

AutoPatch (V2019.2 BETA 2) Calibration Report - 13 - 03 - 2019 15:00:12

| TRANSDUCER ALIGNMENT CALIBRATION | |
|---|--|
| Current User | MacArtney Support |
| Project Folder | F:/3_SBG_Horizon_Project/Calibration_field |
| Number of Raw Files | 8 |
| Project | Apogee_calibration |
| Surveyor | MacArtney |
| Job | Calibration_Elbtunnel_19022019 |
| Vessel | SBG_NICOLA |

| RAW FILE LIST | | | | | |
|----------------------|----------|----------|---------|-------|--|
| Date | Start | End | Heading | Speed | File Name |
| 19 - 02 - 2019 | 13:20:06 | 13:21:50 | 279.8° | 2.2 | SBG_NICOLA[multibeam]_SBG_Horizon-20190219-142006.pds |
| 19 - 02 - 2019 | 13:23:07 | 13:24:24 | 100.4° | 3.2 | SBG_NICOLA[multibeam]_SBG_Horizon-20190219-142307(2).pds |
| 19 - 02 - 2019 | 13:25:00 | 13:26:58 | 285.5° | 2.7 | SBG_NICOLA[multibeam]_-20190219-142500.pds |
| 19 - 02 - 2019 | 13:27:54 | 13:29:32 | 101.7° | 3.6 | SBG_NICOLA[multibeam]_-20190219-142754.pds |
| 19 - 02 - 2019 | 13:29:57 | 13:32:31 | 282.1° | 2.6 | SBG_NICOLA[multibeam]_-20190219-142957.pds |
| 19 - 02 - 2019 | 13:33:15 | 13:35:13 | 102.2° | 3.7 | SBG_NICOLA[multibeam]_-20190219-143315.pds |
| 19 - 02 - 2019 | 13:35:52 | 13:38:19 | 279.9° | 2.9 | SBG_NICOLA[multibeam]_-20190219-143552.pds |
| 19 - 02 - 2019 | 13:38:45 | 13:40:34 | 100.4° | 3.9 | SBG_NICOLA[multibeam]_-20190219-143845.pds |

| Post-Processing Trajectory | |
|-----------------------------------|----------|
| File: | Ho_t.out |

| OFFSET LOCATIONS | | | |
|-------------------------|--------------|------------|--------|
| Description | Starboard[m] | Forward[m] | Up[m] |
| COG | 0.000 | 0.000 | 0.000 |
| HORIZON | 0.115 | 0.128 | 2.047 |
| APOGEE | -0.186 | 0.120 | 2.006 |
| EKINOX | -0.057 | 0.170 | 2.005 |
| ELLIPSE | -0.069 | 0.029 | 2.003 |
| SEPTENTRIO_EKINOX | -0.942 | -0.367 | 2.018 |
| Mbe-1Tx | 0.004 | 2.575 | -0.827 |
| Mbe-1Rx | 0.004 | 2.756 | -0.851 |

| COMPUTATION SETTINGS | |
|-----------------------------|------------------------|
| Positioning System | Trajectory-Pos |
| Heading System | APOGEE |
| Pitch/Roll/Heave System | APOGEE |
| Height Mode | Use Position and Heave |

| SOUND VELOCITY PROFILE | | |
|-------------------------------|-------------------------|---------------------------|
| From Internal Records | | |
| 108 records | | |
| Min Speed = 1425.39m/s | Min Cast Depth = 0.50m | Min Survey Depth = 14.40m |
| Max Speed = 1425.92m/s | Max Cast Depth = 11.70m | Max Survey Depth = 19.20m |

| MRU ALIGNMENT | | | |
|----------------------|---------|---------|---------|
| Name | Roll | Pitch | Heading |
| HORIZON | N/A | N/A | 0.000 ° |
| APOGEE | N/A | N/A | 0.000 ° |
| EKINOX | N/A | N/A | 0.000 ° |
| ELLIPSE | N/A | N/A | 0.000 ° |
| HYDRINS | N/A | N/A | 0.000 ° |
| HORIZON | 0.000 ° | 0.000 ° | N/A |
| APOGEE | 0.000 ° | 0.000 ° | N/A |

| | | | |
|----------------|---------|---------|---------|
| EKINOX | 0.000 ° | 0.000 ° | N/A |
| ELLIPSE | 0.000 ° | 0.000 ° | N/A |
| HYDRINS | 0.000 ° | 0.000 ° | N/A |
| Trajectory-Mru | 0.000 ° | 0.000 ° | 0.000 ° |

