

Research Paper No.3
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Statistical Paths of Typhoons
In 45 Years, 1950-1994

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STORM DATA PROJECT

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1. INTRODUCTION

Western Pacific is the specific region in the world where the largest number of typhoons (equivalent to tropical storms and hurricanes in the Atlantic) occur annually.

The mapping capability of typhoon locations has been improving since 1884. Weather satellites, since April 1, 1960, resulted in a quantum leap of both typhoon tracking and its accuracy.

Presented in this paper is the best-possible maps of the various aspect of hurricane paths as evidenced by the individual path along with the central pressure and its time variations (deepening and filling).

Typhoon tracks were mapped by months, by decades, and by central pressure in an attempt to visualize their variations along the paths. Composite path maps, thus produced, are very useful in determining the geographic locations where various events took place during the 45 statistical years, 1950-94.



2. PATHS OF TYPHOONS

(1950-94)

By Central Pressure..... 4

By Deepening 5

By Filling 6

By Deepening and Filling 7



Paths of 1231 Typhoons (1950-94)

By Central Pressure

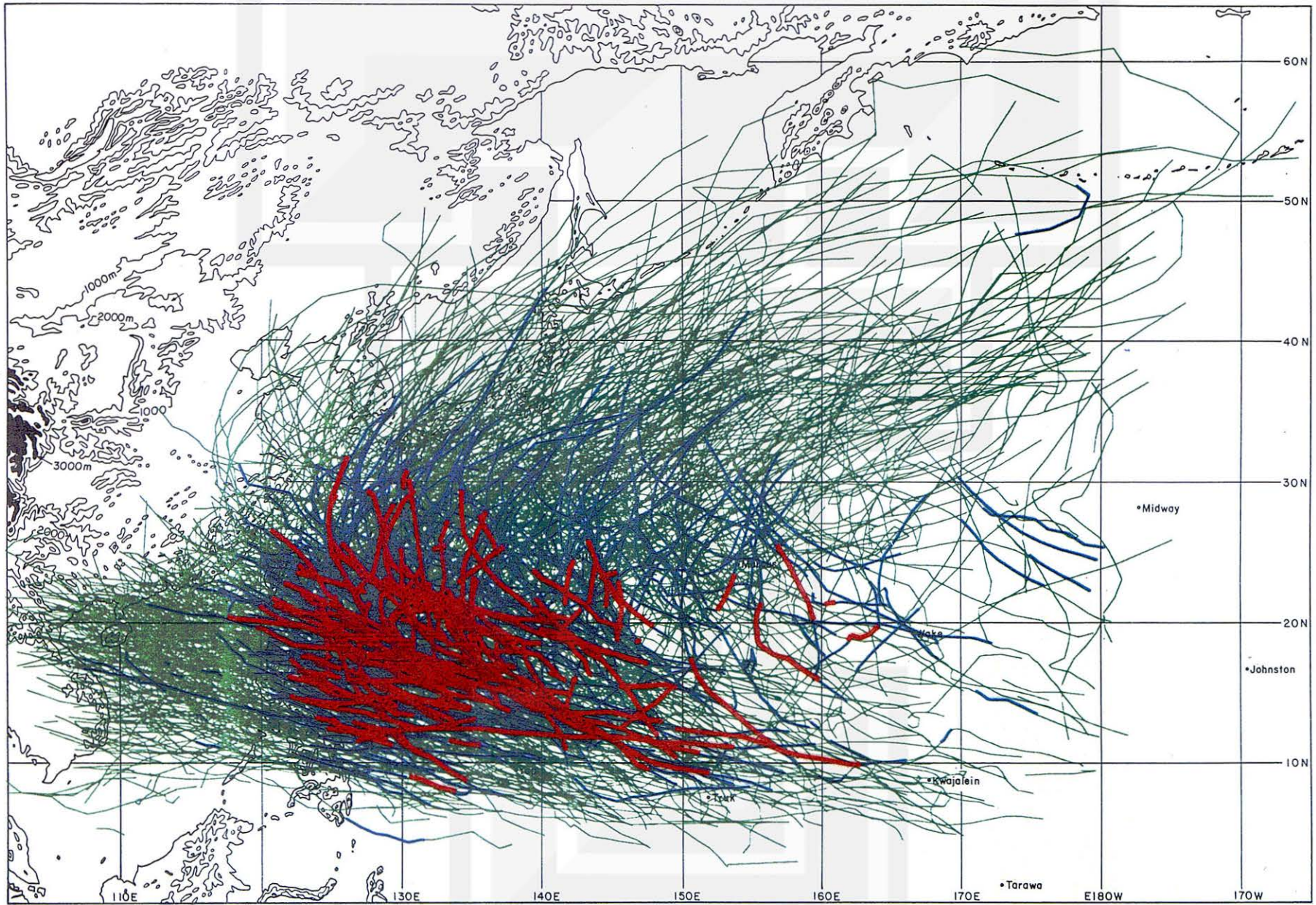


Fig. 1 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 1231 Typhoons (1950-94)

By Deepening

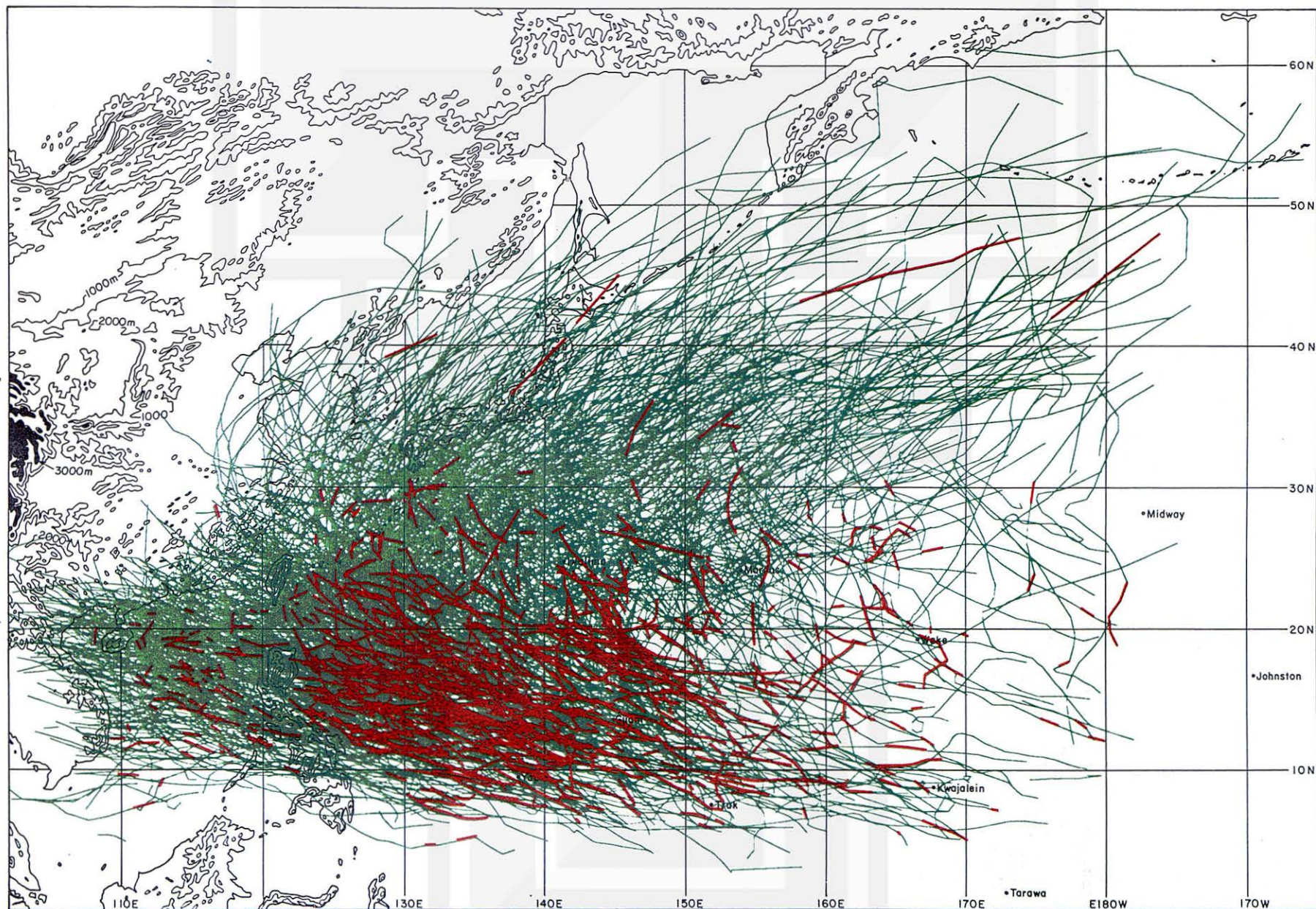


Fig. 2 By Deepening: less than 1 mb/hour (green), greater than 1 mb/hour (red)

Paths of 1231 Typhoons (1950-94)

By Filling

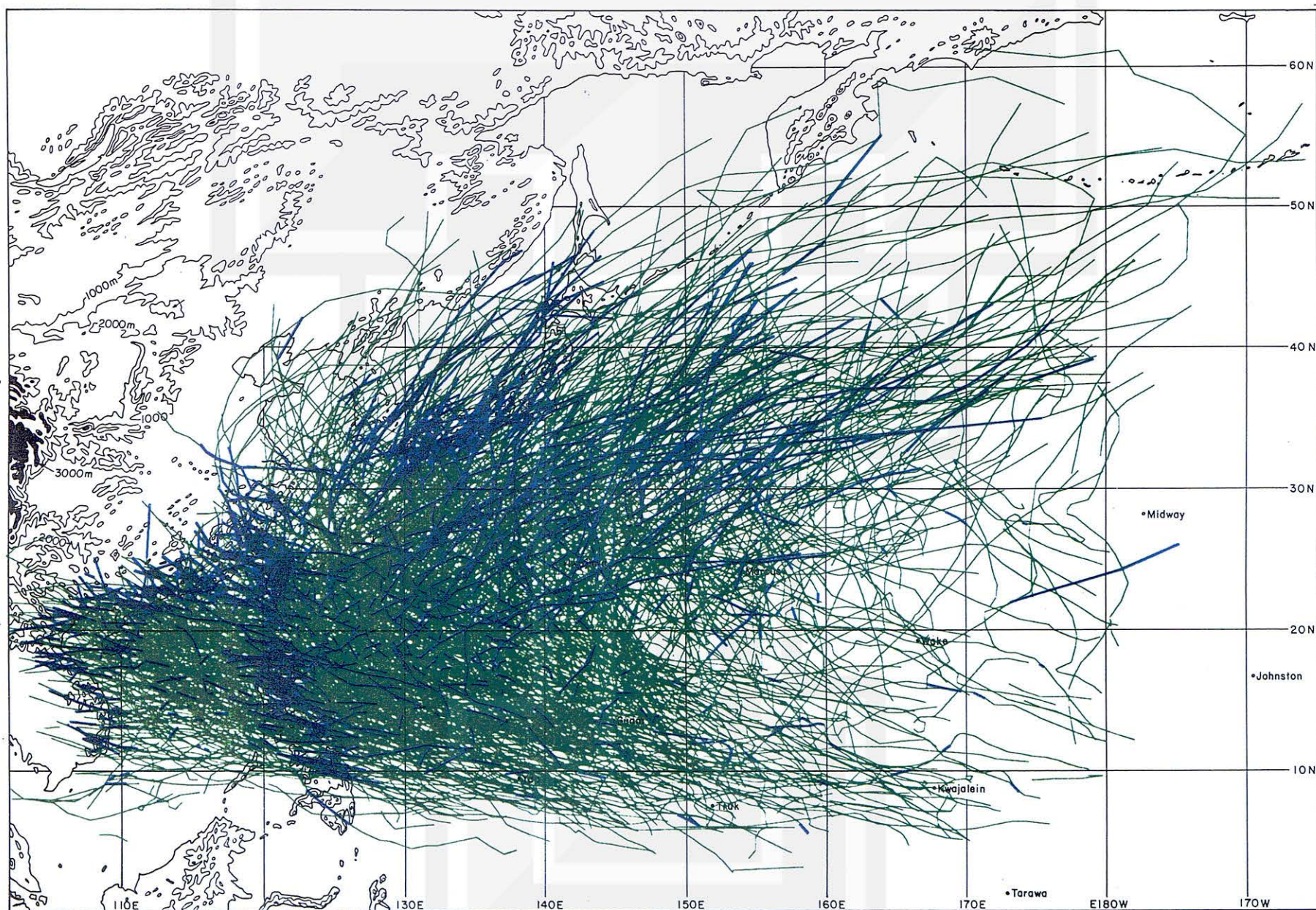


Fig. 3 By Filling : less than 1 mb/hour (green), greater than 1 mb/hour (blue)

Paths of 1231 Typhoons (1950-94)

