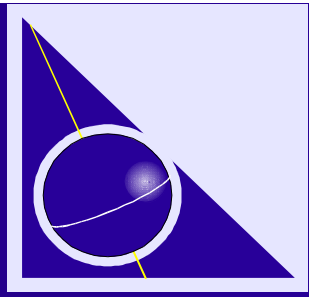
Geo++®
Gesellschaft für satellitengestützte geodätische und navigatorische Technologien mbH

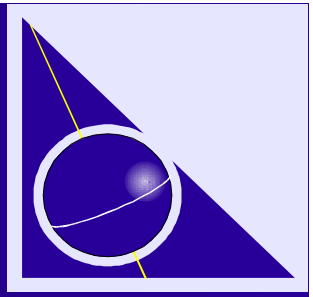


GPS Positionsbestimmung
mit
Geo++® – GNSMART

Andreas Bagge

zur Einführung von SAPOS in Baden−Württemberg
Crailsheim – 2000−12−07

GN SMART



GNSS:

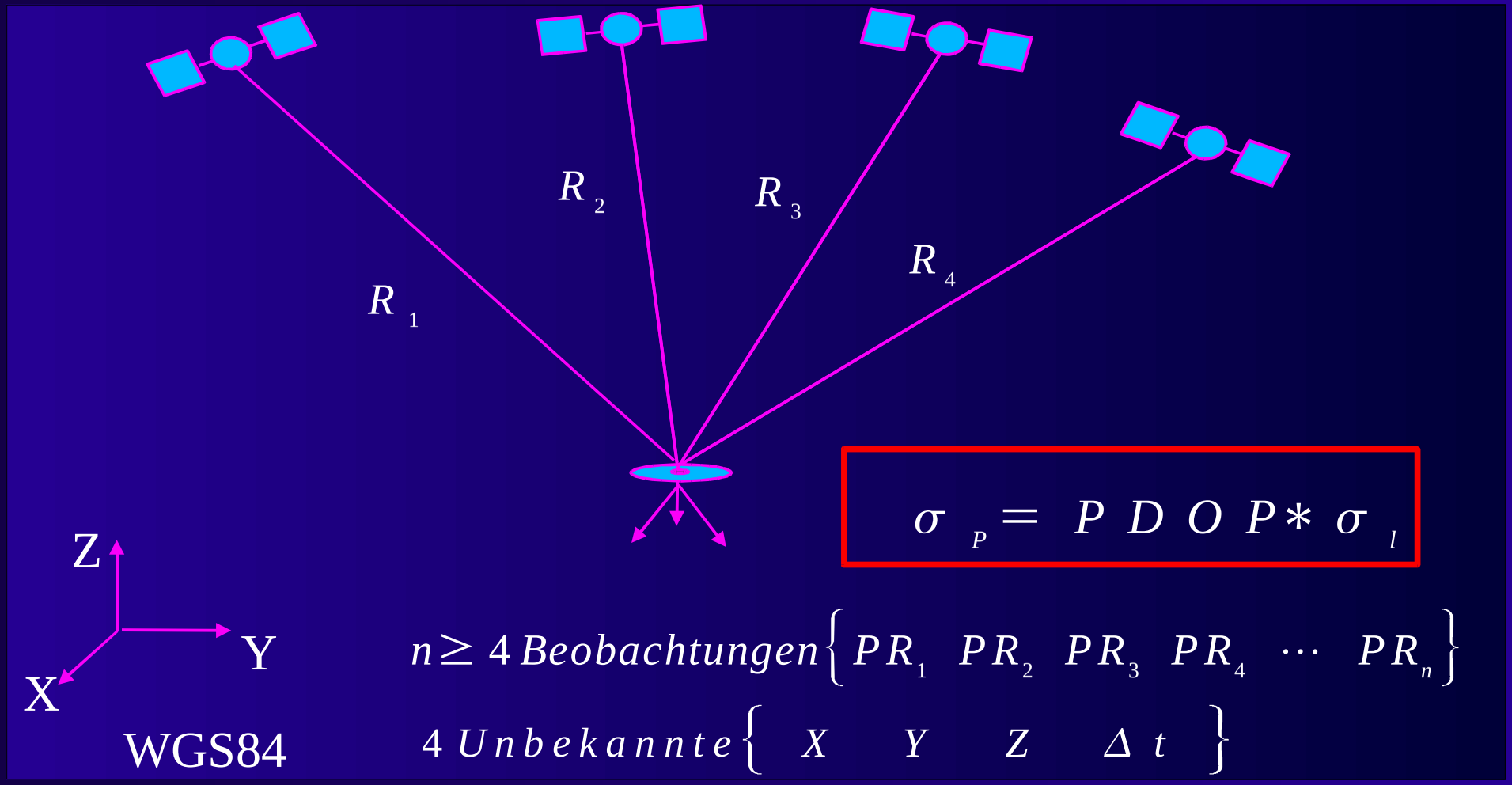
Global **N**avigation **S**atellite **S**ystem

(GPS, GLONASS)

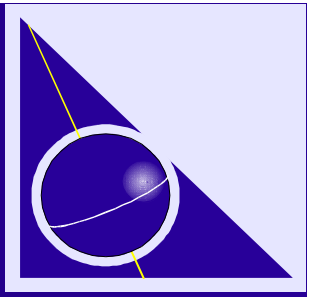
SMART:

