



Arbeitsgemeinschaft der Vermessungsverwaltungen
der Länder der Bundesrepublik Deutschland

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National Report of Germany

- PPP-RTK
- GNSS campaign 2021
- News from Wettzell

EUREF Symposium 2023

Working Committee of the Surveying Authorities of the
Laender of the Federal Republic of Germany (AdV)

AMTLICHES DEUTSCHES VERMESSUNGSWESEN



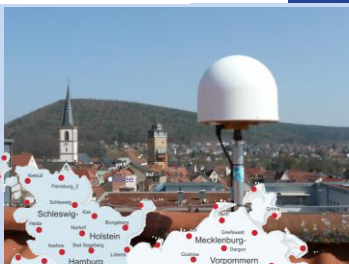
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Throughout Germany PPP-RTK project network AdV 2022 - 2024

SAPOS-DE



Bundesamt für
Kartographie und Geodäsie
GREF

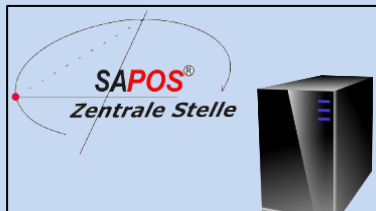


Bundesamt für
Kartographie und Geodäsie
GREF



OSR

throughout Germany
PPP-RTK
project network



Geo++[®]
GNSMART

- Clock
- Orbit
- Bias
- Ionosphere
- Troposphere

SSR



1. DAB+ Bundesmux
Channel 5C
Subchannel 32
("PPP-RTK-AdV")

Internet/Ntrip

Geo++[®] SSRZ

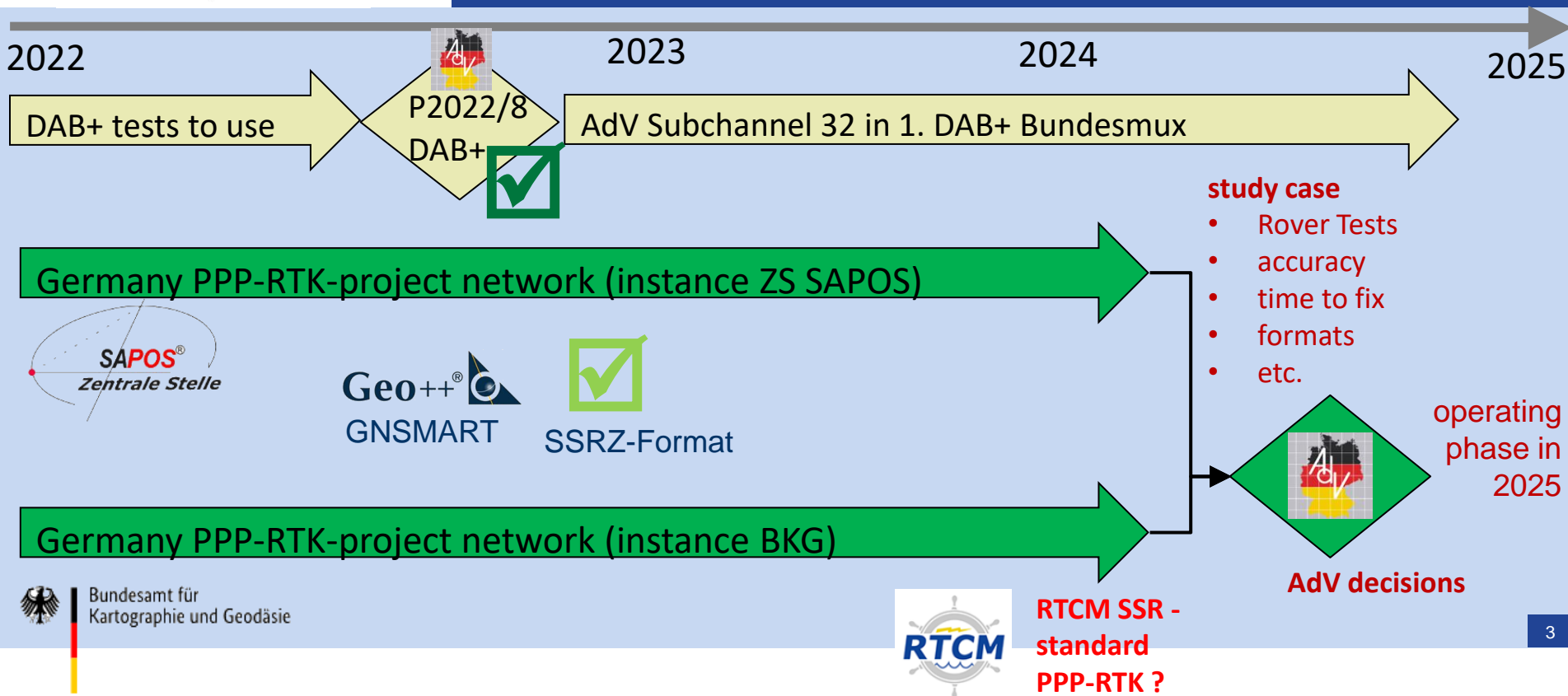


Others ?



