



Rapport nr. 400-2010

STRØMMÅLING

NS 9425-2

LOKALITET BOGNO

Radøy kommune





Resipientanalyse

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| <i>Lokalitet</i> Bogno | <i>Dato, rapport</i> 25 / 01 – 2010 |
| <i>Kommune</i> Radøy kommune | <i>Dato, felt</i> 27 / 11 – 2009 20 / 01 – 2010 |
| <i>Oppdragsgiver</i> Lerøy Vest AS | <i>Rapport nr.</i> 400 – 2010 |
| <i>Oppdragsart</i> Straummåling | <i>Rapportsider</i> 9 |
| <i>Personell feltundersøkelse</i> Frode Berge-Haveland, Resipientanalyse Helge Hansen, Lerøy Vest AS | Sterkaste igjennomsnitt strøm blei målt ved 5 meters djup og var: 8,6 cm/s |

Sammendrag

Ein Aquadopp 400kHz strømmålar frå Nortek AS blei sett ut på 2 meters djup. Straummålaren blei programmert til å måle 40 celler a 2 meter. Dvs., strømmålaren blei programmert til å måle vasstraum i dei øvre 80 meterane i vassøyla ved lokaliteten. Der var 67 meter djupt ved målestasjonen N 60°36,240 / E 05°04,550. Straumdata frå 0 til 60 meters djup var gode. Straumdata er her presentert ved 5, 15, 45 og 60 meters djup. Straumen blei målt i perioden 27 november 2009 til 18 januar 2010.

Den i gjennomsnittlige straumen var størst ved 5 meters djup. Den i gjennomsnittlige straumen var over 8,6 cm/s igjennom heile vassøyla. Maximum's målingane ved 60 meter er med all sannsynleg heit feilmålingar. Den sterkaste straumen blei målt ved 5 meters djup og var 34,3 cm/s. Dette tilsvarer ein Vc (10 års repetisjonsperiode) på 0,57 m/s og ein Vc (50 års repetisjonsperiode) på 0,63 m/s. Straumretninga ved prøvestasjonen var ved 5 meters djup i retning nordvest. Vidare nedover i vassøyla gjekk hovudstraum retninga mot søraust. Botnstraumen gjekk i retning nord.

Underskrift forfatter

Frode Berge-Haveland
Cand. Scient. Marin mikrobiolog

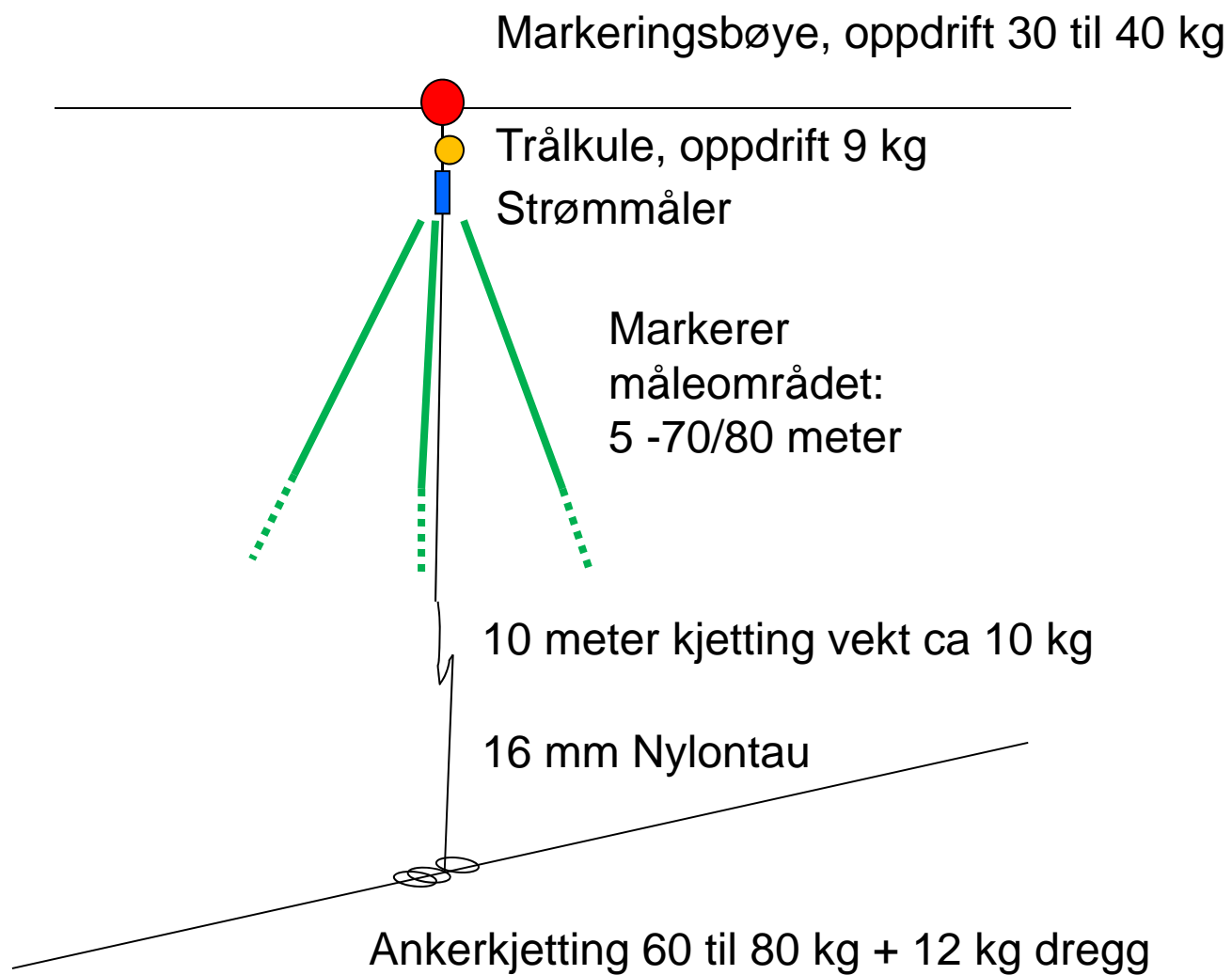
Ansvarlig underskrift for Resipientanalyse