| VALID DATA GATES | | |
|------------------|---------|---------|
| | Minimum | Maximum |
| Depth | 14.40 | 19.20 |
| Sector | -58.50° | 58.50° |

| ADJUSTMENTS | |
|----------------------------|-----------------------|
| Parameter | Value |
| SVP Offset | 1.0 m/s |
| Position Latency | 0.00 milliseconds |
| Motion Latency | 2 milliseconds |
| Motion Misalignment | 0.0 deg |
| Multibeam Latency | 0 milliseconds |
| Multibeam Offset Starboard | 0.00 m |
| Multibeam Offset Forward | 0.00 m |

| DATA PAIRING & ROLL AREA SETTINGS | |
|-----------------------------------|---|
| Parameter | Value |
| Min. Roll-Pitch Overlap | 80 |
| Max. Heading Overlap | 60 |
| Line Heading Margin | 20 |
| Line Speed Margin | 1 |
| Roll Calibration Area Placement | Automatically, based on seabed features |

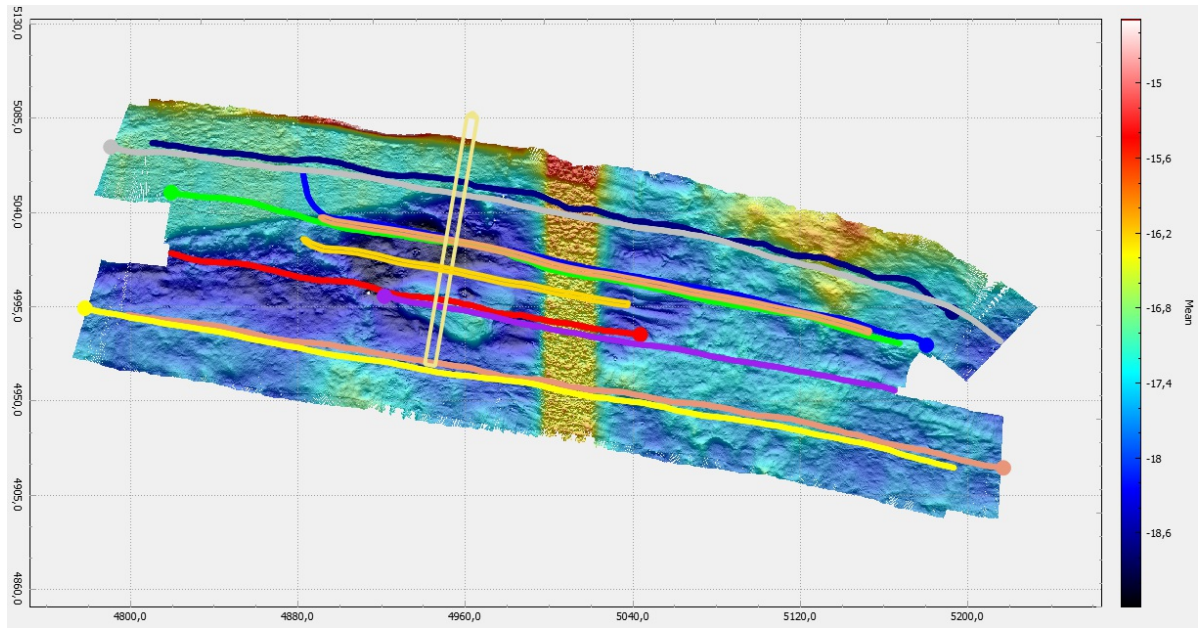
| CALIBRATION OFFSET RESULTS | | | | | |
|----------------------------|----------------|---------------|--------------|---------------|--------------------------------|
| Roll-Pitch | Hdg | Roll | Pitch | Heading | |
| Head 1 - 3 - 4 | Head 1 - 1 - 3 | -0.004° | 3.130° | -1.385° | |
| Head 1 - 3 - 4 | Head 1 - 1 - 7 | -0.012° | 3.025° | -1.175° | |
| Head 1 - 3 - 4 | Head 1 - 2 - 4 | 0.004° | 3.140° | -1.495° | |
| Head 1 - 3 - 4 | Head 1 - 2 - 8 | 0.008° | 3.095° | -1.645° | |
| Head 1 - 3 - 4 | Head 1 - 3 - 5 | -0.009° | 3.055° | -1.210° | |
| Head 1 - 3 - 4 | Head 1 - 4 - 6 | -0.007° | 3.075° | -1.355° | |
| Head 1 - 5 - 6 | Head 1 - 1 - 3 | -0.006° | 3.060° | -1.325° | |
| Head 1 - 5 - 6 | Head 1 - 1 - 7 | -0.012° | 3.000° | -1.150° | |
| Head 1 - 5 - 6 | Head 1 - 2 - 4 | -0.004° | 3.075° | -1.435° | |
| Head 1 - 5 - 6 | Head 1 - 2 - 8 | -0.001° | 3.080° | -1.505° | |
| Head 1 - 5 - 6 | Head 1 - 3 - 5 | -0.013° | 2.990° | -1.095° | |
| Head 1 - 5 - 6 | Head 1 - 4 - 6 | -0.005° | 3.055° | -1.405° | |
| Head 1 - 7 - 8 | Head 1 - 1 - 3 | 0.012° | 2.995° | -1.515° | |
| Head 1 - 7 - 8 | Head 1 - 1 - 7 | -0.002° | 2.950° | -1.220° | |
| Head 1 - 7 - 8 | Head 1 - 2 - 4 | 0.009° | 2.985° | -1.405° | |
| Head 1 - 7 - 8 | Head 1 - 2 - 8 | 0.019° | 3.005° | -1.595° | |
| Head 1 - 7 - 8 | Head 1 - 3 - 5 | 0.005° | 2.970° | -1.355° | |
| Head 1 - 7 - 8 | Head 1 - 4 - 6 | 0.012° | 2.995° | -1.505° | |
| | PRESET | -0.04° | 3.09° | -1.78° | |
| | AVERAGE | -0.00° | 3.04° | -1.38° | ADVISED MOUNTING ANGLES |
| | SDEV | 0.01° | 0.06° | 0.16° | |