By Deepening and Filling

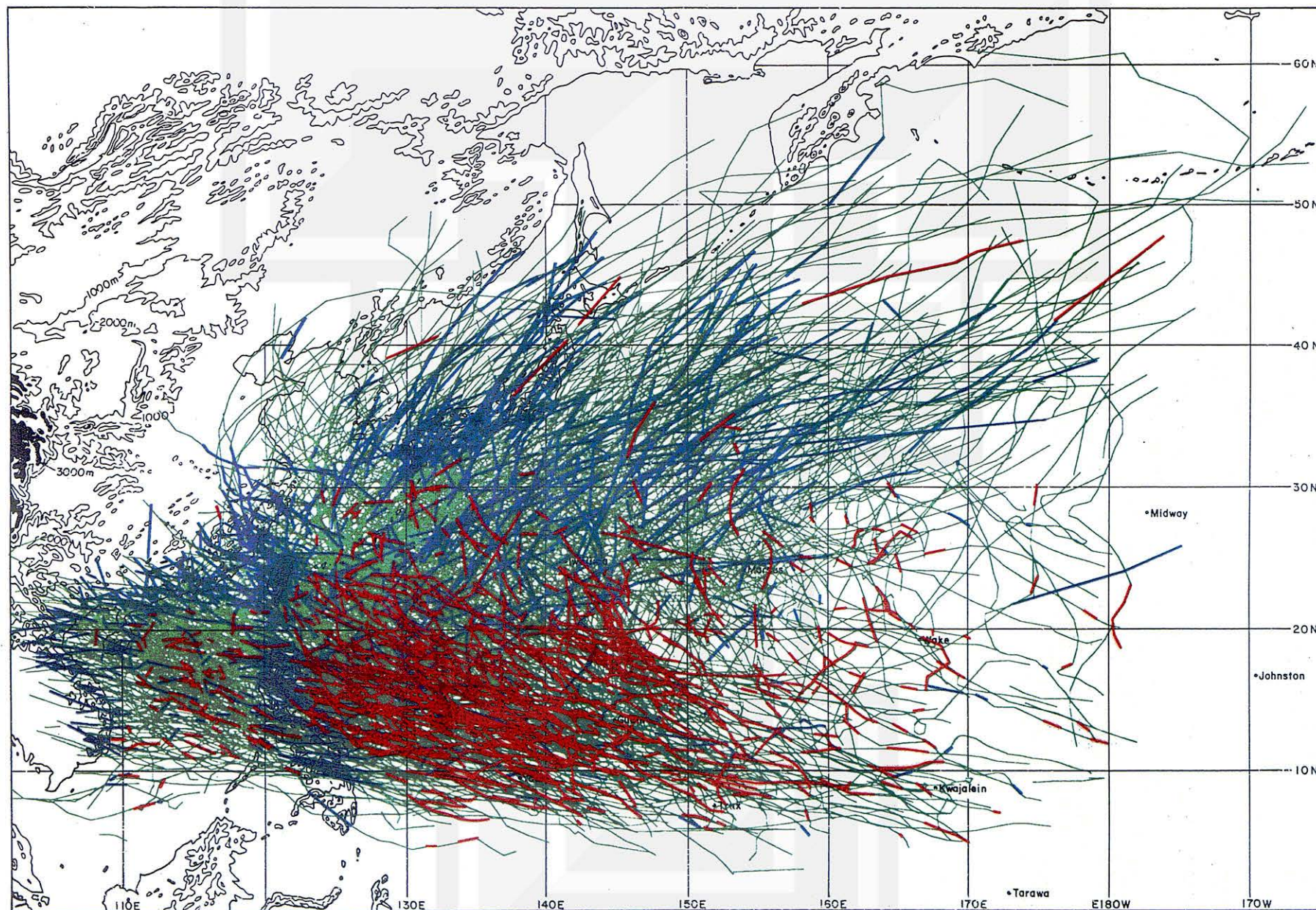


Fig. 3a By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

3. PATHS OF TYPHOONS

(1950-94)

by Decades

| | | |
|------------------|-----------------------------|----|
| 1950 - 59 | Central Pressure | 9 |
| | Deepening and Filling | 10 |
| 1960 - 69 | Central Pressure | 11 |
| | Deepening and Filling | 12 |
| 1970 - 79 | Central Pressure | 13 |
| | Deepening and Filling | 14 |
| 1980 - 89 | Central Pressure | 15 |
| | Deepening and Filling | 16 |
| 1990 - 94 | Central Pressure | 17 |
| | Deepening and Filling | 18 |

Paths of 250 Typhoons (1950-59)

By Central Pressure

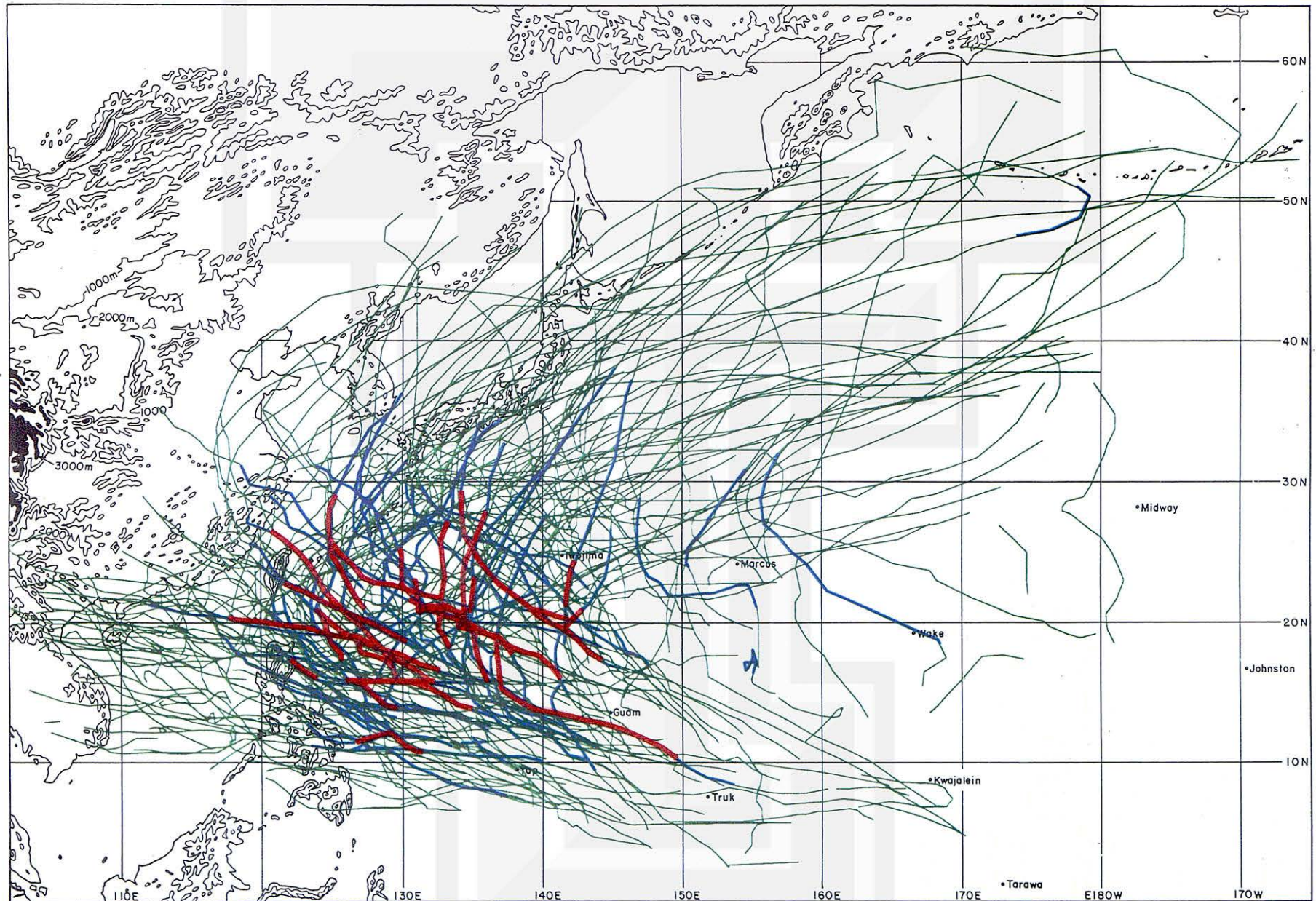


Fig. 4 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 250 Typhoons (1950-59)

By Deepening and Filling

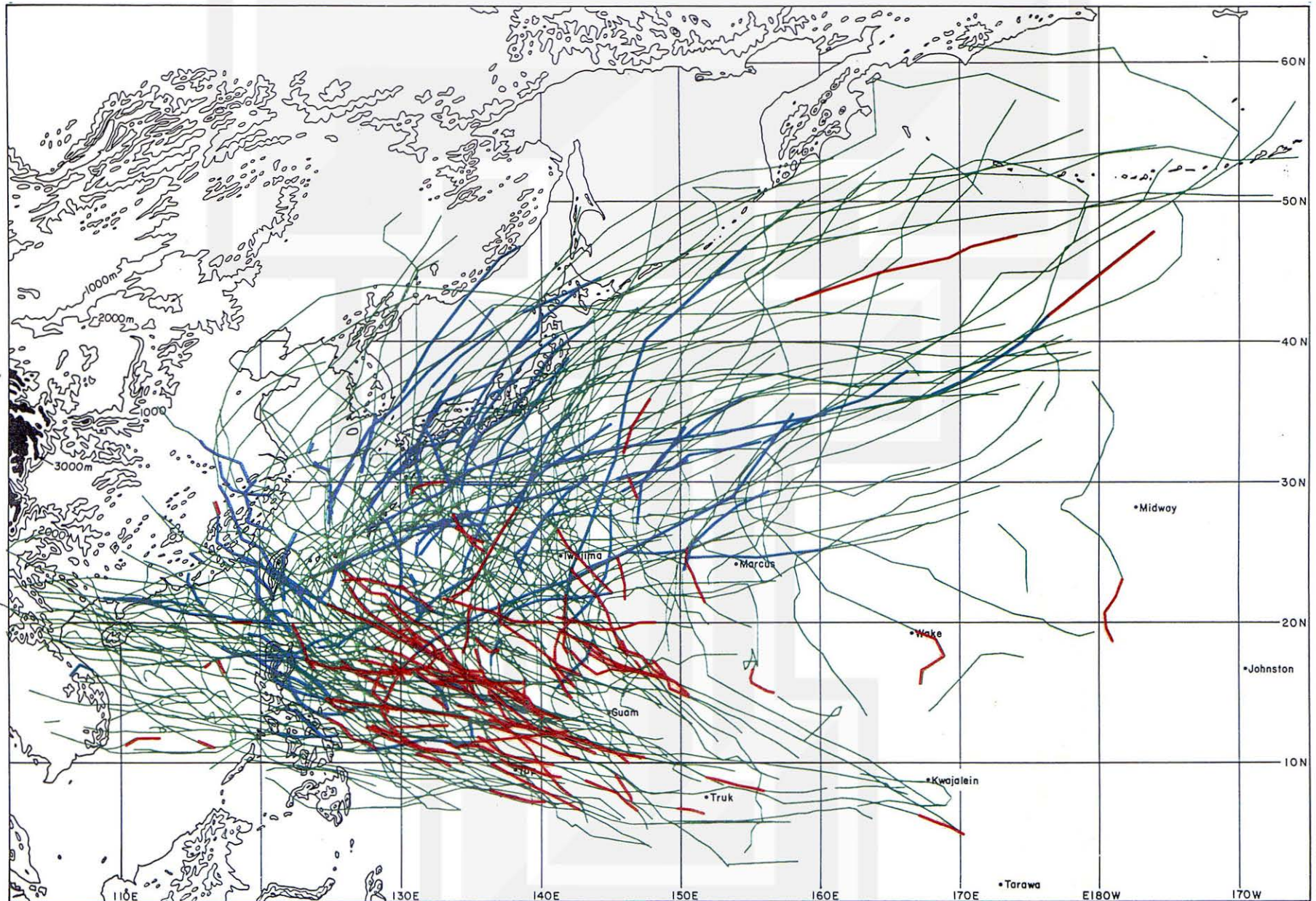


Fig. 5 By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

Paths of 293 Typhoons (1960-69)