Frode Berge-Haveland
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INNHALDSFORTEGNELSE

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Skisse for utsetting av Nortek doppler strømmåler ved ny lokalitet



3.1 Statistisk oppsummering av strømmålingsdata

STATISTICAL SUMMARY
 File name: Bogno01-1.SD6
 Series number: 1
 Number of measurements in data set: 7506
 Data displayed from: 11:40 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

| | Total | East / west | North / south |
|------------------------------|--------|-------------|---------------|
| Mean current speed (cm/s) | 8,6 | 6,2 | 5,1 |
| Variance (cm/s) ² | 29,808 | 23,946 | 16,212 |
| Standard deviation (cm/s) | 5,460 | 4,893 | 4,026 |
| Mean standard deviation | 0,635 | 0,794 | 0,795 |
| Maximum current velocity | 34,3 | | |
| Minimum current velocity | 0,0 | | |
| Significant max velocity | 14,9 | | |
| Significant min velocity | 3,4 | | |

5 meter

STATISTICAL SUMMARY
 File name: Bogno01-6.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

| | Total | East / west | North / south |
|------------------------------|-------|-------------|---------------|
| Mean current speed (cm/s) | 5,7 | 4,1 | 3,3 |
| Variance (cm/s) ² | 9,786 | 8,924 | 6,366 |
| Standard deviation (cm/s) | 3,128 | 2,987 | 2,523 |
| Mean standard deviation | 0,545 | 0,734 | 0,765 |
| Maximum current velocity | 21,2 | | |
| Minimum current velocity | 0,0 | | |
| Significant max velocity | 9,3 | | |
| Significant min velocity | 2,5 | | |

15 meter

| | Velocity | Dir | Temp |
|--------------------|----------|------|------|
| Valid measurements | 7457 | 7457 | 7510 |

STATISTICAL SUMMARY
 File name: Bogno01-13.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

| | Total | East / west | North / south |
|------------------------------|-------|-------------|---------------|
| Mean current speed (cm/s) | 5,0 | 3,2 | 3,2 |
| Variance (cm/s) ² | 7,377 | 5,860 | 6,000 |
| Standard deviation (cm/s) | 2,716 | 2,421 | 2,450 |
| Mean standard deviation | 0,545 | 0,768 | 0,758 |
| Maximum current velocity | 17,9 | | |
| Minimum current velocity | 0,0 | | |
| Significant max velocity | 8,1 | | |
| Significant min velocity | 2,2 | | |