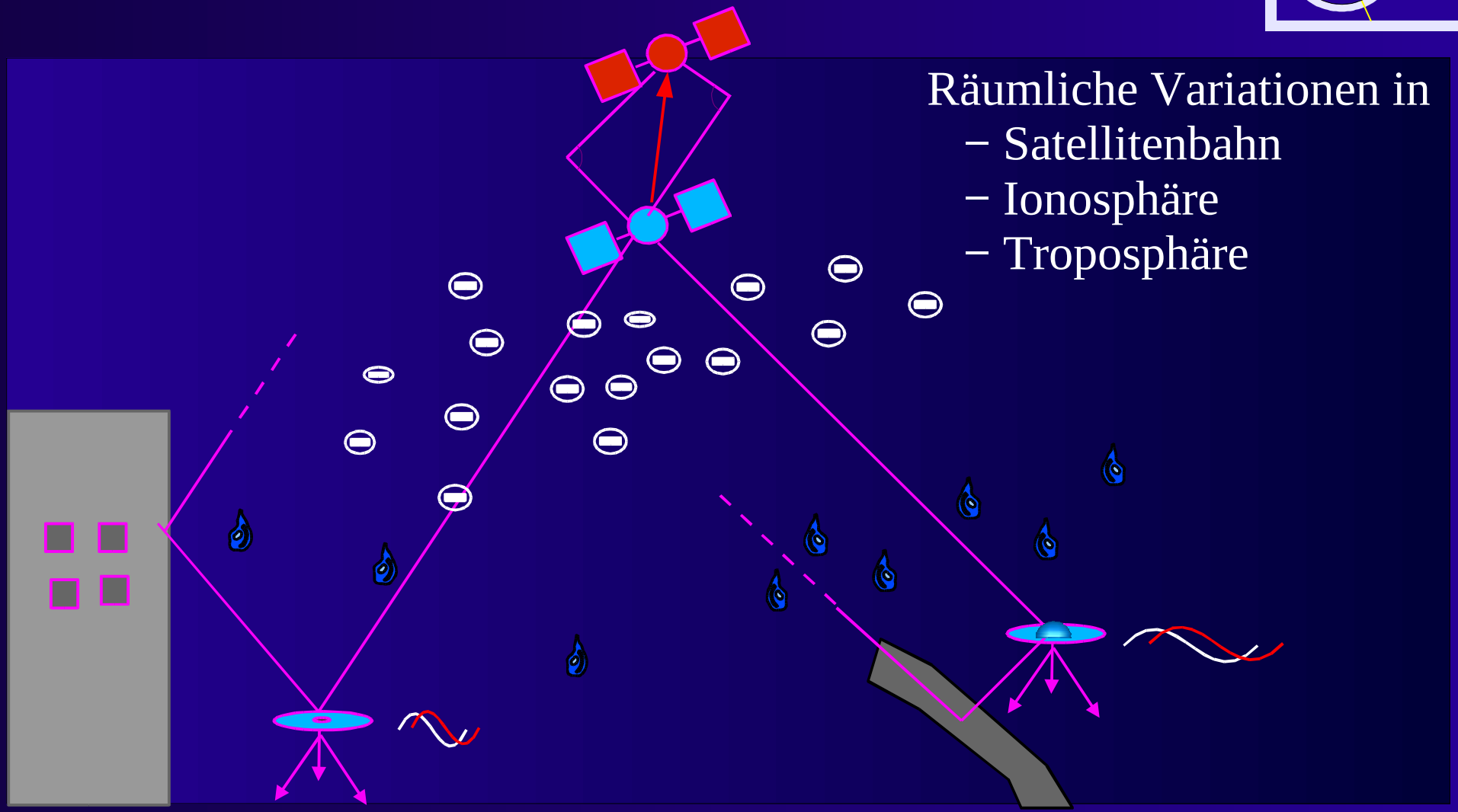
State **M**onitoring **A**nd **R**epresentation **T**echnique

