Local Saxon Seismic Network and SeisComP3 – small events and first experiences

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Disposition

Seismicity of "Saxony and neighbourhood"

- region of low seismicity, swarm earthquakes
- southeastern Germany, western Czech Republic
- 300 km south of Potsdam
- every year a few felt earthquakes
- last swarms: a few 1000 events, max. M=3.9
- detection threshold below M=0.0
- event list 2012: 975 events
- event list 2013: actual 85 events
- goal for automatic detection: every potentially felt event, detection threshold below M=2.0

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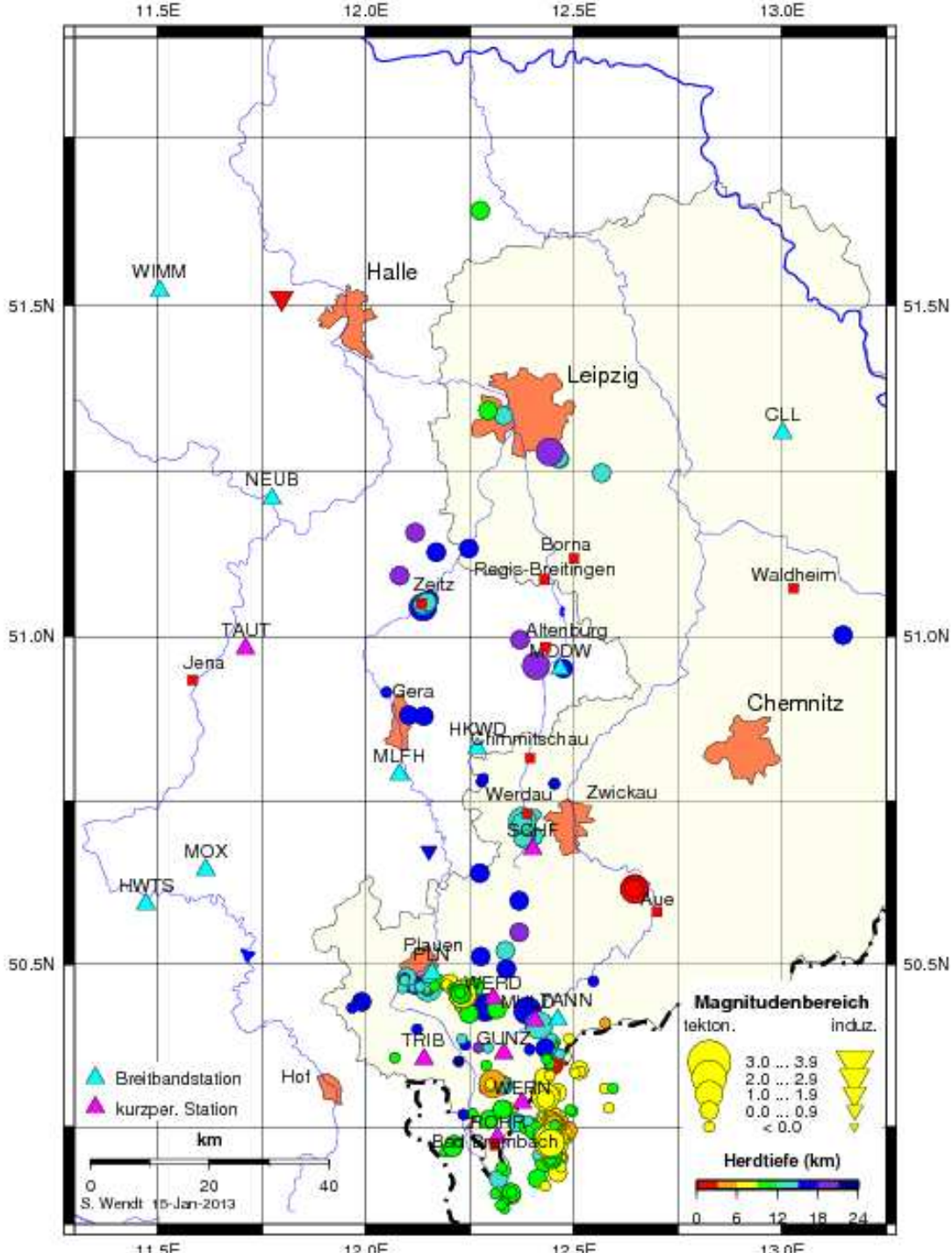
Jan. 2012 - Jan. 2013