30 meter

| | Velocity | Dir | Temp |
|--------------------|----------|------|------|
| Valid measurements | 7381 | 7381 | 7510 |

STATISTICAL SUMMARY
 File name: Bogno01-21.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

| | Total | East / west | North / south |
|------------------------------|-------|-------------|---------------|
| Mean current speed (cm/s) | 4,8 | 3,1 | 3,1 |
| Variance (cm/s) ² | 7,465 | 5,860 | 5,823 |
| Standard deviation (cm/s) | 2,732 | 2,421 | 2,413 |
| Mean standard deviation | 0,568 | 0,791 | 0,782 |
| Maximum current velocity | 25,6 | | |
| Minimum current velocity | 0,0 | | |
| Significant max velocity | 7,9 | | |
| Significant min velocity | 2,1 | | |

45 meter

| | Velocity | Dir | Temp |
|--------------------|----------|------|------|
| Valid measurements | 7086 | 7086 | 7510 |

STATISTICAL SUMMARY
 File name: Bogno01-28.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

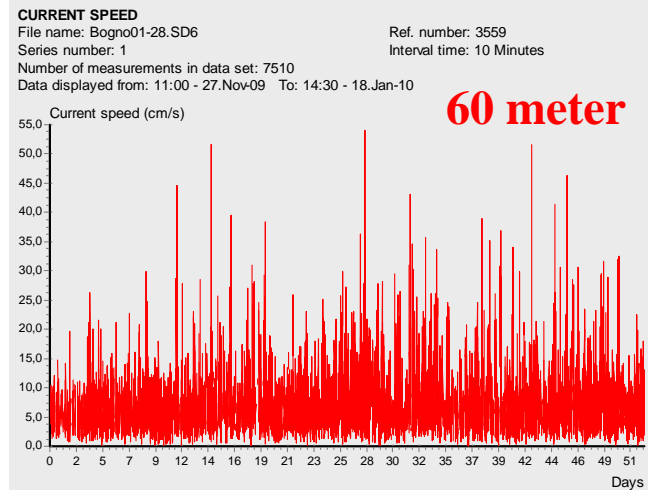
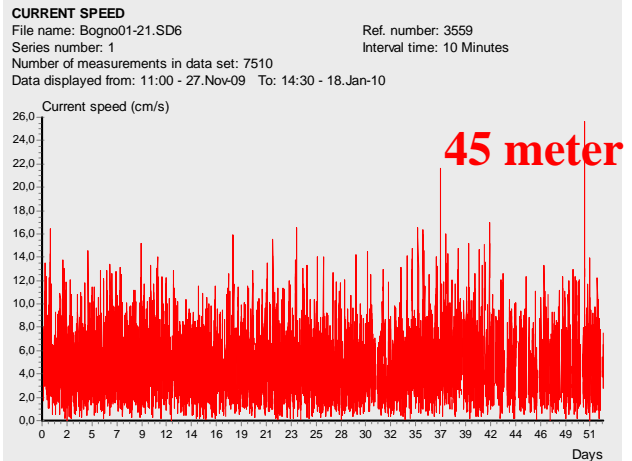
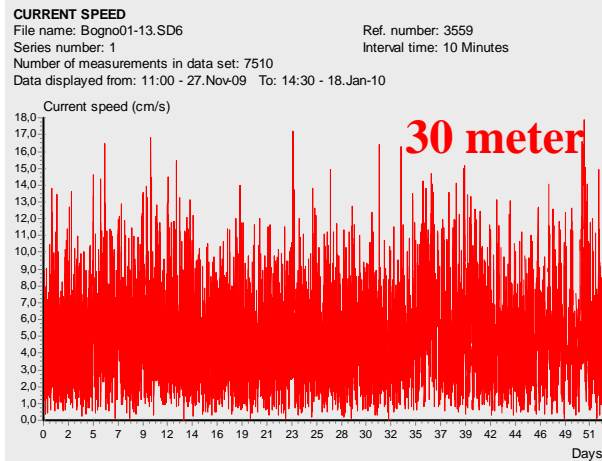
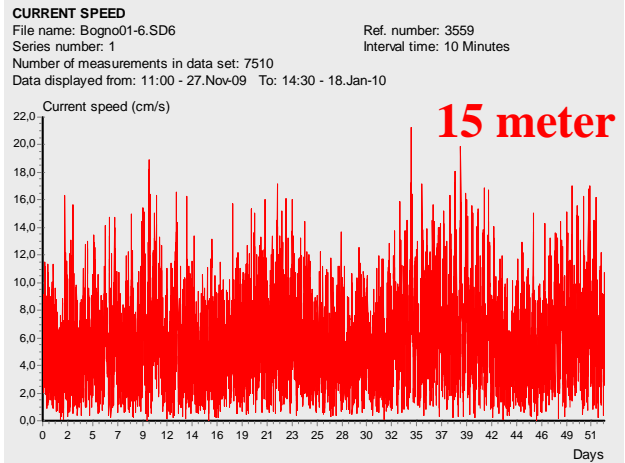
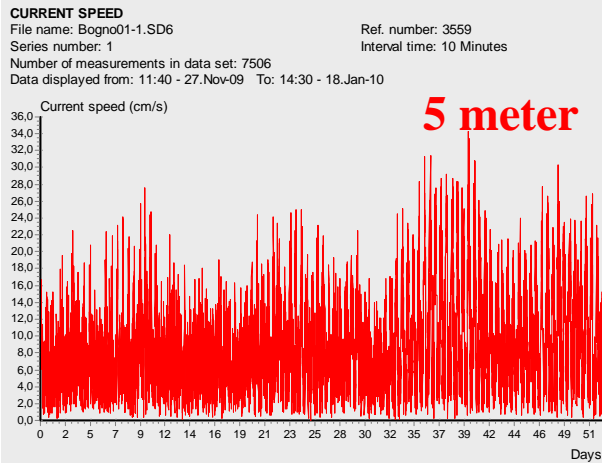
Ref. number: 3559
 Interval time: 10 Minutes