GPS Grundprinzip



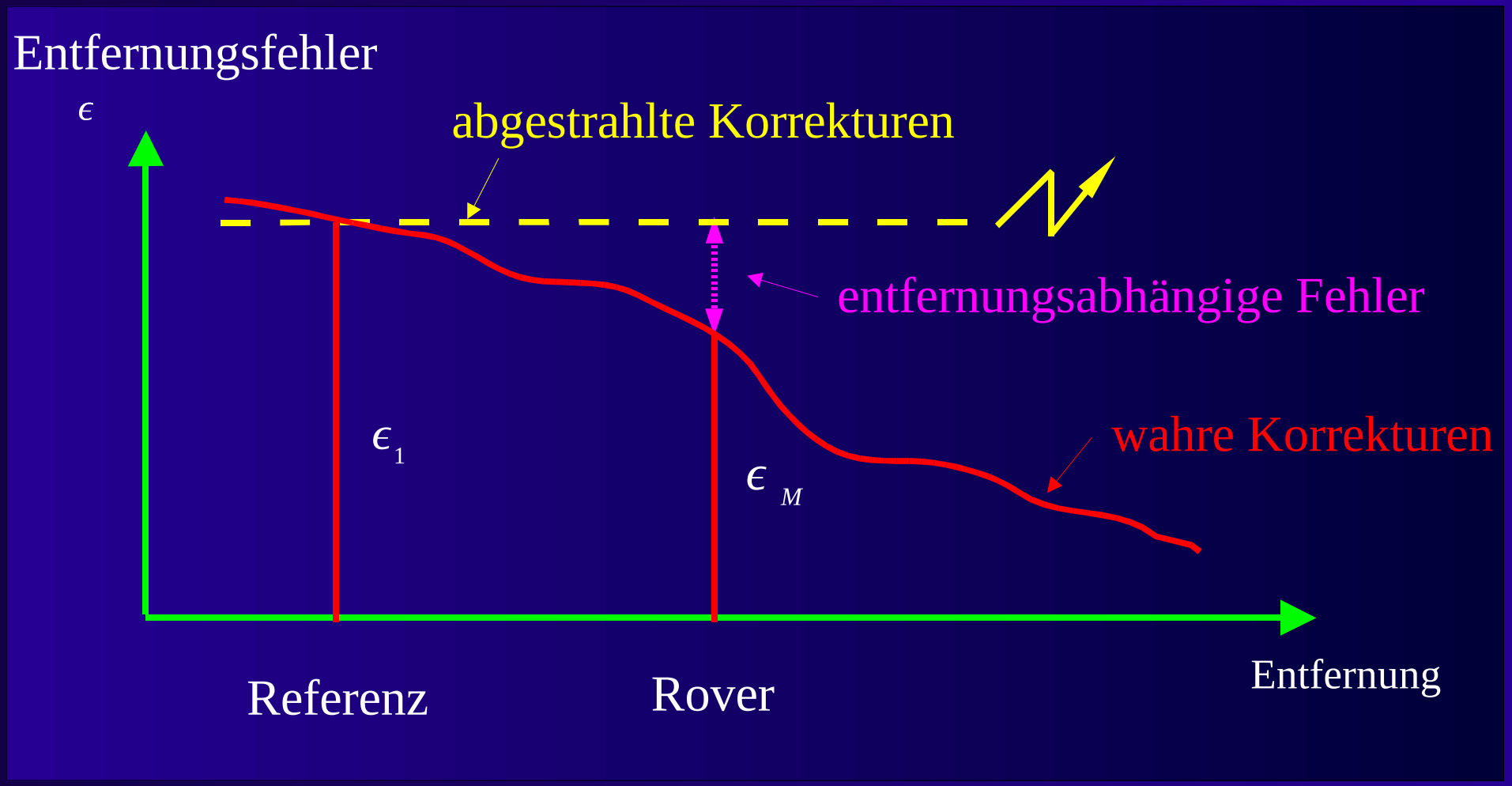
GPS Fehlerquellen



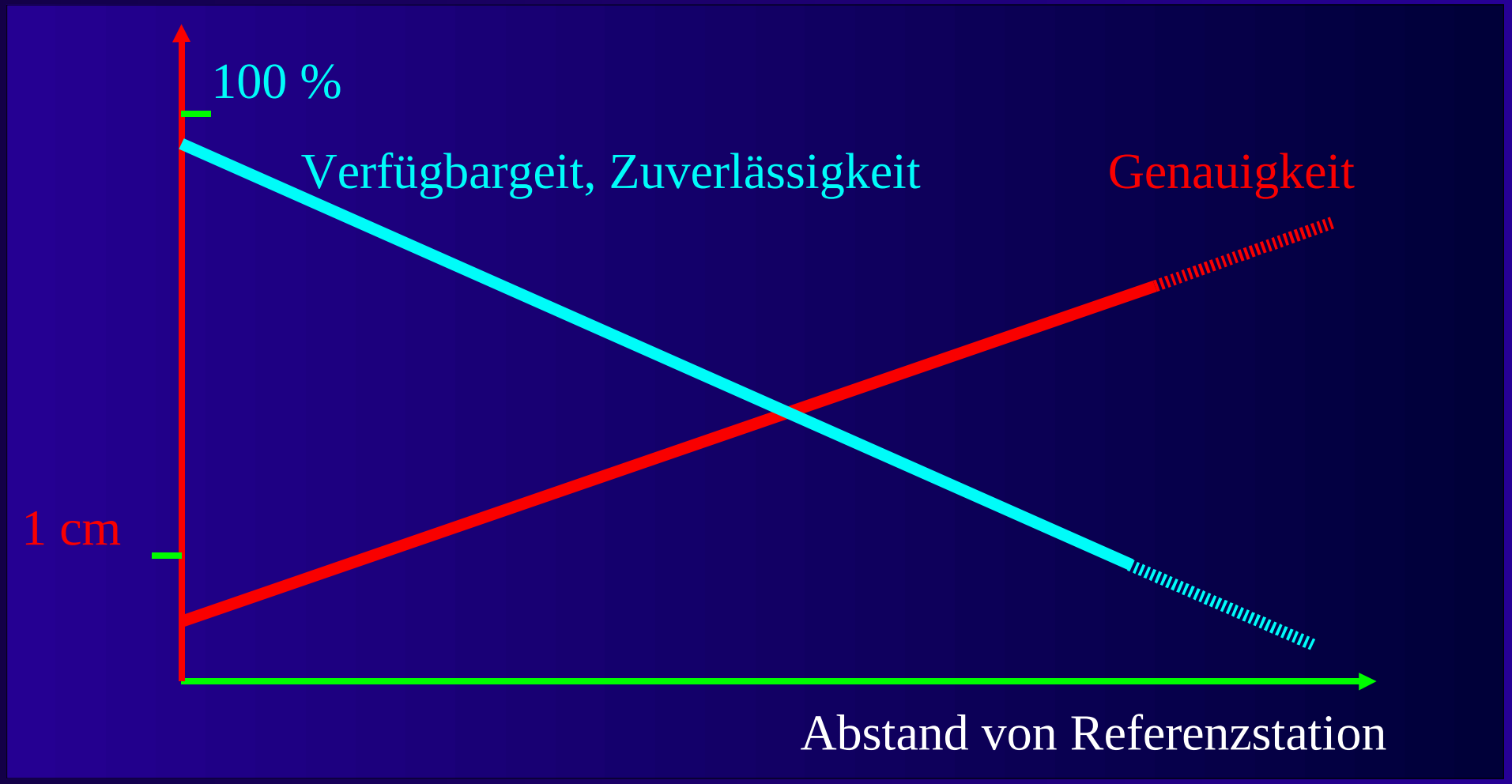


Räumliche Variationen in
- Satellitenbahn
- Ionosphäre
