

2.2 AN EXPENDABLE BATHYTHERMOGRAPH AND SEA-SURFACE TEMPERATURE  
EXPERIMENT IN THE EASTERN AND WESTERN PACIFIC

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INTRODUCTION

Since 1969, the Centre ORSTOM de Nouméa has operated a surface observation system with the help of merchant ships. Several routes are used in the tropical Pacific; from west to east, there are the following main routes (Figure 1).

Nouméa	- Hong Kong	(1)
Nouméa	- Japan	(2)
Australia	- California	(3)
Tahiti	- California	(4)
Tahiti	- Panama	(5)

Other minor routes are also operated, such as Nouméa and Tahiti - New Zealand, Nouméa - Wallis Island and Tahiti - Honolulu.

The observations consist, mainly of SST measurements, and surface salinity sampling.

Starting from 1977, chlorophyll determinations and zooplankton sampling

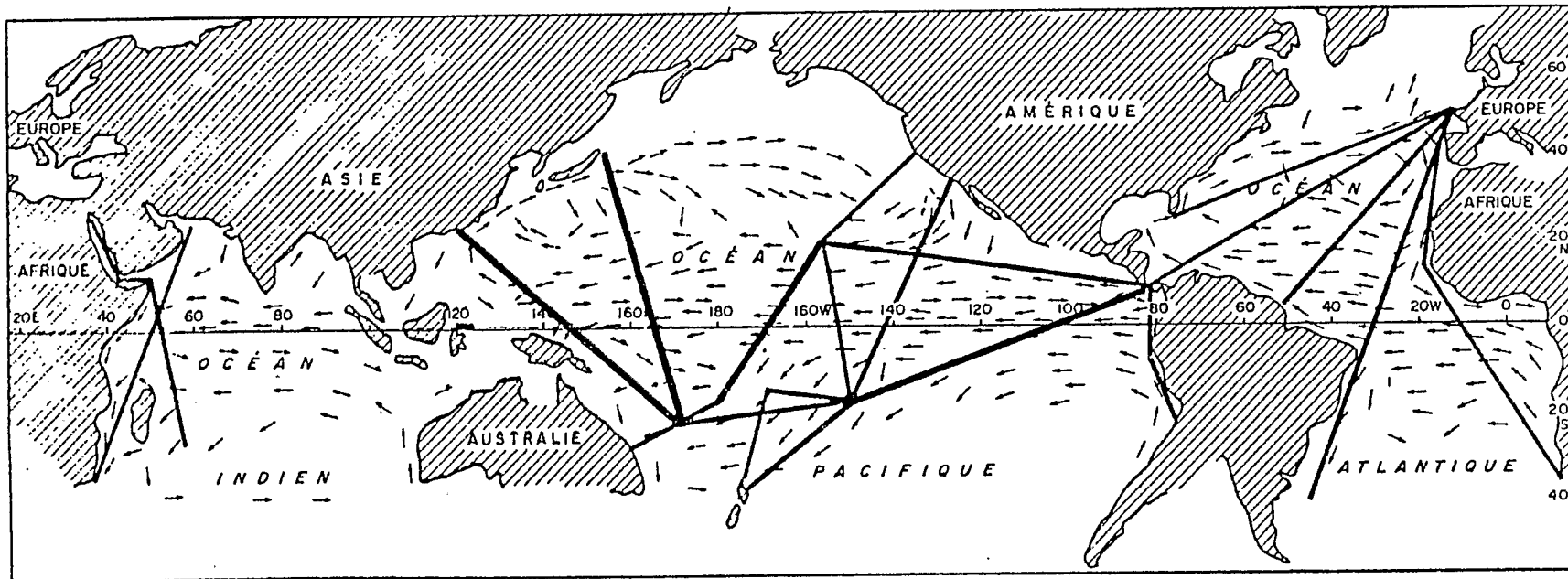
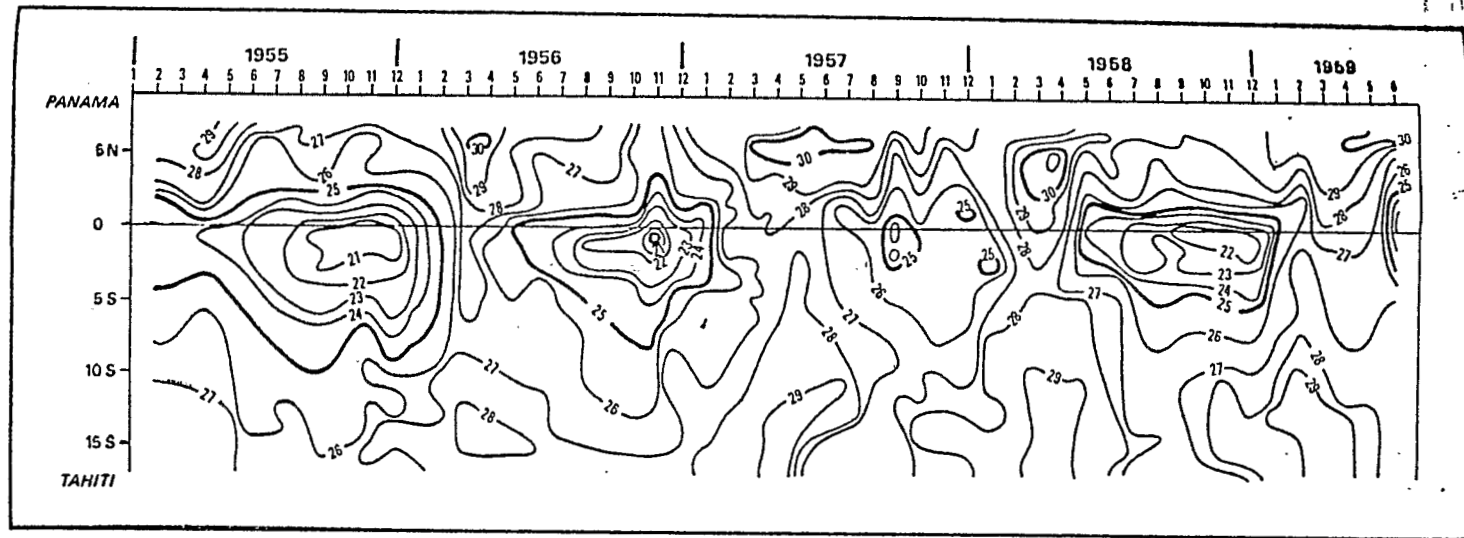