| | Total | East / west | North / south |
|------------------------------|--------|-------------|---------------|
| Mean current speed (cm/s) | 7,1 | 4,2 | 4,8 |
| Variance (cm/s) ² | 25,766 | 16,863 | 18,734 |
| Standard deviation (cm/s) | 5,076 | 4,106 | 4,328 |
| Mean standard deviation | 0,715 | 0,981 | 0,901 |
| Maximum current velocity | 54,1 | | |
| Minimum current velocity | 0,0 | | |
| Significant max velocity | 12,5 | | |
| Significant min velocity | 2,8 | | |

60 meter

| | Velocity | Dir | Temp |
|--------------------|----------|------|------|
| Valid measurements | 6379 | 6379 | 7510 |

3.2 Straummålingsdata i graf

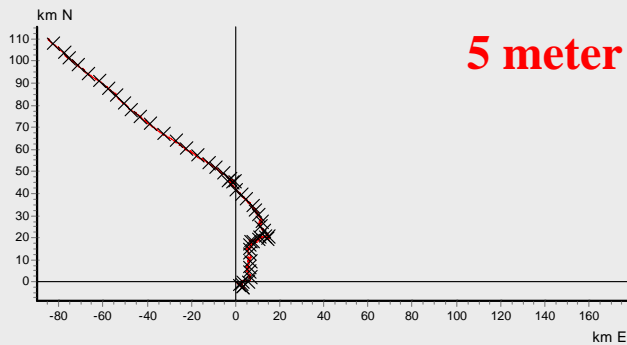


3.3 Progressiv vektor

PROGRESSIVE VECTOR

File name: Bogno01-1.SD6 Ref. number: 3559
 Series number: 1 Interval time: 10 Minutes
 Number of measurements in data set: 7506
 Data displayed from: 11:40 - 27.Nov-09 To: 14:30 - 18.Jan-10

Neumann parameter: 0.358 Rest speed: 3.1 cm/s
 Average speed: 8.6 cm/s Rest direction: 322 deg.

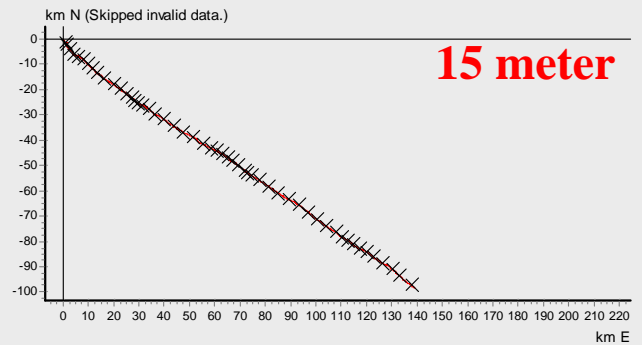


5 meter

PROGRESSIVE VECTOR

File name: Bogno01-6.SD6 Ref. number: 3559
 Series number: 1 Interval time: 10 Minutes
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Neumann parameter: 0.665 Rest speed: 3.8 cm/s Valid data points: 7457
 Average speed: 5.7 cm/s Rest direction: 125 deg.

