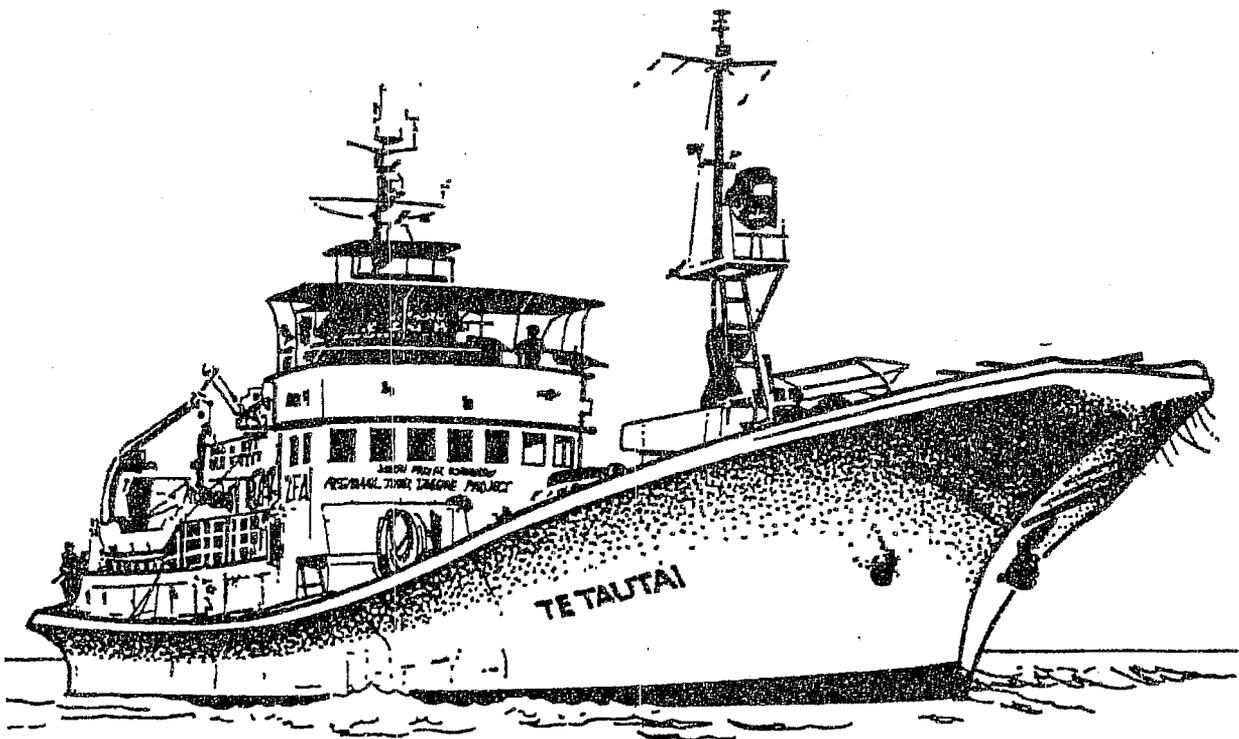


**REGIONAL TUNA TAGGING PROJECT**  
*MONTHLY TAGGING SUMMARY - JULY 1992*



South Pacific Commission  
Noumea, New Caledonia

## FOREWORD

The Regional Tuna Tagging Project commenced in late 1989, with the field work scheduled to run for two years. The Project is funded largely from the Sixth European Development Fund under the Pacific Marine Resources Programme, and is being carried out by the South Pacific Commission's Tuna and Billfish Assessment Programme. The majority of the work is being done from the Project's chartered Tuvaluan pole-and-line vessel, *Te Tautai*, but also incorporates tagging from commercial vessels under short-term charter arrangements or cooperative agreements. Tagging is being carried out in tropical waters between Philippines and Kiribati.

The primary objective of the Project is to gather information on the population dynamics of western Pacific yellowfin, with emphasis on the estimation of movement patterns, mortality rates and growth. This information will enable an assessment of the status of the fishery and allow a variety of interaction questions to be addressed. Similar information is also being collected for skipjack and bigeye.

The objective of this monthly summary is to provide up-to-date information on the results of the field work to those individuals or agencies cooperating with the Project and to those with a specific interest in tuna tagging projects of this sort. Inquiries regarding any of the information presented in the summaries should be directed to :

Chief Fisheries Scientist  
Tuna and Billfish Assessment Programme  
B.P. D5  
NOUMEA CEDEX  
New Caledonia

## ACTIVITIES OF THE TAGGING VESSEL *TE TAUTAI* DURING JULY 1992

The *Te Tautai* was fishing to the north of Cikobia, in northern Fiji, on 1 July, en route for Funafuti, Tuvalu. Five schools were encountered that day and 664 tuna (20 yellowfin, 644 skipjack) were tagged. The vessel reached Funafuti on 3 July and stood down for a two-day break. The *Te Tautai* departed on 5 July for baiting at Nukufetau, and then spent the next three days steaming to Tarawa. Sightings were poor during this transit, and only 10 yellowfin and 11 skipjack were tagged, all in the northern part of the Tuvalu zone.