By Central Pressure

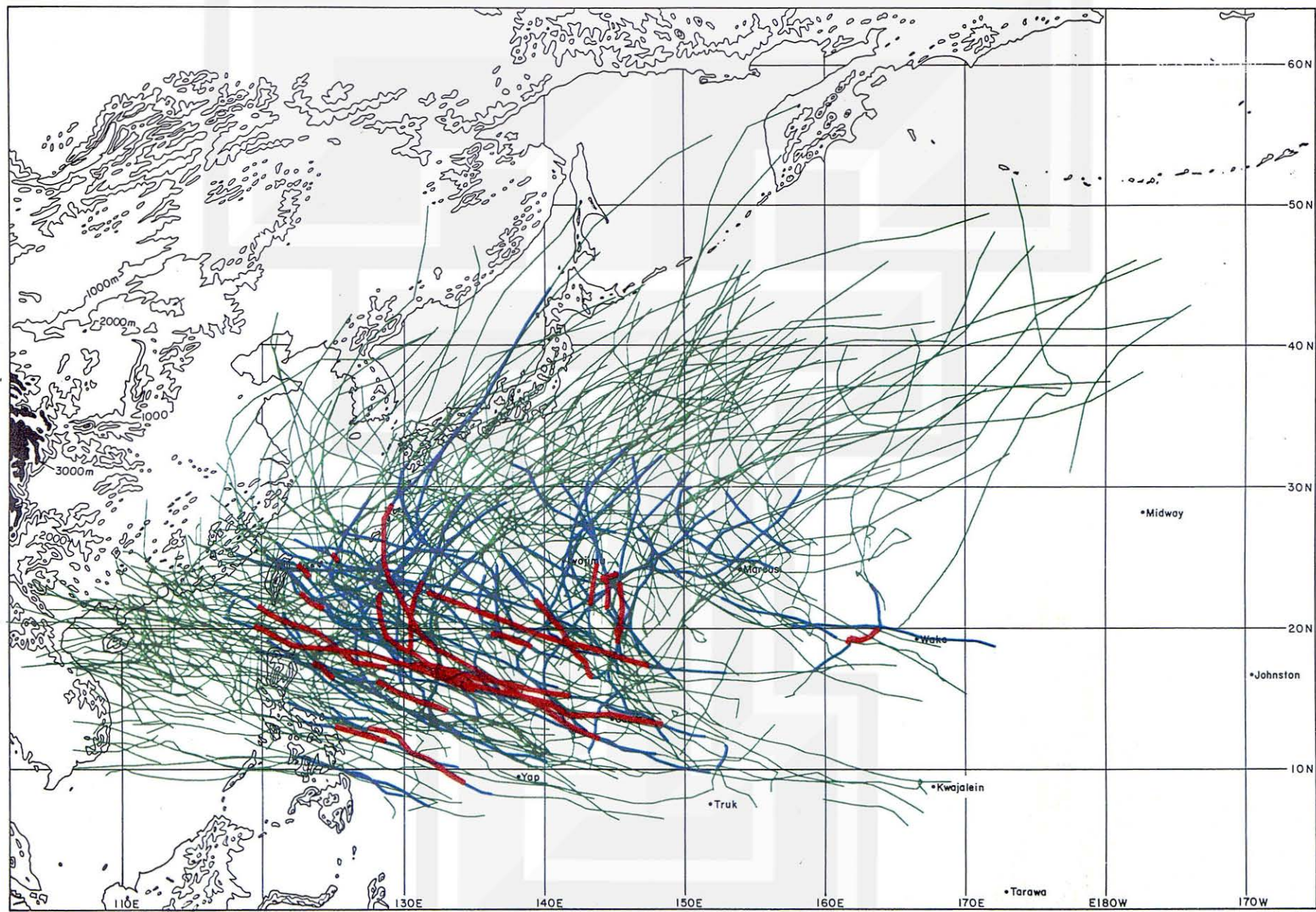


Fig. 6 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 293 Typhoons (1960-69)

By Deepening and Filling

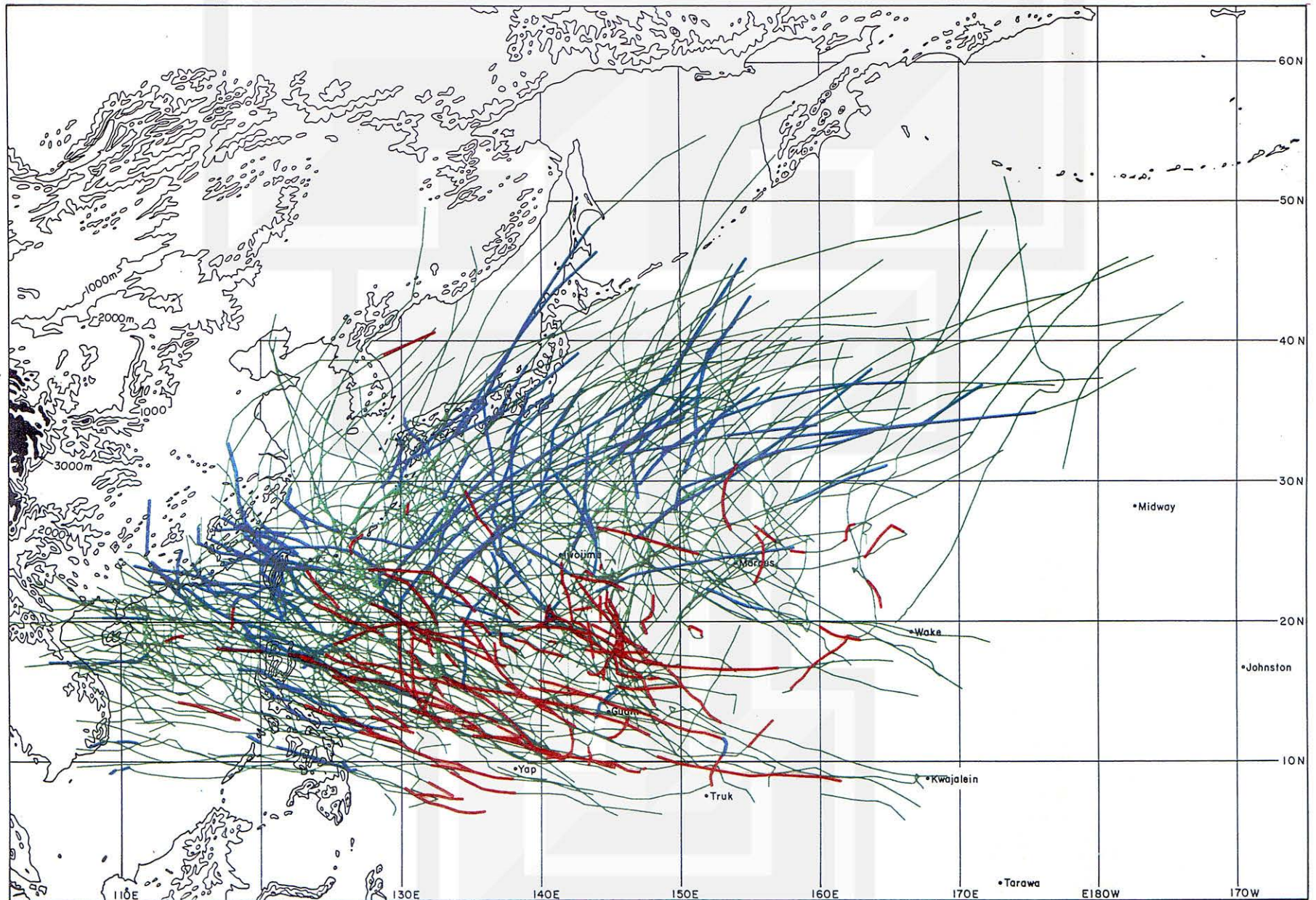


Fig. 7 By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

Paths of 265 Typhoons (1970-79)

By Central Pressure

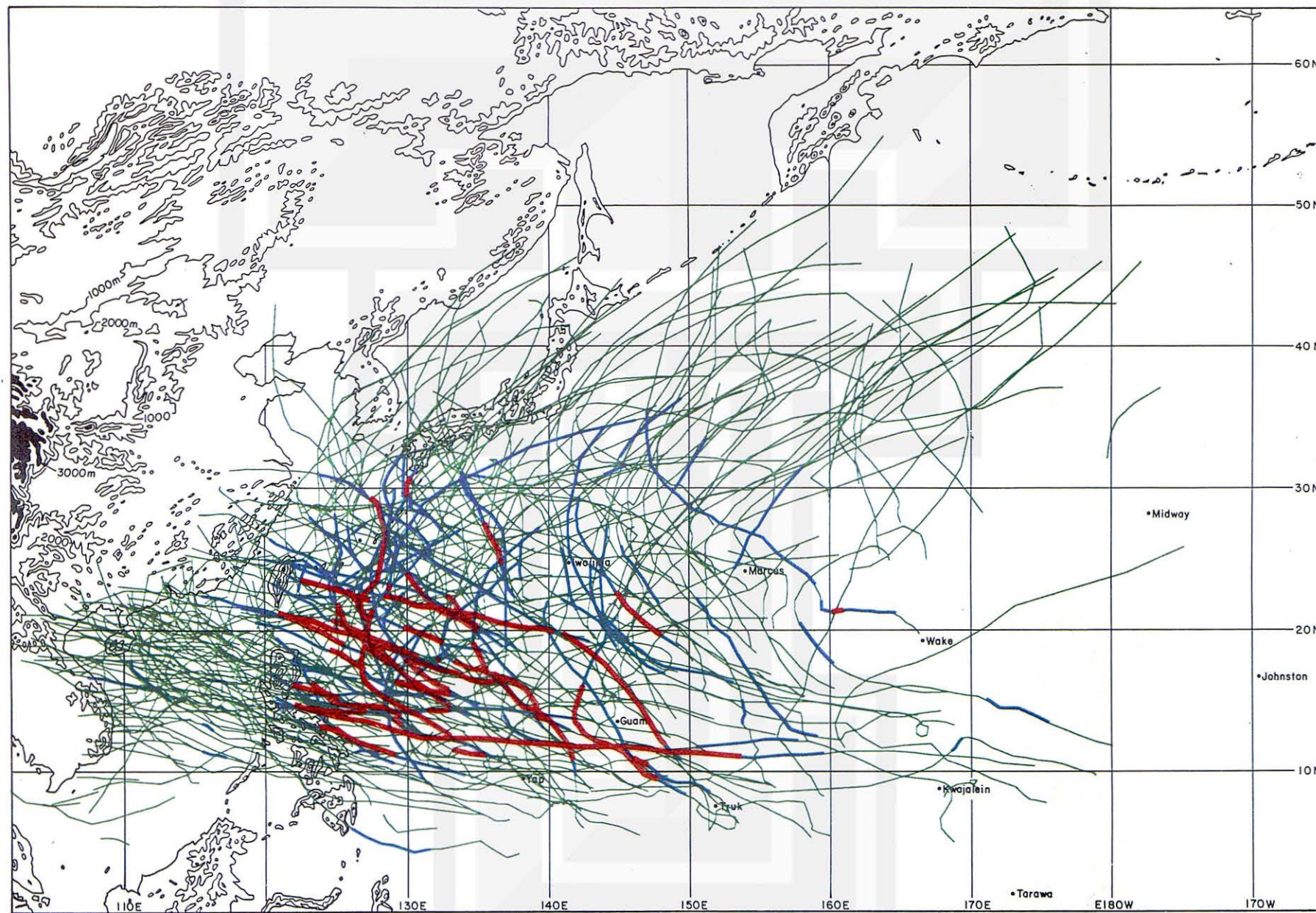


Fig. 8 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 265 Typhoons (1970-79)

By Deepening and Filling

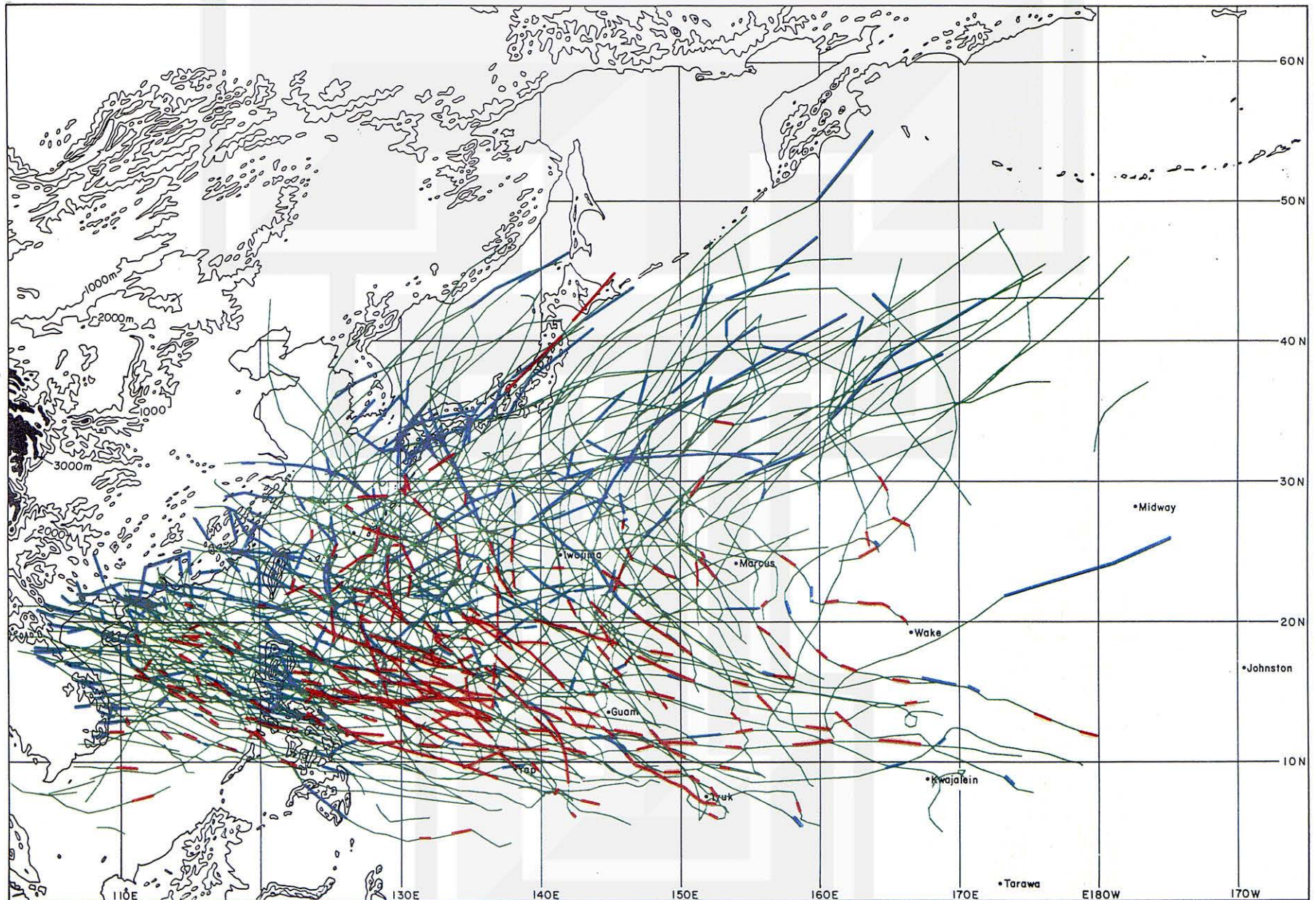


Fig. 9 By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

Paths of 270 Typhoons (1980-89)