- Troposphäre

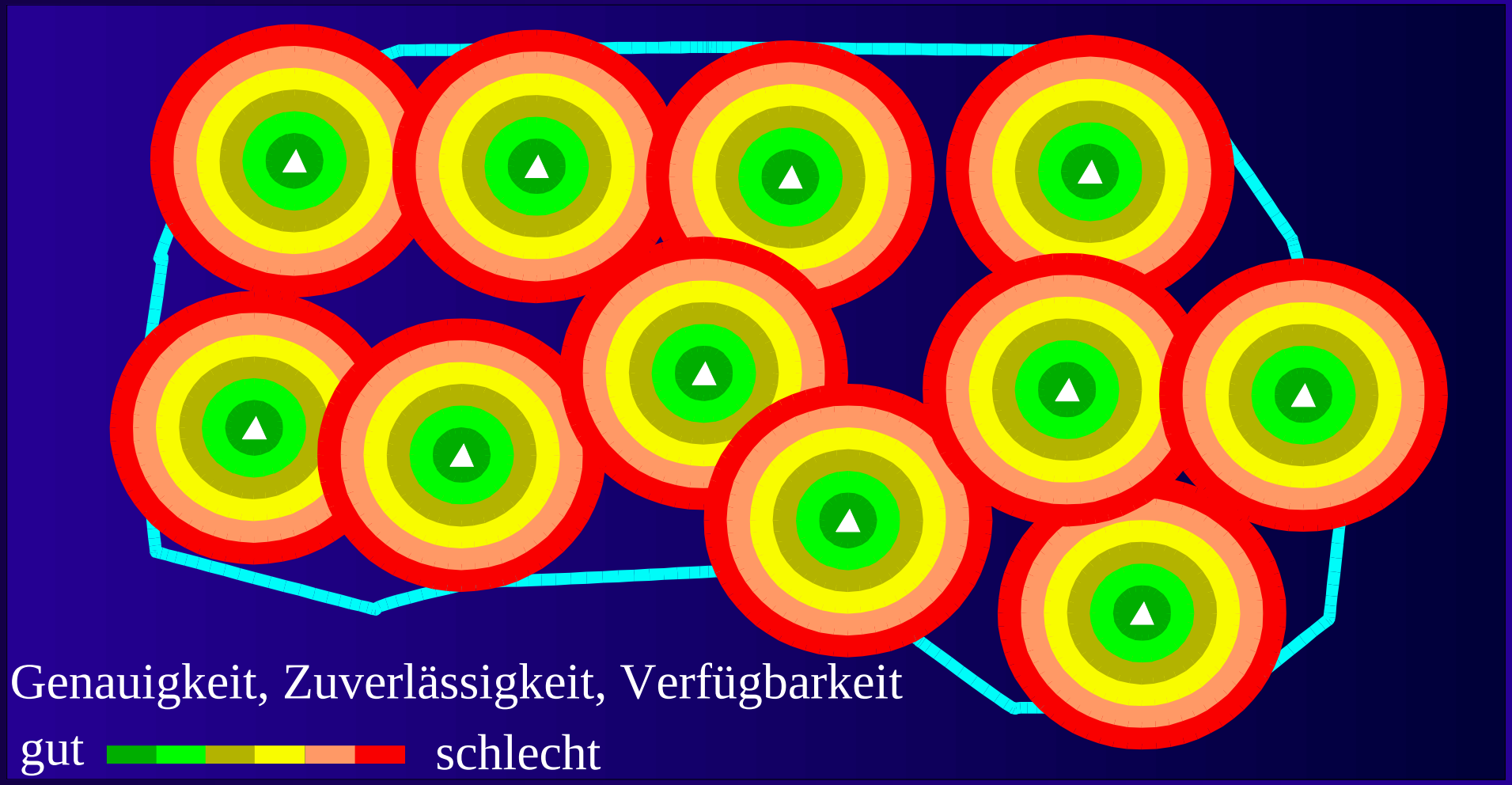
Entfernungsabhängigkeit



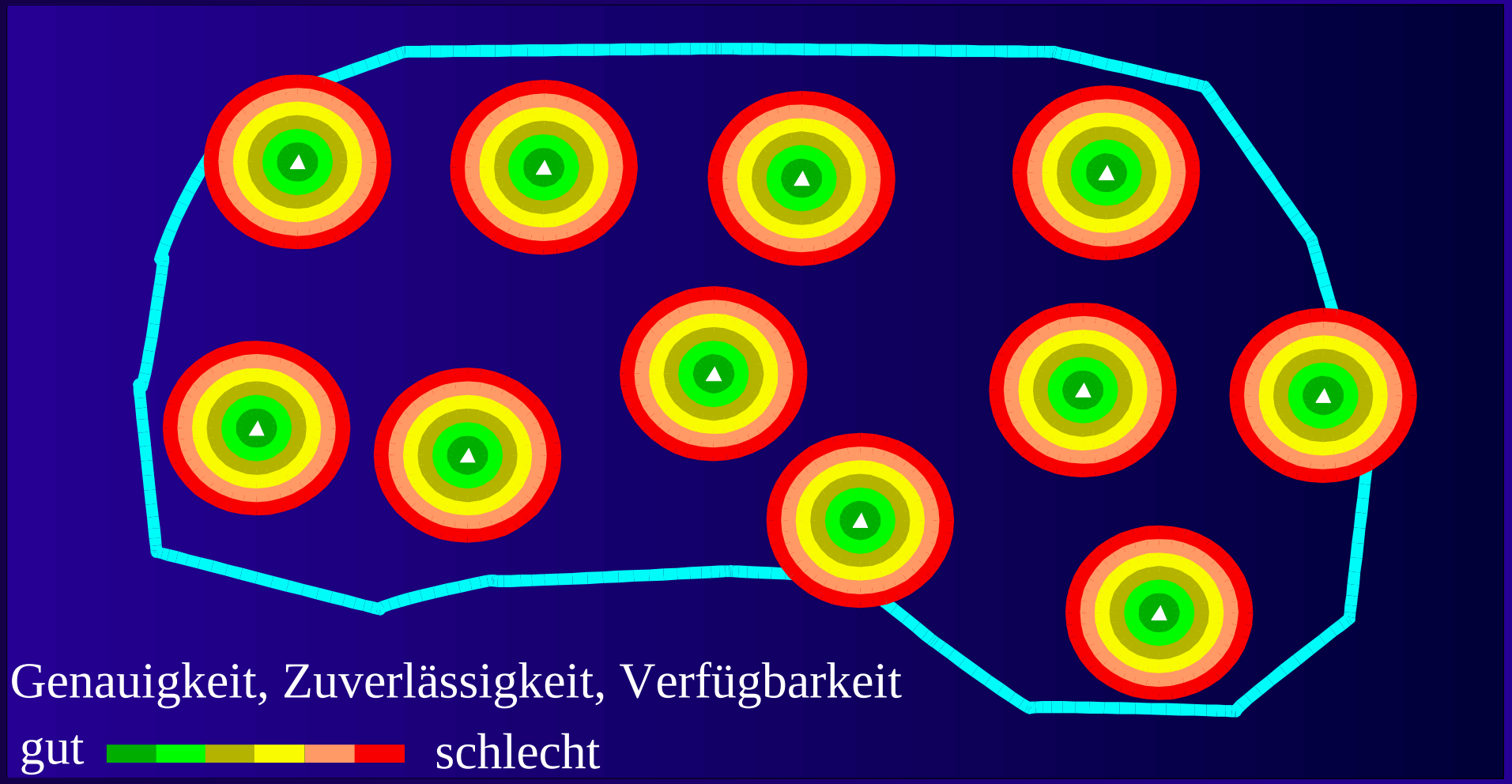
RTK–Qualität: Genauigkeit, Zuverlässigkeit, Verfügbarkeit