A load of milkfish was taken on board on 9 July in Tarawa. The vessel then began a three-week trip across the equatorial Pacific, with the ultimate destination the Philippines. As the vessel crossed the Equator and neared Nauru, sightings of logs and other floating debris increased. One log was fished and one yellowfin tagged. A number of schools were encountered close to Nauru and fished on the afternoon of 11 July, resulting in 57 skipjack releases. Fishing 5-11 miles to the west of Nauru on 12 July yielded 835 releases from two large and relatively well-behaved schools of skipjack.

The vessel departed Nauru on 13 July and searched to the southwest, towards the Nuguria Islands in Papua New Guinea. A total of 563 tuna (547 skipjack, 16 yellowfin) were tagged in Nauru waters en route. An area of logs and drifting Philippine-style payaos (FADs) were encountered in the international waters between the Nauru and PNG EEZs on 14 July, and yielded 99 releases (81 yellowfin, 17 skipjack, 1 bigeye). A further 20 yellowfin and 56 skipjack were tagged from one school in northeast PNG waters before the vessel reached Nuguria on 16 July. Two nights were spent in the Nuguria lagoon for baiting before searching to the northwest, along the northern coast of New Ireland, around Tench Island and to the north of Massau and Manus Islands. Numerous schools of small tuna were encountered between Nuguria and Tench but responded poorly to the bait and only 23 yellowfin, 99 skipjack and 2 bigeye were tagged. On 20 July, large schools of yellowfin and skipjack were fished near the Equator to the north of Manus, but again were unresponsive, largely because of the abundance of ocean anchovy (*Stolephorus punctifer*) on which the tuna were feeding. 19 yellowfin, 28 skipjack and 21 bigeye were eventually tagged after five schools were chummed.

The following four days were spent to the north of the Equator. An area of drifting logs found within 40 miles of the Equator on 21 July produced 692 releases (81 yellowfin, 570 skipjack, 41 bigeye). As the vessel searched further to the north, however, schools and floating objects became rare, and from 22-24 July releases were limited to 50 yellowfin, 22 skipjack and 5 bigeye. On the morning of 24 July, the bait supply on board was exhausted, and the vessel stopped searching and steamed directly for Helen Reef.

On reaching Helen Reef on 25 July, RTTP core activities officially ceased. The following three months of operations will be under the auspices of the Philippines Tuna Research Project (PTRP). An extension of RTTP field activities is expected to recommence in the Coral Sea in early November and finish in New Caledonia in late December.

### RELEASES TO DATE

JULY (1-31)	YELLOWFIN RELEASES	SKIPJACK RELEASES	BIGEYE RELEASES	OTHER RELEASES	TOTAL TAGGED
Te Tautai	321	2,886	70	0	3,277
<u>TOTALS AS AT</u> 31 JULY 1992					
Soltai 6, 8, 12	574	7,729	1	0	8,304
Nei Kaneati	1,058	3,165	43	0	4,266
Trapper/Sunbird	930	2,824	4	0	3,758
Te Tautai	29,727	75,555	6,153	82	111,517
Japanese GS	144	118	30	0	292
<b>GRAND TOTAL</b>	<b>32,433</b>	<b>89,391</b>	<b>6,231</b>	<b>82</b>	<b>128,137</b>

## PATTERN OF RECOVERIES

Only 73 tag returns were received during July - 19 yellowfin, 41 skipjack and 13 bigeye. Most recoveries were received from U.S. purse seiners (31), Japanese purse seine and pole-and-line vessels (25) and Australian coastal longliners (15).

The July returns included :-

- recaptures in the Coral Sea of medium-sized bigeye (9) and yellowfin (6) tagged there during October/November, and showing considerable growth after periods of up to 258 days at liberty;
- long-term easterly-directed movements of both yellowfin and skipjack (6 over 2000 nm), including Yap to Tokelau;
- recaptures of four yellowfin over 100 cm by purse seiners.

The total number of returns is now over 12,000, for interim return rates of 9.1% for yellowfin, 9.9% for skipjack, and 4.1% for bigeye.

## CANNERY/TRANSHIPMENT RECOVERIES

Note : In many cases we have been able to trace tags back to the recapture vessel.

