September 20th, 1964

UNITED STATES AIRCRAFT CARRIER "ENTERPRISE"

A few days ago the United States Naval Attache asked me to visit the United States aircraft-carrier "Enterprise" when she was off the coast of Victoria. In the United States I had seen several units of the Fleet, but I had not seen a large nuclear carrier and so this was an opportunity not to be missed.

The carrier sent small anti-submarine aircraft to Essendon to pick up the few people who had been asked to go on board. After about half-an-hour's flight we landed smoothly on the $4\frac{1}{2}$ acres of flight deck.

The sheer size of this carrier is quite fantastic and something that it is difficult to visualise. It is unfortunate that because of the narrow gap into Port Phillip Bay the carrier was unable to visit Melbourne where many more people could have seen her.

She is about 86,000 tons, and her eight nuclear reactors can send her through the water at up to 40 miles an hour.

Everything about this ship is spacious. This nuclear carrier and her two nuclear escorts - one destroyer and one cruiser - are designed to be able to stay at sea for protracted periods without taking on additional fuel or stores. It is possible to do this, of course, because the storage capacity normally used for fuel oil can be used for other purposes on a nuclear ship. The purpose of this cruise of these three nuclear vessels is to demonstrate that ships can stay at sea for very long periods without taking on additional supplies. Indeed, after a cruise around the world during which there will have been several fire power displays these ships will get back to the United States with enough fuel in their reactors to travel around the world a few times, enough armaments for more than a week's continuous high level fighting and enough food for the men for a further protracted period. These are the benefits of nuclear power.

We were given a demonstration with a geiger-counter to show quite convincingly that there is less radioactivity from the reactors than a person would normally get from the luminous dial on a wrist watch. Indeed, after demonstration in which my own watch was involved I almost felt like throwing the watch overboard.

After a tour of the ship and an inspection of the seven different types of aircraft on board we were taken to a vantage point to witness the fire power demonstration. This involved the large Vigilante nuclear bomber, the smaller powerful Phantom aircraft that is used in this ship as a fighter but which can also be used as an attack bomber, and several smaller aircraft. Nearly all the aeroplanes on board were, of course, supersonic, and two of them flew past the carrier at supersonic speeds to give us an example of the impact of the sonic boom, which seemed to shake the whole ship. This is the shock wave caused by aircraft travelling at speeds faster than the speed of sound — it is something which doesn't much worry military aircraft, but which is going to cause considerable difficulties when civil transports start travelling at these speeds, over the towns and villages in different countries.

During this fire power demonstration we saw a convincing demonstration of the accuracy of certain missiles, some of which are used by the Australian Air Force. Four parachute flares were dropped several

hundred yards from the ship, then some aircraft at great speed crossed the bow of "Enterprise" and released their side-winder rocket missiles. These are missiles that will home on anything that gives out some heat. The side-winders homed on the flares, scored a bull's-eye and shot the flares "Enterprise" has several steam catapults which are essential to get jet aircraft off a carrier; in something like 250 feet a ten ton or eleven ton aircraft can be brought up to speeds well in excess of 100 miles an hour so that they can be successfully launched. With the several catapults it is possible to get a very large strike or protective force into the air in a very short time. It has been said that this carrier contains greater fire power than all the conventional bombs dropped during the second world war. Quite obviously it has tremendous nuclear capability, but this does not mean that its conventional armaments are to be despised - they are exceedingly accurate and powerful and these, of course, were the ones whose demonstration we obverved. "Enterprise" represents a tremendous amount of investment in one ship, and therefore if she is used in any theatre of war it is essential that she can protect herself or be adequately protected. For these purposes her radar screen is extended by an aeroplane that can fly above her and thus observe anything that might be trying to approach her below the normal radar screen on the ship. The cruiser and the destroyer sailing with her are, of course, armed with the latest surface-to-air and surface-to-surface missiles for protection against aeroplanes or attack by sea. They also have on board the latest anti-submarine devices. The whole task force, called Task Force 1, is a most convincing display of the effectiveness of sea and air power combined. After about four hours on board we were flown back in the anti-submarine aircraft to Essendon. -000--