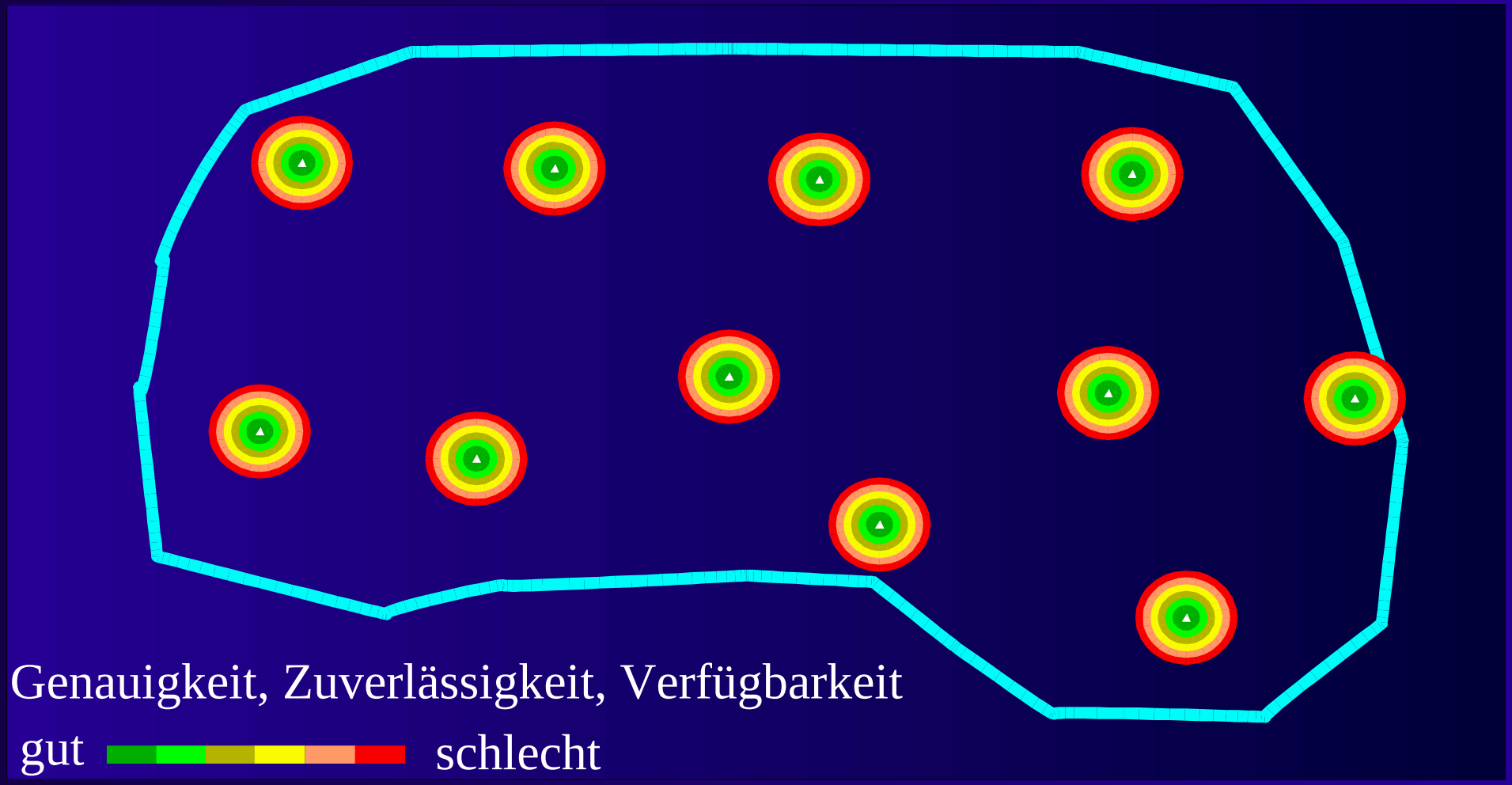
einzelne Referenzstationen (geringe Ionosphäre)



einzelne Referenzstationen (mittl. Ionosphäre)