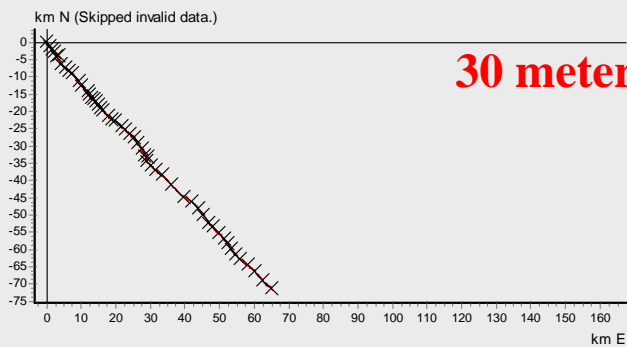


15 meter

PROGRESSIVE VECTOR

File name: Bogno01-13.SD6 Ref. number: 3559
 Series number: 1 Interval time: 10 Minutes
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Neumann parameter: 0.440 Rest speed: 2.2 cm/s Valid data points: 7381
 Average speed: 5.0 cm/s Rest direction: 138 deg.

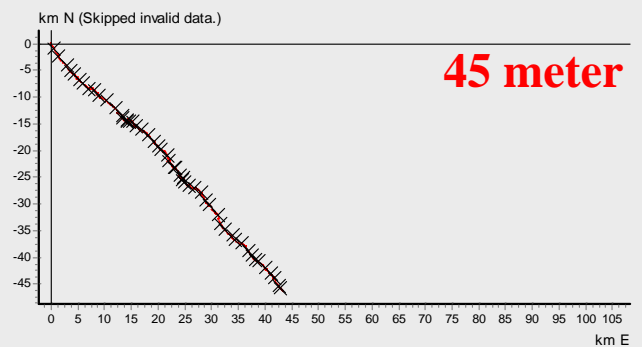


30 meter

PROGRESSIVE VECTOR

File name: Bogno01-21.SD6 Ref. number: 3559
 Series number: 1 Interval time: 10 Minutes
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Neumann parameter: 0.311 Rest speed: 1.5 cm/s Valid data points: 7086
 Average speed: 4.8 cm/s Rest direction: 137 deg.

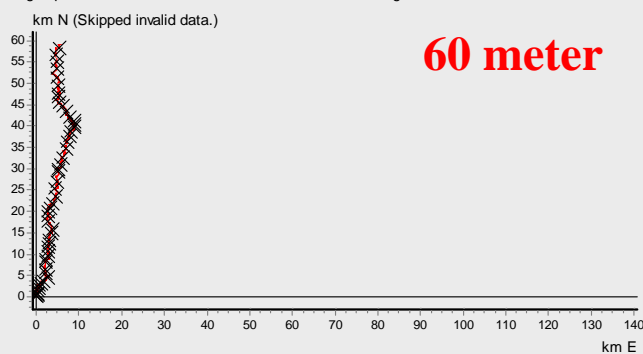


45 meter

PROGRESSIVE VECTOR

File name: Bogno01-28.SD6 Ref. number: 3559
 Series number: 1 Interval time: 10 Minutes
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Neumann parameter: 0.218 Rest speed: 1.5 cm/s Valid data points: 6379
 Average speed: 7.1 cm/s Rest direction: 6 deg.



