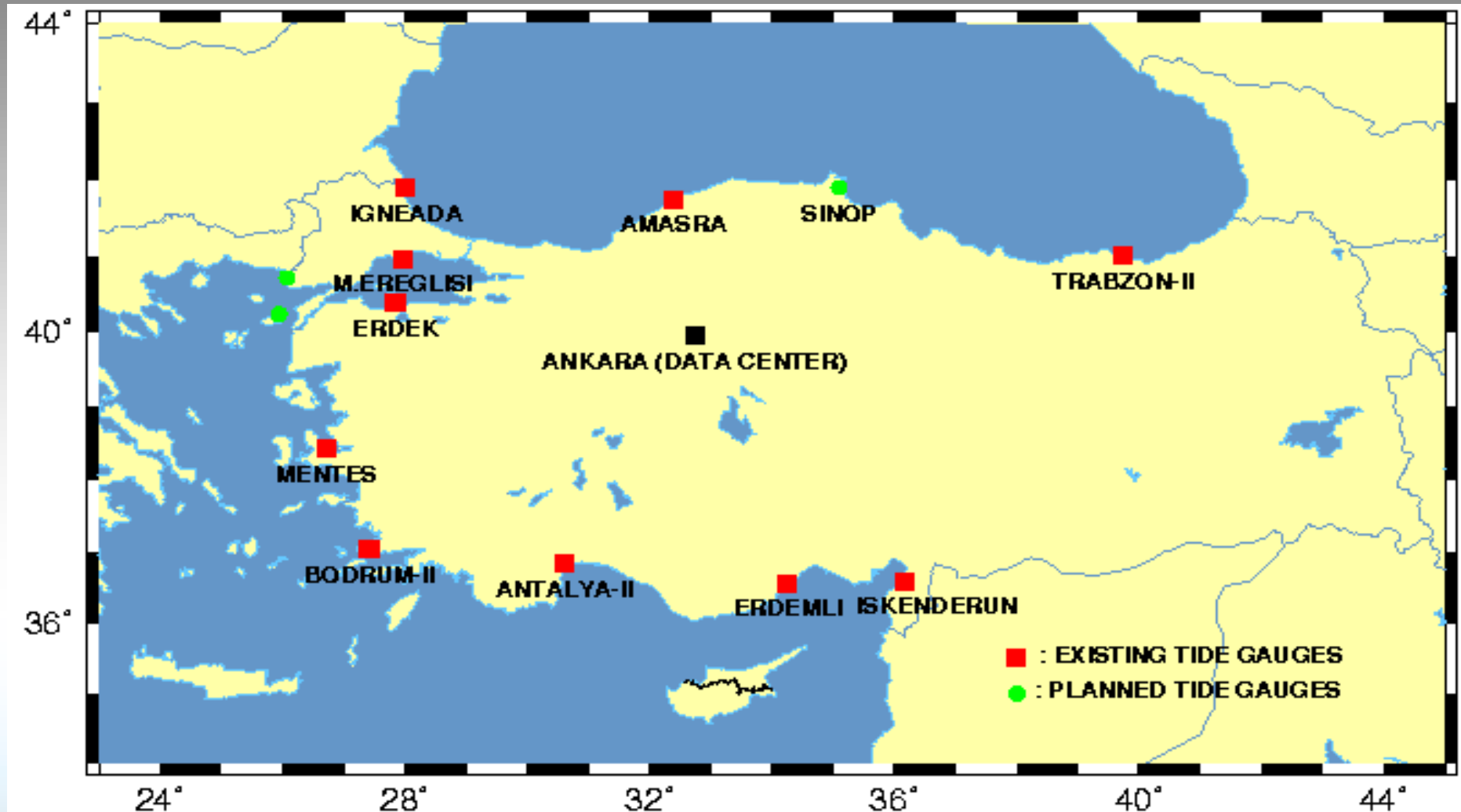
➤ The topography used in TG03 geoid determination