By Central Pressure

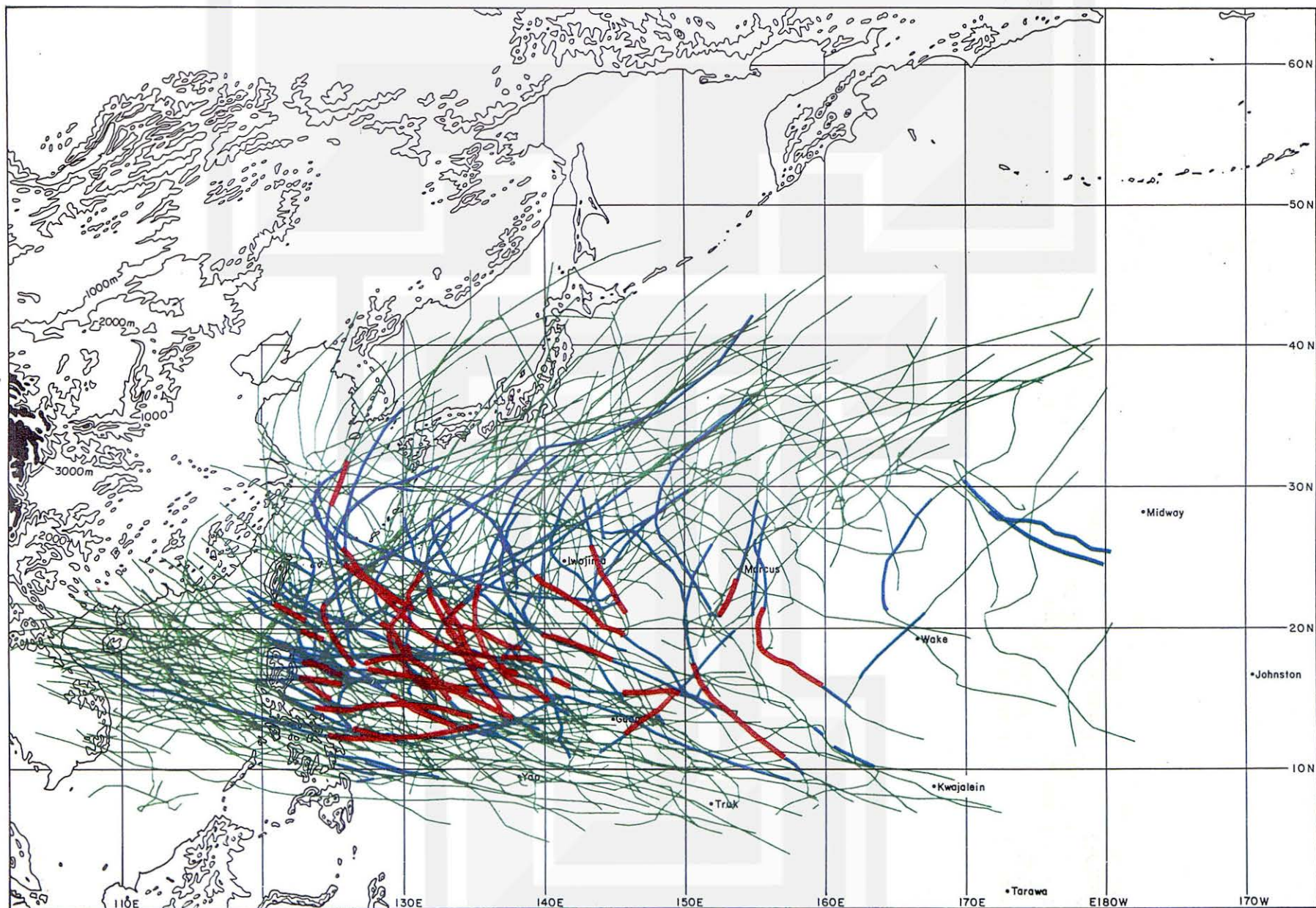


Fig. 10 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 270 Typhoons (1980-89)

By Deepening and Filling

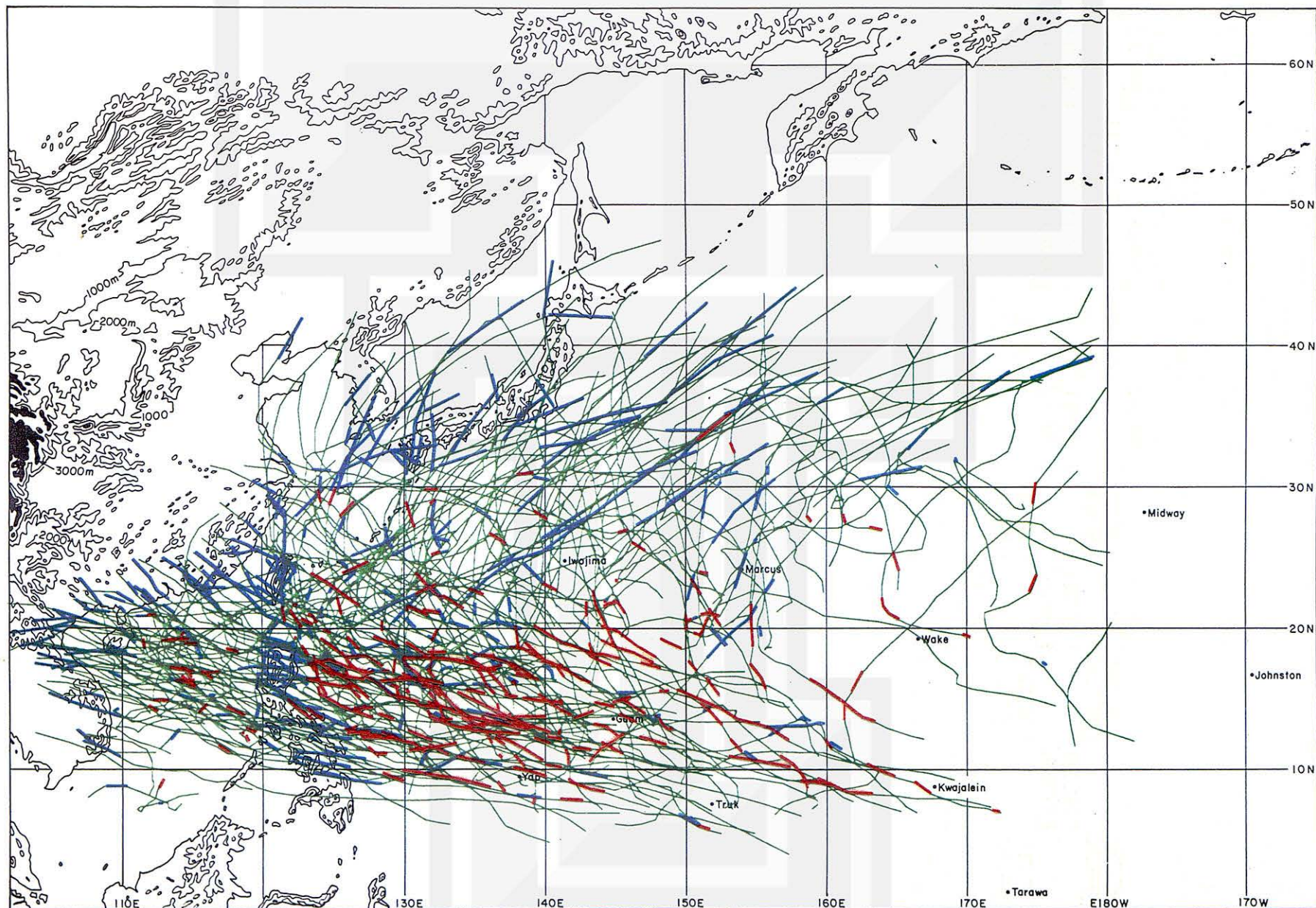


Fig. 11 By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

Paths of 153 Typhoons (1990-94)

By Central Pressure

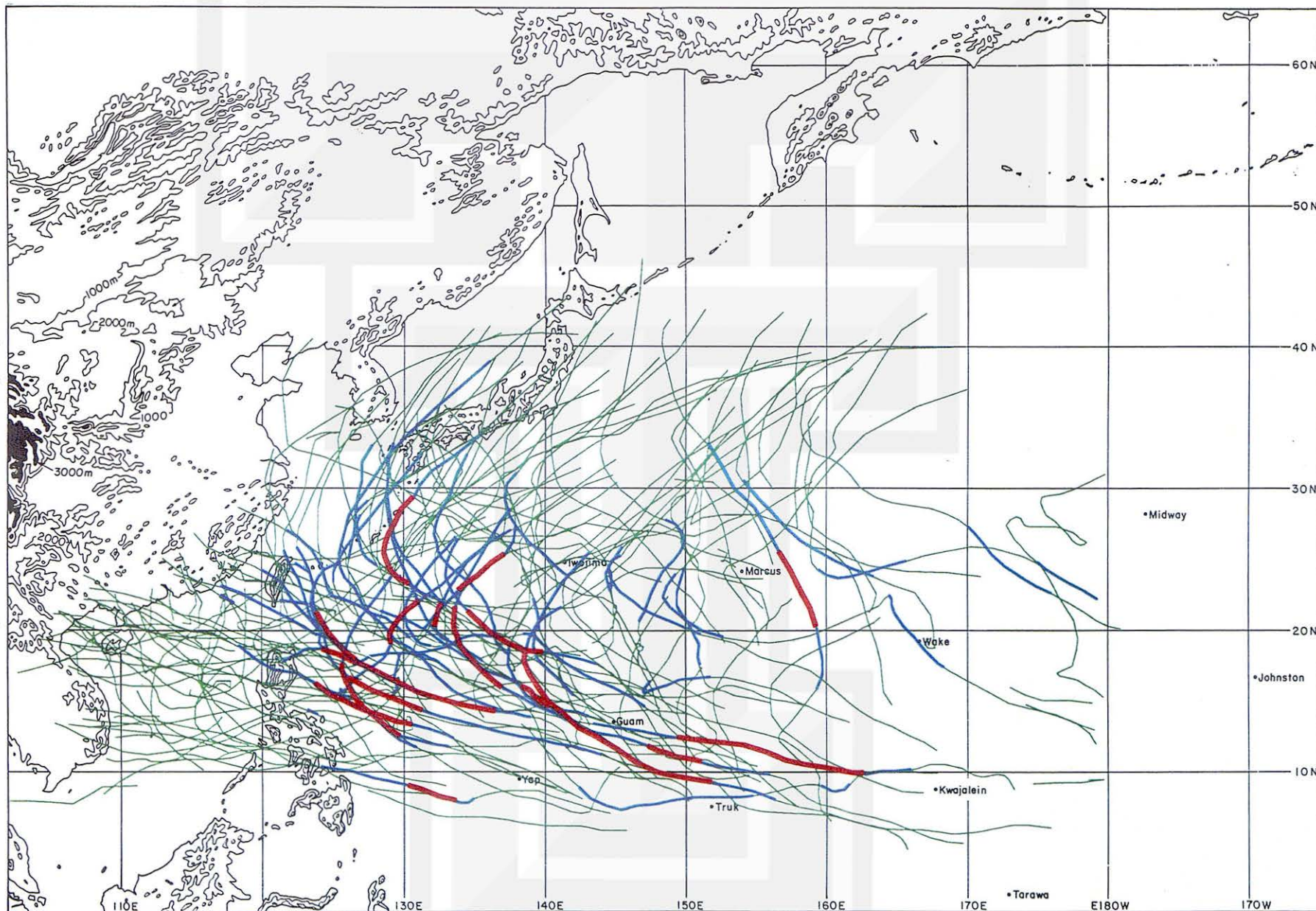


Fig. 12 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 153 Typhoons (1990-94)