### A) YELLOWFIN

COUNTRY	JULY (1-31) RECOVERIES	TOTAL RECOVERIES TO 31 JULY 1992
Solomon Islands	0	0
United States	0	0
Japan	0	0
Philippines	0	282
Korea	0	0
Tinian	0	57
Palau	0	0
Indonesia	0	9
Puerto Rico	5	31
Thailand	0	487
American Samoa	3	204
Marshall Islands	0	0
Other/Unknown	0	2
<b>TOTALS</b>	<b>8</b>	<b>1072</b>

### B) SKIPJACK

COUNTRY	JULY (1-31) RECOVERIES	TOTAL RECOVERIES TO 31 JULY 1992
Solomon Islands	0	0
United States	0	2
Japan	0	0
Philippines	0	738
Korea	0	0
Tinian	0	117
Palau	0	0
Indonesia	0	48
Puerto Rico	1	76
Thailand	0	1204
American Samoa	22	781
Marshall Islands	0	0
Other/Unknown	0	1
<b>TOTALS</b>	<b>23</b>	<b>2967</b>

### C) BIGEYE

COUNTRY	JULY (1-31) RECOVERIES	TOTAL RECOVERIES TO 31 JULY 1992
Solomon Islands	0	0
United States	0	0
Japan	0	0
Philippines	0	22
Korea	0	0
Tinian	0	18
Palau	0	0
Indonesia	0	0
Puerto Rico	1	3
Thailand	0	19
American Samoa	1	12
Marshall Islands	0	0
Other/Unknown	0	1
<b>TOTALS</b>	<b>2</b>	<b>73</b>

## RECOVERIES TO DATE

(PS = purse seine, P/L = pole-and-line, LL = longline, T = trolling, U = unknown)

Note: The "Other/Unknown" column includes recoveries from the To Teutai.

### A) YELLOWFIN

NATIONALITY OF RECAPTURE VESSEL	JULY (1-31) RECOVERIES							TOTAL RECOVERIES TO 31 JULY 1992						
	TYPE OF FISHING GEAR USED							TYPE OF FISHING GEAR USED						
	PS	P/L	LL	T	H	U	TOT.	PS	P/L	LL	T	H	U	TOT.
Solomon Islands	0	0	0	0	0	0	0	177	35	0	2	0	1	215
United States	8	0	0	0	0	0	8	295	0	0	0	0	0	295
Japan	4	0	0	0	0	1	5	423	1	0	0	0	8	432
Philippines	0	0	0	0	0	0	0	794	0	1	9	22	5	831
Korea	0	0	0	0	0	0	0	205	0	0	0	0	0	205
Taiwan	0	0	0	0	0	0	0	188	0	0	0	0	0	188
Palau	0	0	0	0	0	0	0	0	8	0	0	0	1	9
Indonesia	0	0	0	0	0	0	0	36	424	0	0	26	0	486
USSR	0	0	0	0	0	0	0	1	0	0	0	0	0	1
FSM	0	0	0	0	0	0	0	8	0	0	2	5	0	15
Kiribati	0	0	0	0	0	0	0	0	5	0	2	0	0	7
Fiji	0	0	0	0	0	0	0	0	26	0	0	0	0	26
Other/Unknown	0	0	6	0	0	0	6	181	39	8	3	0	1	232
<b>TOTALS</b>	<b>12</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>19</b>	<b>2308</b>	<b>532</b>	<b>9</b>	<b>18</b>	<b>53</b>	<b>16</b>	<b>2942</b>

### B) SKIPJACK

NATIONALITY OF RECAPTURE VESSEL	JULY (1-31) RECOVERIES							TOTAL RECOVERIES TO 31 JULY 1992						
	TYPE OF FISHING GEAR USED							TYPE OF FISHING GEAR USED						
	PS	P/L	LL	T	H	U	TOT.	PS	P/L	LL	T	H	U	TOT.
Solomon Islands	0	0	0	0	0	0	0	925	660	0	8	0	6	1599
United States	21	0	0	0	0	0	21	948	0	1	0	0	0	949
Japan	10	4	0	0	0	4	18	1278	101	0	0	0	6	1385
Philippines	0	0	0	0	0	0	0	1721	0	0	118	73	28	1938
Korea	0	0	0	0	0	0	0	460	0	0	0	0	0	460
Taiwan	2	0	0	0	0	0	2	610	0	0	0	0	0	610
Palau	0	0	0	0	0	0	0	0	52	0	1	0	0	53
Indonesia	0	0	0	0	0	0	0	31	776	0	1	32	2	842
USSR	0	0	0	0	0	0	0	1	0	0	0	0	0	1
FSM	0	0	0	0	0	0	0	8	0	0	11	1	0	20
Kiribati	0	0	0	0	0	0	0	0	66	0	5	0	0	73
Fiji	0	0	0	0	0	0	0	0	461	0	0	0	0	461
Other/Unknown	0	0	0	0	0	0	0	295	142	0	5	2	2	448
<b>TOTALS</b>	<b>33</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>41</b>	<b>6277</b>	<b>2260</b>	<b>1</b>	<b>149</b>	<b>108</b>	<b>42</b>	<b>8937</b>