| MOUNTING ANGLE SIGN CONVENTION | |
|---|--|
| Roll | Positive when Transducer center beam points towards port |
| Pitch | Positive when Transducer center beam points towards bow |
| Heading | Positive when Transducer is rotated clockwise around vertical axis of vessel |
| Note: All angles are absolute w.r.t. the vessel reference frame | |

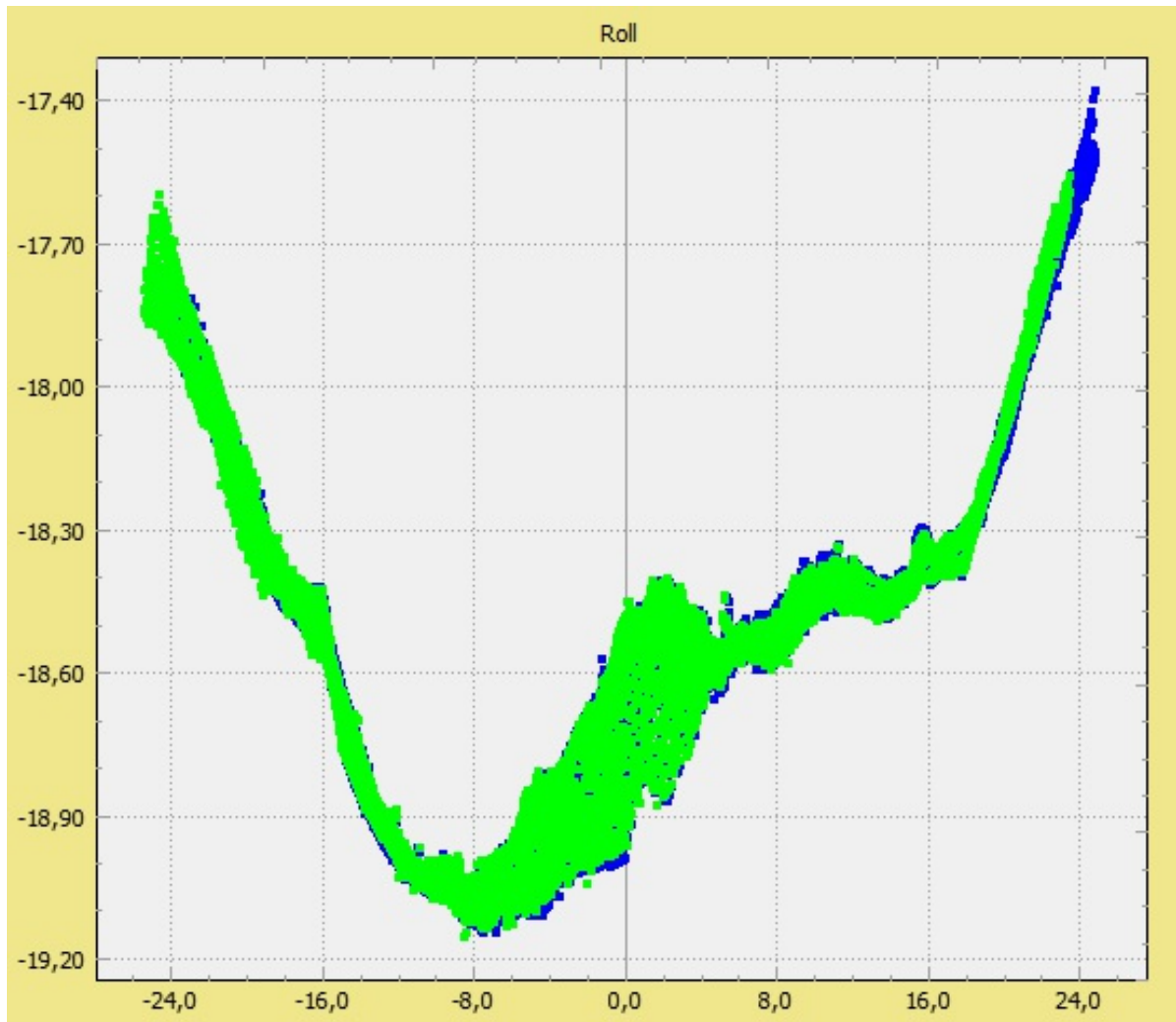
| | |
|----------------------|--------------------|
| ACCURACY | |
| Average Error | 1.734 cm/m2 |

