

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 6107-8

~~12 July~~ - 1 August 1961

27 June
and

CCOFI Cruise 6108

13-28 August 1961

SIO Reference 62-16

26 July 1962

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

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Sponsored by

Marine Research Committee

SIO Reference 62-16

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Approved for distribution:

Roger Revelle

Roger Revelle, Director

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INTRODUCTION

The data presented in this report were collected by the RV Black Douglas of the Bureau of Commercial Fisheries and the RV Horizon of the Scripps Institution of Oceanography on Cruises 6107-8 and 6108 of the California Cooperative Oceanic Fisheries Investigations program. The RV Black Douglas participated in both cruises; the RV Horizon, in Cruise 6107-8 only. The first two figures in this cruise numbering system represent the year of the cruise; the last two figures, the month. In the case of quarterly cruises the last figures are hyphenated. The cruises preceding this one in the series are 6008, 6009 and 6009-10 (Scripps Institution report, SIO Ref. 62-10), 6101-2 (SIO Ref. 61-24) and 6103, 6104-5 and 6105 (SIO Ref. 62-15).

The data are tabulated at observed depths; the interpolated and computed values are tabulated at standard depths and are accompanied by charts of horizontal distribution. The presentation of data in this report does not constitute publication; however, the data contained in this report have been carefully edited and no modifications should be necessary before final publication.

STANDARD PROCEDURES

Processing of the data was carried out using the method described by Klein.^{1/} Certain approximations have been introduced for the determination of the integrated pressure terms which may result in errors whose maximum values are less than 0.5 dynamic centimeter at 0 over 200 decibars, 1.0 dynamic centimeter at 0 over 500 decibars, and 2.0 dynamic centimeters at 0 over 1000 decibars. The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD .

To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer, thermograph, or bathythermograph, while temperatures from reversing thermometers are recorded in hundredths of a degree. The salinity values obtained by salinometer are recorded to three decimal places, provided they meet accepted standards. The third decimal place has been offset to emphasize that the accuracy of the observations is not to one unit in that place, but that the values recorded "have a reproducibility of $\pm 0.004\%$ salinity at the 95 percent probability level, and a probable accuracy of $\pm 0.01\%$ salinity or better at the same level of probability."^{2/} The values are recorded to two decimal places when

^{1/}Klein, Hans T. A new technique for processing physical oceanographic data. MS

^{2/}Quotation from Department of Oceanography, University of Washington, Tech. Rep. No. 66, UW Ref. 60-18, October 1960.

obtained by chlorinity titration, or by salinometer where only one determination per sample was obtained, or where there is doubt concerning the accuracy of a particular sample, or of all samples on a station. The accuracy of all samples obtained by salinometer and recorded to two decimal places is believed to be equal to or better than those obtained by manual titration.

Extrapolated values and values interpolated between remote observations are entered within parentheses. A hyphen is used to indicate a missing observed value. The time is the time of messenger release. When more than one cast was made on a station, messenger times and wire angles are given in the order of increasing depth. A line is left blank between the observed data of each cast.

On stations where more than one cast is lowered, the various property curves may not agree perfectly. This discrepancy may be caused by changes in geographical position, real property changes with time, slight error in measurement, or a combination of these factors. Stations with overlapping casts have the following footnote: Overlapping casts; reconciliation of property curves when necessary.

FOOTNOTES

Laboratory personnel, before titrating the salinity samples, note any possible imperfections in the sealing of the bottles as follows:

Loose bottle cap: The cap is definitely loose so that it could be moved with very little applied pressure. The salinity values obtained from these samples may be usable depending on time and/or conditions of storage.

Possible evaporation: Either the cap was sealed with less than usual pressure, the bottle edge chipped, the rubber washer cracked, or the bale broke on opening, etc.

Use of the above values in interpolation depends upon consistency with other values of salinity and other properties, and these footnotes are supplemented with "falls on property curve" or "does not fall on property curve," depending upon whether the property curve was drawn through the value or not.

In addition to footnotes, three special notations are used without footnotes because their meaning is always the same.

