

# Operations

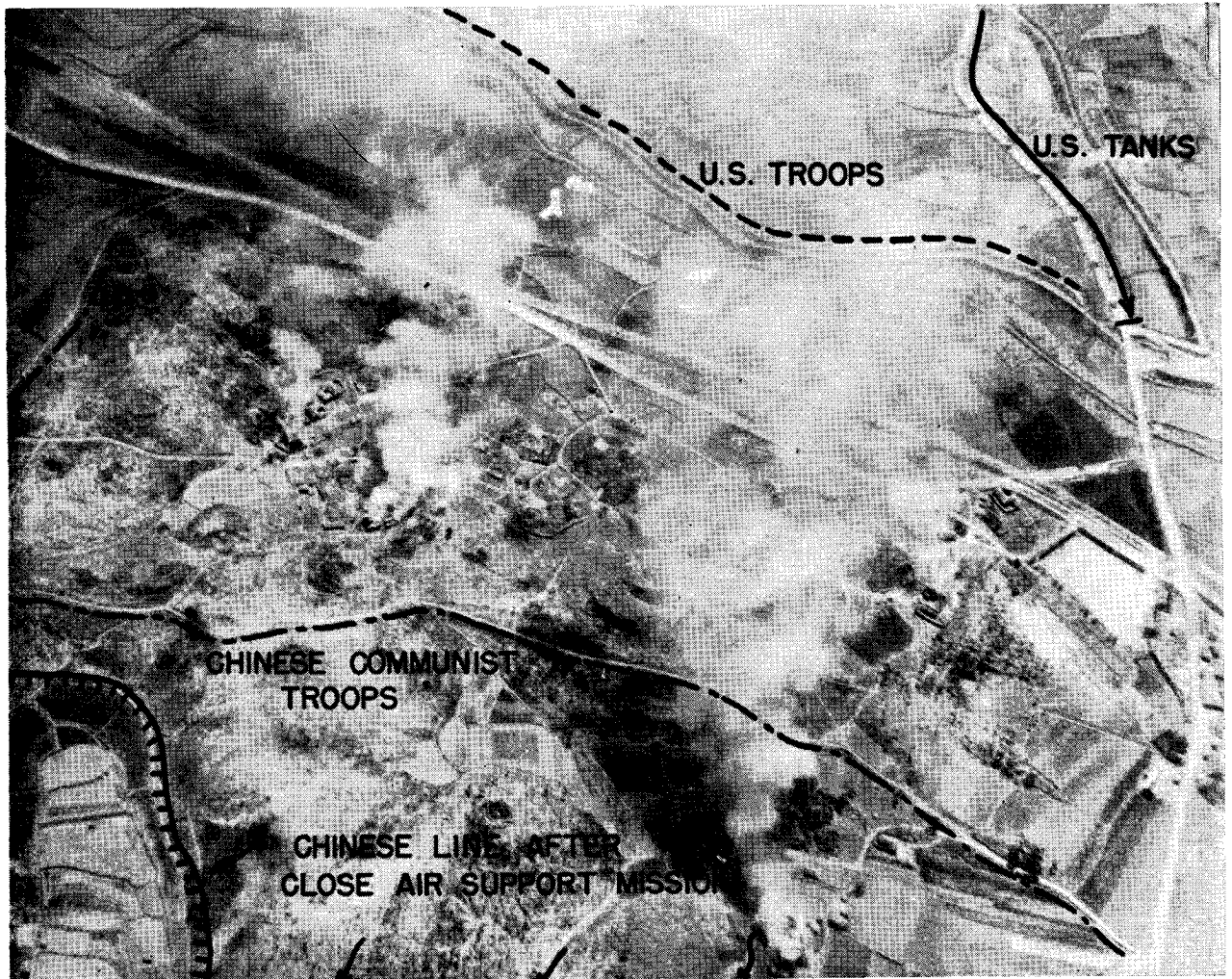
## THIS IS WAR

**W**HILE the Korean conflict may be limited geographically, there is nothing limited about the operations of the Navy's forces in the area. By any standards, it is war.

Task Force 77 alone launched 2,407 offensive sorties against the enemy from 25 February to 4 April, slightly

more than a month. Of this number 1,223 were interdiction sorties. Defensive sorties for this period numbered 517.