### C) BIGEYE

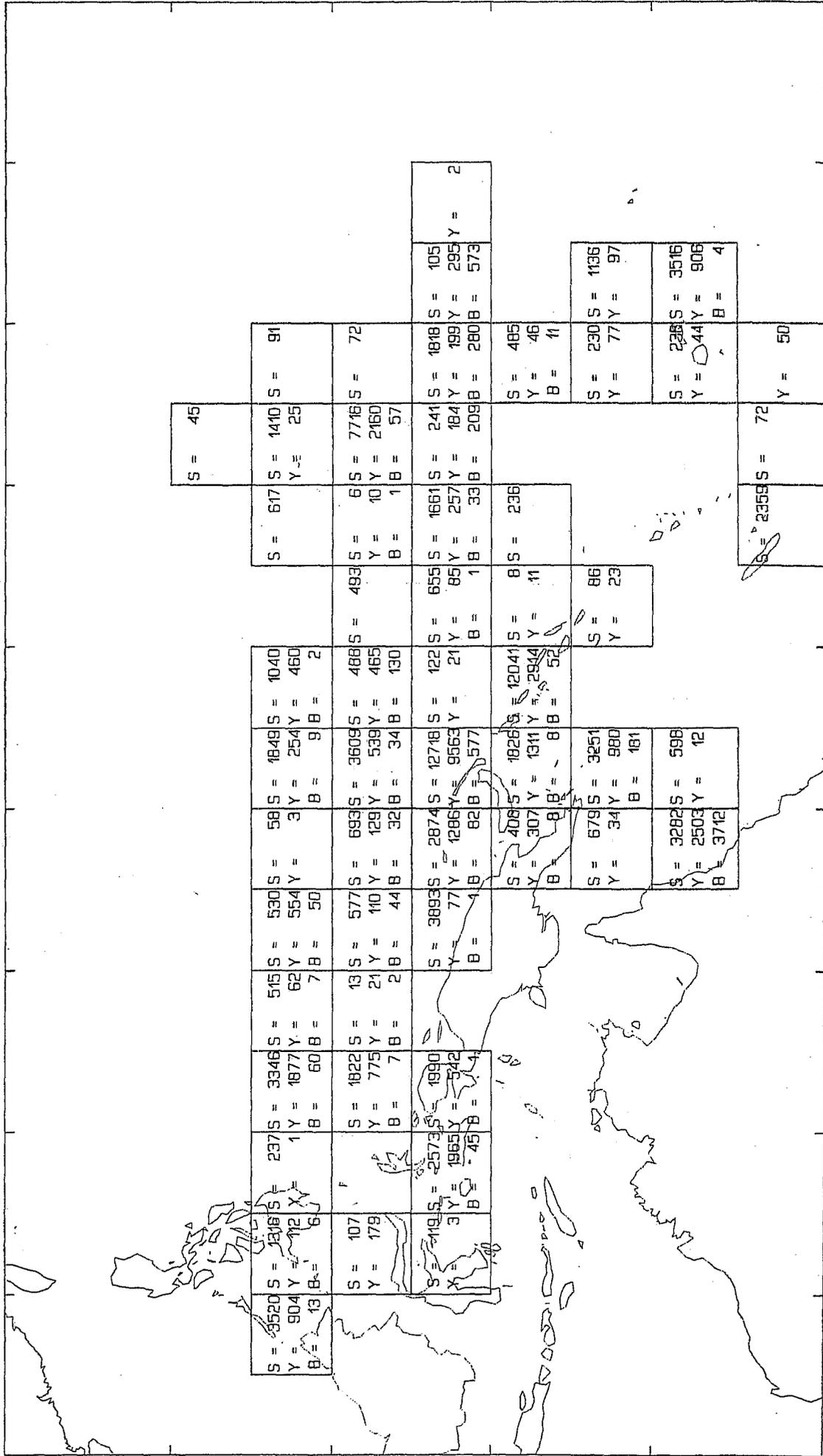
NATIONALITY OF RECAPTURE VESSEL	JULY (1-31) RECOVERIES							TOTAL RECOVERIES TO 31 JULY 1992						
	TYPE OF FISHING GEAR USED							TYPE OF FISHING GEAR USED						
	PS	P/L	LL	T	H	U	TOT.	PS	P/L	LL	T	H	U	TOT.
Solomon Islands	0	0	0	0	0	0	0	9	0	0	0	0	0	9
United States	2	0	0	0	0	0	2	60	0	0	0	0	0	60
Japan	1	0	0	0	0	1	2	40	0	2	0	0	2	44
Philippines	0	0	0	0	0	0	0	46	0	0	0	0	0	46
Korea	0	0	0	0	0	0	0	9	0	0	0	0	0	9
Taiwan	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Palau	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0	0	2	8	0	0	1	1	12
USSR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FSM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiribati	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fiji	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Other/Unknown	0	0	9	0	0	0	9	11	47	9	0	0	1	68
<b>TOTALS</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>13</b>	<b>182</b>	<b>66</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>254</b>