To indicate a premature or a delayed reversal of the water-sampling device which results in certain depth and property errors, the following notation is used.

p: pretrip or posttrip.

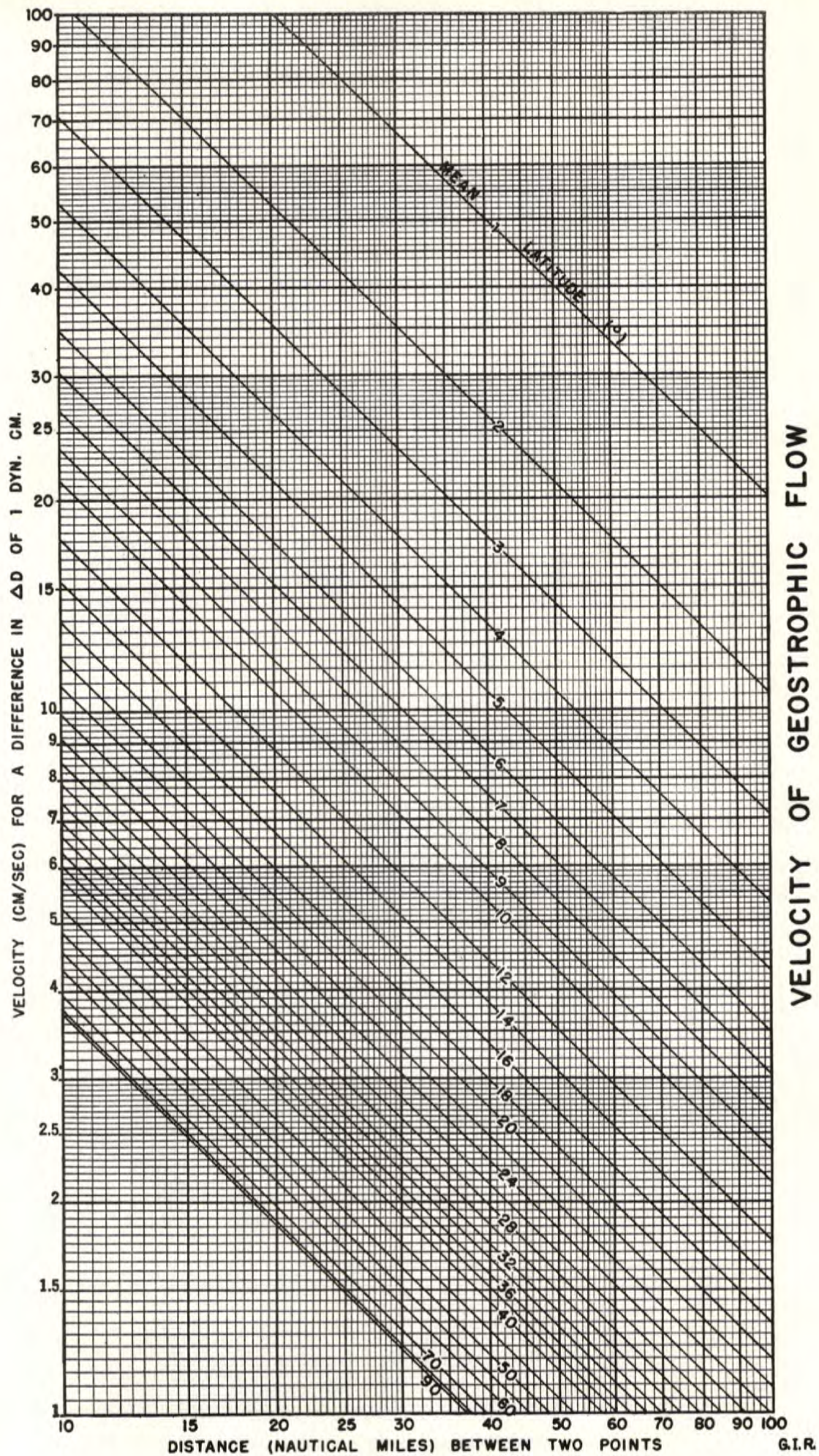
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

