海洋概報

平成 17 年度第5号

2005年10月

第一管区海上保安本部

1 調査概要

1.1 目的

我が国の管轄海域における海況把握を行うため,巡視船による海流観測及び水温観測を実施すると共に,海 難救助等における漂流予測の精度向上のための基礎資料となる流況の収集・解析を行うため.

1.2 調查区域

オホーツク海南西海域 (図1のとおり)

- 1.3 調査期間及び経過概要
- (1) 現地作業期間

観測期間 平成 17 年 8 月 22 日から 8 月 24 日までの 3 日間

(2) 経過概要

平成 17 年 8 月 22 日: 紋別港出港 平成 17 年 8 月 24 日: 紋別港出港

1.4 調查方法

調査方法等は以下のとおり.

(1) 海流観測

機 種:古野電気株式会社製 音波ログ (CI-20-H)

観 測 層:海面下 10・30・50m の3層

(2) 水温観測

機 種:鶴見精機株式会社製 投下式水温深度測定装置 (XBT MK-130)

観 測 層:海底までの連続水温 (プローブは T-6(460m) を使用)

1.5 使用した船舶又は航空機の種別又は名称

紋別海上保安部所属 巡視船「そらち」

2 調査結果

流況を図 2.1 ~ 図 3 に,水温水平分布を図 3.1 ~ 図 3.7,鉛直分布を図 4.1 から図 4.3 に示す. また,表1及び2に,XBT・ADCP 観測成果を示す.

2.1 流況

距岸 15~20 海里内に海岸線に平行な南東方向への宗谷暖流があり,その流速は 1.5~2.0knot 程度である. 暖流域沖合は音稲府岬北東沖には向岸傾向,知床半島北西沖には離岸傾向の流れとなっている.能取岬北沖 では,非常に弱い低気圧性の環流域である. 2.2 水温

宗谷暖流のフロント表層付近には,冷水域が帯状に分布している.この冷水帯は当本部海洋速報において6 月下旬から出現し,以後今回の観測まで存在したものである.また,冷水帯は表層から10m付近までは顕著 であるが,30m以深では存在しない.なお,6月下旬の北海道水産試験場観測資料*1によると,その起源は 「サハリン西岸から連続する」との報告がなされている.

宗谷暖流域と沖合の水域では,明瞭な相違を示しており,30m 層では9~15 台の大きな水温傾度をなし フロントを形成している.また,50m 層において沖合いの水域は0 以下を示しており,オホーツク海中層 水の分布となっている.

2.3 水位差^{*2}

宗谷暖流の駆動力として,日本海とオホーツク海の水位差がその要因として考えられており,水位差と宗谷 暖流には密接な関係があることから,図5に稚内-紋別間の水位差を示す.

参考文献

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[2] 科学技術庁研究調整局、『オホーツク海に関する総合研究報告』(科学技術庁,1981年)

[3] 青田昌秋,『宗谷暖流域の海況変動』(沿岸研究ノート,1984年)

^{*1} 北海道立水産試験「海況速報(平成17年度第2号)」

^{*&}lt;sup>2</sup> 稚内の潮位については,気象庁 WEB サイト [http://www.jma.go.jp] から取得した.



図 2.1: 海 流 図 (10m 層)



図 3: 流 況 図 (50m 層)



図 3.2: 水温水平分布図(10m 層)



図 3.3: 水温水平分布図(20m 層)



図 3.4: 水温水平分布図(30m 層)



図 3.6:水温水平分布図(100m 層)







図 4.1: st.02 - st.36 における水温鉛直断面分布図







図 4.3: st.10 - st.14 における水温鉛直断面分布図

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表 1: XBT,ADCP 観測成果表

-10-

INT	Vel(kt)	0.2	0.0	0.2	0.3	0.6	1.3	1.3	0.3	0.5	0.3	0.8	1.2	0.5	1.9	
CURRE	Dir.	184	342	239	132	153	165	149	197	142	089	161	150	171	176	
	SL (m)	14	12	14	10	17	19	7	10	15	19	9	4	16	ę	
	25	-0.7	-0.7	4.8	4.5					-0.7						
	0	1.1	1.2	11	4.5				0.2	6.0	0.5					
	10	- 6'	- -	Ľ				6	0.	α <u>,</u>		œ.				
	75 400	0-	Ţ	0	e			œ	Ţ	Ŷ	Ŷ	9				
(degC)	50 350	-0.3	-0.6	1.7	6.3	14.9		8.9	0.3	0.3	0.5	6.7			8.7	
Temp.	30 300	1.0	1.0	0.7	0.9	17.2	15.8	9.7	Ξ	2.9	6.8	6.9	14.9	17.2	8.9	
	20 250	6.2	4.8	8.0	5.5	17.9	16.5	9.0	5.3	8.0	17.9	4.5	15.4	17.4	8.8	
	10	18.2	18.5	19.3	17.5	18.2	17.4	11.6	18.1	17.9	18.9	16.5	16.4	19.1	10.6	
	0.0	8.3 0.4	8.5	9.3	8.2	8.2	L.T	3.3	8.1	7.9	8.9	8.3	8.1	9.1	2.9	
) 15	4.	2	1	1	1	1	1	.6	.6	1	1	1	1 0.	0.	
	Air (degC	16	16	16	16	16	16	15	15	15	16	15	15	15	11	
	ATMOS (hPa)	1014.0	1014.0	1014.0	1014.0	1014.0	1014.0	1014.5	1015.0	1015.0	1014.5	1014.5	1014.5	1014.7	1014.5	
	E Class	3	e	з	з	3	3	3	2	2	2	2	2	-	-	
	WAV Dir.	NE	NE	ENE	NE	NE	NNE	ш	ENE	ENE	ш	ш	ш	NNE	ESE	
	ass	4	4	4	4	4	4	4	з	з	4	з	з	з	з	
	WIND	NE	빌	Ш	빌	¥	INE	ш	R	R	ш	ш	ш	۳	SE	
	Di	6	8	0	0	0	4	-	ш 6	ш 6	0	6	0	2	2 E	
	LONG.(E	143-49	143–29	143-20	143–09	143–00	142-44	142–50	142–59	143–09	142–50	142–39	142–30	142-20	142-20	
	AT.(N)	45-00.0	45-10.0	45-00.0	44-50.0	44-40.2	44-53.7	45-00.2	45-10.0	45-20.0	45-30.0	45-20.0	45-10.0	45-19.9	45-32.9	
	ME L ST)	0731	0613	0524	0434	0344	0237	0208	0121	0031	2324	2236	2141	2057	2010	
	ΕĴ	823	823	823	823	823	823	823	823	823	822	822	822	822	822	
	DATE	20050	20050	20050	20050	20050	20050	20050	20050	20050	20050	20050	20050	20050	20050	
	st. No	23	24	25	26	27	28	29	30	31	32	33	34	35	36	

表 2: XBT,ADCP 観測成果表

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図 5: 稚内 - 紋別間の水位差変化 (2005.1 - 2005.8)