**GRAND TOTAL**

**12,033**

110E 120E 130E 140E 150E 160E 170E 180W 170W 160W

15N 05N 05S 15S



S = 45

S = 617 S = 1410 S = 91  
Y = 25

S = 6 S = 7716 S = 72  
Y = 10 Y = 2160  
B = 1 B = 57

S = 655 S = 1661 S = 241 S = 1818 S = 105  
Y = 85 Y = 257 Y = 184 Y = 199 Y = 295 Y = 2  
B = 1 B = 33 B = 209 B = 280 B = 573

S = 485  
Y = 46  
B = 11

S = 230 S = 1136  
Y = 77 Y = 97

S = 228 S = 3516  
Y = 44 Y = 906  
B = 4

S = 2359 S = 72  
Y = 90

S = 58 S = 1848 S = 1040  
Y = 3 Y = 254 Y = 460  
B = 9 B = 2

S = 488 S = 488 S = 488  
Y = 129 Y = 538 Y = 465  
B = 34 B = 130

S = 655 S = 1661 S = 241 S = 1818 S = 105  
Y = 85 Y = 257 Y = 184 Y = 199 Y = 295 Y = 2  
B = 1 B = 33 B = 209 B = 280 B = 573

S = 408 S = 1026 S = 1204 S = 236  
Y = 307 Y = 1311 Y = 2844 Y = 11  
B = 8 B = 8 B = 52