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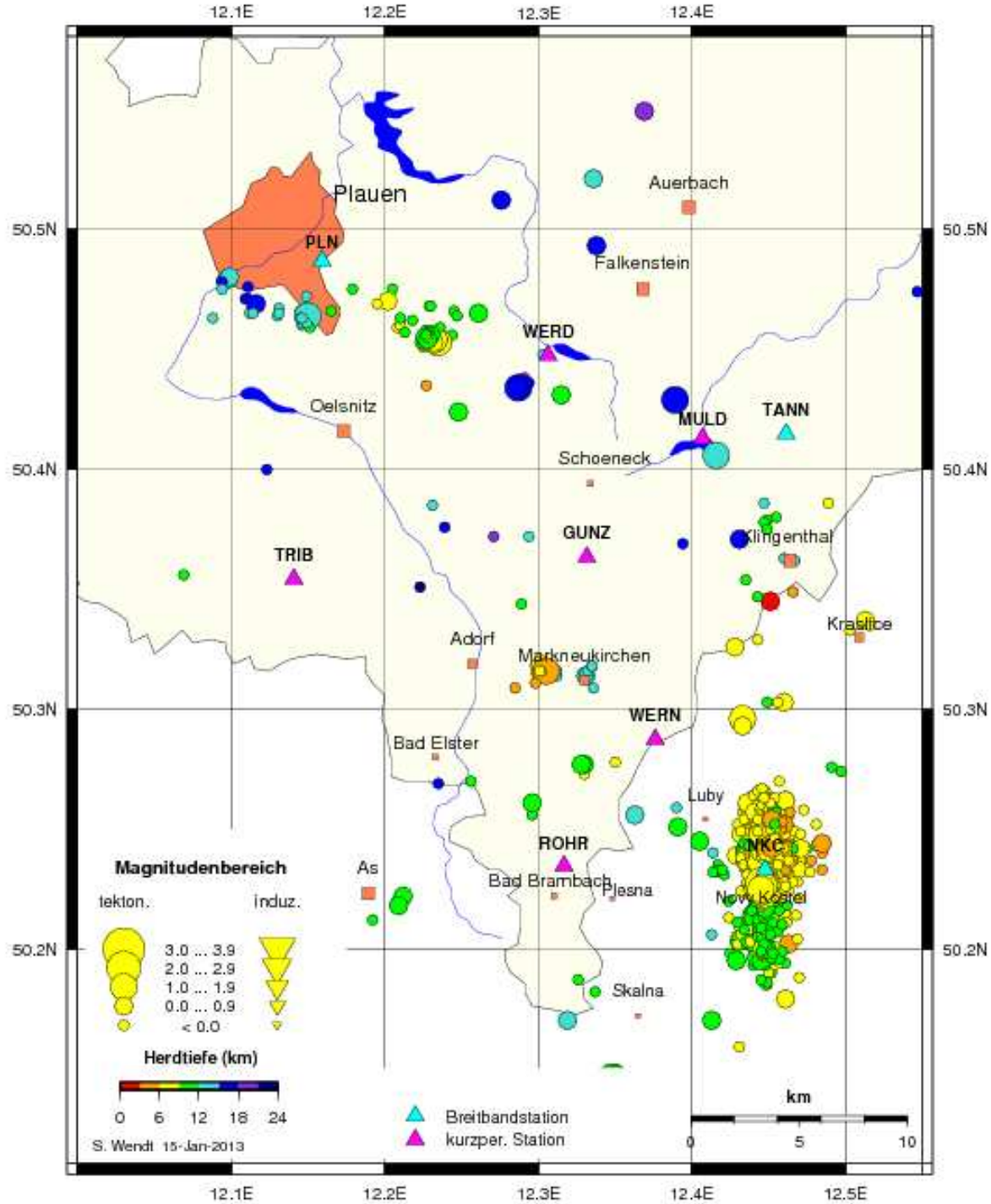

Station Network 2013

January 2013:
42 Online Stations "Central Germany and neighbourhood"