| | |
|---------------------------------|--|
| WARNINGS | |
| There are no warnings to report | |

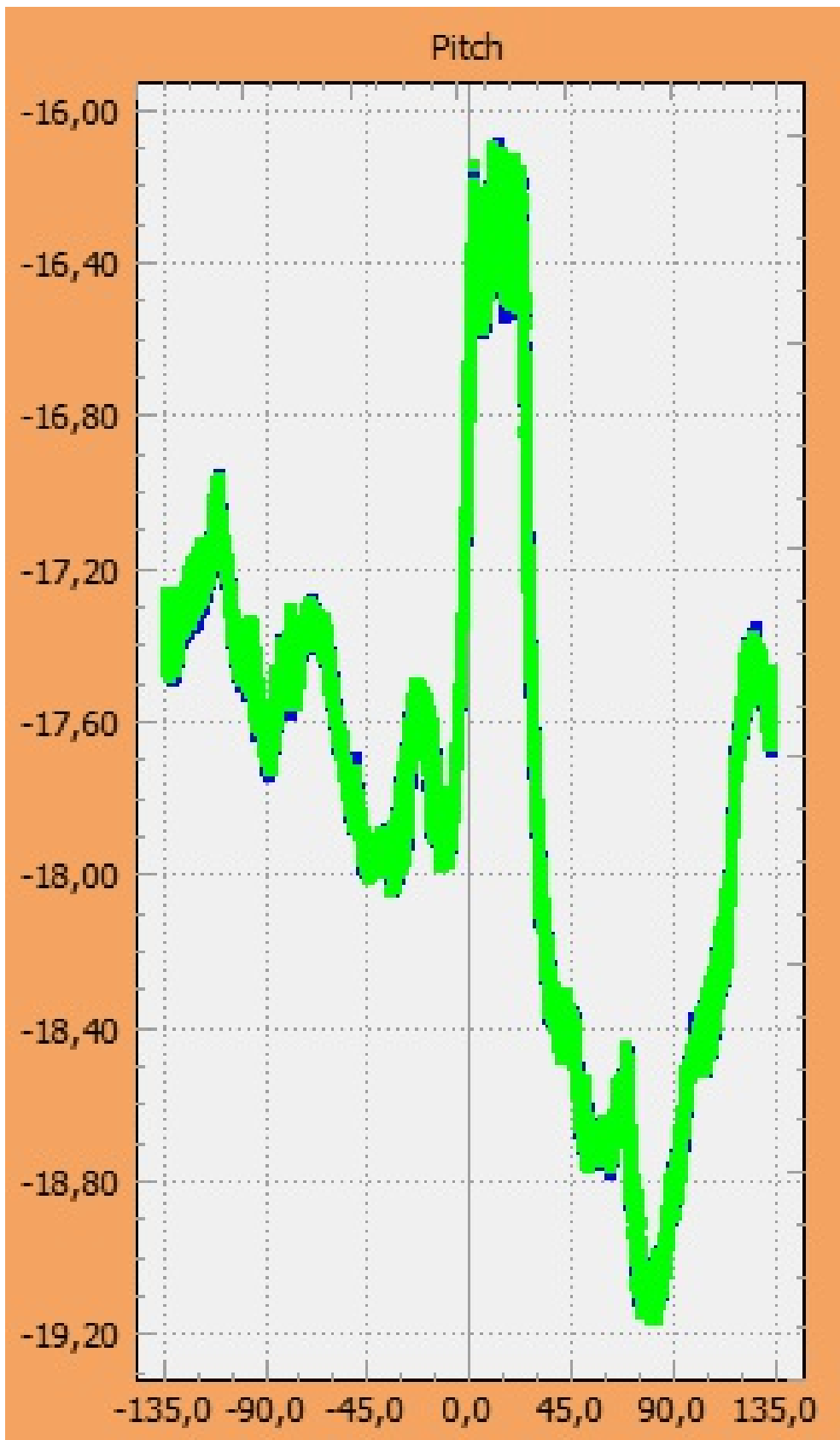
