

## Beams from Germany June 27

Great Britain and Germany went to war in September 1939 as a result of the German invasion of Poland. The early months of 1940 were marked by severe German bombing of London and other locations in Britain. The Royal Air Force (RAF) waged brave and desperate aerial combat against the enemy, but its resources were stretched thin and it was unable to prevent many devastating air raids. The British looked for any way they could find to combat the raids.

On June 5, 1940, the RAF Y Service, the branch that intercepted enemy signals, collected a message from the chief signals officer of the Flieger Corps IV\* that made references to “knickebein” and “Kleve.” The intercept came to Group Captain Lyster F. Blandy, commander of the Y Service. Neither he nor anyone on his staff understood the references.

Blandy arranged to show the message to R. V. Jones, who was head of scientific intelligence on the Air Staff. Jones was cleared for ULTRA, decrypts of German high-grade cryptographic systems. Jones was then investigating *knickebein*, a German navigation beam for their bombers; he believed the Germans had intersecting navigation beams to guide their bombers over Britain. For him, the decrypt confirmed that a *knickebein* transmitter was in the city of Cleves.

Jones discussed this idea with Frederick Lindemann, Science Advisor to Prime Minister Winston Churchill. Lindemann was skeptical about the idea of the navigation beams for various reasons. In the following days Jones poured over reports of the technical examinations of German bombers that had been shot down over Britain. Lindemann sent these to the Air Minister, who got Churchill's endorsement for further examination of the matter.

In addition, documents salvaged from downed enemy aircraft confirmed the *knickebein* at Cleves and another at Bredstedt.

The RAF put aircraft into the air to try to intercept the *knickebein* itself, but without success. Aerial reconnaissance of Cleves failed to locate any likely antenna for transmission of the navigation beam.

Some members of the defense establishment continued to raise questions about the existence of the *knickebein*, and questioned the use of resources to find it or research it. The dispute rose to the cabinet level.

Jones worked a late schedule to fit in with the timing of incoming communications; he arrived at his office on June 21 to find a note that he was expected to attend a cabinet meeting that day. He arrived at the cabinet room at No. 10 Downing Street about a half-hour late.

Discussion was already in progress, and Jones realized that many of the country's most senior officials "had not fully grasped the situation." However, after a few minutes, Churchill asked Jones a technical question, and Jones suggested he tell "the story right from the start." Jones remembered in his memoirs that his proposal took Churchill by surprise, but the prime minister agreed.

Even though he had not prepared a formal briefing, Jones spent the next twenty minutes explaining *knickebein* and how it was being investigated. Some in the cabinet room were still skeptical; one asked why the Germans would need a navigation beam when there were so many ordinary navigation tools—certainly, British pilots didn't need any such thing!

Jones had suggested to the group that once the RAF had found the navigation beams in the air, they would be able to develop countermeasures, such as jamming or bogus beams. Churchill gave his approval for further investigation.

That very afternoon Jones went to a conference in the office of the Director of Signals, Air Commodore Charles Nutting. Participants in the meeting were leaning toward canceling further flights seeking to intercept the beams. Jones told the group firmly that if the flights were canceled, he would see to it that the prime minister knew who had countermanded his orders.

Very quickly the search flights were agreed to. But, Nutting asked, "What do we do if we find the beams?" Jones suggested, "Go out and get tight!"

The next day's flight intercepted beams from both Cleves and Bredstedt, confirming many of Jones's calculations about them.

That night Jones and one of his colleagues, following his own advice, went to St. Stephens Tavern, near the government buildings in London, "to indulge in a celebration that was tempered only by the knowledge that I had to drive down to Boscombe Down on the following day...."

SOURCES:

R. V. Jones, *The Wizard War: British Scientific Intelligence 1939-1945*, 1978.

Kenneth Macksey, *The Searchers: Radio Intercept in Two World Wars*, 2003.