Reports from this particular task force indicate an increase in anti-aircraft in areas of population and in the vicinity of troop and transportation concentration.



*A close air support mission looks like this to the pilot of a Navy Douglas Skyraider as he dives to bomb Chinese communists, separated by less than 200 yards from UN troops. Reds fled to new positions indicated*



There also is strong evidence of radar control for medium caliber antiaircraft.

Many of these offensive sorties were bridge strikes, but even the best efforts could not halt the movement of enemy troops and convoys. Large scale rebuilding of bridges is a primary project with the Communists, and they find their job made easier by the low level of Korean rivers at this time of year. The Reds bypass knocked out bridges where possible.

TF-77's action report stated that the AD is favored over the F4U for all attack purposes except strafing. The preference is due to the heavy payload the AD can carry.

Photography is playing an ever increasing role in the Korean air war. For interdiction planning, photography provides the most accurate method of determining the rebuilding activity of the enemy and his most important routes of transportation. Aerial photography of coastal areas assists greatly in directing shore bombardment by surface units.

**Hecklers.**—A highly important mission is being performed by the specialized teams trained in night and

all-weather flying.

The hecklers' job is to detect and destroy profitable targets in assigned areas and to evaluate enemy movement for possible day attacks. They reported encountering large numbers of truck convoys and more targets than they had the ordnance to handle. The normal dawn and dusk heckler launch was made up of two VF (N) and two VA (N).

Reports indicate that the RCM gear in the AD-4N and AD-4Q may become increasingly important for detecting and locating enemy gunlaying radar. A large number of incidental RCM detections have been made and reported, although there is no systematic RCM program.

Other reports from the fighting front indicate a lack of aggressiveness on the part of enemy pilots and their full utilization of the "Yalu sanctuary" when the going gets really tough. However, there have been exceptions when the enemy has fought with fanatical tenacity. The reports add to the evidence that Red pilots, even when they have had an advantage, often have failed to press home attacks or follow up.

## SOMETHING OLD, SOMETHING NEW

**W**ORLD WAR I fighter tactics could be dusted off and studied to advantage. That's the opinion of one of the Navy's outstanding pilots who recently gave his life in the Korean war.

"The trend generally speaking is away from team work as we knew it in WWII and back toward the pilot to pilot, or plane to plane scrap, as it was in the First World War," said a letter from Lt. Comdr. John Magda, formerly skipper of the Navy's famous *Blue Angels* and more recently commanding officer of VF-191.

Paradoxically, it is the high speed of the modern jet aircraft which makes applicable the tactics of 35 years ago.

"Keeping track of your wingman or section leader under combat maneuvering at 400-500 knots is practically an impossibility. It's a full time job for the wingman to maintain any sort of combat tactical position on his section leader, much less be effective offensively. It stands to reason that if the pilot's full effort is required to maintain position, his effectiveness toward the enemy is nil.

"Whenever it is possible for two planes to stick

together, do it; but if you can't, you can't," Magda continued.

He went on to say that four planes coming in for attack from four different directions are much more effective than two two-plane sections, in which only section leaders are tracking the target, while the wingmen merely keep station.

"If it is at all possible, up to the point where both aircraft performance and pilot ability are not being suppressed, then stay joined up and help or get help whenever possible. The above applies to any sort of engagement of jet to jet, whether escorting or intercepting. Four pairs of eyes, all looking for enemy attacks or enemy to be attacked, are better than only two sets of eyes looking for the enemy.

"In every mixup (the writer's) so far, 95 percent of the time all planes have returned individually or in some cases managed to rendezvous on return by radio.

"To my way of thinking, it looks as if we are swinging back to the old days of the von Richtofen Flying Circus," Magda writes. "Seriously, I'd give anything to have a set of World War I air tactics."

(Magda's plane was victim of ground fire.)

**Suggestions.**—Every pilot in the war zone has his bit of useful information to pass on. These ideas include:

1. Be on the offensive. The MIG-15 must be spotted first and broken into at once. Speeds are too high to wait even 30 seconds.
2. All hands must have swivel heads, even while trying to stay with the leader during flight.
3. Never try to get away from a MIG in a dive.
4. At moderate speeds, use a tight turn to get a MIG off your tail.
5. Attempt to fire in front of the MIG when out of effective range to induce him to maneuver, thereby closing him on the turns that follow.