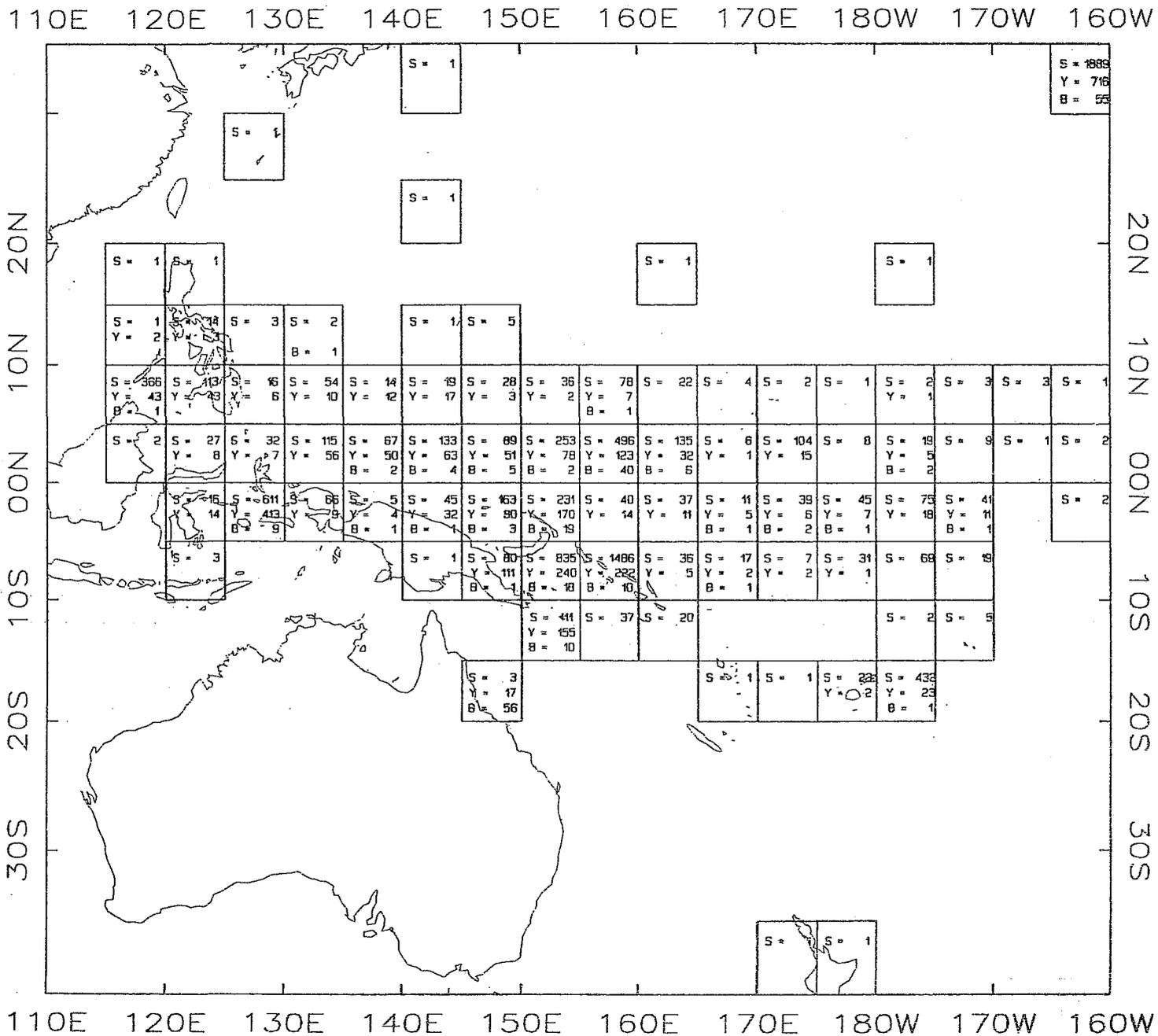
S = 86  
Y = 23

S = 679 S = 3251  
Y = 34 Y = 980  
B = 161

S = 3202 S = 598  
Y = 2503 Y = 12  
B = 3712

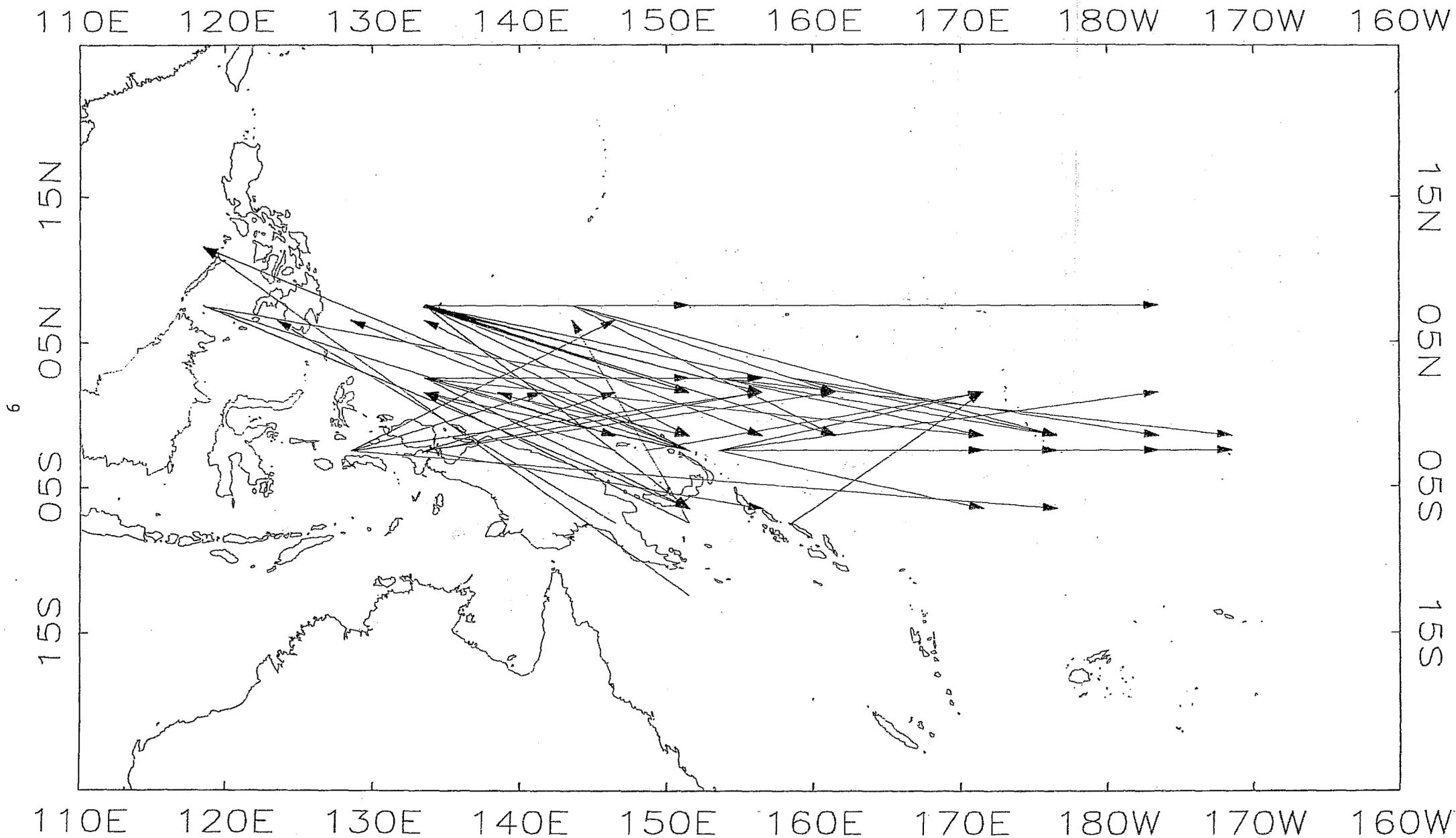
15N 05N 05S 15S

110E 120E 130E 140E 150E 160E 170E 180W 170W 160W

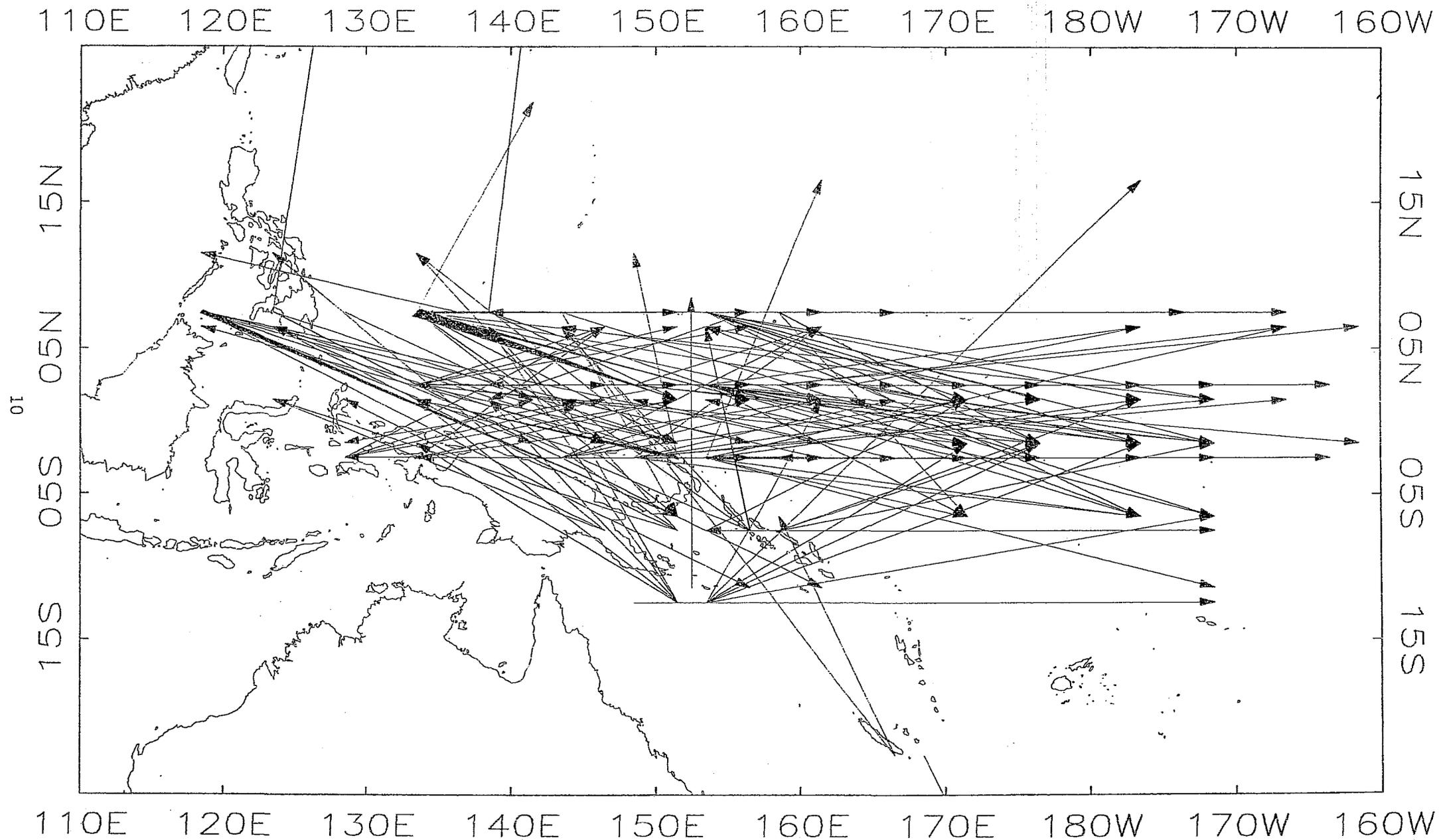


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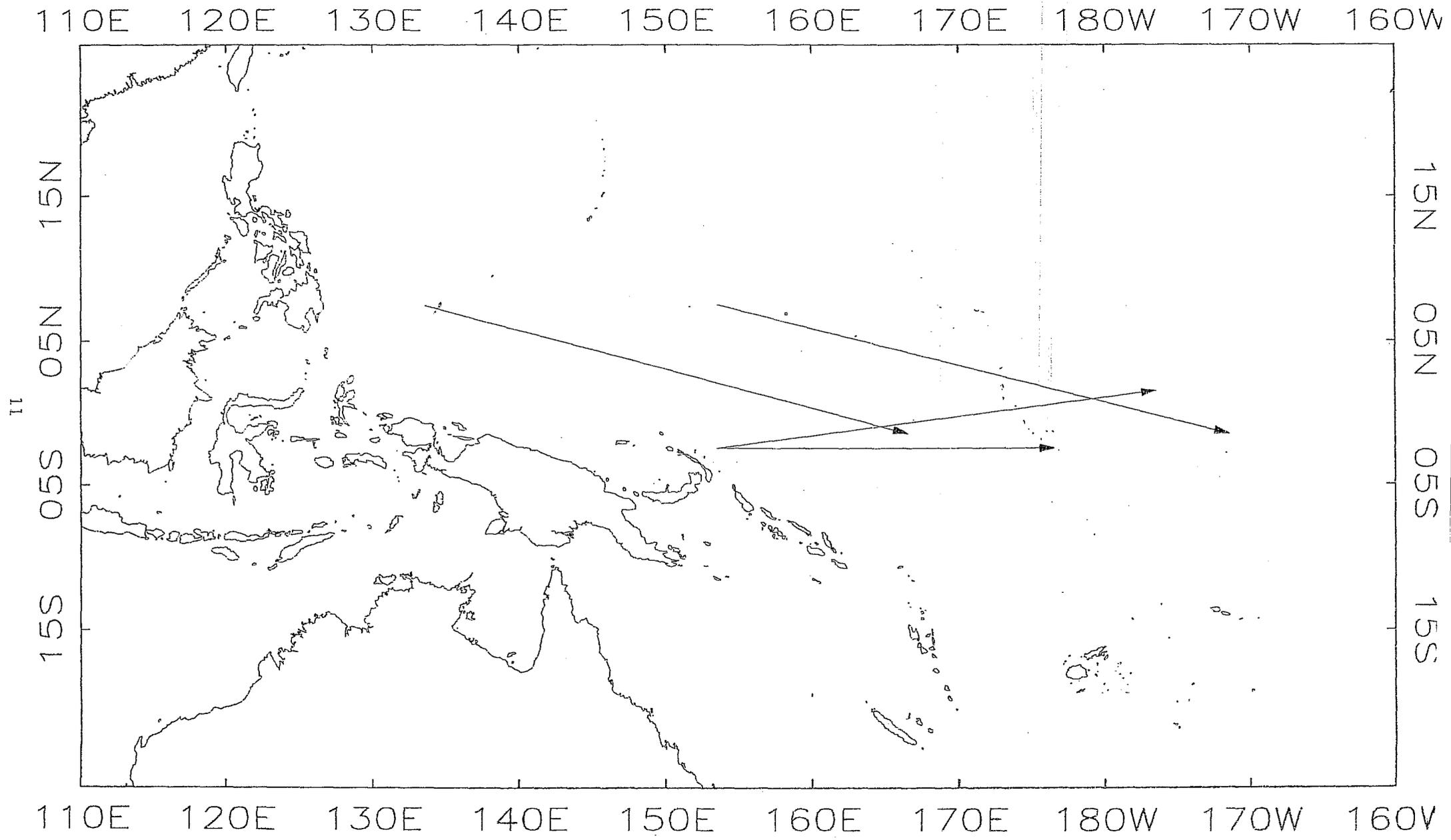
Regional Tuna Tagging Project - RECAPTURES as at 31-JUL-92 (Recaptures with incomplete information are in top right corner)



Movements of tagged yellowfin between five-degree squares. (> 1000 nautical miles only).



Movements of tagged skipjack between five-degree squares. (> 1000 nautical miles only).



Movements of tagged bigeye between five-degree squares. (> 1000 nautical miles only).