

NOAA Trawl Survey Standardization Protocols



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U

$$U = qB$$

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For bottom trawl surveys

$$q = (\text{availability})(\text{efficiency})$$

Trawlgate



NOAA Protocols for Groundfish Bottom Trawl Surveys of the Nation's Fishery Resources

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Trawl Survey Protocols

- Warp measurement
- Autotrawl systems
- Operational procedures
- Trawl construction and repair

Warp measurement

- Two independently-calibrated measuring methods shall be used on each warp, one of which measures real-time.

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- **All vessels must use the identical type of wire.**

Autotrawl systems

SCANTROL
SYMMETRY CONTROL



TOWING MODE 2



SYM



| | | | | | | |
|-------------|---|--------------|-----|--------------|------|------|
| SBPEL RPM : | 0 | STB PRESSURE | 169 | SYMMETRY-1 : | 0.1 | 0:05 |
| PSPEL RPM : | 4 | PRT PRESSURE | 141 | SYMMETRY-2 : | | 0:00 |
| | | SOUNDER : | 137 | DISTANCE | 40.9 | 0:00 |

TRAWLPROGRAM
TOWING MENU

0:05 TOWING

LENGTH 230
SYMMETRY 0.3

WIRELLENGTH
230

MIN TOWING PRS
40.0

MAX TOWING PRS
300.0

ECOTRAWL
10

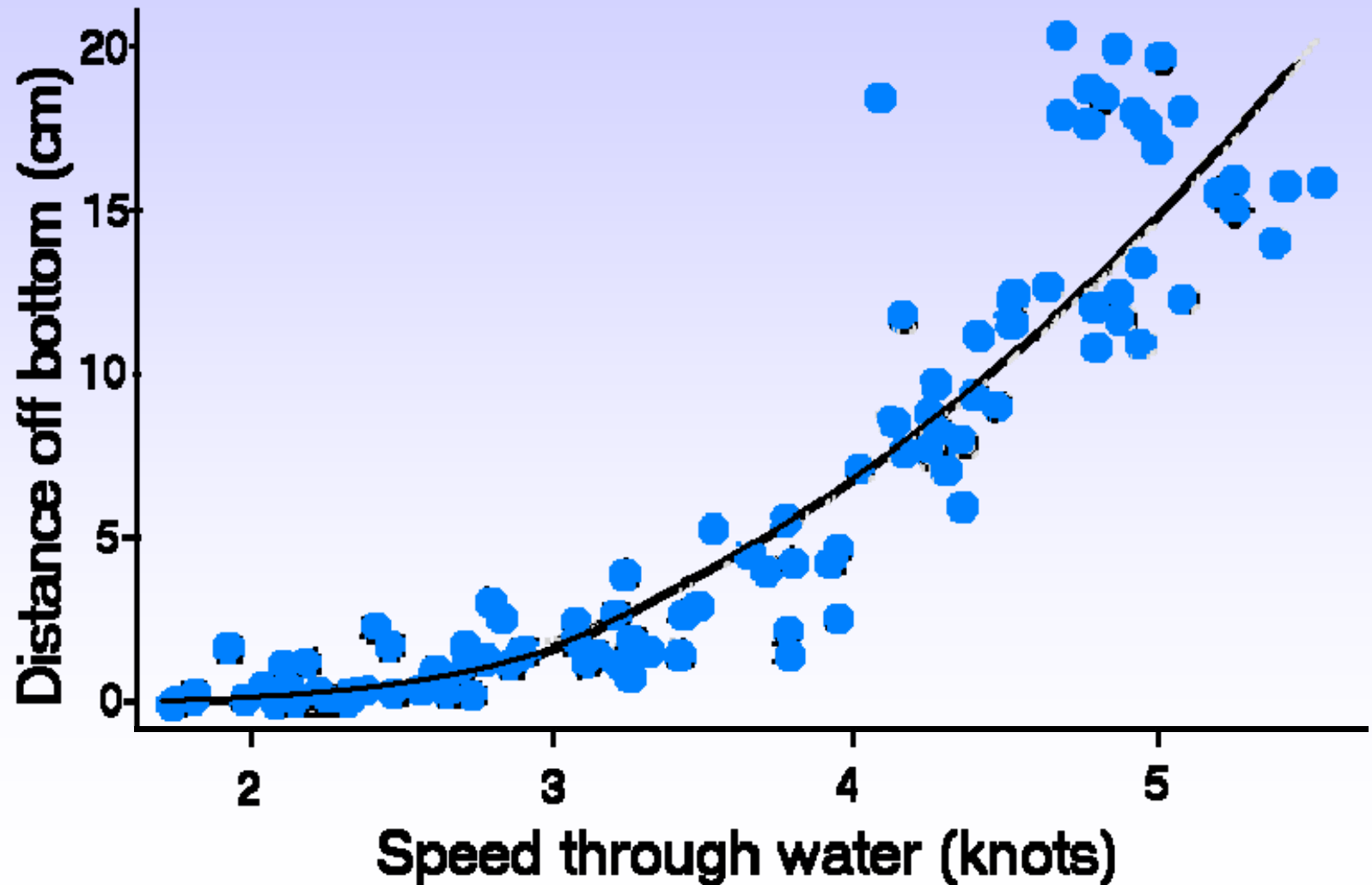
- Surveys using dynamic autotrawl systems must have them tested and certified by a qualified technician before each cruise.