Chart View



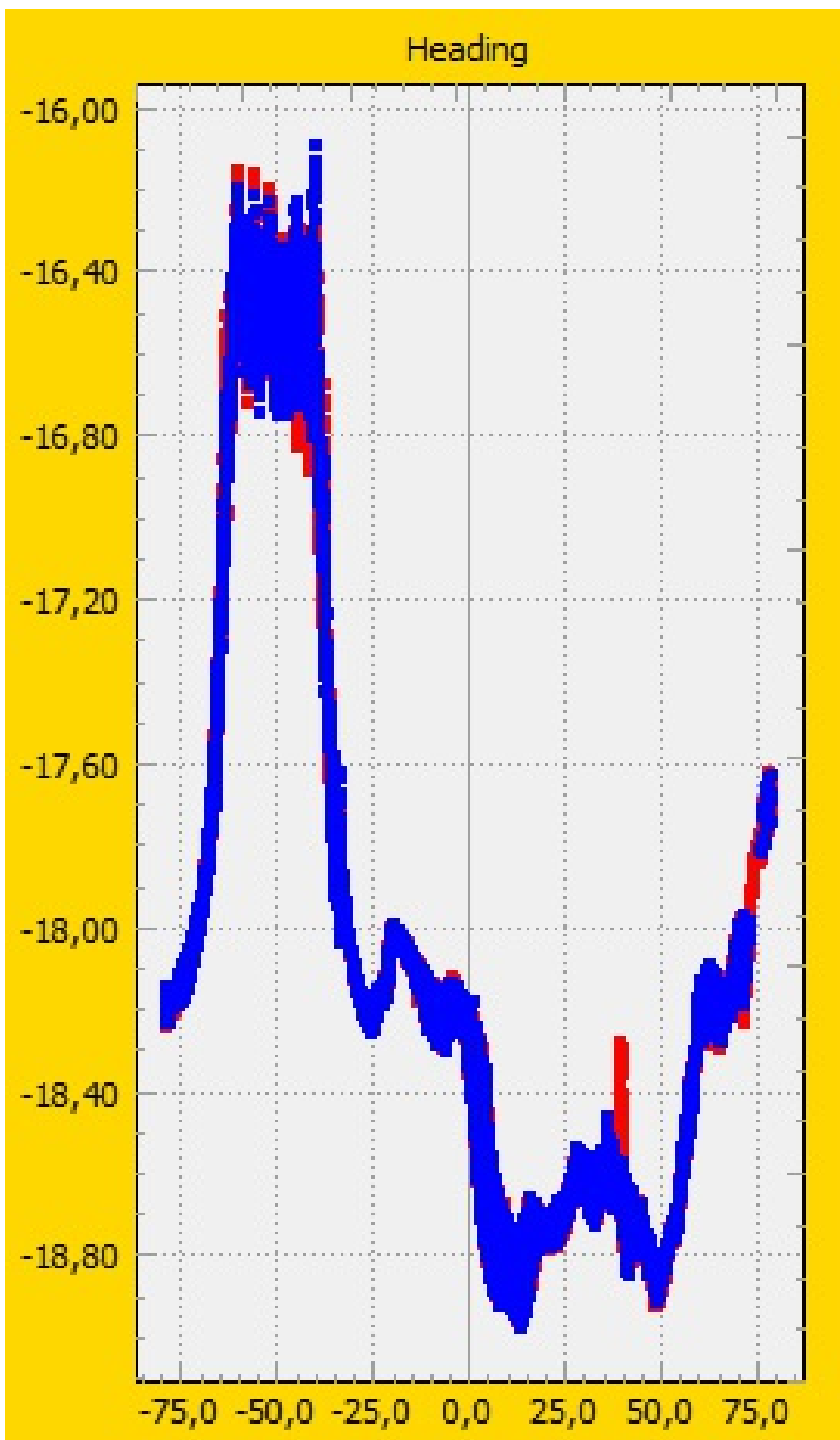
Roll Slice View



Pitch Slice View



Heading Slice View



-- End of Calibration Report --