



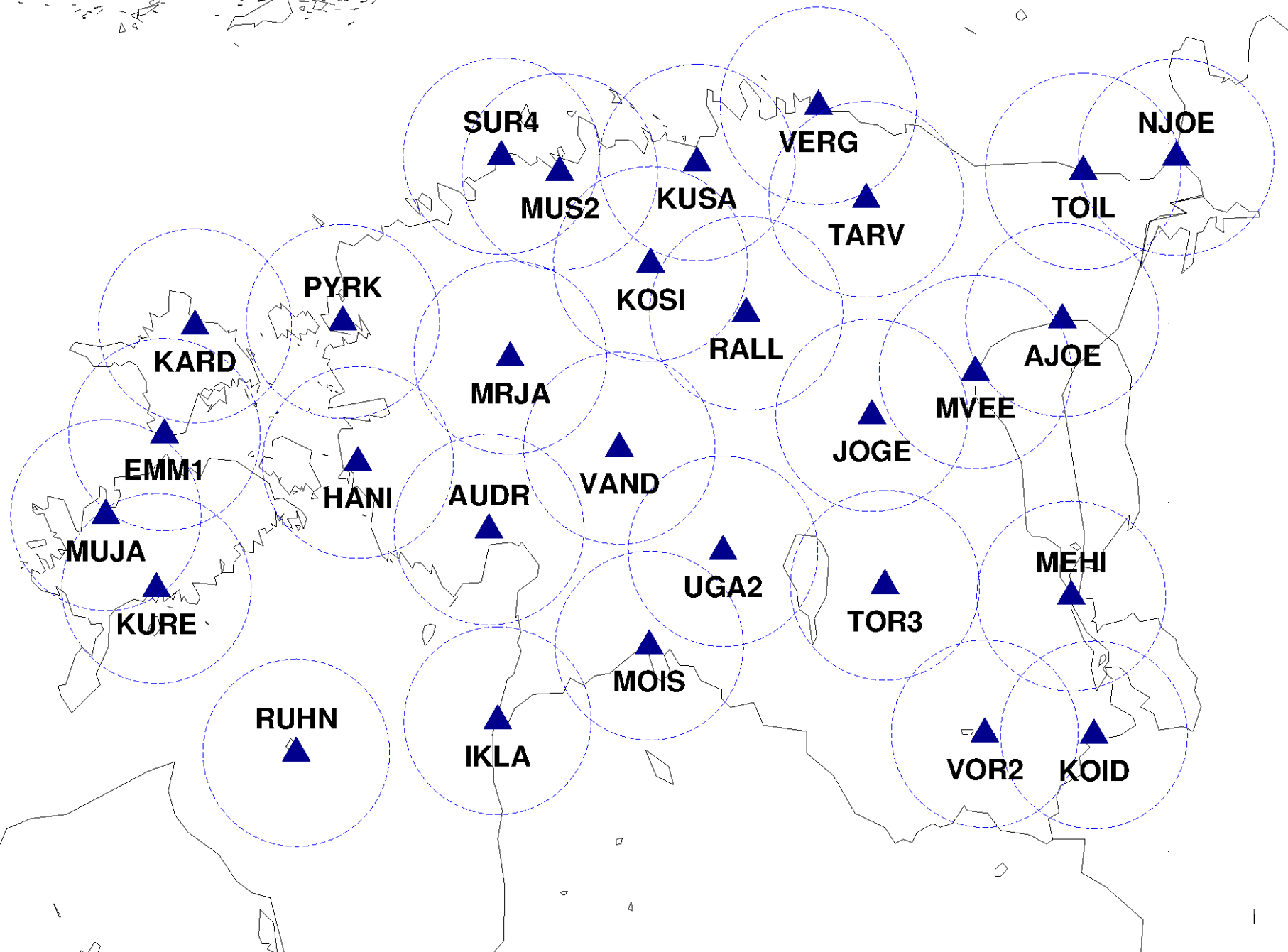
MAA-AMET 30

National report Estonia 2023

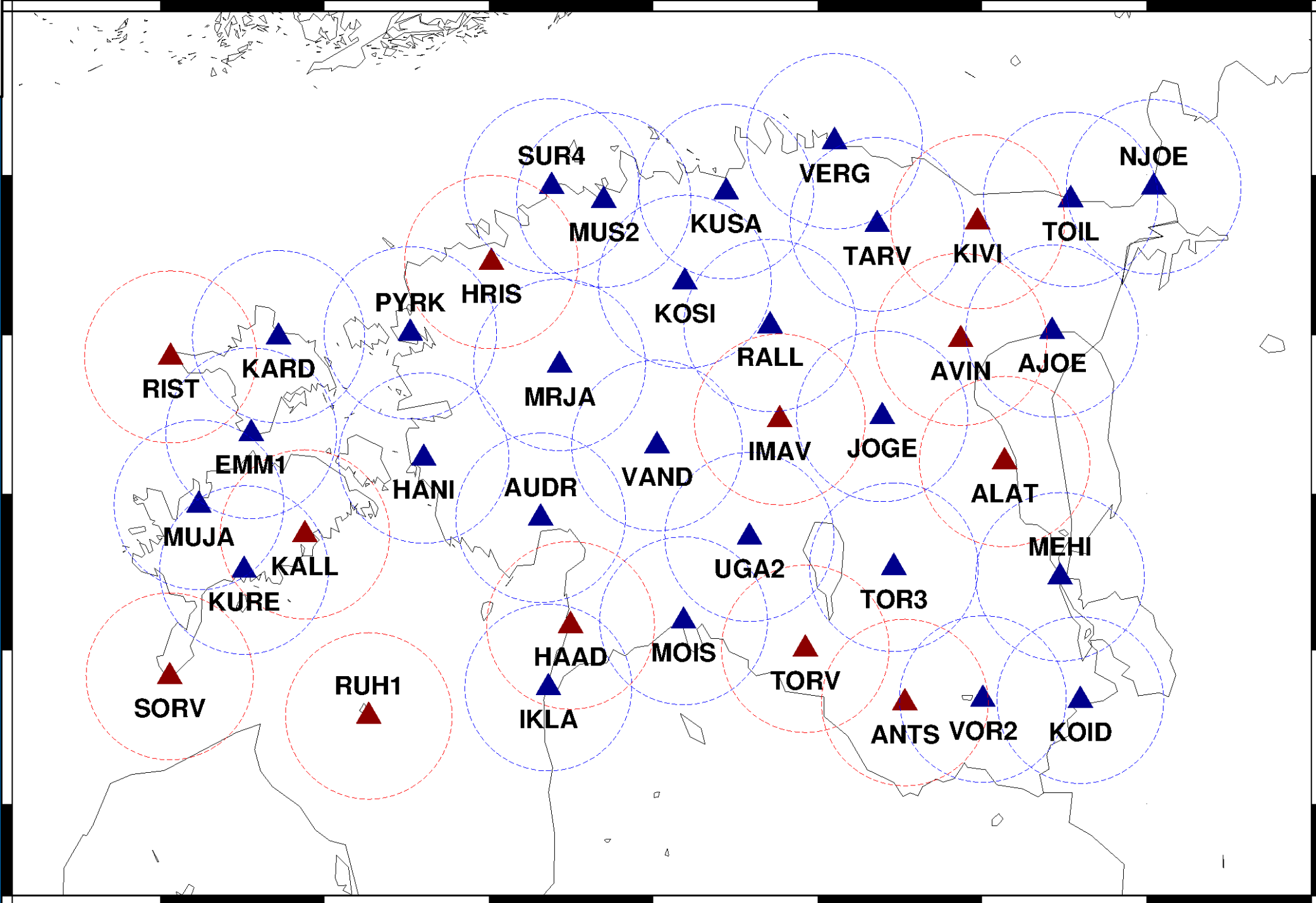


European Position Determination System

- 29 stations
- Leica GR25
(2 GR50)
- Leica AR25
- No Beidou
- MikroTik



- REPowerEU
- Open tender
- 39 stations (12 new)
- 37 new receivers?
- 10 new antennas?
- Beidou
- MikroTik