By Deepening and Filling

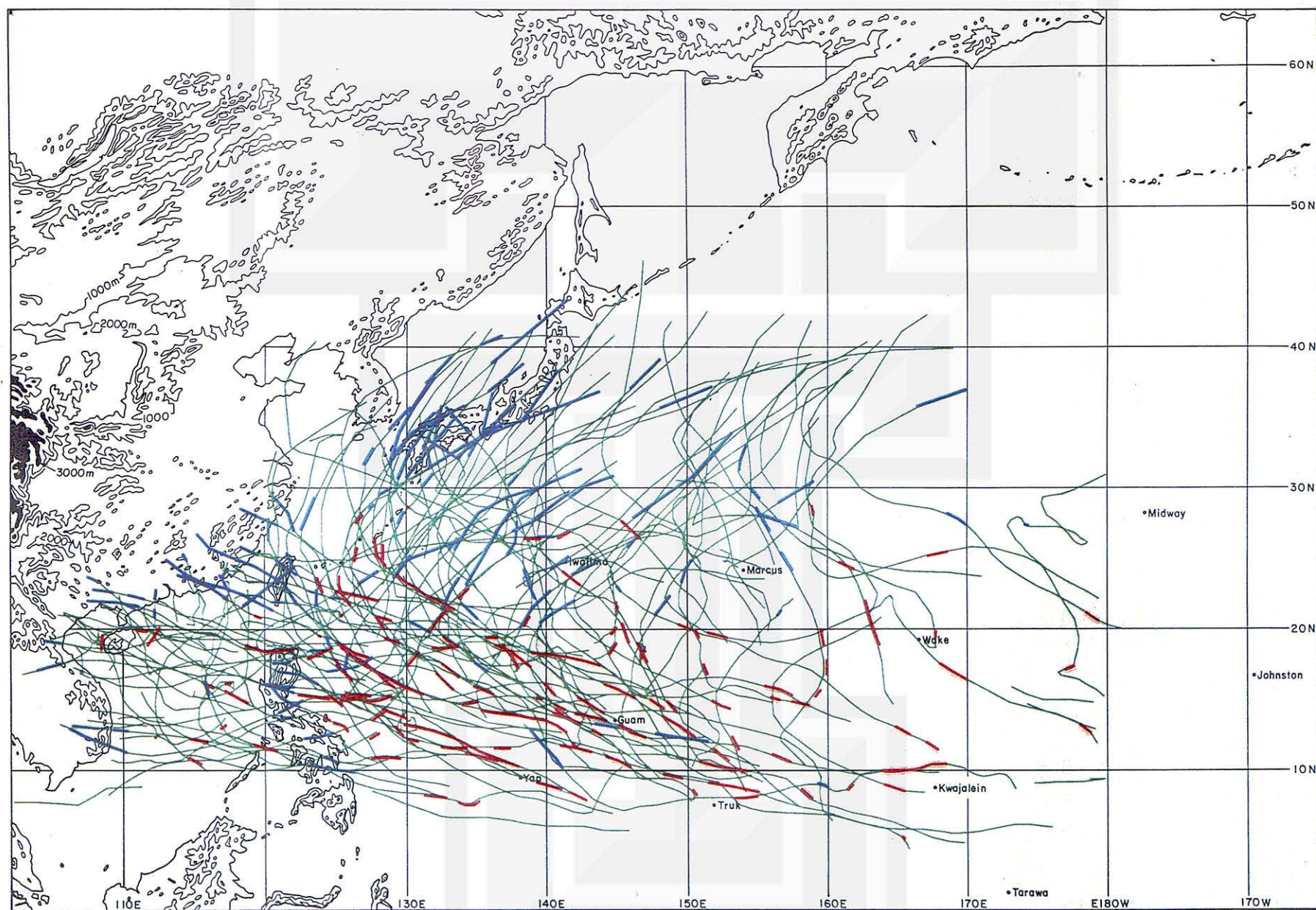


Fig. 13 By Deepening and Filling: less than 1 mb/hour (green), 1 mb/hour or larger deepening (red), 1 mb/hour or larger filling (blue)

4. PATHS OF TYPHOONS

(1950-94)

by Months

| | |
|-----------------|----|
| January | 20 |
| February | 21 |
| March | 22 |
| April | 23 |
| May | 24 |
| June | 25 |
| July | 26 |
| August | 27 |
| September | 28 |
| October | 29 |
| November | 30 |
| December | 31 |



Paths of 23 Typhoons in January (1950-94)

By Central Pressure

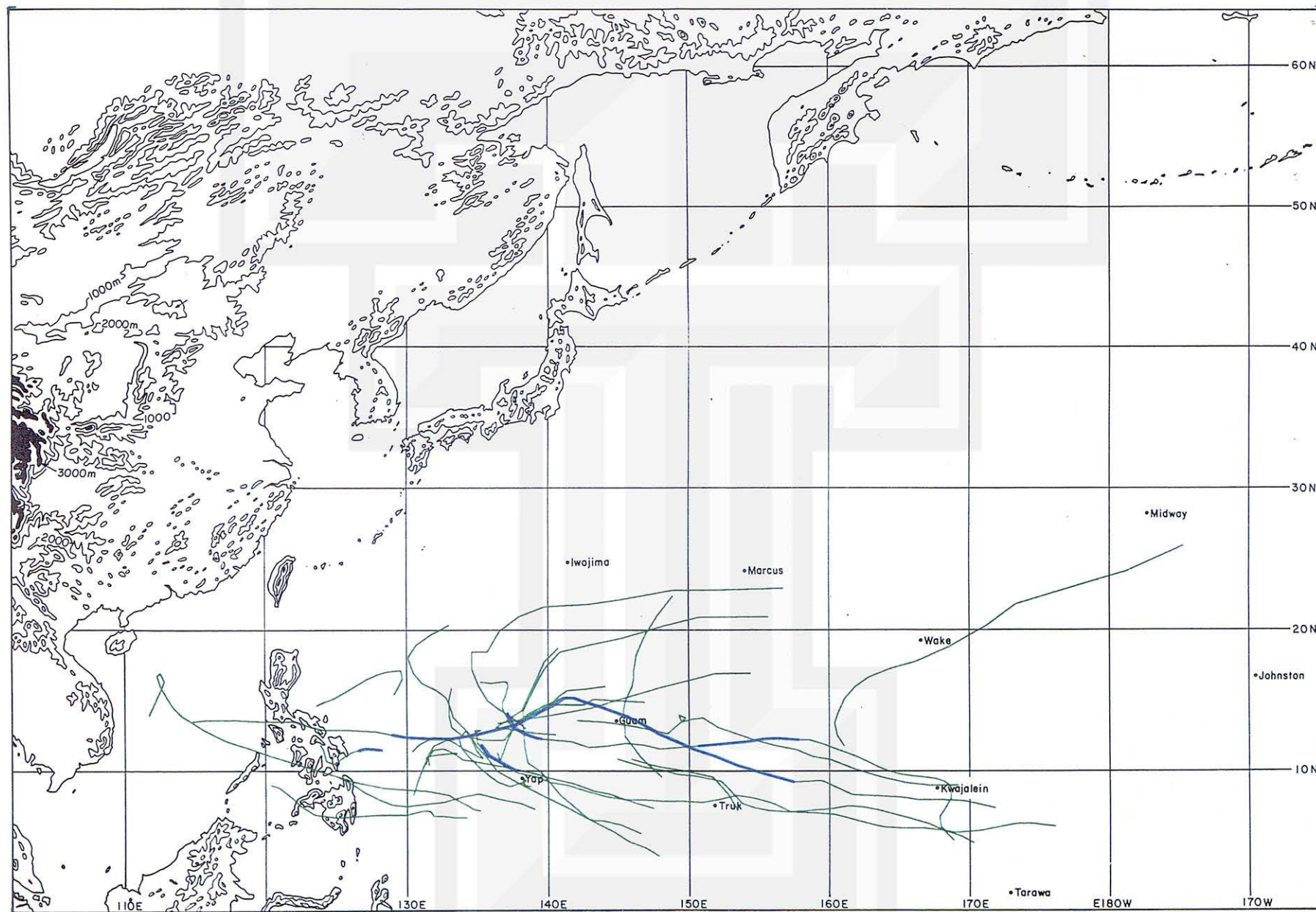


Fig. 14 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 10 Typhoons in February (1950-94)

By Central Pressure

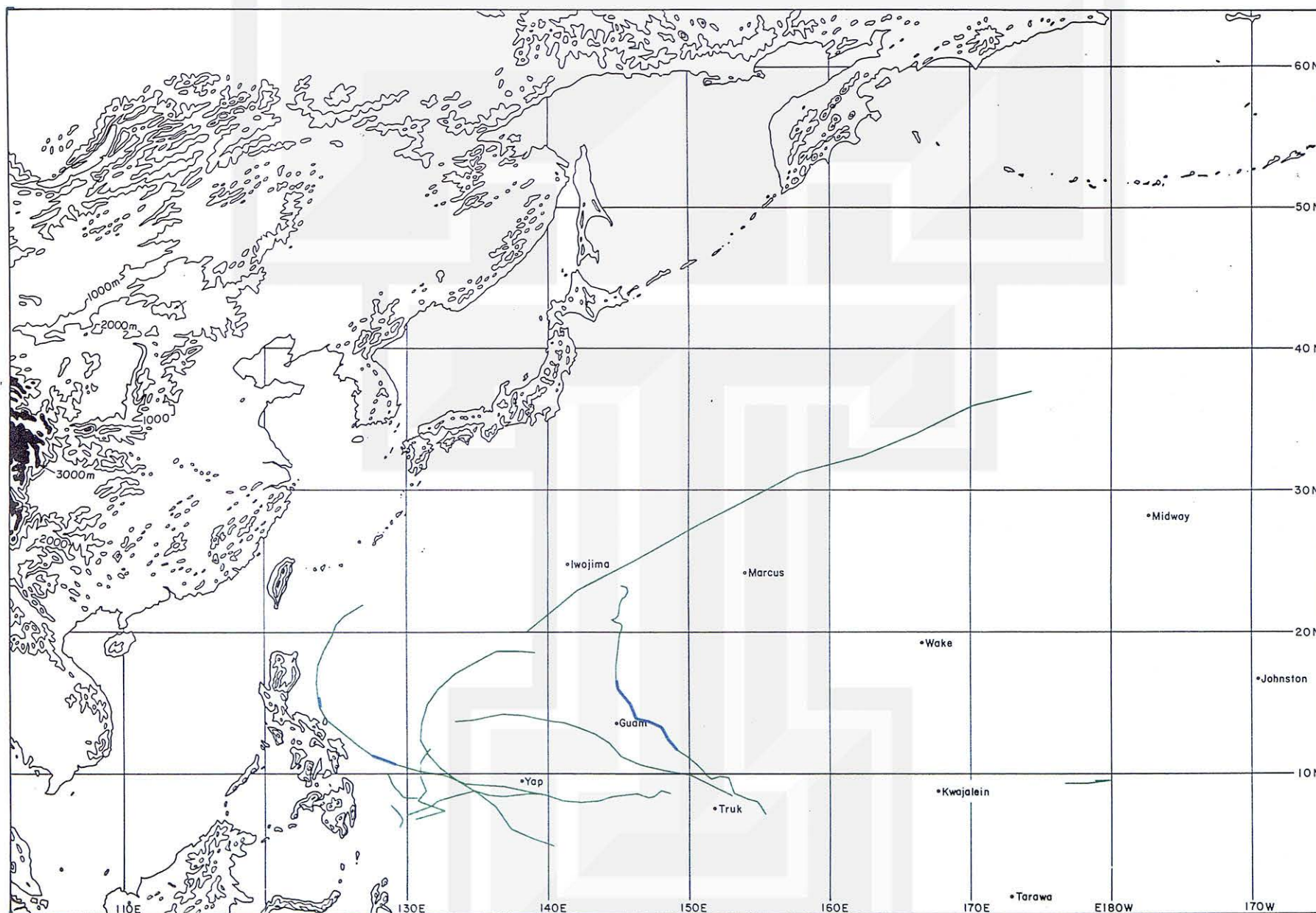


Fig. 15 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 21 Typhoons in March (1950-94)