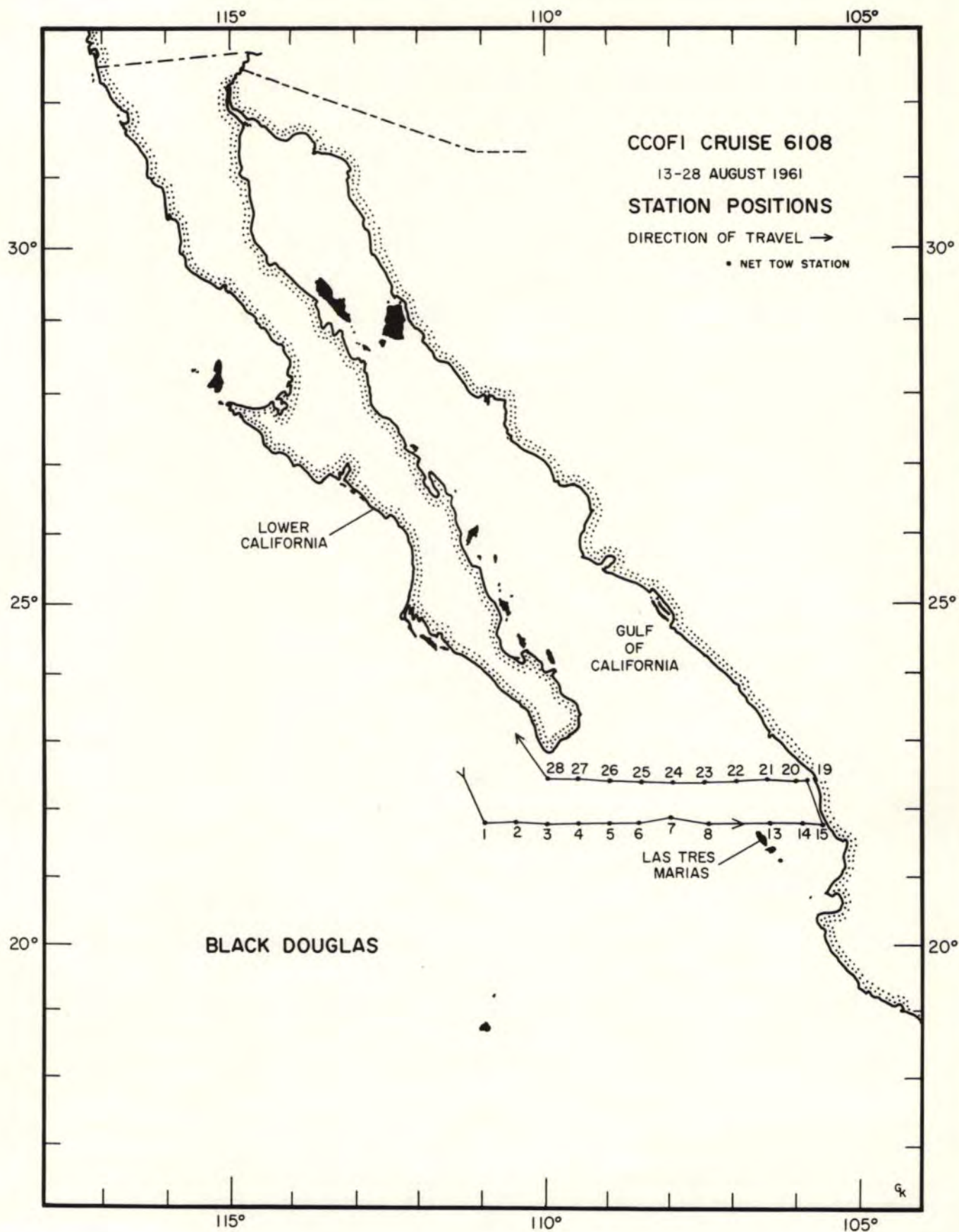
r: rejected value (value seems to be definitely wrong),

u: uncertain value (value may be correct; occasionally it can influence the drawing of the property curve).