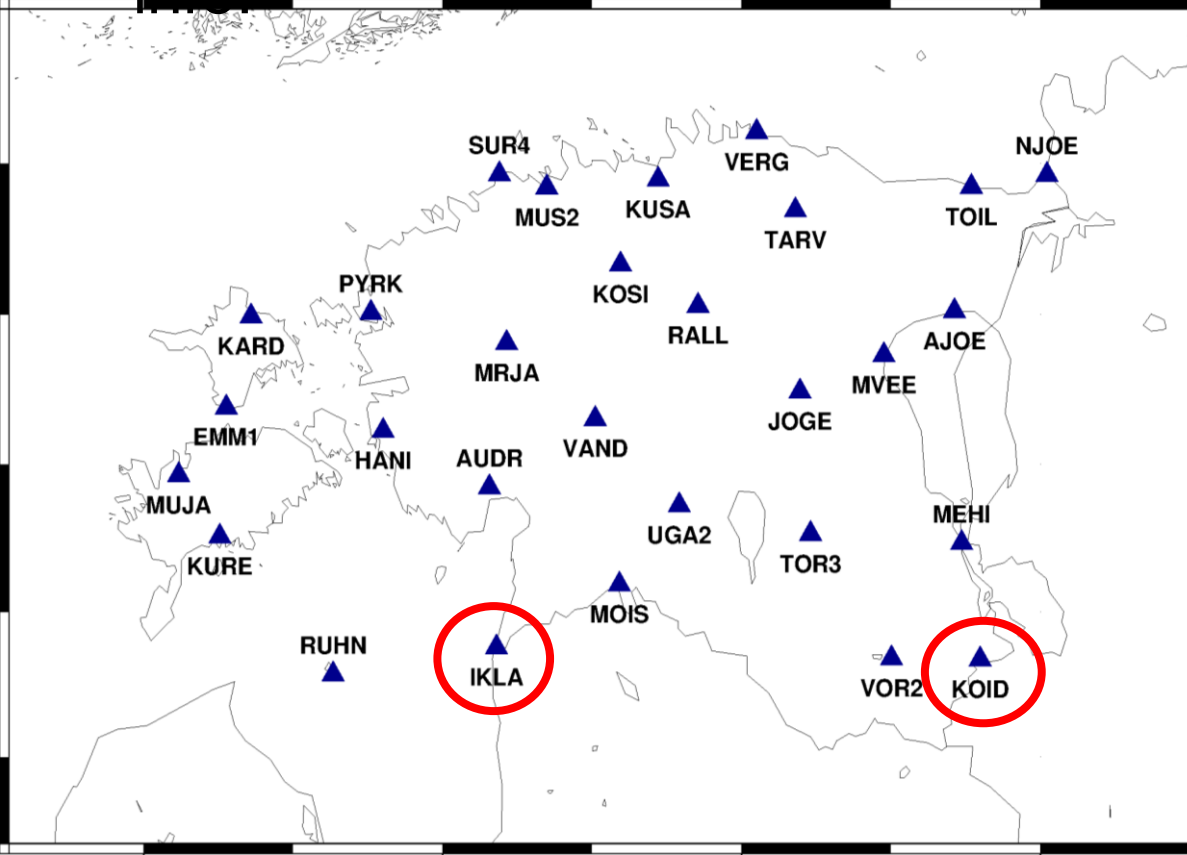


GNSS interference and quality monitoring

- Leica GR50 + Interference Toolbox
- Leica SpiderQC and X-Pos
- Not enough info, not good enough info