Turkish Geoid 2003



➤ 197 GPS / leveling stations

Turkish Sea Level Monitoring System



➤ Sea level variations and meteorological parameters

➤ Existing 10 stations

➤ Planned 3 stations

Turkish Sea Level Monitoring System



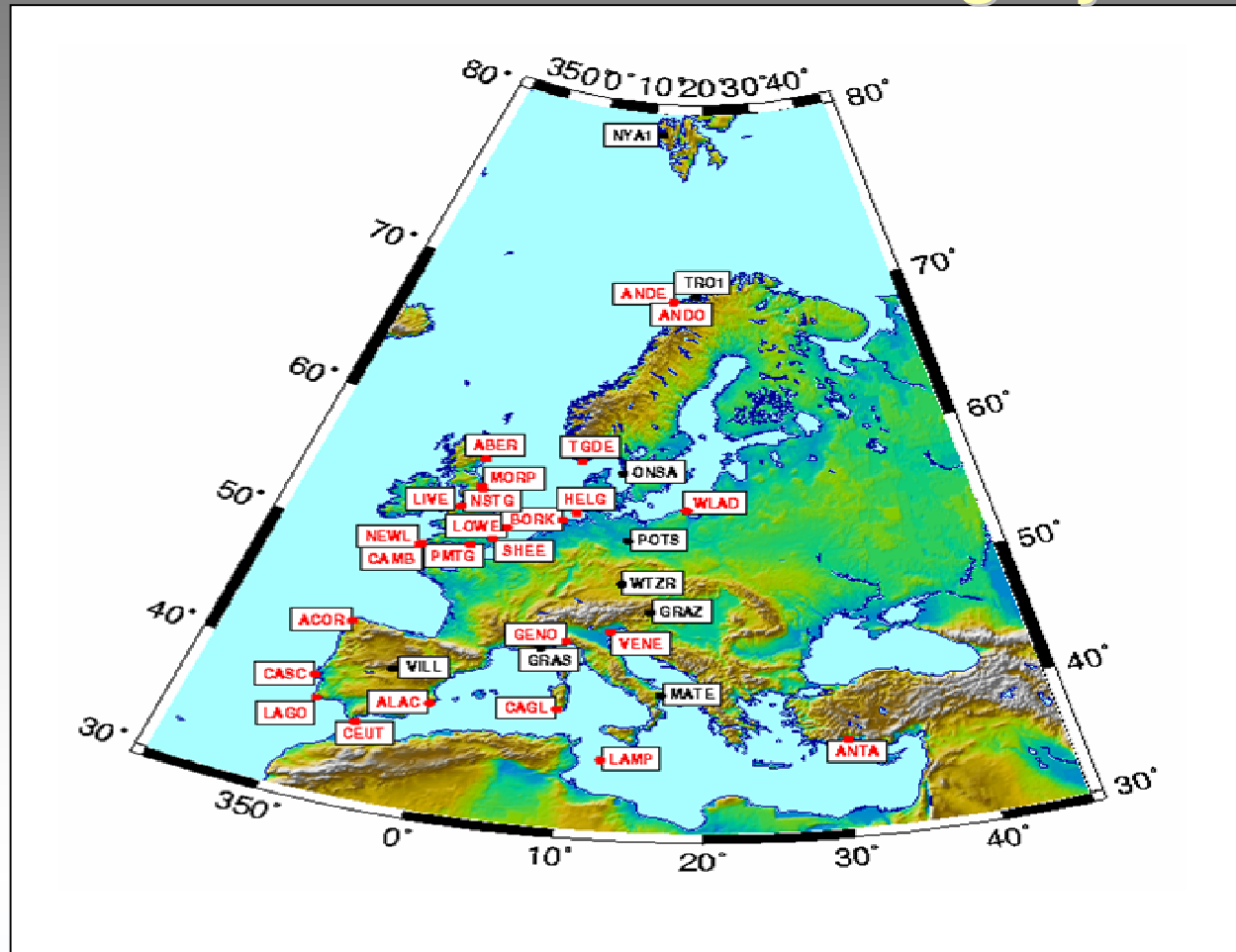
➤ Trabzon-II digital and automatic tide gauge

