Battle of the Eastern Solomons, August 24, 1942

Battle Synopsis

- Ryujo spotted by *Saratoga* a/c, sunk (though unobserved by US a/c)
- *Shokaku* spotted by *Enterprise* a/c, *Shokaku* managed to outmanoeuvre attacking a/c, though
- US Task Force spotted by *Shokaku, Zuikaku* a/c, *Enterprise* attacked by *Shokaku* a/c, OOA, *Zuikaku* to attack *Saratoga* but *Saratoga* obscured by a squall

Summary

<table>
<thead>
<tr>
<th>Round</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
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<tbody>
<tr>
<td>Attack by</td>
<td>./</td>
<td>USN</td>
<td>USN</td>
<td>IJN</td>
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<tr>
<td>IJN</td>
<td>2 1/2</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>USN</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
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Modern Warship Attributes

Fast-attack missile boats: \( \alpha = 2 \quad a_3 = 1 \quad a_1 = 1 \)

Missile corvettes: \( \alpha = 4 \quad a_3 = 2 \quad a_1 = 1 \)

Modern missile frigate

\[ \alpha = 12 \quad a_3 = 4 \quad a_1 = 1.5 \]

\[ or \quad \alpha = 8 \quad a_3 = 6 \quad a_1 = 1.5 \]

Ticonderoga/Aegis class (CA) \( \alpha = 24 \quad a_3 = 16 \quad 2 \leq a_1 \leq 4 \ldots ? \)
# Tactical (Mostly Naval) Warfare Models

<table>
<thead>
<tr>
<th>Author</th>
<th>Year(s)</th>
<th>Type/Notes</th>
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<tbody>
<tr>
<td>Chase</td>
<td>1902</td>
<td>Pre-WW1 naval battles</td>
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<tr>
<td></td>
<td>( \Delta B = \alpha \cdot A/b_1 ) ( \alpha/b_1 &lt; 1 )</td>
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<td>( \Delta A = \beta \cdot B/a_1 ) ( \beta/a_1 &lt; 1 )</td>
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<tr>
<td>Fiske</td>
<td>1905</td>
<td>Pre-WW1 naval battles</td>
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<td></td>
<td>( \Delta B = \alpha \cdot A ) ( \alpha &lt; 1 )</td>
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<td></td>
<td>( \Delta A = \beta \cdot B ) ( \beta &lt; 1 )</td>
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<tr>
<td>Lanchester</td>
<td>1916</td>
<td>WW1 aerial combat; RAF inter-war years doctrine; Battle of Britain “Big Wing“ debate</td>
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<td>( B'(t) = \alpha \cdot A(t) )</td>
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<td>( A'(t) = \beta \cdot B(t) )</td>
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<tr>
<td>Hughes</td>
<td>2000</td>
<td>Early WW2 carrier warfare</td>
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<td>( \Delta B = A )</td>
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<td></td>
<td>( \Delta A = B )</td>
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<tr>
<td>Hughes</td>
<td>2000</td>
<td>Late WW2 carrier warfare</td>
</tr>
<tr>
<td></td>
<td>( \Delta B = (A - b_3 \cdot B) )</td>
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<td></td>
<td>( \Delta A = (B - a_3 \cdot A) )</td>
<td></td>
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<tr>
<td>Hughes</td>
<td>1992/1995</td>
<td>Modern naval missile warfare</td>
</tr>
<tr>
<td></td>
<td>( \Delta B = (\alpha \cdot A - b_3 \cdot B)/b_1 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( \Delta A = (\beta \cdot B - a_3 \cdot A)/a_1 )</td>
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</tbody>
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Strategy and Tactics, Trying a Definition


*Strategy* is about which hardware and troops you want to have

*Tactics* is about what you want to do with your hardware and troops

or:

*Strategy* is about what you want to achieve ...  

*Tactics* is about what you can achieve, subject to an enemy’s options
“Missions of the U.S. Navy“


Warfighting missions

*Sea Control*

*Projecting Power Ashore*

Deterrence

*Presence*

*Strategic Deterrence*
Sea Control

Four different tactical approaches

Sortie Control
Choke Point Control
Open Area Operations
Local

Passive techniques

Deception
Intimidation
Power Projection Ashore

Amphibious Warfare

Naval bombardment

Four basic tactical air tactics

Deep interdiction
Battlefield interdiction
Close air support
Counter-air/Anti-air

Passive techniques

Deception
Intimidation


Presence

Preventive deployment

Reactive deployment

Passive techniques

Deception

Intimidation
Strategic Deterrence

Assured second strike capability

Flexible response

Deter third parties
Operation “BOLO”, January 2, 1967, North Vietnam

Idea: make F-4s “look like” F-105s including the ECM pod ...
Operation “BOLO”, January 2, 1967, North Vietnam

Order of Battle

**USAF**
7 flights of F-4 Phantoms (28 planes), 8th TFW “Wolfpack”,
Ubon Air Base, Thailand
(plus KC-135s, EB-66, EC-121, CSAR ...)