By Central Pressure

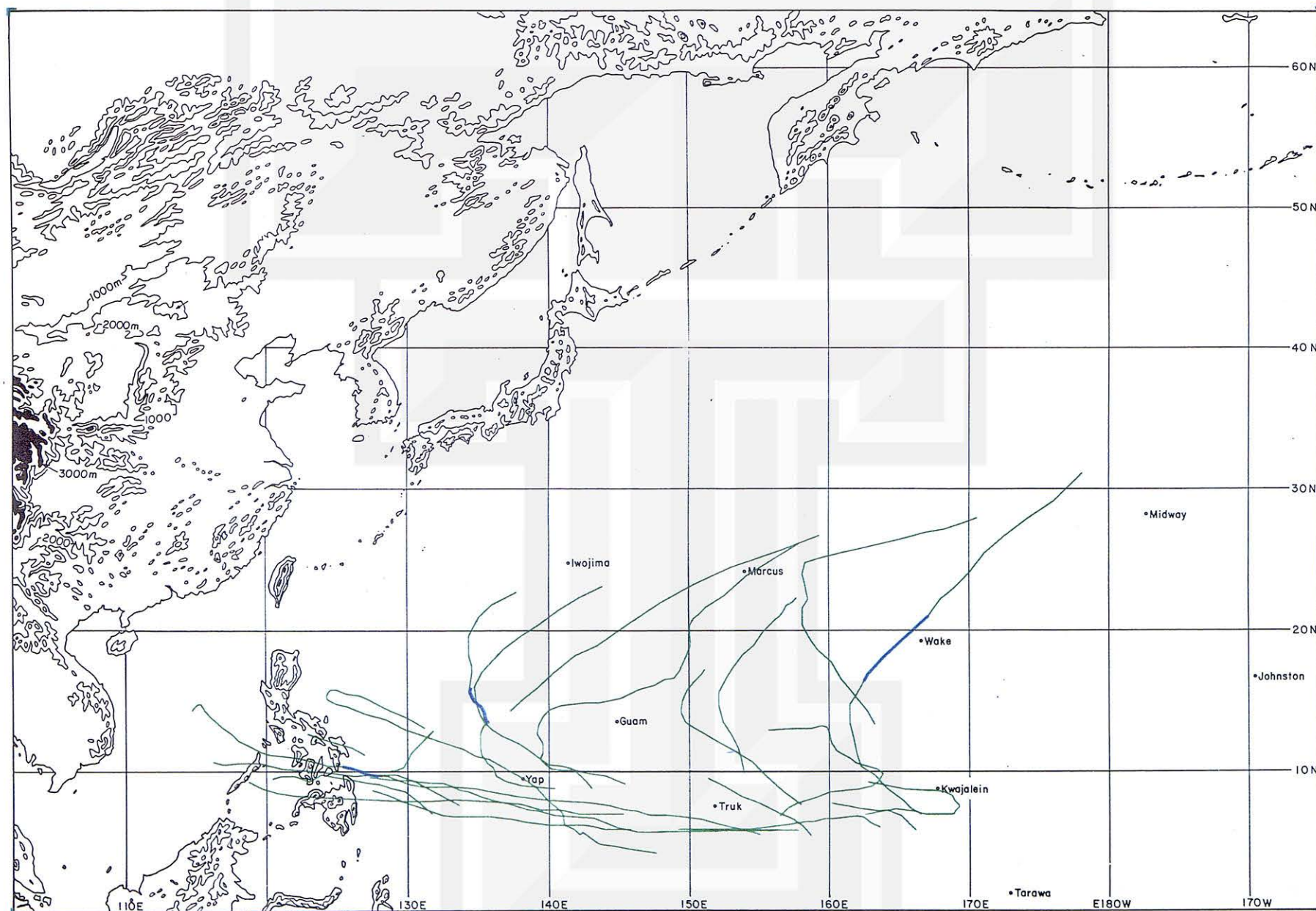


Fig. 16 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 35 Typhoons in April (1950-94)

By Central Pressure

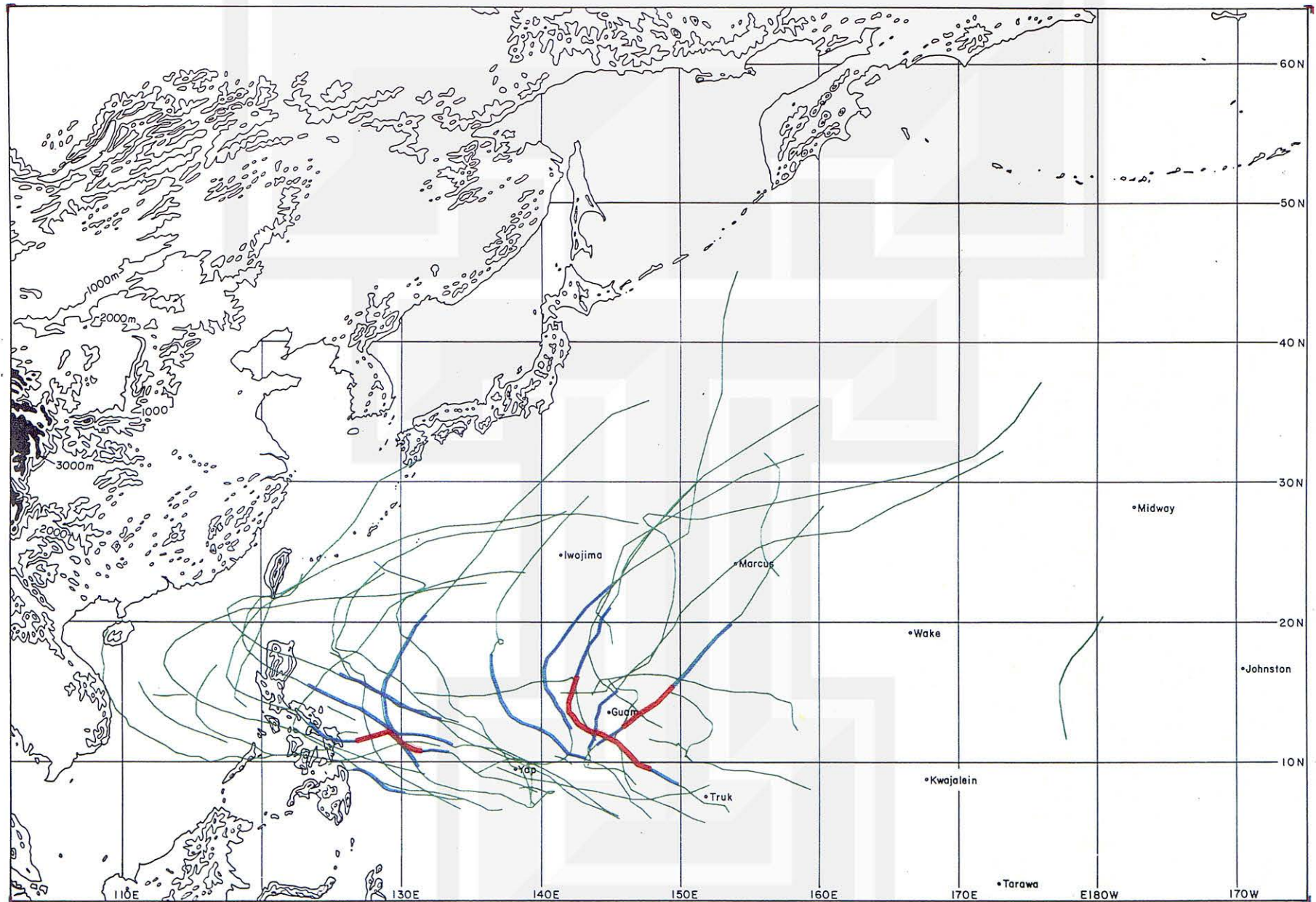


Fig. 17 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 43 Typhoons in May (1950-94)

By Central Pressure

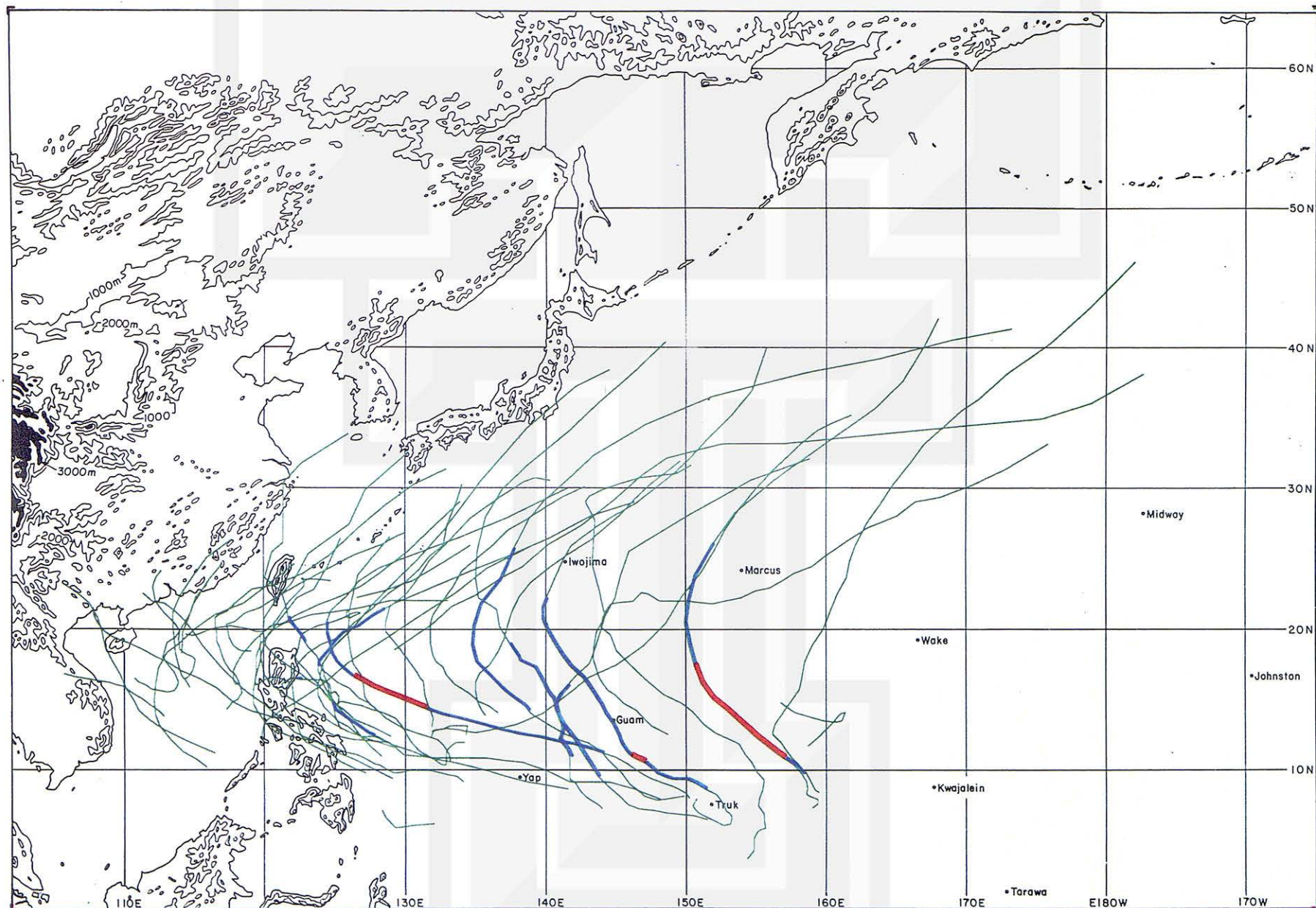


Fig. 18 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 82 Typhoons in June (1950-94)

