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CM 1981/B:9
Fish Capture Committee

SECOND REPORT OF THE PLANNING GROUP FOR THE
SYMPOSIUM ON FISHERIES ACOUSTICS

* General Secretary
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ABSTRACTS

The Planning Group met in Nantes in May 1981 to make detailed arrangements for the management of the symposium, and to make recommendations about calibration procedures and standard targets.

La groupe de planification s'est réunie à Nantes pendant Mai 1981 pour arranger l'administration du symposium, et pour faire des recommandations au sujet de l'étalonnage acoustique et des cibles acoustiques de référence.

REPORT

The meeting was held on 27th to 29th May at ISTPM, Nantes, the following persons being present:

R E Craig (Convener)	Marine Laboratory, PO Box 101 Aberdeen, Scotland
J B Suomala Jr (Vice Convener)	Charles Stark Draper Laboratory 555 Technology Square Cambridge MASS 02139 USA
L Dickie	Marine Ecology Laboratory Bedford Institute of Oceanography PO Box 1006, Dartmouth, Nova Scotia
O Nakken	Institute for Marine Research PO Box 1870-721 5011 Bergen, Nordnes Norway
E Sabourenkov	103045, USSR, Moscow Ministry of Fisheries Rozhdestvensky Boulevard, 12
C S Venema	Fisheries Division FAO Via delle Terme di Caracalla 00100 Rome Italy
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Six papers were tabled which had been prepared for the meeting, along with a number of cruise reports which were considered to be of general interest. The recommendations are presented in two parts:

- (A) Those relating to management of the symposium and
- (B) Those relating to calibration and standard targets.

Part A. Administration of Symposium

Review papers have been arranged as follows

General Principles D N MacLennan and S T Forbes
Marine Laboratory
PO Box 101, Aberdeen AB9 8DB
Scotland

Physical Calibration Joseph E Blue
U/W Sound Reference Division
Naval Research Laboratory
PO Box 8337, Orlando
Florida. USA

Fish etc. as Acoustic Targets Lars Middtun
Institute for Marine Research
PO Box 1870-721
5011 Bergen, Nordnes
Norway

Survey Design Ross Shotton
Bedford Institute of Oceanography
PO Box 1006
Dartmouth
Nova Scotia

and

G P Bazigos
Fisheries Division
FAO, Rome

Review authors are invited to collaborate to avoid overlapping. It is recommended that there should be no requirement on review authors to submit summaries. It is suggested that reviews should extend to about 6,000 words, and it is proposed that 1 hour of conference time be allotted to each review, 1/2 hour for presentation and 1/2 hour for discussion.

Summaries of other contributions will be received by the convener or vice-convener. These will be copied to Venema, Nakken, Buerkle, Udanov and Diner.

Most papers will be accepted automatically, however the Convener and Vice-Convener have authority to reject unsuitable contributions.

It is recommended that acceptance will emanate from the General Secretary, ICES and that the following points are made to Authors.

- a) Acceptance of a paper for presentation at the symposium does not automatically guarantee acceptance for later publication.
- b) M. Noel Diner of ISTPM will be glad to give help with the preparation of the summary in French of papers presented in English. Mr D N MacLennan, Marine Laboratory, will be glad to help with the preparation of summaries in English of papers presented in French.
- c) Papers should be submitted as typescript and diagrams in a form suitable for photocopying. The whole text or illustration on any page should be included wholly within a rectangle 16 cms in width by 20 cms in height.
- d) Each paper should include a list of the symbols and units used. The group does not feel able to impose uniformity in this matter, but authors are requested to refer to pages 23-33 Volume II Part "a" of the report of the meeting on "Hydroacoustical methods for the Estimation of Marine Fish Populations (Charles Stark Draper Publications Section, Cambridge, Mass., 1981)." This is a note by Craig describing a basic set of symbols and units for the subject. Authors may obtain copies of this from the convener if necessary.
- e) References should be in accordance with ICES rules for Journal du Conseil, and an example should be included in the letter of acceptance.
- f) It is recommended that ICES produces 400 copies of each contribution prior to the symposium. (A subsequent letter from the General Secretary advises that this will not be possible, so it appears that authors will be required to submit 400 copies).
- g) A management committee consisting of Craig, Suomala, and Nakken should meet in Bergen in December 1981 or January 1982, preferably accompanied by a representative of ICES headquarters staff.

This management committee will make arrangements for subject sessions, appoint session chairmen, consider the practical arrangements in Bergen and generally agree these with the host country. We suppose a meeting of session chairmen would be needed on 20th June, even if ordinary registration is deferred until the 21st June.

h) We commend to ICES the efforts of FAO to produce a Bibliography of Fishery Acoustics. We believe this would extend to about 400 titles.

Part B: Calibration and Standard Targets

The recommendations regarding physical calibration are as follows:

- a) The operating characteristics of the equipment should be established by purely electrical checks at the time of installation, and whenever components are changed. Acoustic measurements with a calibrated hydrophone are recommended at such times, to establish separately the transmitter and receiver characteristics.
- b) The definitive calibration at the start of any survey should be made with a standard target. The main supplementary check needed is an electrical check of time-varied gain. This calibration should be repeated when possible during surveys, at intervals of about 1 week.
- c) In multi-ship surveys, intercalibration runs of a few hours' duration should be made, after preliminary survey to select a suitable area with a range of fish densities.
- d) Pending further progress in studies of standard targets, we recommend the use at 38 kHz of a 60 mm diameter sphere of stainless steel, having a target strength at that frequency of -35.4 dB.

We make no recommendation for other frequencies, but note an upsurge in research which will shortly provide authoritative answers, coupled perhaps with some change in the definition of target strength.