- SeedLink, near real time
- delayed access on 5 stations:
  - offline-ftp
  - ISDN-dialup (every 10 minutes): 5x

Saxon Network	11	stations
Thuringian Network	12	
German Regional Network	9	
Geofon (local)	2	
Bavarian Network	4	
Czech Regional Network	4	
Geofon (worldwide)	ca. 60	

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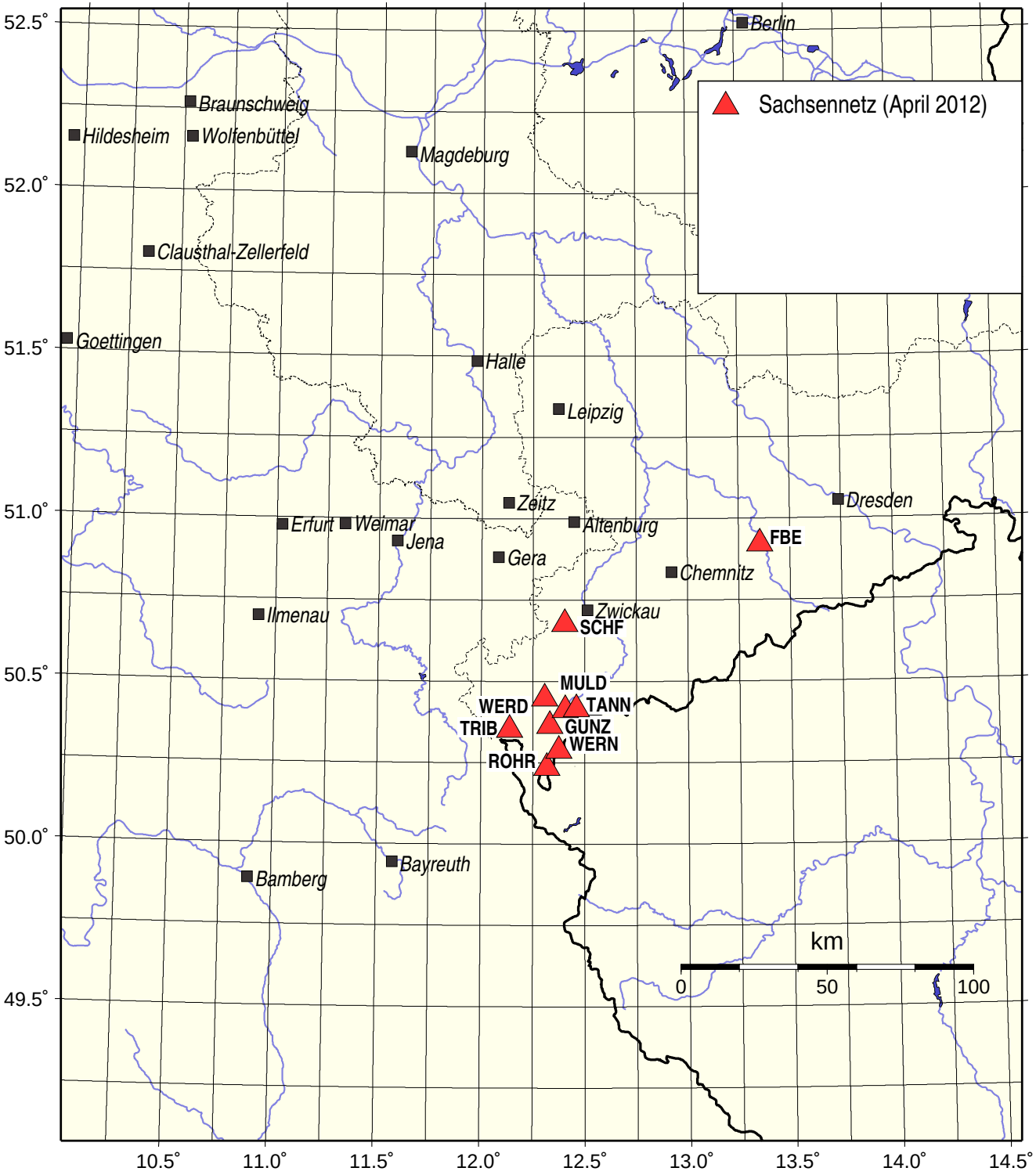