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PPP-RTK Projektphase der AdV 2022 - 2024

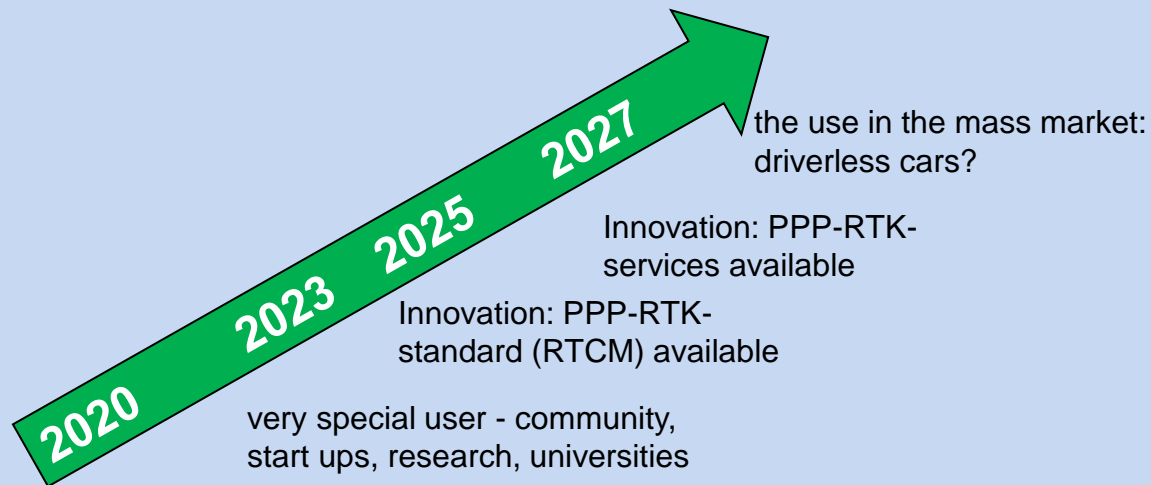
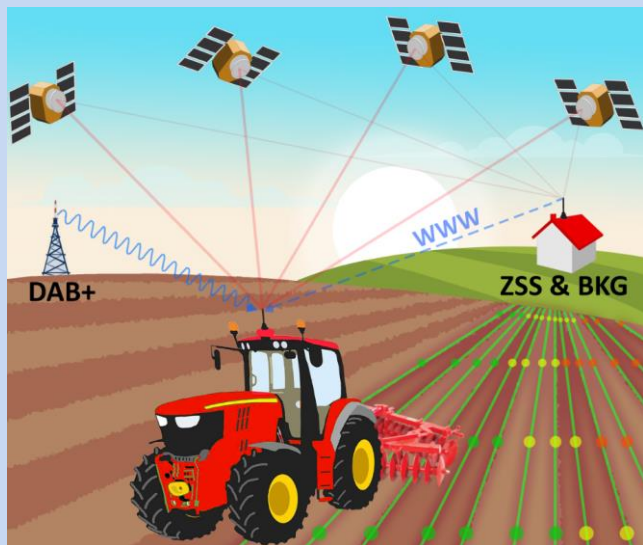




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PPP-RTK – development in Germany „a perspective for the future“

