

# **Working Group D**

# **The Africa Reference Frame Project –**

# **AFREF**

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**International Committee on GNSS**  
**Pasadena, California**  
**10 December 2008**

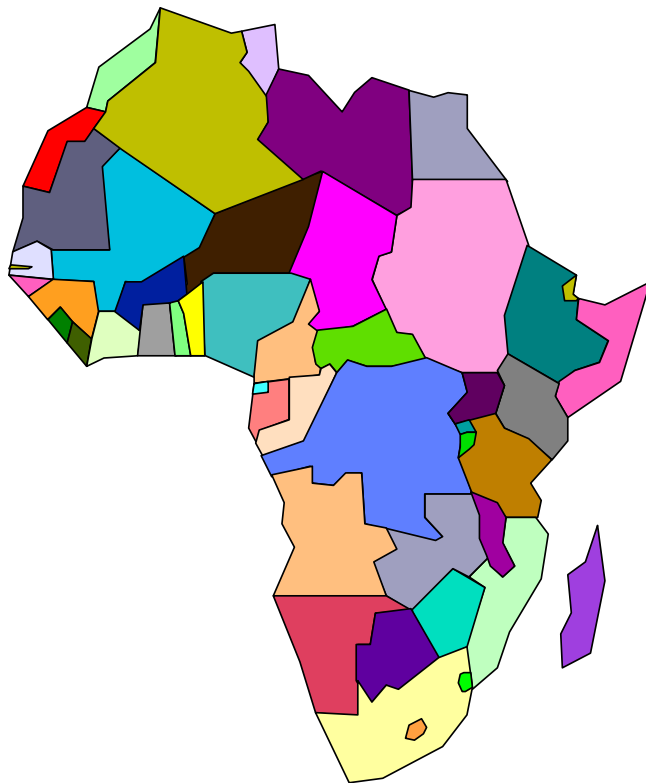


# Background

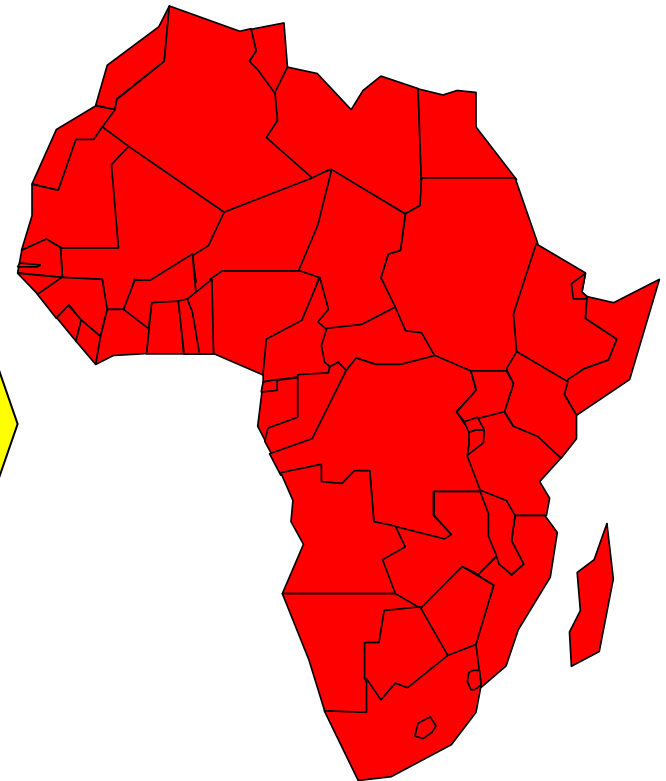
- Over 50 countries in Africa each with their own geodetic reference system and frame and some with 2 or more systems.
- Two of the objectives of AFREF are
  - To determine a continental reference system for Africa consistent and homogeneous with the global reference frame of the **ITRF** as a basis for national 3-d reference networks.
  - To establish **continuous, permanent GNSS base stations** at a spacing such that the **users will be within 1000km** of a base station and that data is freely available to all nations.