Figure 1 - Surface sampling routes operated by ORSTOM.

(a)



(b)

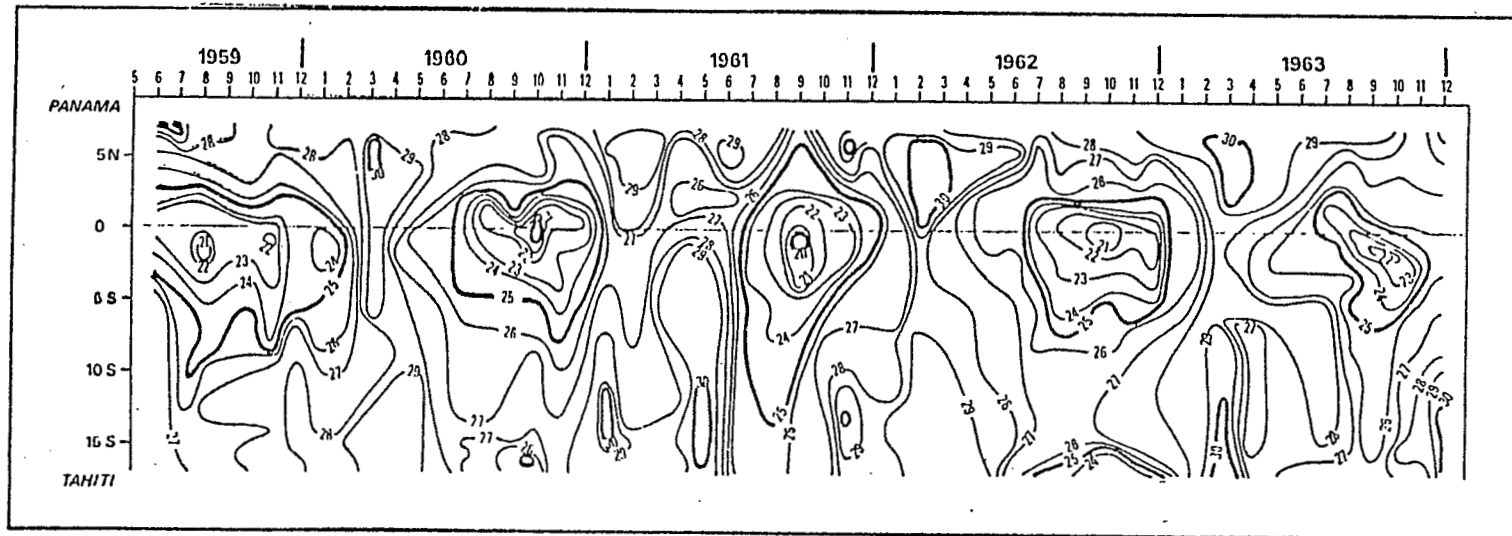