Potential mass market





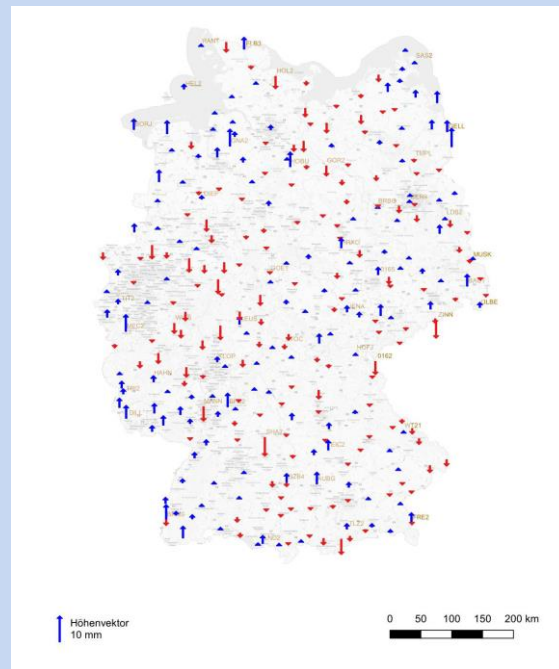
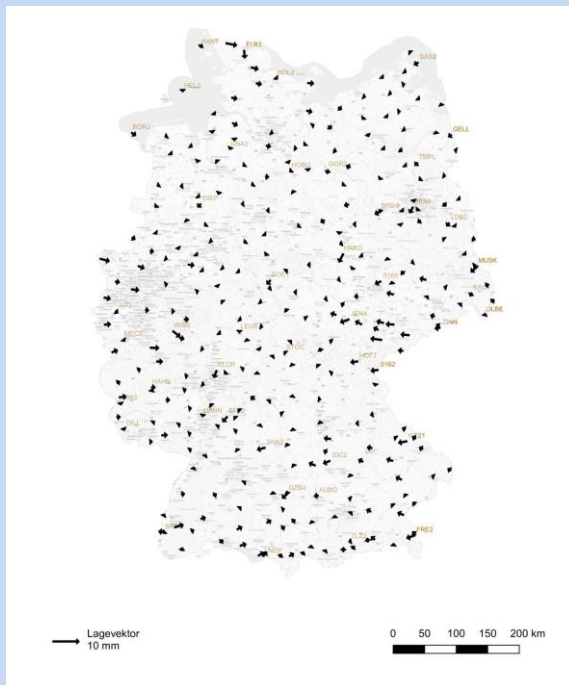
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GNSS campaign 2021

comparison GNSS antenna calibration

GNSS campaign 2021

- first results are available
- comparison GNSS antenna calibration
- do we get a new spatial reference (2023) ???
- more scientific research to be done!



*Abb. 1+2: Vergleich der beiden Netz-B-Berechnungsvarianten
(Restklaffungen nach der zwangsfreien Auffelderung der
Variante AMK auf die Variante RFK, LGLN-Auswertung)*

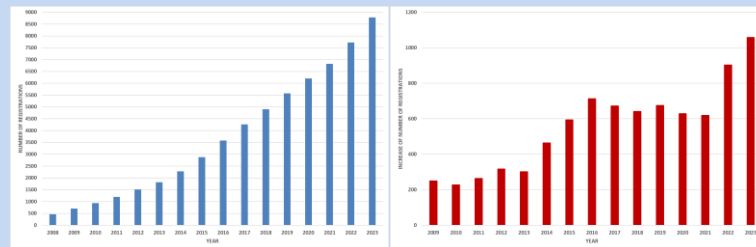
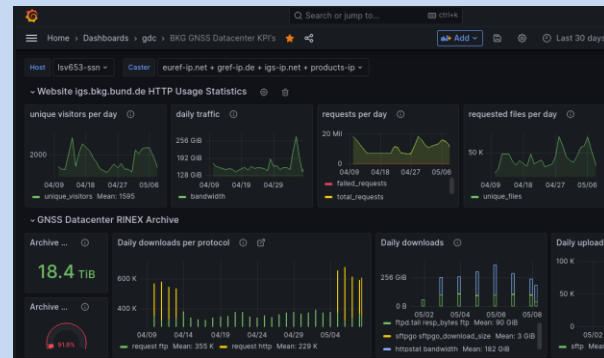


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GNSS @ BKG



- BKG's regional DC restored after outage
- Closer communication between the three EPN DCs
- Number of registrations for RT casters still increasing
- BKG only RT AC using DLR's RETICLE
- BKG new (old) IGS RTWG chair and possibly new RTACC
- New GNSS station under investigation near Leipzig co-located to new gravimetric station





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Geodetic Observatory Wettzell



- **VLBI: Official IVS scheduling center (since 2020) and correlation center (since 2021)**
- **Galileo PRS: monitoring station is currently established**
- **Space weather monitoring: 5 m radio telescope in test operation, magnetometer station operational**
- **Laser ranging: Observation of space debris is planned to become operational**
- **Time & Frequency: Core station in the DFG research group "Clock Metrology - a novel approach to time in geodesy"**
- **Competence center for satellite geodesy: organisation of workshops, support of student projects, school lab established**