60 meter

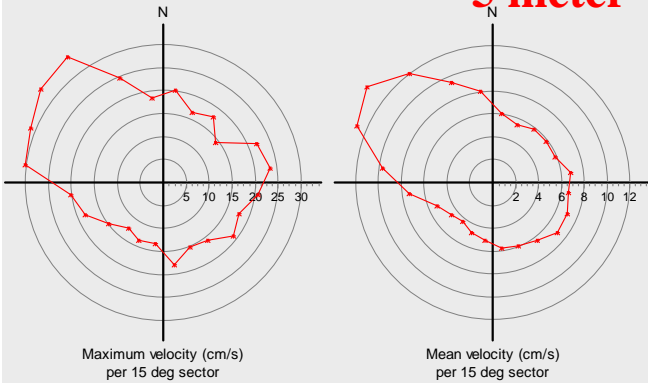
3.4 Maksimum og gjennomsnittlig straumfordelings diagram

CURRENT VELOCITY DISTRIBUTION DIAGRAM

File name: Bogno01-1.SD6
 Series number: 1
 Number of measurements in data set: 7506
 Data displayed from: 11:40 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

5 meter

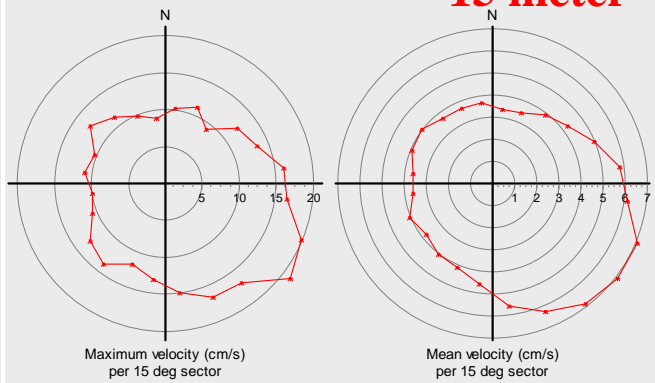


CURRENT VELOCITY DISTRIBUTION DIAGRAM

File name: Bogno01-6.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

15 meter

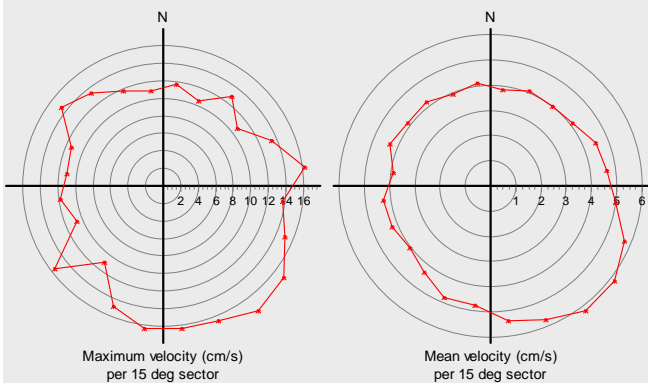


CURRENT VELOCITY DISTRIBUTION DIAGRAM

