

R.V. FRANKLIN

NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

CRUISE PLAN

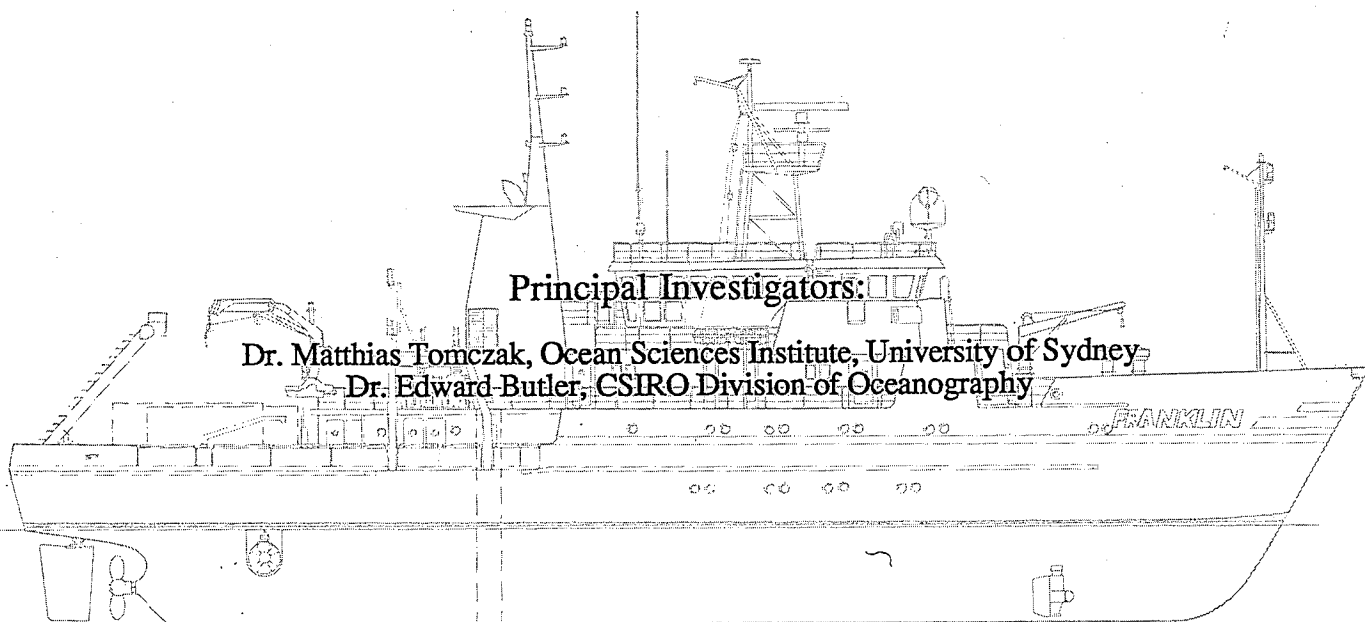
R.V. 'FRANKLIN'

FR011/88

Depart Hobart 0900 Friday 2 december, 1988
Arrive Hobart 1400 Saturday 17 December, 1988

Principal Investigators:

Dr. Matthias Tomczak, Ocean Sciences Institute, University of Sydney
Dr. Edward Butler, CSIRO Division of Oceanography



For further information contact

ORV Operations Manager
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R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

Research Cruise Plan

RV Franklin

Cruise FR11/88

Itinerary

Sail	Hobart	0900	Fri 2 December 1988
Arrive	Hobart	1400	Sat 17 December 1988

Scientific Programs

- To determine the location of the Subtropical Convergence between 148°E and 167°E for December 1988
- To develop an indicator for the position of the Subtropical Convergence which can be derived from satellite data.
- To study water mass formation and conversion at the Subtropical Convergence
- To collect water samples for iodine species analysis.

Principal Investigators

Dr Matthias Tomczak
Ocean Sciences Institute
The University of Sydney
NSW 2006

Dr Edward Butler
CSIRO Division of Oceanography
Hobart Tas 7001

Research Plan

The location of the Subtropical Convergence will be established from CTD casts taken along a cruise track which covers the latitude range 40°S to 50°S. Particular attention will be given to the locations of temperature and salinity gradient zones and their relationships to the convergence zone, to determine which property is more representative of the Subtropical Convergence.

Water mass formation will be studied using heat and salt diffusion equations and mapping the formation area with intensive sampling in such a way that the various contributions to the heat and salt balance can be determined.

A CTD cast to the bottom using 24 samples will be made at the northernmost station for iodine species. The samples will be filtered and stored for later analysis onshore.

Cruise Track

A possible cruise track with the station positions is shown in figure 1. The ship will sail eastward approximately along track sections A-B-C-D-E. Exact location of positions B,C,D and E will depend on findings along the way, the aim is to cut the convergence as completely as possible.

The westward section E - A is only notational at this stage and will depend entirely on the findings from the eastward track. In addition the the CTD stations as indicated, there will be two periods of intensive coverage of parts of sections B - C and C -D, in a way which will allow calculation of horizontal temperature and salinity gradients.