Site Name	Site Code	Satellite System	Receiver	Quality Plots	File Summary	File Availability	Current Status
AJOE	AJOE	GPS GLONASS Galileo	LEICA GR25	AJOE	AJOE	AJOE	✓
AUDR	AUDR	GPS GLONASS Galileo	LEICA GR25	AUDR	AUDR	AUDR	✓
EMM1	EMM1	GPS GLONASS Galileo	LEICA GR25	EMM1	EMM1	EMM1	✓
HANI	HANI	GPS GLONASS Galileo	LEICA GR25	HANI	HANI	HANI	✓
IKLA	IKLA	GPS GLONASS Galileo	LEICA GR50	IKLA	IKLA	IKLA	✓
JOGE	JOGE	GPS GLONASS Galileo	LEICA GR25	JOGE	JOGE	JOGE	✓
KARD	KARD	GPS GLONASS Galileo	LEICA GR25	KARD	KARD	KARD	✓
KOID	KOID	GPS GLONASS Galileo	LEICA GR50	KOID	KOID	KOID	✓
KOSI	KOSI	GPS GLONASS Galileo	LEICA GR25	KOSI	KOSI	KOSI	✓
KURE	KURE	GPS GLONASS Galileo	LEICA GR25	KURE	KURE	KURE	✓
KUSA	KUSA	GPS GLONASS Galileo	LEICA GR25	KUSA	KUSA	KUSA	✓
MEHI	MEHI	GPS GLONASS Galileo	LEICA GR25	MEHI	MEHI	MEHI	✓
MOIS	MOIS	GPS GLONASS Galileo	LEICA GR25	MOIS	MOIS	MOIS	✓
MRJA	MRJA	GPS GLONASS Galileo	LEICA GR25	MRJA	MRJA	MRJA	✓
MUJA	MUJA	GPS GLONASS Galileo	LEICA GR25	MUJA	MUJA	MUJA	✓
MUS2	MUS2	GPS GLONASS Galileo	LEICA GR25	MUS2	MUS2	MUS2	✓
MVEE	MVEE	GPS GLONASS Galileo	LEICA GR25	MVEE	MVEE	MVEE	✗
NJOE	NJOE	GPS GLONASS Galileo	LEICA GR25	NJOE	NJOE	NJOE	✗
PYRK	PYRK	GPS GLONASS Galileo	LEICA GR25	PYRK	PYRK	PYRK	⚠
RALL	RALL	GPS GLONASS Galileo	LEICA GR25	RALL	RALL	RALL	✓
RUHN	RUHN	GPS GLONASS Galileo	LEICA GR25	RUHN	RUHN	RUHN	✓
SUR4	SUR4	GPS GLONASS Galileo	LEICA GR25	SUR4	SUR4	SUR4	✓
TARV	TARV	GPS GLONASS Galileo	LEICA GR25	TARV	TARV	TARV	✓
TOIL	TOIL	GPS GLONASS Galileo	LEICA GR25	TOIL	TOIL	TOIL	✓