# Unification Through GNSS & ITRF

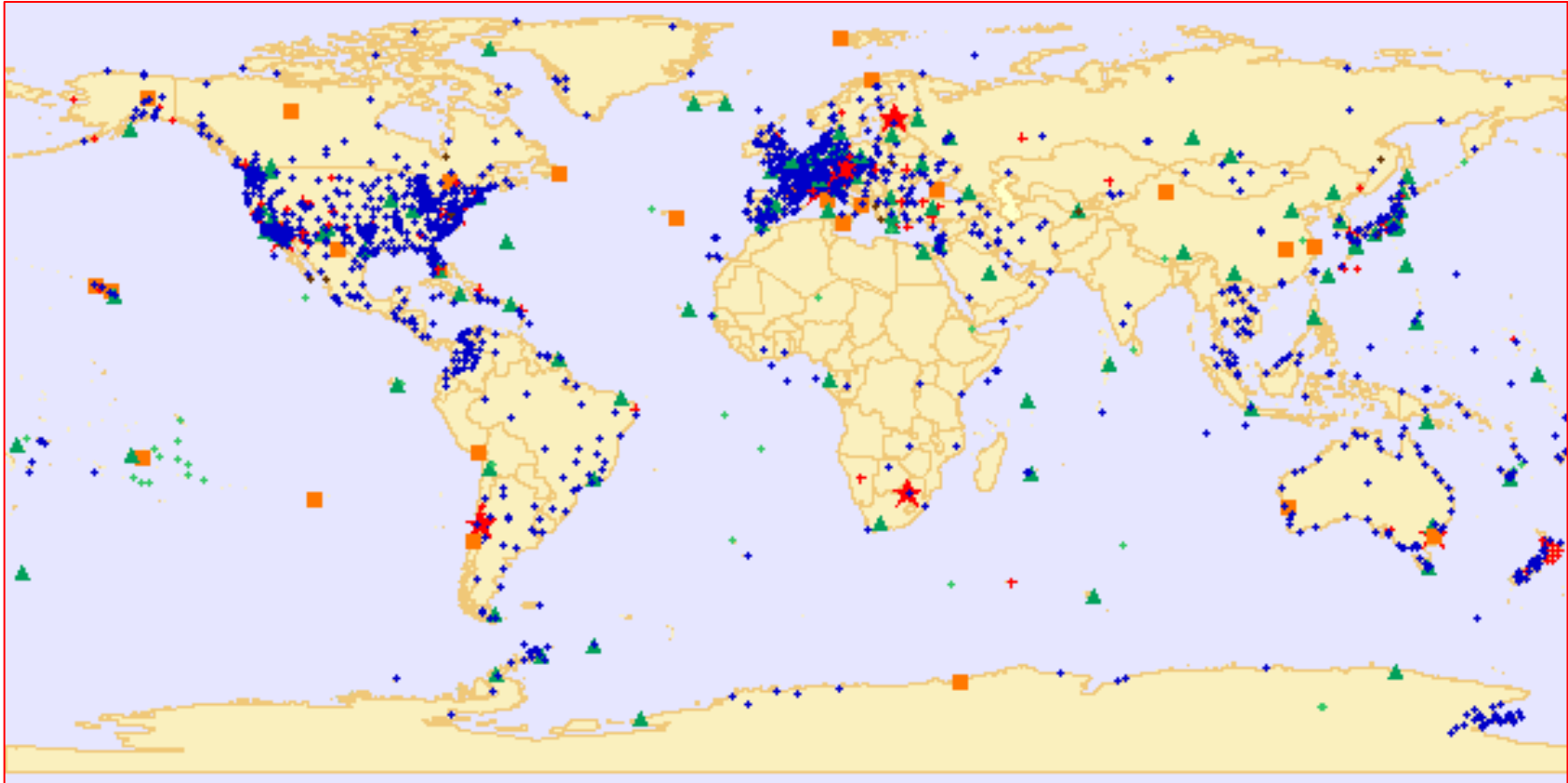


**GNSS  
+  
ITRF**





# Global Distribution of IGS Stations





# Situation in Africa

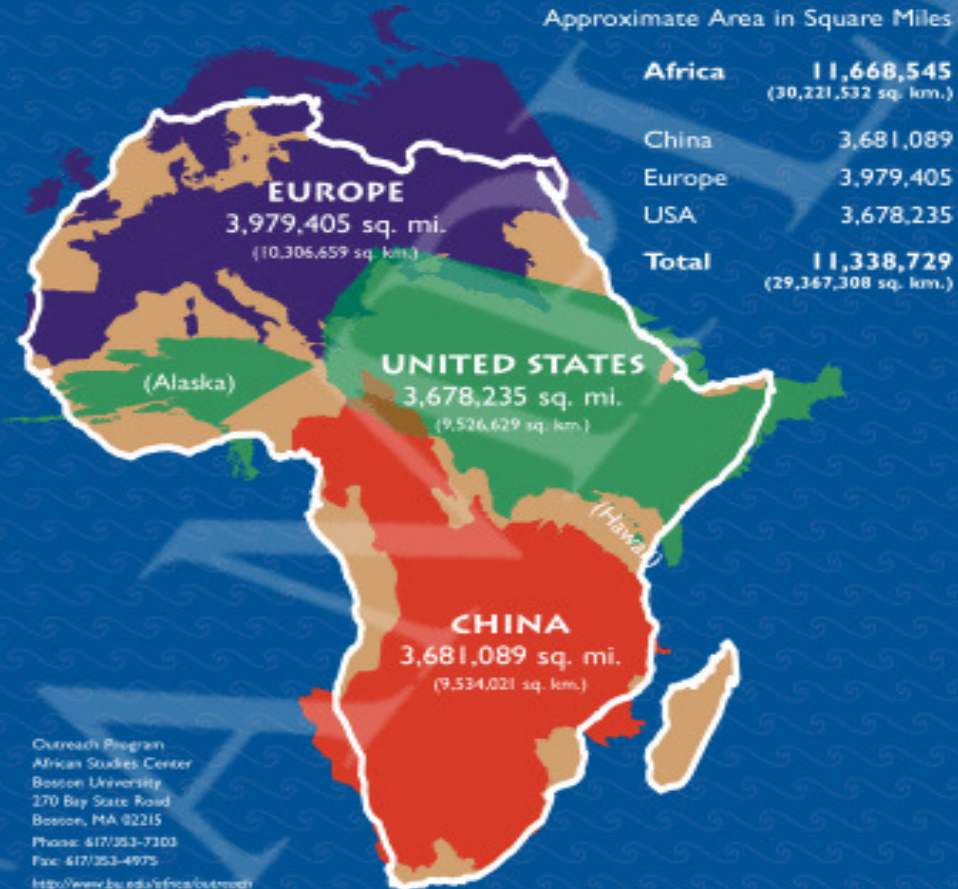
GPS, GLONASS, SLR, VLBI, AND DORIS SITES IN AFRICA





# HOW BIG IS AFRICA?

Approximate Area in Square Miles



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Mollweide Equal Area Projection