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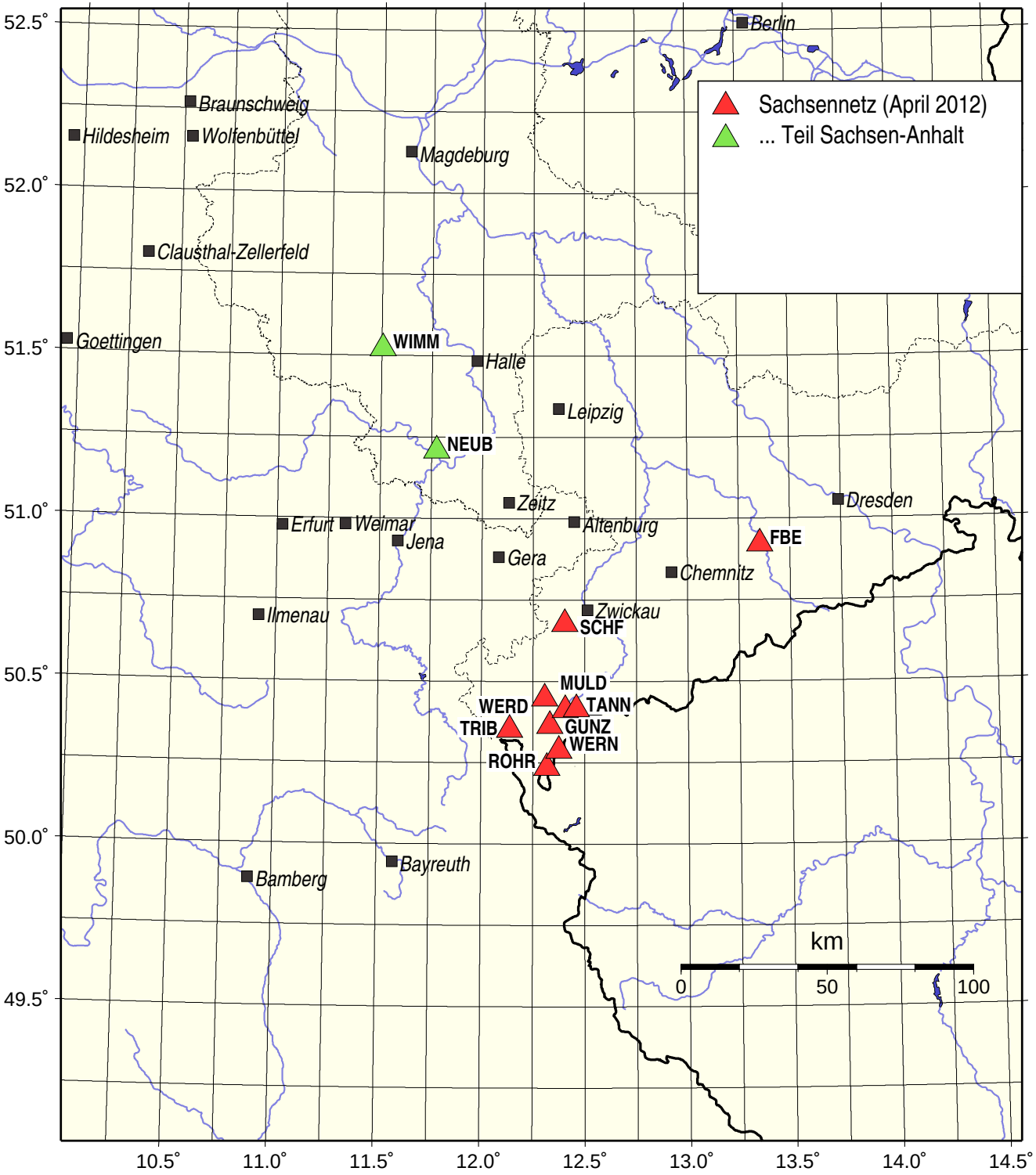
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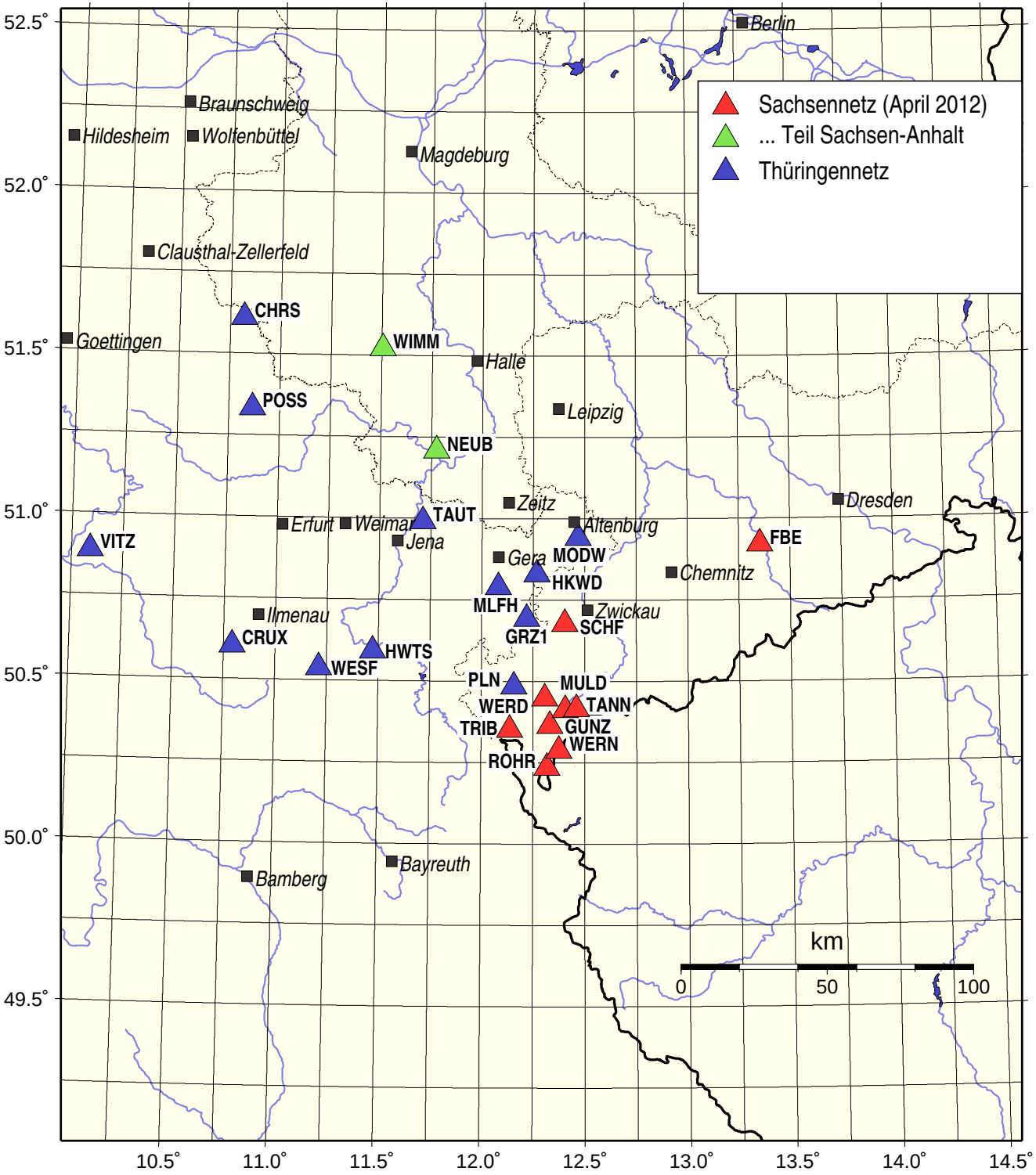
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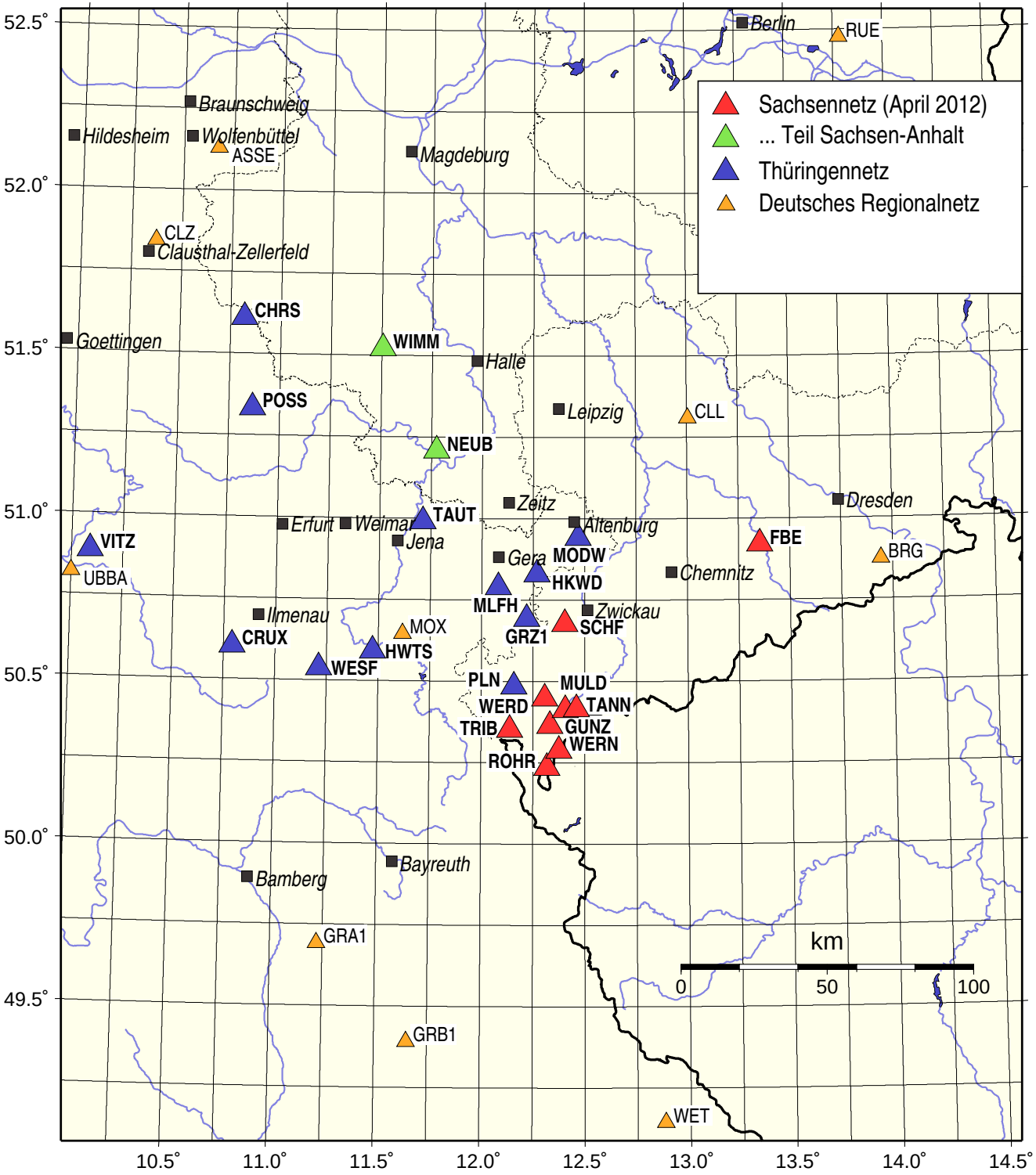
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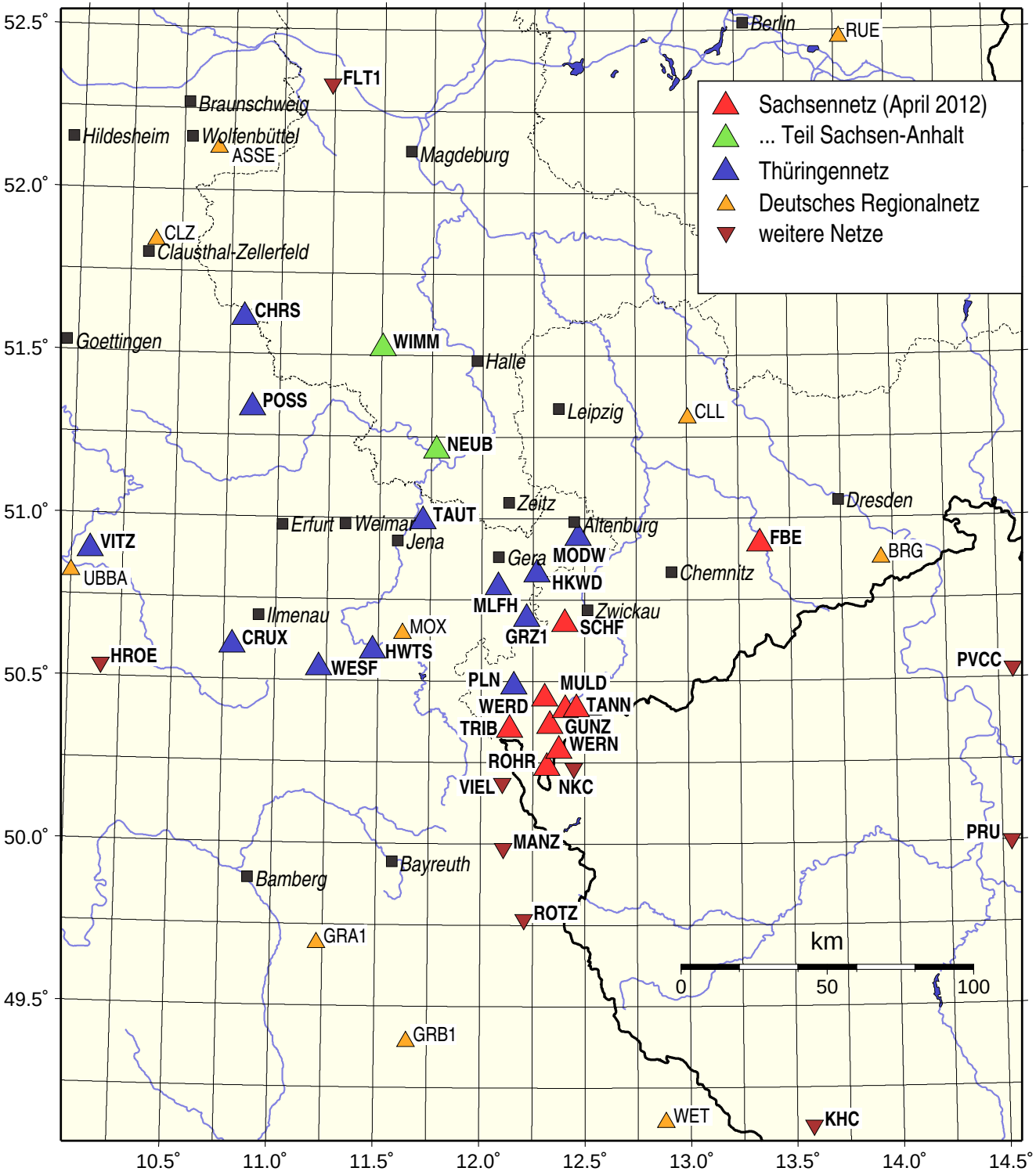
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SeisComP3, Version Seattle 2012

- installed by Gempa
- testing since November 2012
- two detection piplines: local and worldwide
- first success: 24.11.2012 14:15:43 Altenburg M=1.8
- actual swarm: 11 events, magnitudes from M=0.7 to M=2.4 (manual analysis)
- **all of them found by the automatic system**
- alerts by e-mail, most of them induced events
- open questions, next steps
  - identification (and suppression) of induced events like quarry blasts
  - extend successes to whole region
  - NonLinLoc
  - server to send SMS
  - avoiding 'splitted' events
  - GUI's on separated machines

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SeisComP3 live

- routine analysis Collm observatory CLL
- SeisComP3 scolv (M=2.4 1.1.2013 18:20)
- SeisComP3 scolv (M=0.9 1.1.2013 18:10)

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Thanks

Thanks ...

- ... to Potsdam people and all the developers for the great software!
- ... to all the connected networks providing the data!
- ... to local Saxon Authorities for founding the network!
- ... to you for your interest!

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