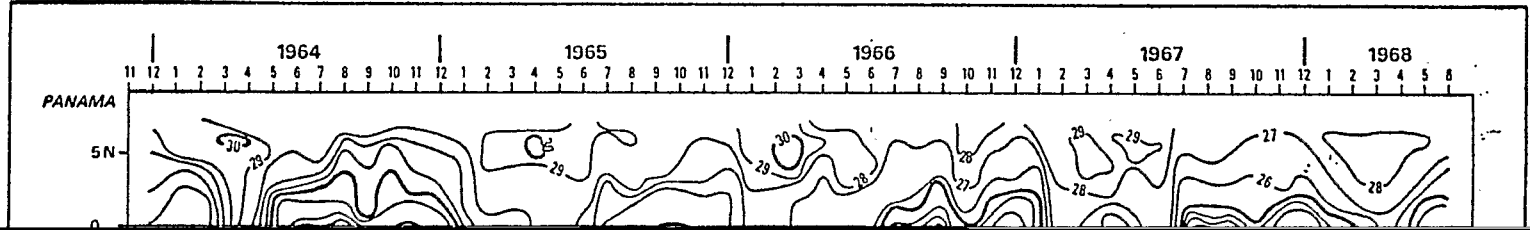
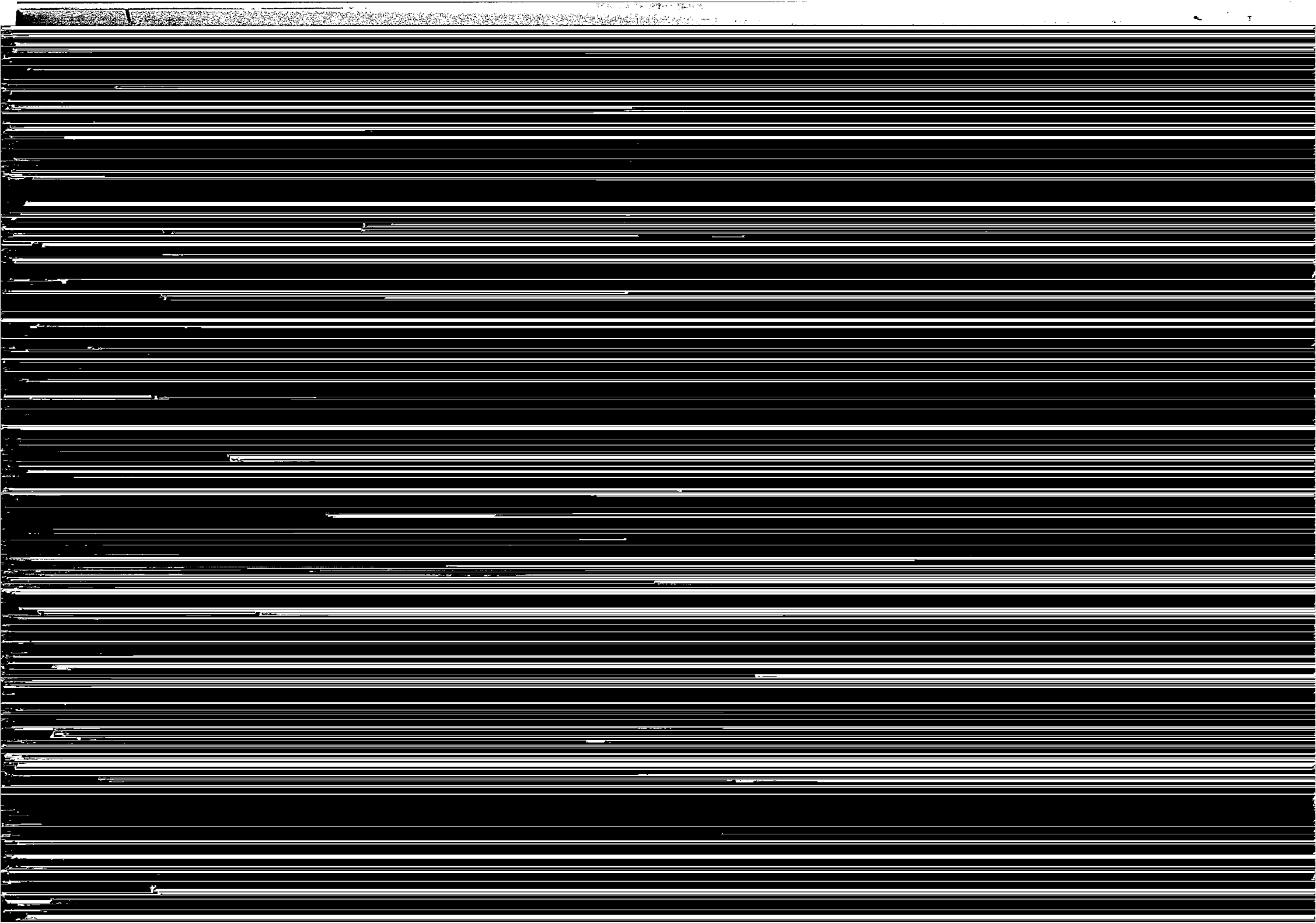