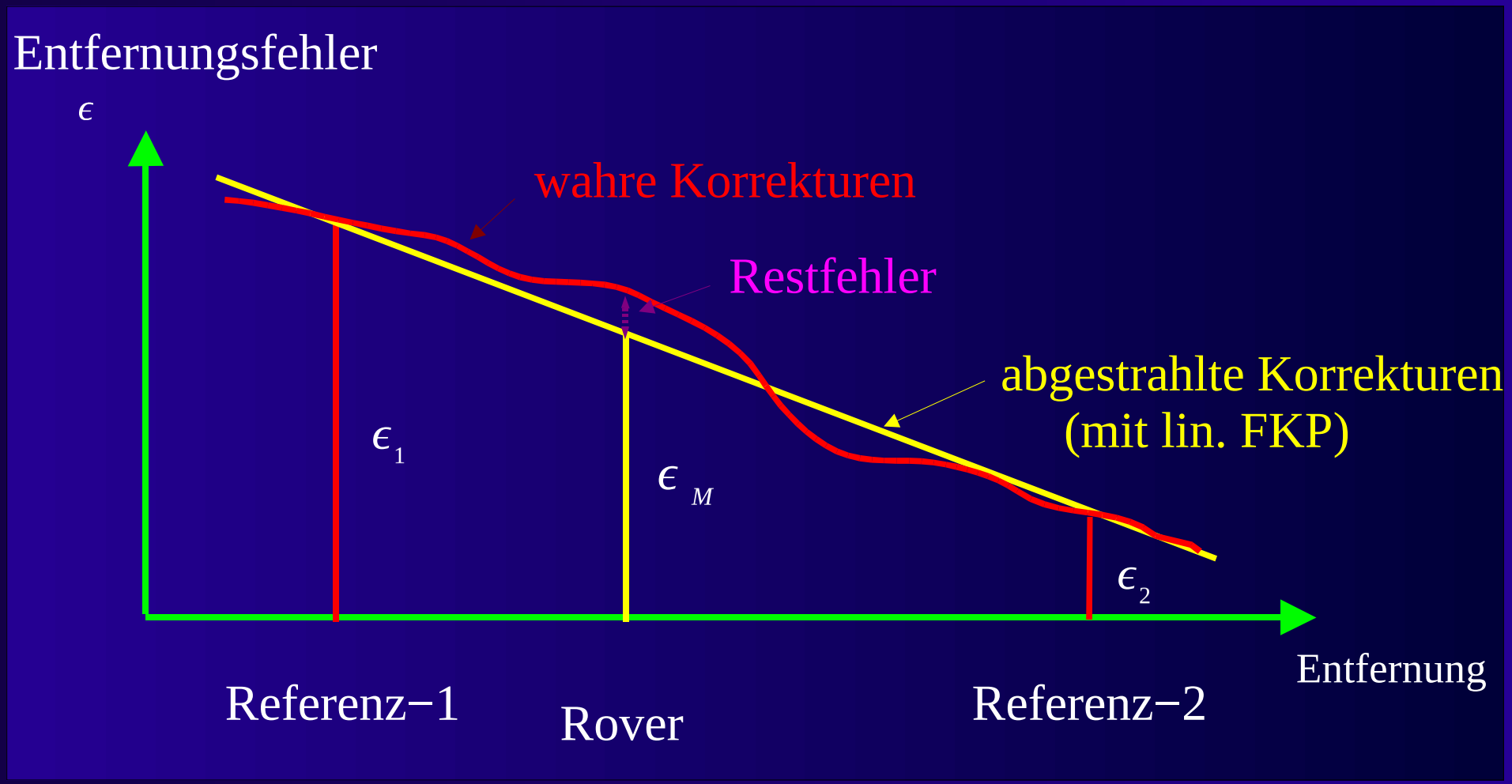


einzelne Referenzstationen (starke Ionosphäre)