Turkish Sea Level Monitoring System



➤ Geodetic measurements (EGPS, CGPS, leveling) are made periodically

Turkish Sea Level Monitoring System



- **16** stations sea level analysis center Antalya tide gauge establishes ICGS determination of interannual to interdecadal and long term sea level variations in Eastern Mediterranean Sea and Black Sea ESEAS CGPS data with GAMIT/GLOBK

Geodetic Database (GDB)

Jeodezi Bilgi Sistemi

Sistem Jeodezi Jeof. ve Niv. Uzay Tek. JJD Projeler Pencere Yardım

Değer İsteği Bilgi Bankası Nirengi Niyelman GPS Gravite

Pafta İçindeki...
Nokta Tanımlayarak...
Sınırlar İçindeki...
Yaklaşık Koordinatlarla...
Pafta Üzerinde Görerek...

1 / 100 000 ölçekli KONYA M28 paftası

Nirengi Niyelman GPS
Yer Duvar Açık

Nokta Tanımlayınız...

Hazırlayan: Tülay GÜVENER
Kontrol Eden: Abdül TOK
Niyelman Geçki No: 100

Sıra	Hat	Nokta
1	100	006
2	100	008

000 6 N41-c1 SAGLIK OCAĞI
001 BNG-60 N41-c1 METEOROLOJİ
002 1 N41-c1 METEOROLOJİ
003 BN-2 N41-c1 VİFA KÜZE
004 3 N41-c1 VİFA KÜZE
005 BN-4 N41-c1 ENDÜSTRİ MES. L.
006 BN-E1 N41-c1 VİFA STAFKUL
007 5 N41-c1 KOK. ORTOKUL
008 6 N41-c1 SAGLIK OCAĞI
009 BN-7 N41-c1 CAMİ
010 8 N41-c1 KARAYOLLARI
011 9 N41-c1 TOPRAK ARŞ. ENDT
012 7051 N41-c1 SİRKİNDY OKUL
013 BN-10 N41-c1 SİRKİNDY TRAFİ
014 11 N41-c1 SİRKİNDY CAMİ
015 12 N41-c1 HOBİL
016 13 N41-c1 YENİKÖYÇASIĞY

Protokol Kot Türü
• Helmer Ort. Yuk. • Mol. Nor. Yuk.
• Normal Ort. Yuk. • Kotsuz

Tesis Türü
☒ Yer Noktası ☒ Duvar Noktası ☒ Açık

Nokta Derecesi
☒ Düşüm ☒ I ☒ II

nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no	nivhat_no
100	006	DN-E1	1	D					0.2
100	008	G	1	Y					0.41

Nokta Tanımlayınız...

Hazırlayan: Tülay GÜVENER
Kontrol Eden: Abdül TOK
1/ 250 000 ölçün adı: ANKARA
1/ 100 000 ölçün adı: 129

Nokta Numarası ve Adı: 104

Sıra	1/100	Nok. No
1	129	101
2	129	102
3	129	103
4	129	104
5		
6		
7		
8		
9		
10		

Nokta Derecesi	Dilim Geniği
<input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> II <input checked="" type="checkbox"/> III <input checked="" type="checkbox"/> IV	<input checked="" type="checkbox"/> 3" <input checked="" type="checkbox"/> 6" <input checked="" type="checkbox"/> Coğ.

nok_no	nok_adi	pal250	pal100
101		ANKARA	129
102		ANKARA	129
103		ANKARA	129
104		ANKARA	129

Yükün: 4193006 m. DOM: 33° Enlem: 37° 52' 57" Boylam: 32° 24' 9" Jeodezi Bilgi Sistemi

Typical screenshots

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