By Central Pressure

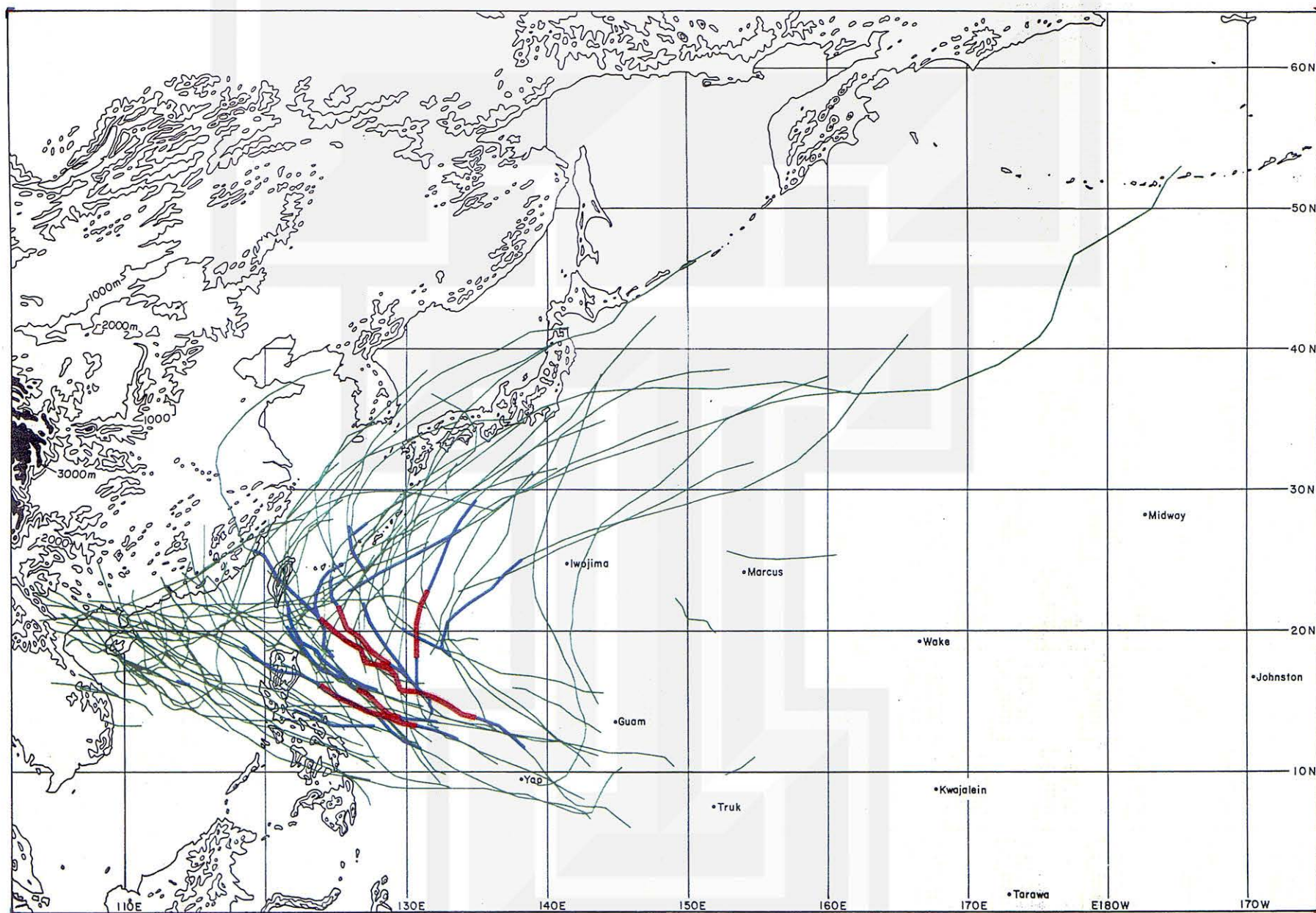


Fig. 19 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 181 Typhoons in July (1950-94)

By Central Pressure

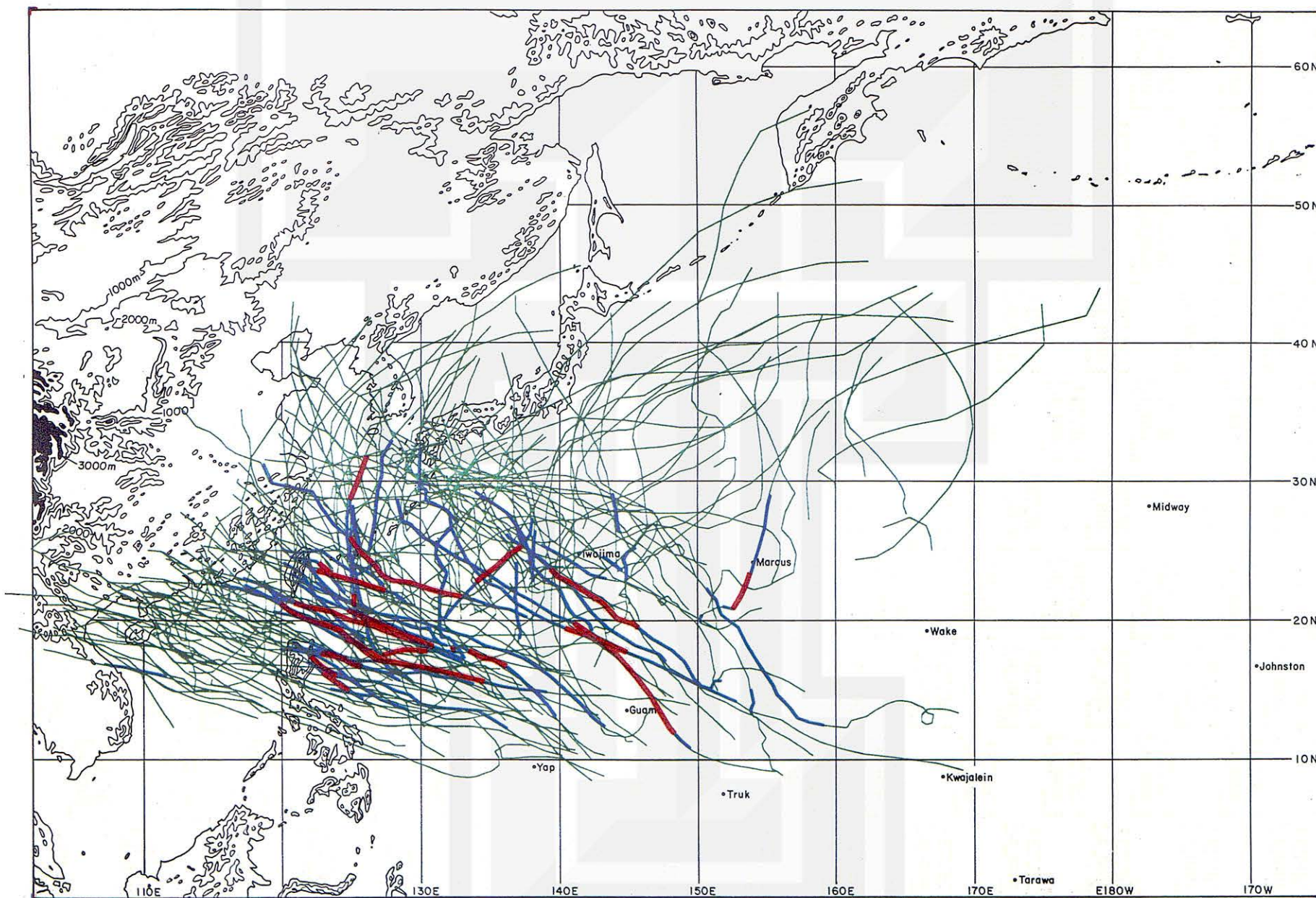


Fig. 20 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 258 Typhoons in August(1950-94)

By Central Pressure

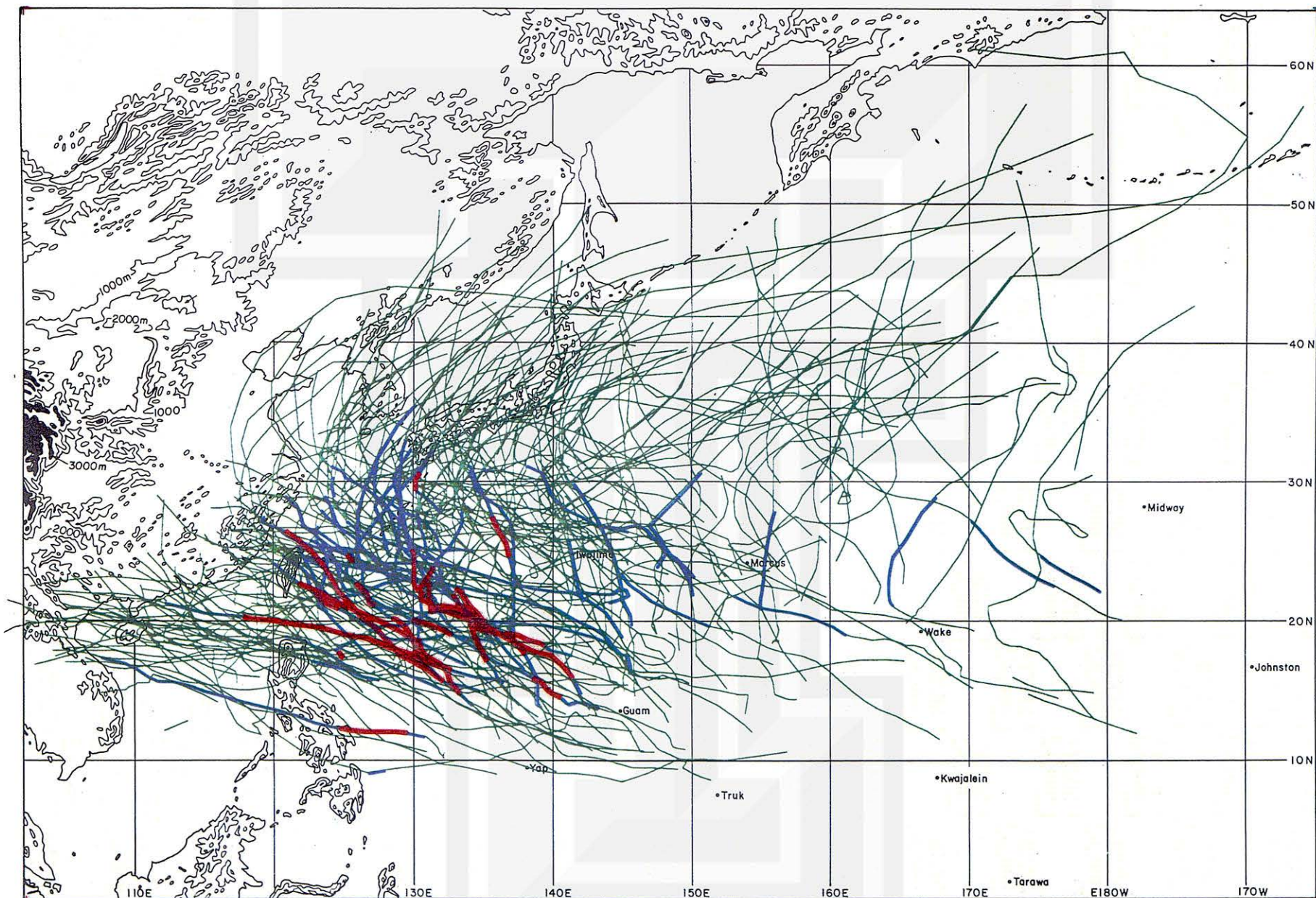


Fig. 21 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 224 Typhoons in September (1950-94)

By Central Pressure

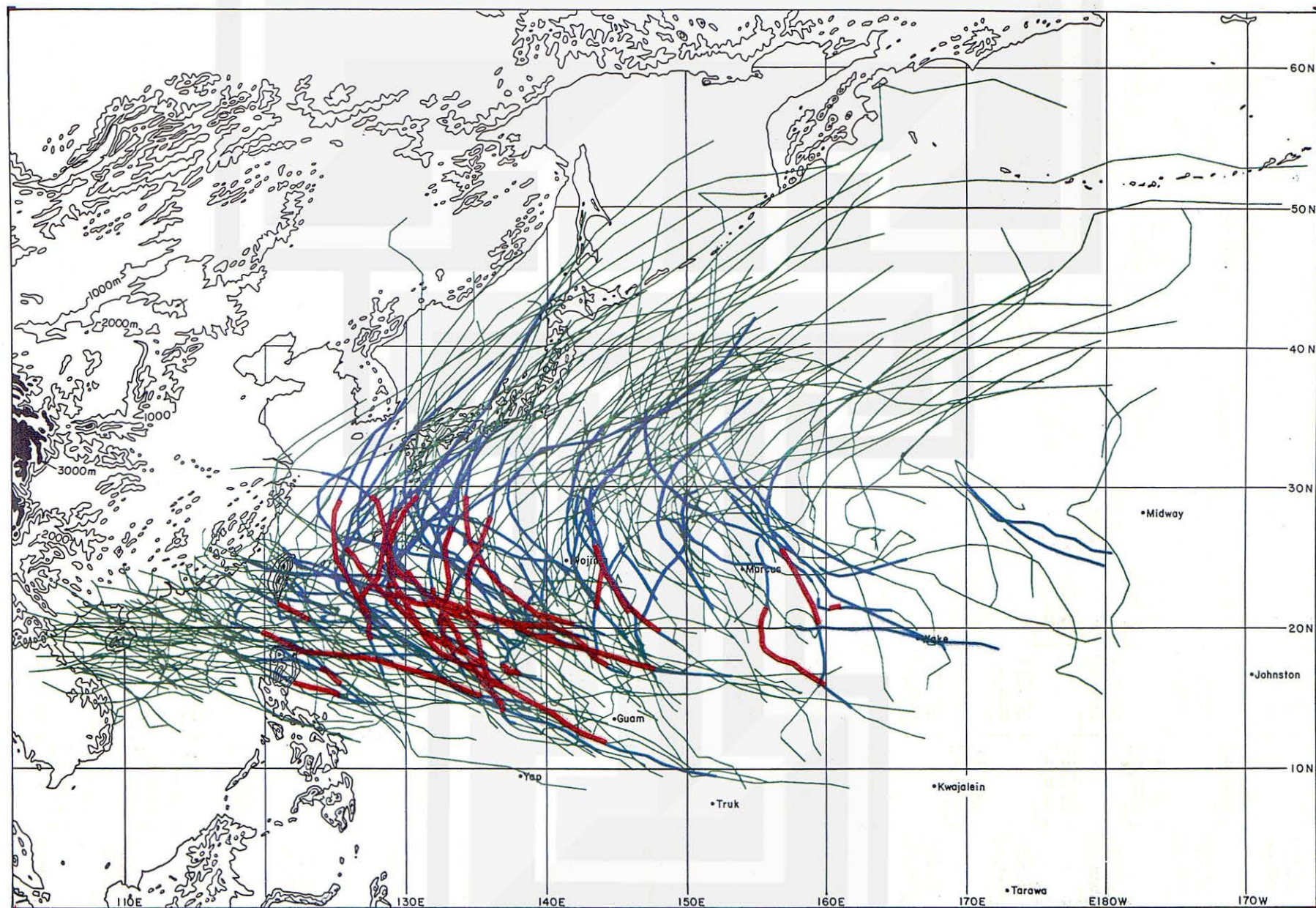


Fig. 22 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 181 Typhoons in October (1950-94)