Figure 2(a) & (b) - Space-time isopleths of sea-surface temperature, Tahiti-Panama, 1955-63.





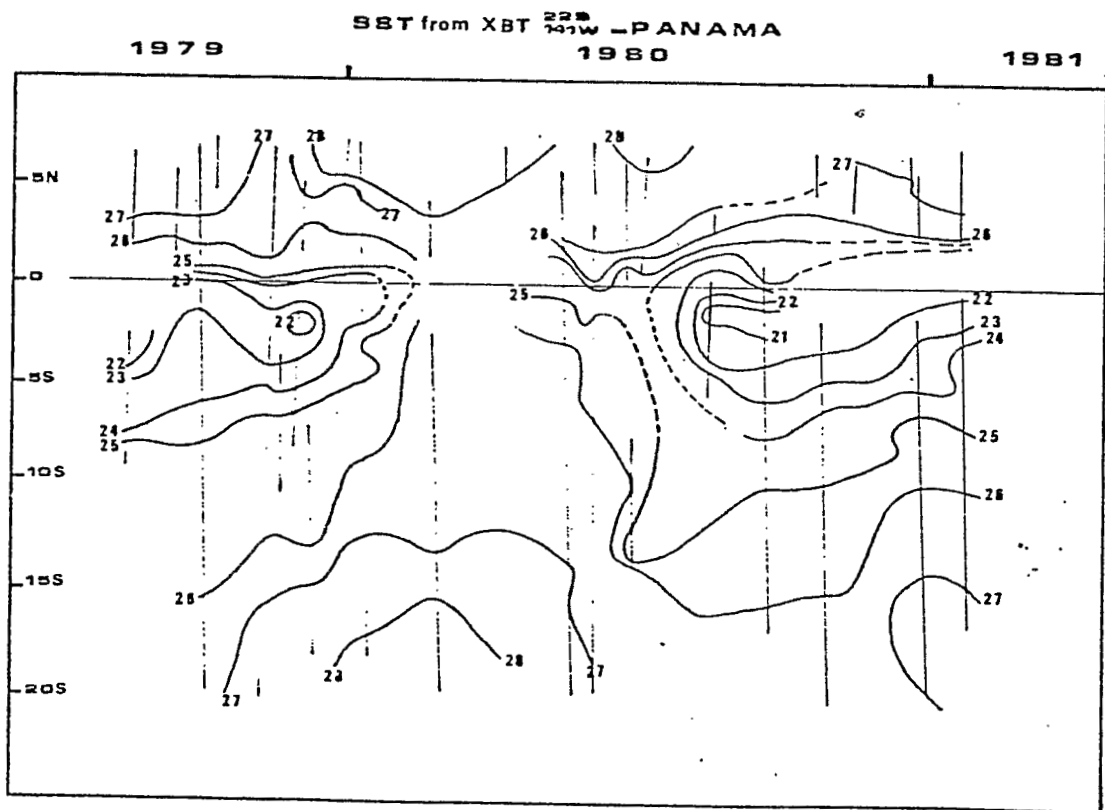
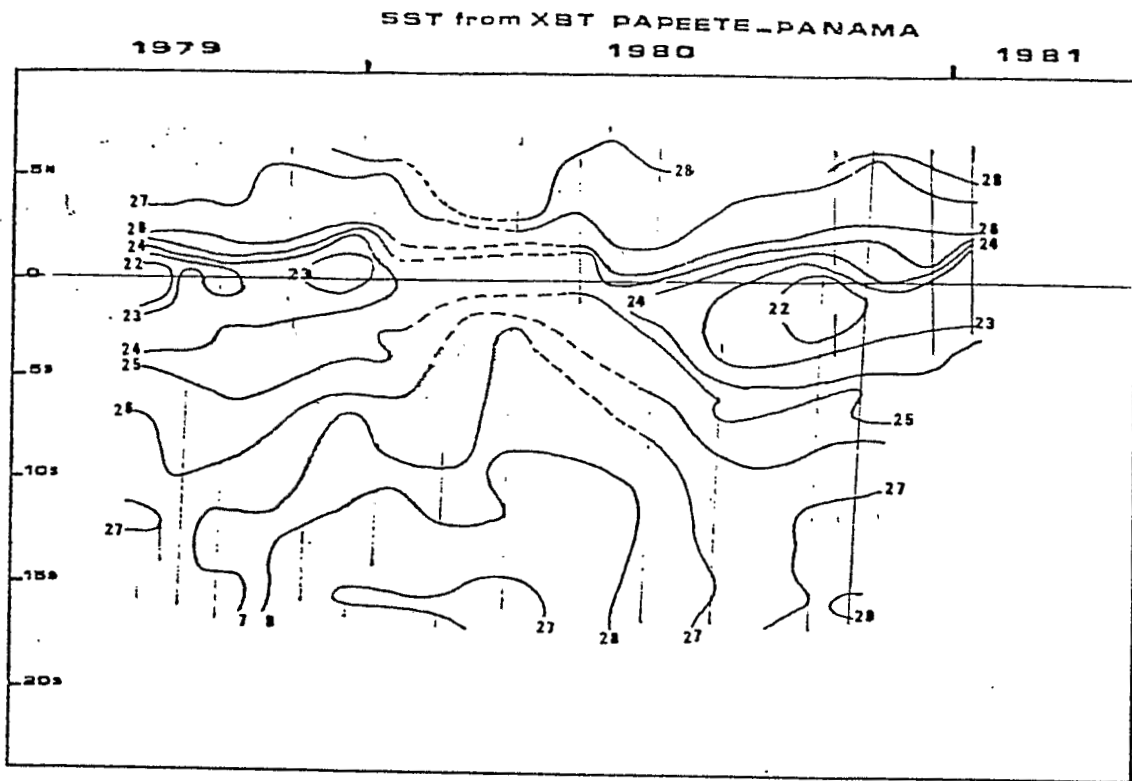
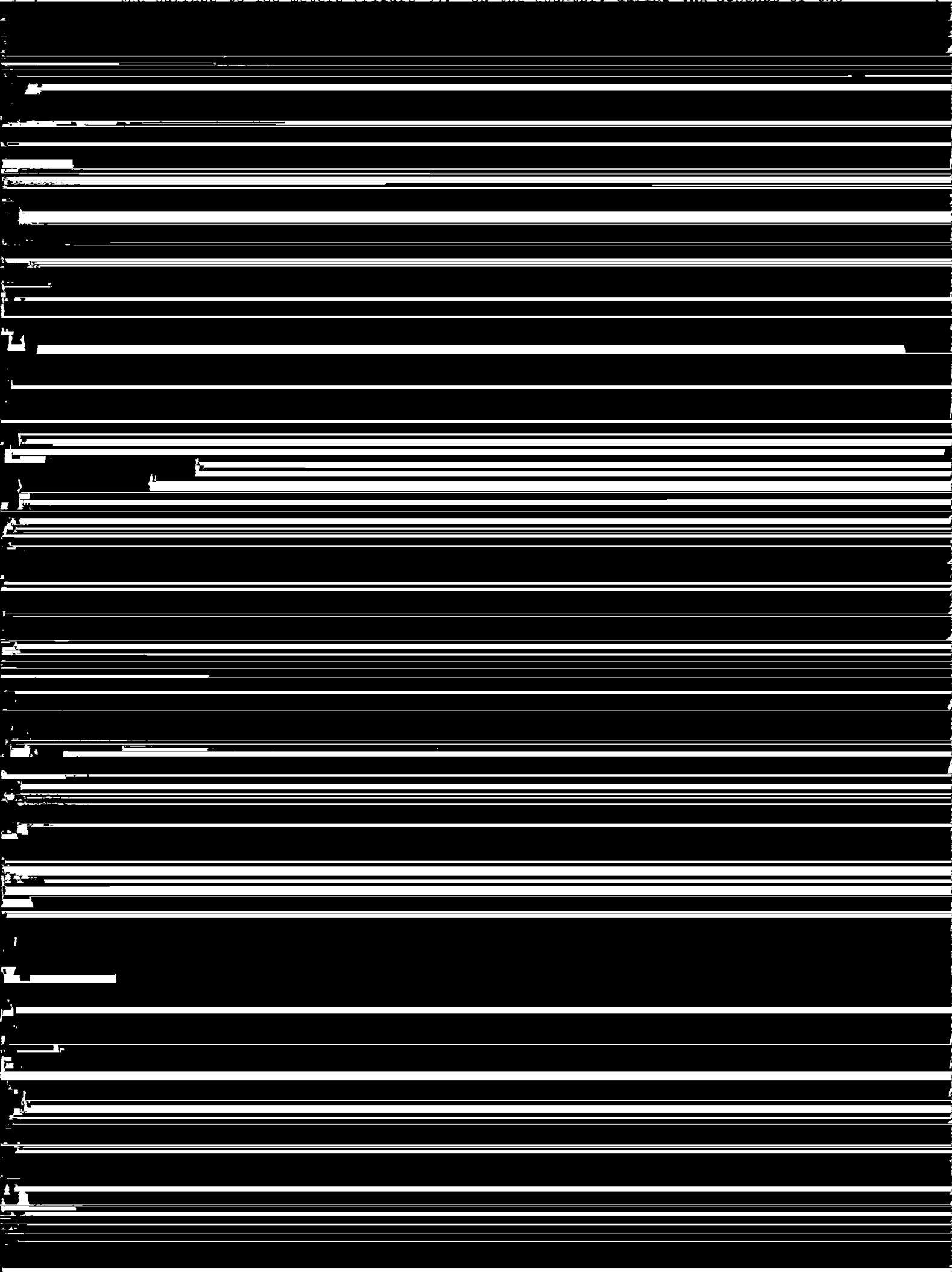