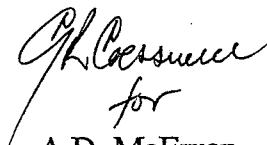
ORV Equipment Required

- CTD
- ACDP
- Thermosalinograph
- Wind speed and direction
- Air temperature
- GPS
- XBT

Personnel

M. Tomczak	University of Sydney	Chief Scientist
K. Walms	"	
A. Franklin	"	
R. Lee	"	
M. England	"	
B. Edwards	CSIRO Oceanography	Cruise Manager
P. Adams	"	
B. Barker	"	
M. Rayner	"	
K. Suber	"	
B. Baker		

This cruise plan is in accordance with the directions of the National Facility Steering Committee for the oceanographic research vessel RV *Franklin*.



A.D. McEwan

CSIRO Division of Oceanography National Facility Steering



D.H. Green

Committee

July 1988

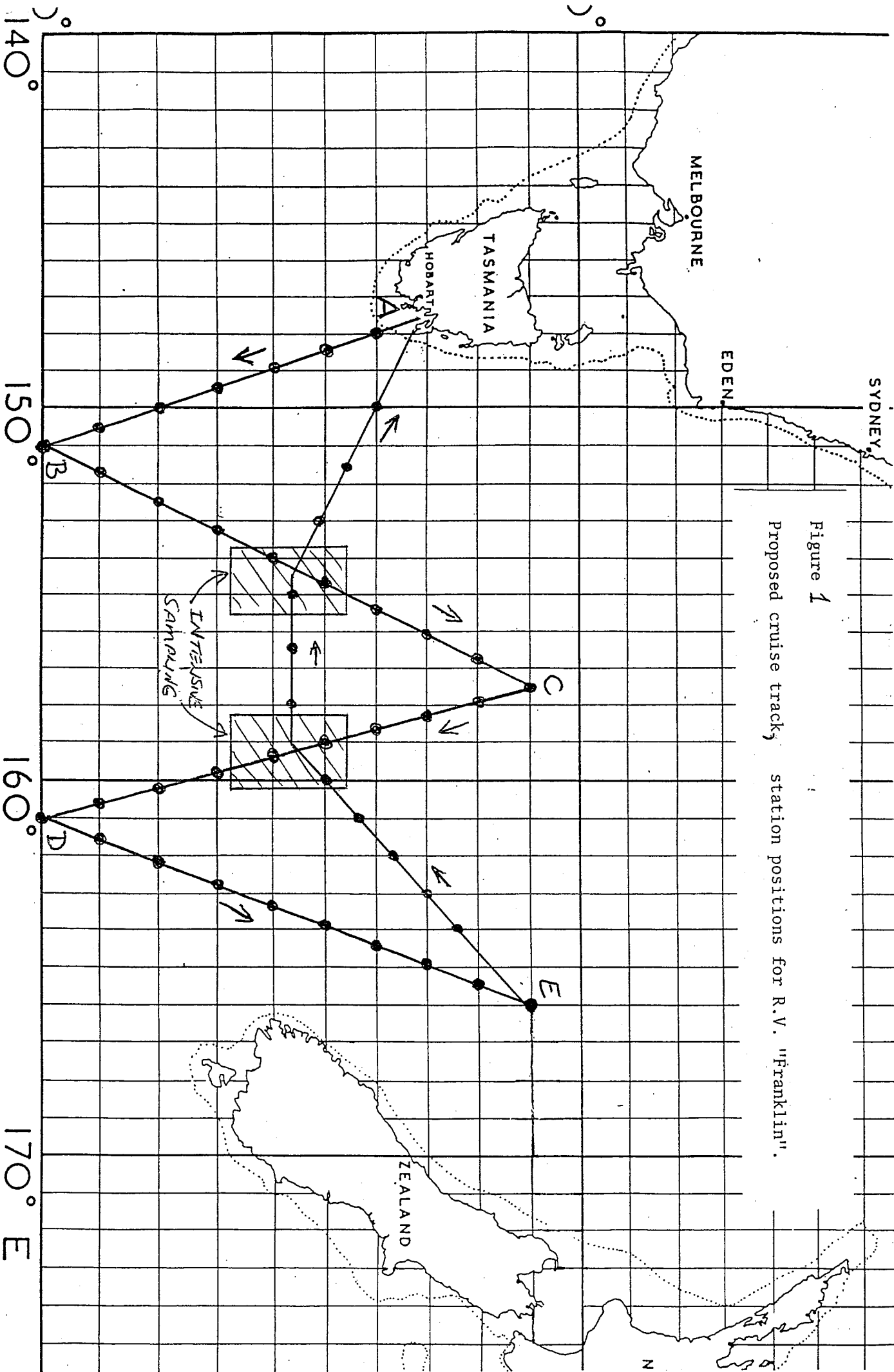


Figure 1
Proposed cruise track, station positions for R.V. "Franklin".