File name: Bogno01-13.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

30 meter

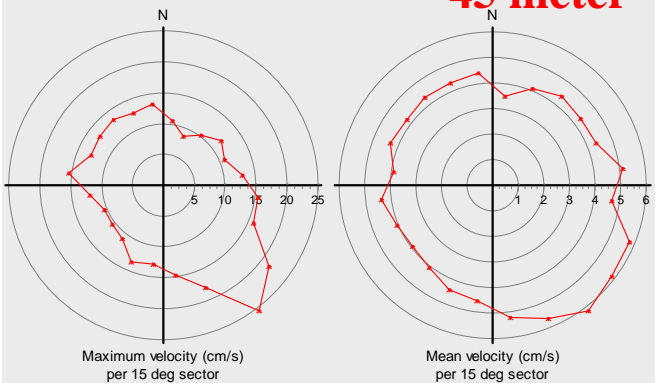


CURRENT VELOCITY DISTRIBUTION DIAGRAM

File name: Bogno01-21.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

45 meter

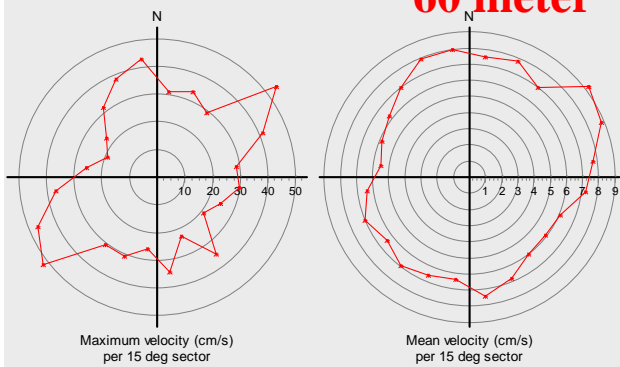


CURRENT VELOCITY DISTRIBUTION DIAGRAM

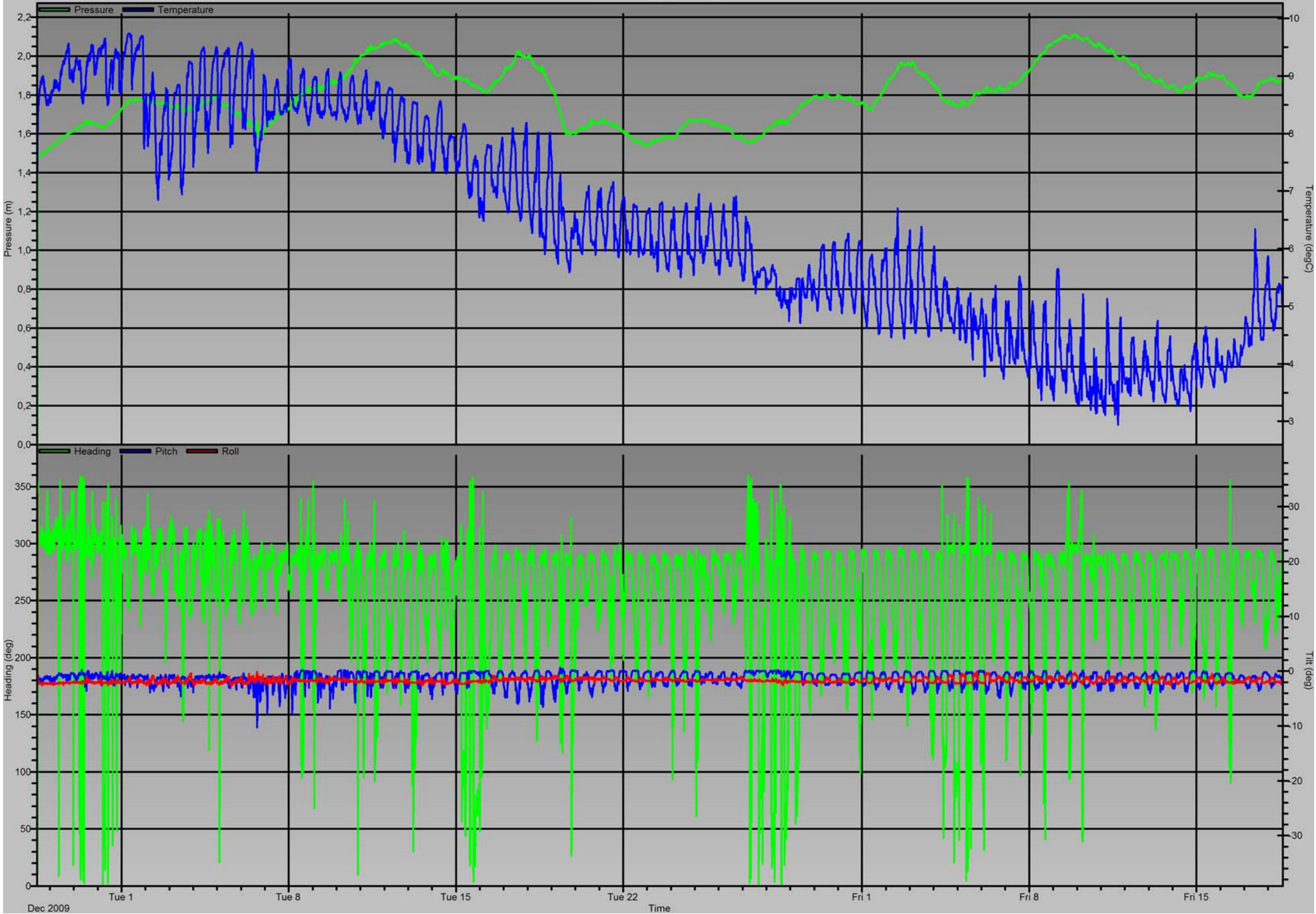
File name: Bogno01-28.SD6
 Series number: 1
 Number of measurements in data set: 7510
 Data displayed from: 11:00 - 27.Nov-09 To: 14:30 - 18.Jan-10

Ref. number: 3559
 Interval time: 10 Minutes

60 meter



Current and sensor data



Hydrografiprofil

Utgår