Figure 3 - Sea-surface temperature from XBTs, Polynesia-Panama, 1979-1981.

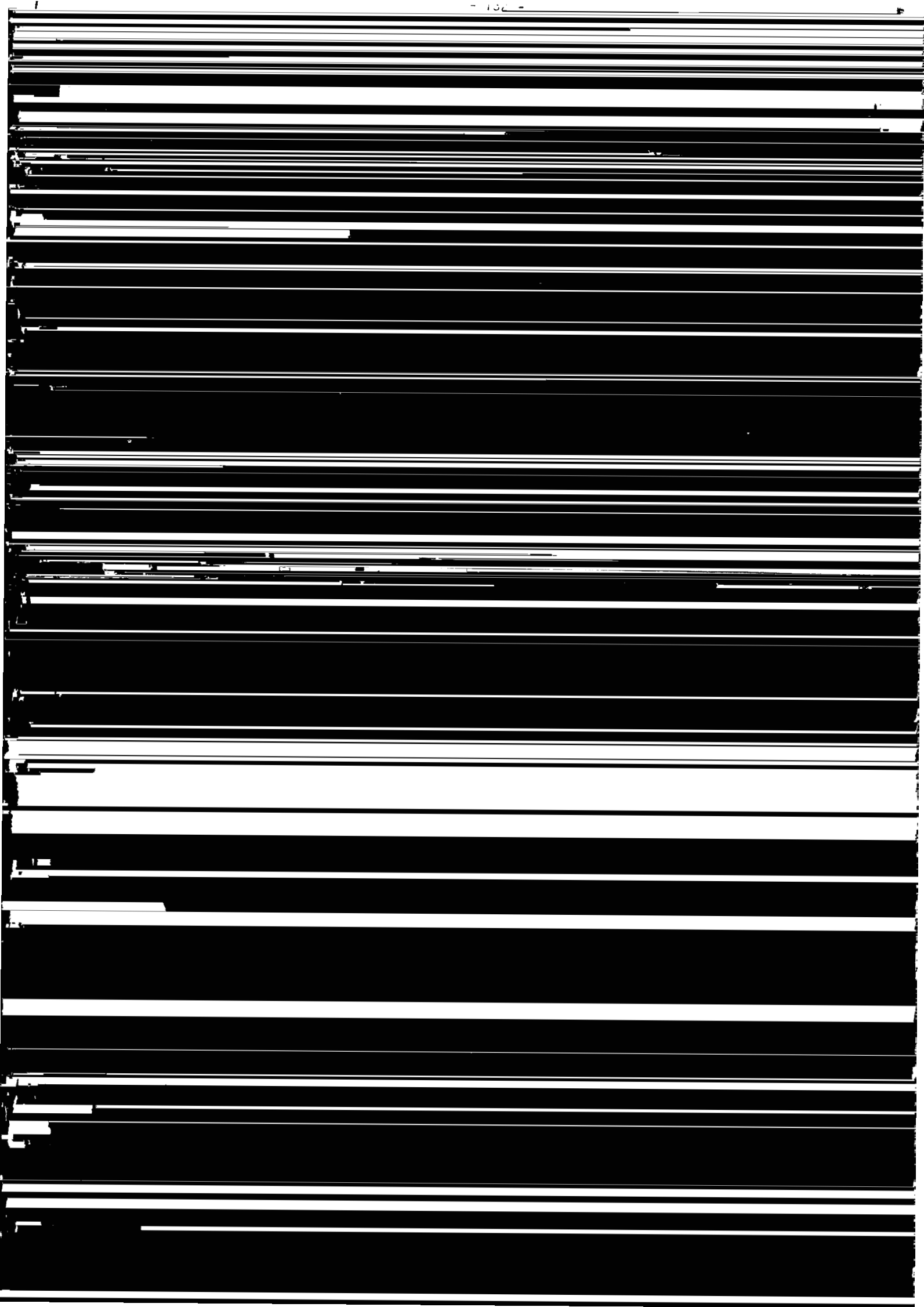


These features are confirmed by consideration of the heat content from the surface to 100 meters (Figure 5). On the equator, during the absence of the









The 0-100m heat content (Figure 9) shows weak seasonal variations in the tropical area. On the equator, there is no change during the series: a maximum of heat content occurs from 5°S to the equator and does not seem to have seasonal variations. This maximum is low and characteristic of a post El Niño period. Before El Niño, we expect a stronger heat content in the equatorial area.