**The MIG-15.**—Just how good a plane the MIG is has been the subject of much discussion, but it is pretty well conceded that it is a topnotch fighter in anybody's war.

Every pilot who has tangled with the formidable Russian job has his own ideas, and the majority show a healthy respect for the aircraft if not for the pilots flying the jets.

"The MIG is a damned fine airplane. The pilots flying them are good. They seem to get maximum performance out of their planes. They have continually attack F86's and pressed their attacks. Only when at a definite tactical disadvantage would they run for the river (the Yalu). They seem to have little or no discipline in that they broke as soon as our people turned into them. However, when two of our planes tied into one of theirs, it was not unusual for several MIG's to join the procession. They seemed to be poor gunners for even though they fired a lot, they didn't do much damage. Their 37 mms. would give them a definite kill with very few hits if they got them. . . ."

Such is the personal and unofficial opinion of another pilot.

The mentioning of fire power of the MIG brings up the question of the firepower of UN planes. There is a strong desire for a heavier gun. Most pilots seem to think that six .50-caliber guns will not produce sufficient hitting power. The objection is that you have to school longer to inflict enough damage for a kill. "Most of the kills the boys got were ridden to the deck. 20-mm. aren't necessarily the answer, but they are the best we have at the moment," is the comment of another airman.

Getting back to the MIG, another pilot says the Russian jet completely outclasses anything the Navy has

now, but it is slightly inferior to the F86. He termed the F86 probably the best operational aircraft in the world today.

Fleet units soon should start receiving the FJ2, which is the sweptwing version of the F86.

"The MIG-15 completely outclasses the F9F," this same pilot goes on to state. "The *Panther* possibly could outturn the MIG, but that's purely defensive and you can't fight a war that way."

**Other Comment.**—Among other comments from naval airmen are the following discussions:

"In general, concentration of firepower and bracketing are impossible against the MIG except under unusual circumstances. Even in the best situation, that of being on the MIG's tail and forcing him to maneuver, only the lead plane, and possibly his wingman, can get into range to do any firing. In addition, variations in the full power maximum speeds of individual planes and the reactions and techniques of individual pilots preclude a strung out unit after a chase.

"Thus maintaining the four-plane division as a tactical unit is impractical offensively and expensive defensively. The present doctrine of this particular squadron provides that while the first attack usually is initiated by the entire division, the second section is free to attack other or separating units.

"When a split such as the above is made, the wingman immediately must move out and take position normally held by the other section. The importance of perfect coordination between the single planes is paramount. When this is properly done, a section of jets can operate with greater maneuverability and flexibility than can be attained by a division and still can maintain the defensive advantages of having two units to cover each other. This releases the other section of the division for the offensive work.

"Offensive tactics so far have been very simple in theory: getting on the MIG's tail and staying with him until the range can be closed. An F9F's initial advantage of 3,000 feet or over puts the MIG on the defensive and generally causes him to work down. When the MIG has had the altitude advantage, he has used it to make runs followed by zoom climbs, and he keeps this advantage until the F9F has climbed to his altitude. Pilots soon realize that the starting position for a MIG at high speed places the F9F about 10 o'clock or 2 o'clock about 2,000 feet above. The run then becomes a converging course, like a high-speed join-up. This eliminates the element of surprise for the F9F



*Carrying a full ordnance load of bombs and napalm, a Navy Douglas Skyraider sets out for Korean front*

and provides a possible set-up for a countering run. Therefore, almost all runs will wind up in a tail chase with the MIG opening range fast.

"The F9F-2 with the P-8 engine reaches buffet speed with 100 percent power in a much shallower glide than the MIG normally makes. Thus, the F9F, while losing distance maintains an altitude advantage which it can subsequently use to again close the range by 'cutting the corner' when the MIG pulls up or turns. It has been found that long range bursts, with enough lead to make sure the MIG can see the tracers, generally has caused him to maneuver which again allows the F9F to close. It is not recommended, however, that rolls to be followed, due to the F9F's loss of speed.