FORMAT

These data are typed in the format of the University of California Press publication, Oceanic Observations of the Pacific. So that these pages can be used as copy for the 1961 volume, the first page of Cruise 6107-8 data is numbered 108; Cruise 6108, 174.





PERSONNEL

Cruise 6108

SHIP'S CAPTAIN

Forster, C. W., RV Black Douglas

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV Black Douglas

Berry, Frederick H., Fishery Research Biologist, Bureau of Commercial Fisheries

Bailey, Floyd, Student, San Diego High School

De Witt, Hugh H., Visitor

Dockins, Donald M., Visitor, Stanford University

Kerns, Donald J., Trainee, National Science Foundation

Kiwala, Robert S., Senior Marine Technician

Mattson, Robert, Student, San Diego High School

Meyer, David H., Trainee, National Science Foundation

Navari, Joseph V., Student, Long Beach High School

Perkins, Herbert C., Fishery Aid, Bureau of Commercial Fisheries

Sloan, Phillip R., Student

Tuthill, C. Carr, Senior Museum Zoologist

Wolf, Robert S., Fishery Research Biologist, Bureau of Commercial Fisheries

Wroncy, Donald J., Student, San Diego High School

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
PT-1	VIII-13	1540	21°50.0'	111°00.0'	1650	320°	3	cloudy	rough	26.84	34.48
PT-2	13	1845	21°51.0'	110°30.0'	1600	330°	3	partly cloudy	rough	27.00	34.79
PT-3	13	2235	21°50.0'	109°59.0'	1500	310°	3	partly cloudy	moderate	26.64	34.45
PT-4	14	0145	21°50.0'	109°30.0'	1600	300°	3	cloudy	rough	28.27	34.58
PT-5	14	0455	21°50.0'	109°00.0'	1650	330°	2	partly cloudy	rough	28.52	34.53
PT-6	14	0850	21°52.0'	108°32.0'	1900	300°	2	partly cloudy	moderate	27.97	-
PT-7	14	1220	21°54.0'	108°03.0'	1600	calm		partly cloudy	calm	28.62	34.94
PT-8	14	1555	21°50.0'	107°26.5'	1450	110°	2	partly cloudy	slight	29.63	34.49
PT-13	24	0510	21°50.0'	106°30.0'	350	320°	4	clear	rough	30.44	34.33
PT-14	24	0817	21°50.0'	106°00.0'	27	330°	3	partly cloudy	rough	29.49	34.79
PT-15	24	1055	21°50.0'	105°36.5'	6	330°	3	partly cloudy	moderate	30.30	33.53
PT-19	26	2240	22°31.0'	105°53.0'	13	220°	3	partly cloudy	moderate	29.34	34.88
PT-20	26	2345	22°30.0'	106°03.0'	26	220°	3	partly cloudy	moderate	30.36	34.42
PT-21	27	0230	22°30.0'	106°30.0'	250	280°	2	partly cloudy	moderate	30.00	-
PT-22	27	0603	22°30.0'	107°00.0'	750	250°	1	cloudy	moderate	30.02	35.01
PT-23	27	1100	22°28.0'	107°30.0'	1800	100°	6	overcast	very rough	27.47a)	34.65
PT-24	27	1430	22°28.0'	108°00.0'	1500	220°	1	overcast	rough	29.04	34.60

a) Alternate value, 29.87°C.

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
PT-25	VIII-27	1730	22°28.0'	108°30.0'	1400	var.	-	cloudy	rough	29.04	34.72
PT-26	27	2047	22°29.0'	109°00.0'	1800	210°	1	cloudy	moderate	28.59	34.68
PT-27	28	0050	22°30.0'	109°30.0'	1450	280°	4	cloudy	rough	29.94	35.12
PT-28	28	0445	22°30.0'	110°00.0'	1600	320°	4	cloudy	very rough	29.56	35.03

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

SIO
CCOFI
6108

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