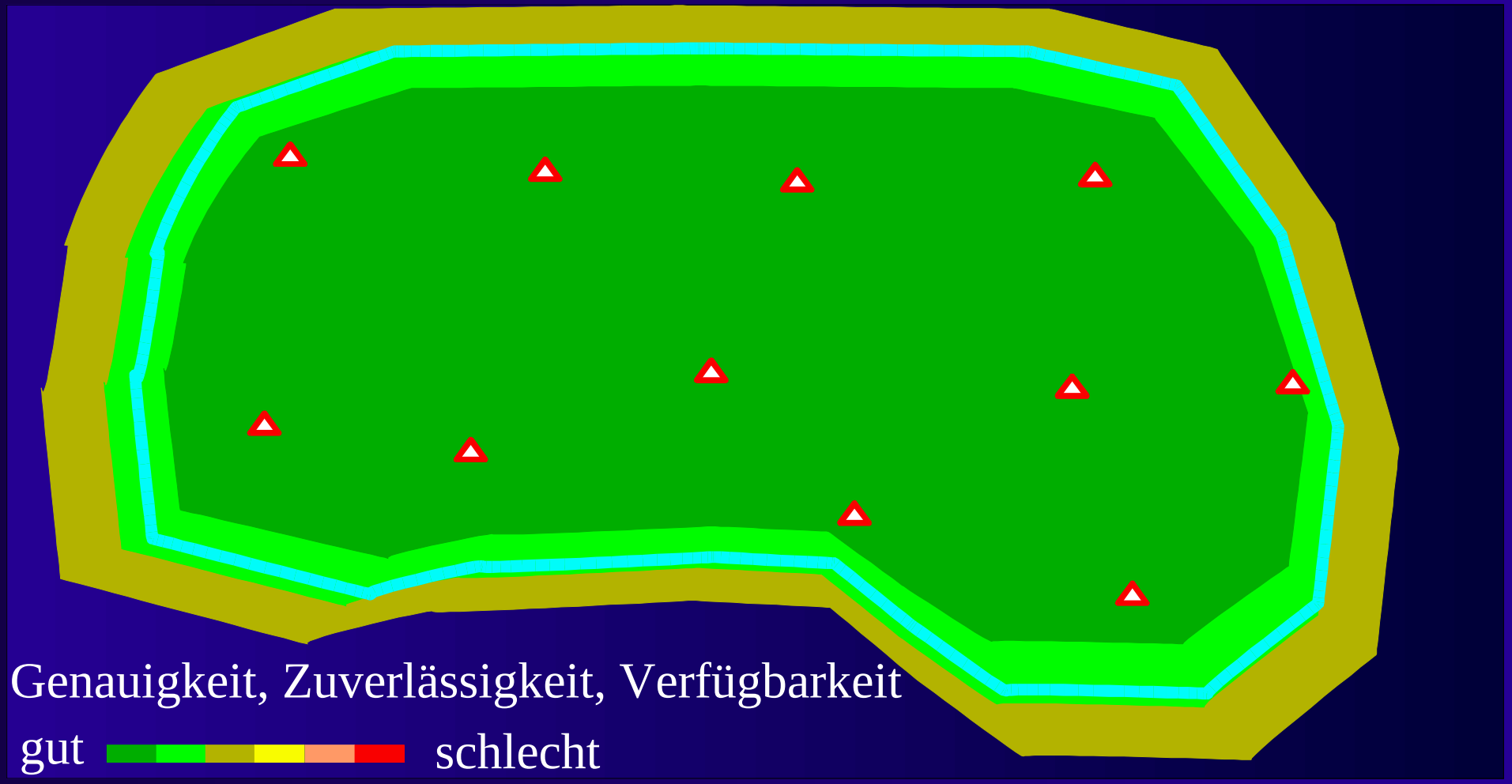


Vernetzung

von Referenzstationen

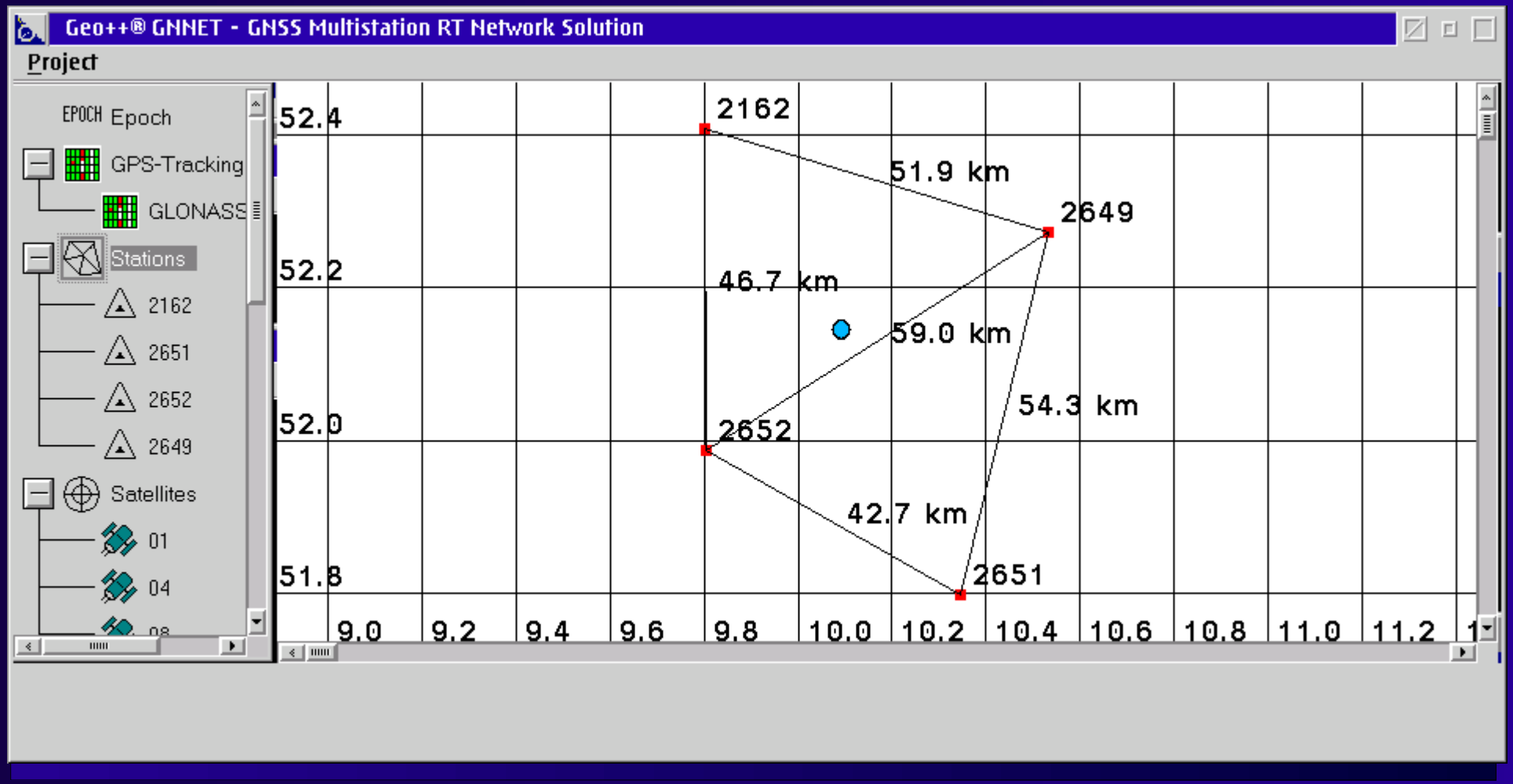


GNSMART Referenzstationsnetz
homogene Qualität



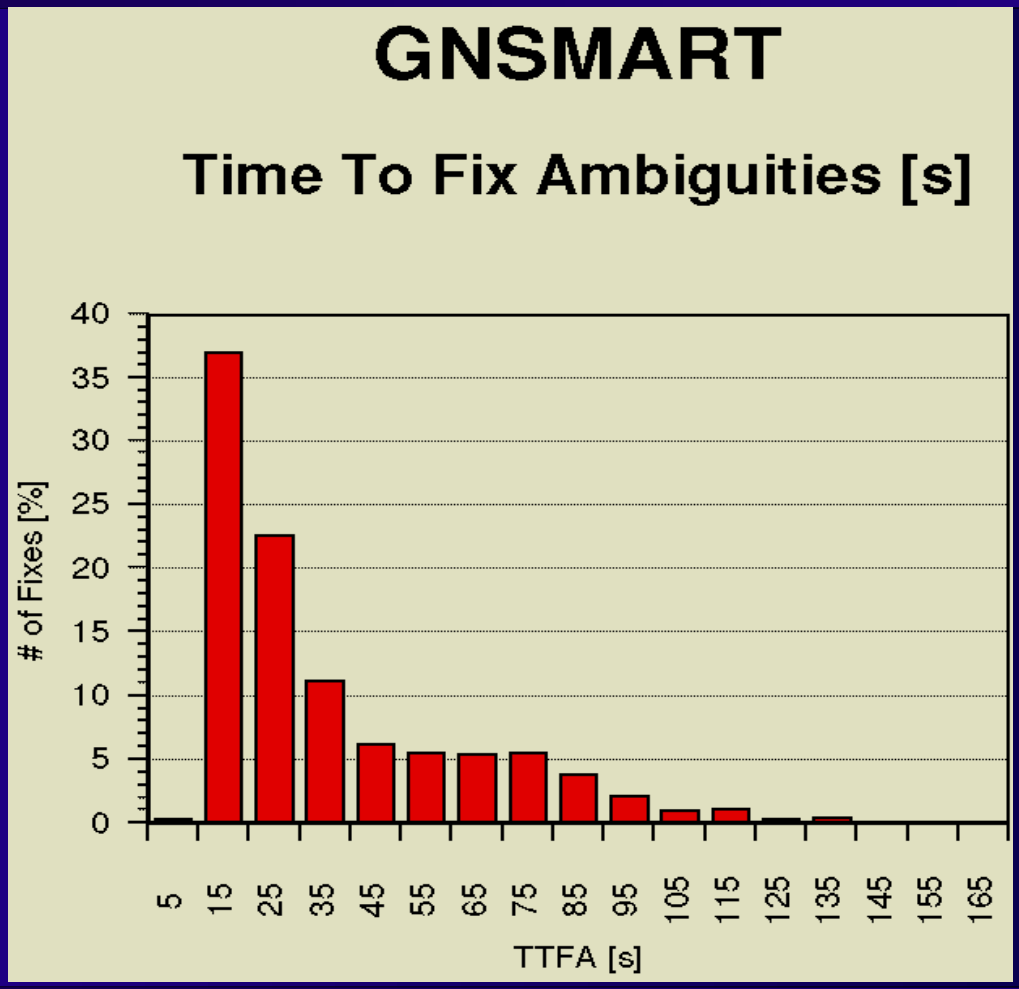
