HEADQUARTERS
U.S. STRATEGIC BOMBING SURVEY
(PACIFIC)
C/O POSTMASTER, SAN FRANCISCO

INTERROGATION: 188

PLACE: Tokyo
Date: 1 Nov 1945

Division of origin: Strategic Air

Subject: Effects of American radar countermeasures

Personnel interrogated:

Lt. Col. SUZUKI, communications section of Eastern Area Army headquarters.
Lt. Col. KAMIMO, on staff of Eastern Area Army as radar control and Tokyo aerial defense officer.

Where interivewed: Eastern Area Army headquarters.

Interrogator: Capt James H.C. Mulligan, 1st Lt Paul L. Harton.

Interpreter: Mr. T. Hara

Allied officers present; None

SUMMARY

1. Early warning radar
2. Effects of countermeasures
3. Redeployment of AA units July 1945
4. Ground controlled interception
5. Sets of German design.

INTERROGATION

Lt. Col. SUZUKI stated that he himself was not very familiar with the details of radar and that he had arranged for Lt Col KAMIMO to be present to answer any questions concerning that subject. While awaiting the arrival of Col KAMIMO the interrogators questioned Col. SUZUKI.

The Eastern Army had jurisdiction over the following areas: Kanto district, Shizuoka district (East of Fuji River), Niigato Prefecture and Nagano Prefecture. The areas mentioned were outlined on the map in the plotting room.

Questions were asked concerning the early warning radar system. It was told that there were no ship borne radar sets used for early warning and that the range of the land based radar stations had a range of 300 kilometers.

An early type EW radar set-up was described. Each radar set consisted of 1 transmitter and 3 receivers (sometimes a 4th receiver was present for the officer in charge. The receivers were arranged in a 90° circular arc, the center of the circle being the transmitter and the radius being from 100 to 400 meters. Such a set up covered only 90° in azemuth. For complete 360° coverage 4 transmitters with their associated receivers were required, the transmitters forming the center and the receivers the outside of the circle. Each unit (transmitter and receivers considered separately) was operated by 2 or 3 men with a non-commissioned officer in charge and an officer was in over-all charge of the set-up.

According to Col. SUZUKI the army and navy maintained separate early warning systems but that information was exchanged by constant radio and telephone communication. In addition each service had liaison officers at the headquarters of the other.

When questioned about very high frequency communications equipment Col SUZUKI stated that the army was experimenting with 40 centimeter equipment but these were terminated by the cessation of hostilities.

At this point Lt Col KAMIMO arrived and further interrogation was directed at him.

The first interference noticed with Japanese radar was caused by rope (RR-3/U) dropped by B-29's. This interfered with both the 1.5 and 3.85 meter bands but bothered the latter less than the former. Referring to the 5 types of radar used for directing guns it was stated that type I (1.5 meters) was not common in the Tokyo area and there were 16 type II radars (also 1.5 meters) in the area.

The first method used to eliminate interference from rope was the training of operators to distinguish between the aircraft and rope. They also tried to determine range alone when aircraft echo emerged from rope echo, leaving azimuth and elevation to be determined by other means. It was stated that range could not be determined immediately after rope was dropped but could be after plane left rope.

Jamming was the most serious trouble encountered with radar. The radars of 3.85 meter wave length were the least affected but toward the end of the war the effectiveness of the jamming on this band increased. It was indicated that most of the radar sets on this band were located in the Toky area and that few raids were made on Toky toward the end of the war.

One remedy for jamming that they attempted was a change of frequency. It was customary to retune a number of sets, possibly 5 out of 100 before a raid and then, after jamming started, to tune the sets back to their original frequency. Apparently they thought that all jammers were under the control of aircraft crews and that this method would confuse jammer operators. Col. KAMIMO had no definite information as to the success of this remedy but he believed it had been successful.

The Japanese attempted to take bearings on the signals from the jamming transmitters as a second remedy. The reply to the question as to the success of this remedy was rather confusing but it might seem that there was some success in taking bearings on a large number of planes.

Col KAMIMO had not seen it himself but he understood that the echoes from aircraft could be momentarily seen amid the jamming due to the appearance of a pip which lit up the oscilloscope brighter than the jamming. This pip occurred, in his opinion, when the antenna was pointing at the interval between two aircraft or flights of aircraft. He claimed that this phenomenon gave them the range data to supplement the azimuth and elevation data received bu DF'ing on jamming signal. It was noted that this pip fluctuated and he admitted it might have been due to rope.

All replies in the matter of anti-jamming methods were very confusing to interrogators and it is not known whether the replies were actual facts or merely wishful thinking on the part of the Japanese.

About 20 July 1945, 4 AA companies and 6 searchlight companies began redeployment and about that time some radar equipment was in transit and was, therefore not in operation.

Questions were asked to determine whether or not the Japanese had a ground-controlled interception system (GCI) in operation. Direct radio telephone connection between control room and aircraft was available. As to whether a radar check was kept on the position of Japanese fighters, the reply was that this was being done but the system was only 80% completed at the end of the war.

According to Col SUZUKI and Col KAMIMO, no radar sets of German design or manufacture were in use but a modification of German design was being made in Japanese plants to one of the existing Japanese models. They knew nothing of any sets of ½ meter wavelength. They said that a set of German design or manufacture was to be used in conjunction with a 150 mm gun but theyknew no details.