The Air Observer Schools, like the E.F.T.S., were operated by civilian companies under R.C.A.F. supervision. The first school opened on May 27, 1940, with a 12week course devoted largely to dead reckoning navigation and map reading. The trainees then went to a B. and G.S., the first of which commenced on Aug. 19, 1940, for a 6-week course, followed by a special 4-week course in astro-navigation at the Central Navigation School.

In March, 1942, the original category of air observer was abolished and replaced by four new types—navigator, navigator "B", navigator "W" and air bomber. Each of the three types of navigator received the same standardized training. The navigator trainee began with a 10-week course at an I.T.S. (in contrast to the observer's 4-week course) and then went to an A.O.S. for 18 (later 20) weeks, during which he received 98 hours flying time in addition to training on synthetic devices and the astro course formerly given at the C.N.S.

Since the navigator "B" combined bomb aiming with his navigation duties, he was given a 6 (later 8) week course at a B. and G.S. between the I.T.S. and A.O.S. stages. In February, 1944, the gunnery instruction at B. and G.S. was discontinued. Navigators "B" were chiefly used in Coastal Command and the trainees received a 6-week general reconnaissance course before going to an O.T.U.

The navigator "W" served as wireless operator as well as navigator and, in addition to the usual navigation course, received special signals training. Courses for navigator "W" began in the autumn of 1943 and, until December of that year, were filled with R.A.F. pupils. When R.C.A.F. navigators "W" were trained the pupils were selected from the best wireless operator-air gunners graduating from Wireless Schools.

Training of air bombers began in August, 1942. The trainee's duties were varied; in addition to bombing he had to have some knowledge of navigation, gunnery, and piloting. After the usual 10-week course at I.T.S., the air bomber trainee went to B. and G.S. for a course which was initially 8, then 12, and finally 10 weeks. This was followed by a 6 (later 10) week course at an A.O.S., making a total instruction period of 30 weeks.

Class	R.C.A.F.	R.A.F.	$\underbrace{R.A.A.F.}_{R.A.F.}$	R.N.Z.A.F.	Total
Navigator	. 7,280	6,922	944	724	15,870
Navigator B <sup>1</sup>	. 5,154	3,113	699	829	9,795
Navigator W	. 421	3,847	Nil	30	4,298
Air Bomber	. 6,659	7,581	799	634	15,673
	19, 514	21,463	2,442	2,217	45,636

The output of navigators and air bombers was as follows:-

<sup>1</sup> Including air observers.

The wireless operator-air gunner trainee entered directly at Wireless School where, during an 18-week course, elementary ground armament training was given. Operational requirements led to a lengthening of the course from the original 18-week term to 28 weeks by 1942. At the same time the second stage of training at a B. and G.S. was extended from 4 to 6 weeks. The number of rounds fired in air exercises was trebled, from 1,800 in 1941 to 5,400 in 1944.

In the early period the training was of necessity crude, as only obsolete types of machine-guns were available and air exercises had to be carried out on Fairey Battle aircraft which were not fitted with turrets. In 1941 a few Bristol, Boulton 50871-70