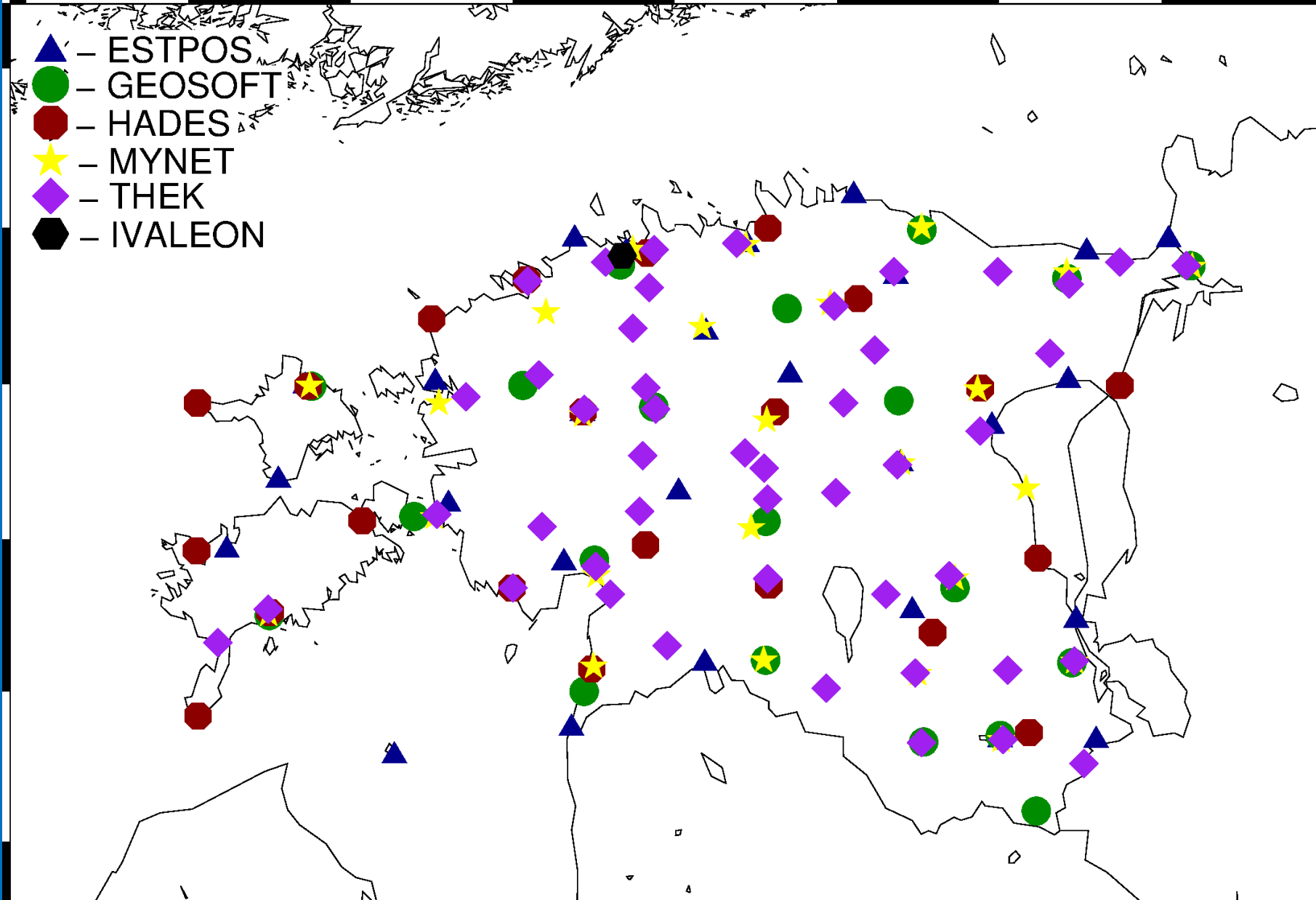
Leica SpiderQC v7.8 Quality Report			
Program Run:	2023/11/14 11:25:34.55		
File Details:			
Observation File:	ajoe318100.23o		
GPS Navigation File:	ajoe318100.23n		
GLONASS Navigation File:	ajoe318100.23g		
Galileo Navigation File:	ajoe318100.23i		
Quality Testing:	Pass		
Station Details:			
Marker Name/Number:	AJOE	10653M001	
Observer/Agency:	ELB	ELB	
Receiver #/Type/Vers:	1831301	LEICA GR25	4.70/6.525
Antenna #/Type:	726136	LEIAR25.R4 LEIT	
Antenna Offsets (HEN):	0.000	0.000	0.000
Approx Position (XYZ):	2922028.271	1516183.544	5444680.408
Approx Position (plh):	59° 00' 43.48987" N 27° 25' 26.10919" E 59.761m		
Diff. Est-Header:	0.3 m dX	-2.8 m dY	0.8 m dZ
Diff. Est-Header:	2.9 m (900 estimates)		
Session Summary:			
Time of first obs:	2023/11/14 11:00:00.00 GPS		
Time of last obs:	2023/11/14 11:14:59.00 GPS		
Session length:	14.98 minutes		
GPS week:	2288, day 2		
Observation interval:	1.00 seconds		
UTC leap seconds:	18 seconds		



- Anubis?
- GNSS Finland Service? Co-operation with NLS Finland
- Interest from Estonian Defence Forces and Estonian Police and Border Guard Board

Monitoring of GNSS stations

- ESTPOS will be the basis
- 4+1 commercial networks
- ~140 stations
- Bernese GNSS software
- Official legislation changes are underway
- Regular inspection once a year, otherwise as is needed



Official stuff

- Since July of 2023 – Land Board is officially under the rule of Ministry of Regional Affairs and Agriculture (before it was the Ministry of Environment)
- Since August of 2023 – Karin Kollo has been also the acting head of the Photogrammetry department. A new department on the basis of Geodesy and Photogrammetry called the Department of Geodesy and Aerial survey will be formed
- Next year – On the basis of Land Board a new state office called Land and Spatial Board (Maa- ja Ruumiamet or MARU) will be created. It will bring together all the land and spatial data authorities from different state offices to form a new competence center