Operational procedures

Operations plan including:

- Scope ratio
- Speed
- Direction
- Location of sampling sites
- Vessel and winch operation during setting and retrieval

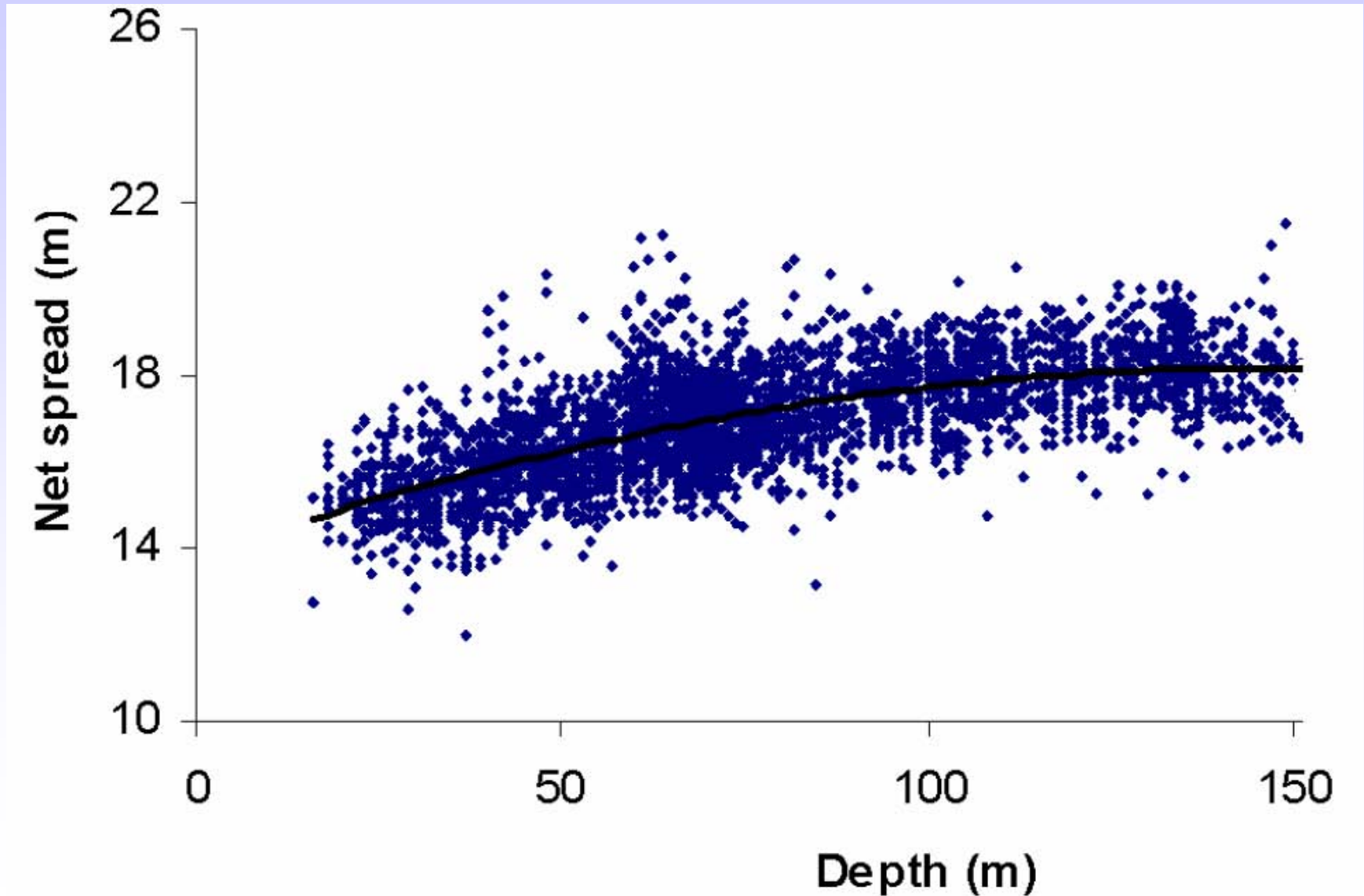
Control speed through water



Measure tow length



Restrict door and wing spread



Trawl construction and repair

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- **Verification that trawls are within specs by the scientific staff**

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- Construction and repair checklist
- Verification that trawls are within specs by the scientific staff
- **Repair training classes**

Objectives of standardization

- Constant catchability over time

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- Constant catchability over space

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- Constant catchability over time
- Constant catchability over space
- Constant catchability among vessels