By Central Pressure

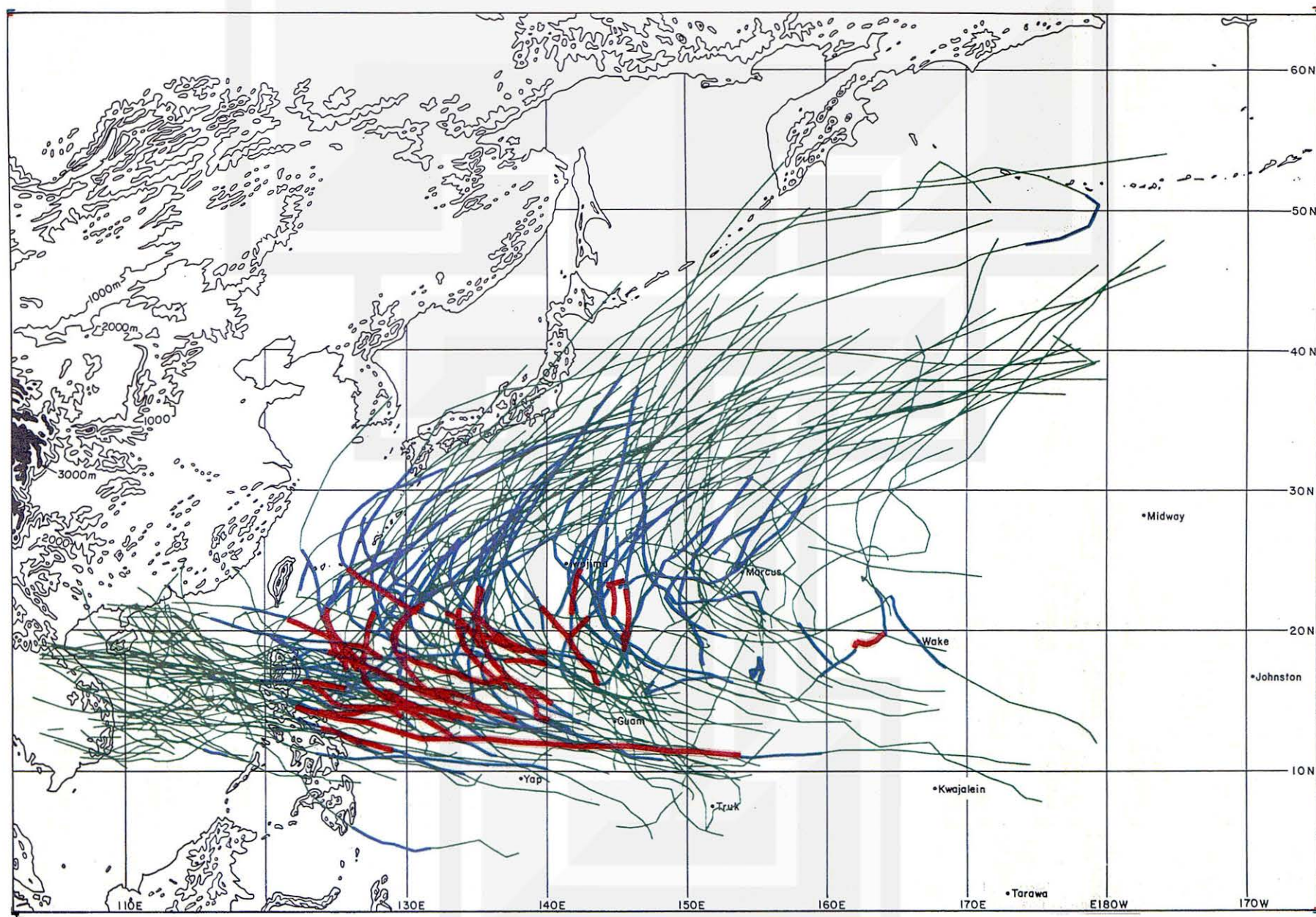


Fig. 23 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 115 Typhoons in November (1950-94)

By Central Pressure

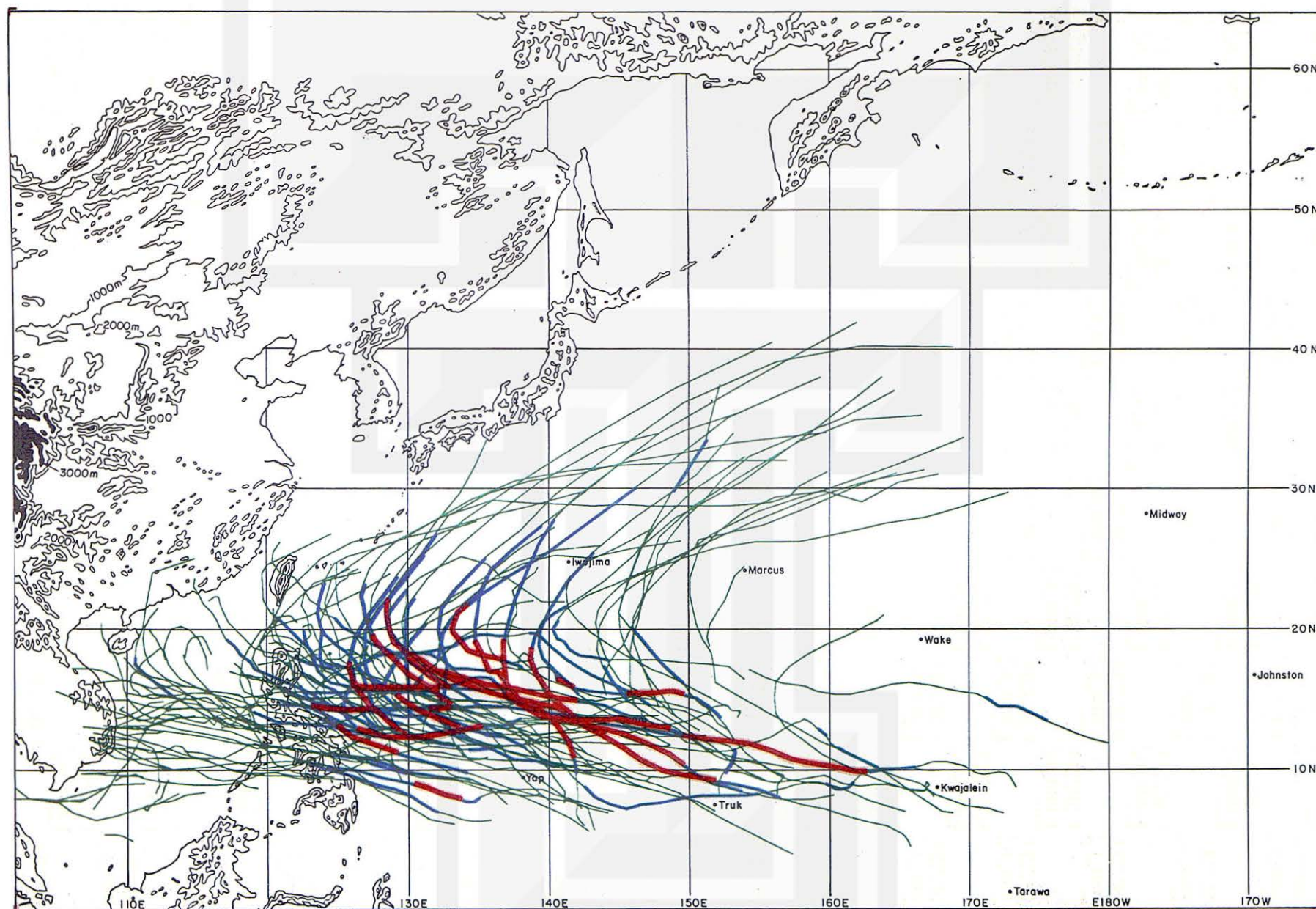


Fig. 24 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)

Paths of 58 Typhoons in December (1950-94)

By Central Pressure

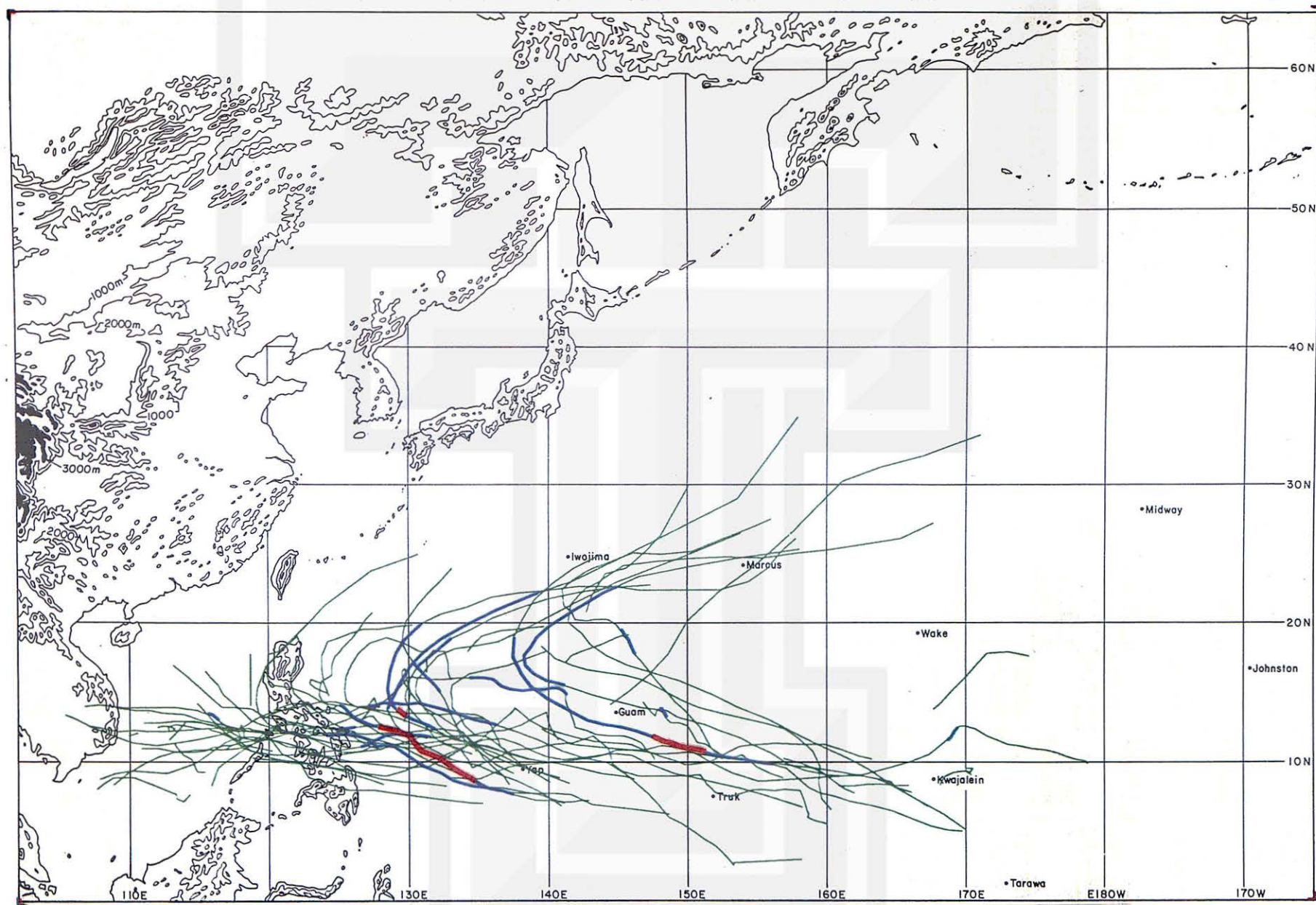


Fig. 25 By Central Pressure: over 950mb (green), between 920-949mb (blue), below 920mb (red)