"It is during such a chase that it is imperative that both F9F's fly practically abeam and fairly wide apart, to prevent being caught if the first MIG sighted is a decoy. It is believed that unless it is a planned set-up, the chances of being picked up during a chase are very slight because of the speeds involved."

It should be pointed out here that these comments

are purely the ideas and opinions of the individuals or the various individual groups and do not represent any changes in actual doctrine. They are passed on for what they might be worth as observations of those who actually have been in combat with the enemy.

## THE CARRIER BASED AIRBORNE CIC PROBLEM

**W**ITH HIGH PRIORITY, work is under way to extend the defensive range of naval units and task forces through the development of an effective carrier based airborne CIC.

At present the area in which a task force can defend itself is limited by the radars of the task force itself and its pickets, plus whatever information which can be obtained from aircraft equipped with APS-20A radar. Combining both the greatest effective range

from the plane to the ship and the range of the radar, this is good for a maximum of about 70 miles.

Today this is a relatively effective radar screen, but this happy situation will not always exist. With the advent of fast jet bombers and attack planes, this distance could be covered in less than 10 minutes.

The urgent need for an effective carrier based, airborne CIC, to extend radar coverage to at least 200 miles, is obvious.

With this as a goal, the Navy anticipates having something of this order available to the Fleet during the fiscal year 1953. First flight of a XS2U-1W, equipped with AN/APS-20A top mounted radar antenna and ground-stabilized seven-inch scopes is set for mid-1952. The AN/APS-20B is under development and will be evaluated in the carrier based airborne CIC. This radar will offer a multiplicity of scopes of 7 and 10 inches.

Additional plans under consideration for the fulfillment of this requirement include a stacked beam type radar which will afford both search and height finding capabilities within a single antenna unit; however, this project is in its earliest stages.

The foregoing arrangements are purely defensive, and present equipment, planes and other limitations will preclude implementation offensive concepts for another five years at least.

**Possibilities.**—One interim solution is the employment of the F3D with APQ-35 gear.

Several possibilities have been suggested for meeting the requirements for extending the search coverage. These include:

(a) *New infrared passive detection techniques.* Little is known of the limitations or the capabilities of this equipment in connection with strike escort. Phenomenal passive IR detection ranges (in excess of 60 miles) at high altitudes have been obtained against a single jet aircraft. Therefore, the IR field may offer at least a partial solution to the problem. Its most serious handicap is the inability to obtain range by this method.

(b) *Search radar equipped strike aircraft.* Much study and equipment development would be required for designing and development of a high-speed strike aircraft with forward looking coverage with detection performance of four jet aircraft at approximately 40 miles above or below the strike group.

(c) *Carrier based airborne CIC.* This is the most likely solution and the course being pursued by the Navy. The offensive prototype is ruled out by the

practical impossibility of building an effective CIC into a carrier based aircraft capable of accompanying a jet strike group. Electronic equipment of today, and within the next 5-year period, is entirely too large in size and if miniaturized using the best techniques available today, performance would be restricted.

There also is the serious question in regard to enemy countermeasures. It is possible that tactical deception or new radar techniques or dodges, such as low duty cycle or squirt transmission would offset this objection.

It is obvious that while work is under way at high priority, many problems are yet to be solved before the Navy can effectively extend present radar coverage over ocean areas, or enemy held land masses.

## SUGGESTED BREAKUP FOR CARRIERS

ONE CARRIER skipper recommends that the "Ready Deck," rather than being a function of the duty carrier, should be coordinated with the flight schedule to provide maximum ready deck coverage and ease of respotting.

Another captain says, "Compared to our present operations with nine distinct types of aircraft with the jets superimposed, World War II flight deck operations seem very elementary."

One recommendation from a CV group commander has started considerable controversy:

"In place of the carrier breakups for landing as specified in USF4 could be substituted a very simple breakup. Altitudes for the various circles are the same. All circles are centered on the median of the carrier's sector. The radii of the circles become progressively smaller as they become lower. They are all tangent to the carrier and no aircraft is to go inside the carrier station circle except in the approach to a landing.

"If the pilots are thoroughly briefed on the inflexible rule that in the upwing leg they must give room to the other carriers, there will be no interference. While there will always be occasions when individual pilots violate this rule, the problem can be beaten by training and air discipline. It can never be beaten by devising a system so complex that few of the junior officers can ever even understand it."