Call names: Ford, Rambler, Lincoln, Tempest,
Plymouth, Vespa and ... Olds 😊

**NVAF**
unknown number of MiG-21 (maximum 16)
unknown number of MiG-17
from Phuc Yen (“Frisco”)
Gia Lam (“Los Angeles”)
Operation “BOLO”, January 2, 1967, North Vietnam

... and the result?

seven MiG-21 kills, no USAF losses

... and on January 6, 1967, a simplified version:

2 F-4s in close formation (single radar blip) with RF-4s (reconnaissance) ...

another two MiG-21 kills, no USAF losses

NVAF lost 9 out of a total of 16 MiG-21s within just five day
Figure 10. Fleet Locations and Movements at the Battle of Leyte Gulf
Figure 11. Fleet Maneuvers at the Battle of Leyte Gulf
“The Third Fleet was under my command. My superior was Admiral Nimitz. **My mission was offensive.** When I received orders to cover the Leyte landings my mission did not change. It was still offensive. **The tasks assigned my force were to gain air supremacy over the Philippines, to protect the landings and to maintain unremitting pressure against Japan, and to apply maximum attrition by all possible means in all areas. Finally, should opportunity for destruction of a major portion of the enemy fleet offer, such destruction would become the primary task of my forces.**”

(Admiral William “Bull” Halsey)

“Where Is, Repeat, Where Is, Task Force 34, The World Wonders!”

(Admiral Chester Nimitz)

“The gentleman who failed to keep his appointment last October.”

(Rear Admiral Clifton “Ziggy” Sprague on Halsey)
“Don’t ever make assumptions. I made an assumption, and that’s how Samar happened.”

(Admiral Chester Nimitz, when asked by then Ensign Peter Deutermann about Samar in 1964)

“One bad general would be better than two good ones.”

(Napoleon Bonaparte)
Colonel Robin Olds: “Sir, it takes three things for a country like North Vietnam to wage war: manpower, willpower, and industrial power. They possess the first two in abundance, but they have little if any industrial capacity and must rely totally on others for their materiel needs. The bulk of those needs arrive in ships at Haiphong and several minor ports. Our bombing pressure keeps very little from coming by rail out of China. Let us attack those ports, sifle their will, bottle up their manpower, and the job will be done. In other words, mine the harbors, drop the road and rail bridges on the Chinese border, get the supply dumps in Cambodia, and most important, totally destroy the seat of government in Hanoi. It’s simple, sir, and with all due respect, the way to end this war is just to win the damned thing.”
1981  Thatcher government announces commitment to *Trident* missile and submarine strategic deterrent ... BUT, in order to pay for this, a reduction in conventional forces:

- elimination of the Royal Marines
- 20 percent reduction of surface ships
- sale of VTOL carriers *Invincible* and *Hermes*

The First Lord of the Admiralty, Keith Speed, publicly opposed the cuts ... was fired ... and the office abolished

> “Shorn of all aircraft, the Royal Navy was to become a coast guard.” (John Lehman)

1982  On April 2, Argentina invades the Falklands ...

... luckily the selling and carrier scrapping order not carried out, but still, in order to move the troops to the South Atlantic, 58 privately-owned ships, including the Queen Elizabeth II, had to be pressed into service ...
The UK 2010 Strategic Defence and Security Review

HMS *Ark Royal* to be decommissioned (2011)
HMS *Illustrious* to be decommissioned (2014)
  (leaving the UK with just one helicopter carrier)
Joint Force *Harrier* fleet to be decommissioned (2010)
  (72 Harriers sold to USMC as spares)
surface fleet of frigates and destroyers to be reduced to 19 ships
Nimrod (maritime surveillance aircraft) to be scrapped (2010)

to be substituted by

HMS *Queen Elizabeth*, commissioned 2017, operational 2020
F-35C *Lightning* (carrier version) ... too expensive ... to be substituted by
F-35B *Lightning* (SVTOL) ...

and no maritime surveillance replacement in sight ...