GNSMART Ergebnisse

Netz Hannover – Braunschweig – Clausthal – Hildesheim



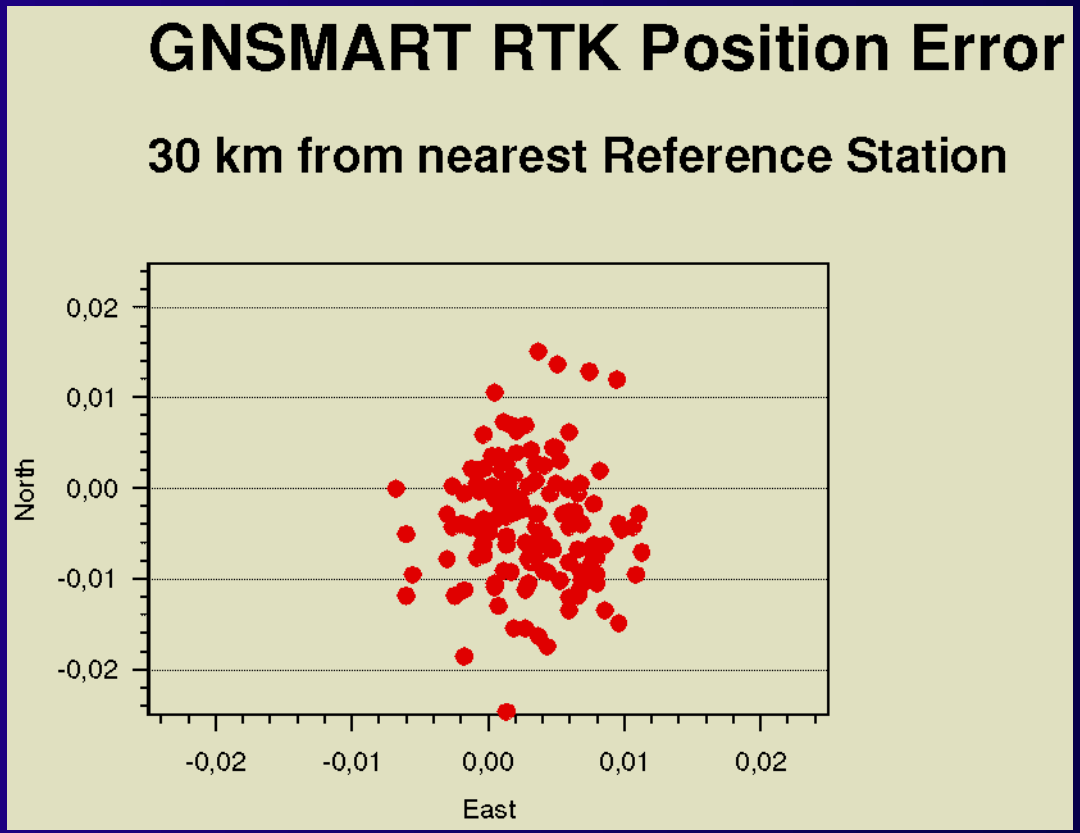
GNSMART Ergebnisse

Zeit bis zum Fixen



GNSMART Ergebnisse

erreichbare Genauigkeit



GNSMART aus Nutzersicht