

new credit upon themselves in long-range training flights.

If the weather conditions and other factors which influenced the conduct of *Sunrise*, and which are fully recounted in the following pages, are given due consideration, it will be gathered that aircrews of the Commands engaged made the best of a very bad job. That Bomber Command planning may have been at fault—e.g., in that not a single unit was deployed to a position near the coast—may, in the view of the judges, be considered reprehensible. Such matters, however, are now *sub judice*, and profound speculation on this score would be premature.

An official pronouncement, subject to considerations of national security, would go far towards allaying much of the uneasiness promoted by what was, after all, a single exercise held under exceptionally severe weather conditions.

Arctic Trials

THERE is considerable significance in the recently announced decision by the Admiralty to send an expedition early next year on a six weeks' cruise in the Northern Atlantic and Arctic waters. The Navy obtained a good deal of practical experience in cold-weather operation during the war, when convoying ships around North Cape to Russia, but equipment has changed since then, and there is much to be learned about the functioning of weapons of all sorts, electronic devices, aircraft and their gear, as well as the effect on crews of low temperatures, the most suitable clothing, and a host of other things.

It is obvious that the Royal Navy might be called upon again to operate in these northern waters in case of war, and the fact that the largest vessel is an aircraft carrier, H.M.S. *Vengeance*, gives a pointer to the way naval thought is shaping. She will be accompanied by two destroyers, a frigate, a submarine and an oiler.

Behaviour of aircraft in cold climates has already been studied by the R.A.F. and R.C.A.F. in Canada during extensive "winterization" trials, and much has been discovered. On the whole, aircraft can be made to function fairly well, as shown in the lecture to the Royal

CONTENTS

Outlook - - - - -	707
Exercise Sunrise - - - - -	709
Power-Line Patrol - - - - -	714
Suction-wing Glider - - - - -	716
Here and There - - - - -	717
Ways and Nenes - - - - -	719
Sea Vampires Exercise - - - - -	722
Civil Aviation News - - - - -	723
New Piaggio and Caproni Designs - - - - -	727
Altimeter Settings - - - - -	728
Powered Controls - - - - -	730
Correspondence - - - - -	731
Service Aviation - - - - -	732
Development of a New Aircraft - - - - -	735

Forthcoming Events page 731

Aeronautical Society last October. The Navy's tests will be somewhat different in that the little flotilla will be a self-contained unit and, presumably, will depend entirely on its own resources.

Details have not been disclosed as to the types of aircraft which the carrier will take, but we would suggest that helicopters should be included in the equipment. Not only would such cold-weather experience be valuable to helicopter designers, but it is conceivable that the carrier might find such aircraft extremely valuable on an expedition of this sort. Not long ago an American expedition, Task Force 80, went to the Arctic to take supplies to weather stations there, and to look for possible sites for new stations. That expedition included two icebreakers, each of which carried two helicopters. One of these is reported to have found the cairn which contained the records left in the Arctic regions more than 40 years ago by Peary during his North Pole attempt. It is not suggested that the British Naval expedition should go looking for cairns; that is not its function. But it might find, as did the American task force, that the helicopter could come to the rescue in emergency, as well as doing many useful ordinary jobs.



"OFF THE ROPES." The Cierva Air Horse made its first free flight on December 8th, as reported on p. 729. Piloted by Mr. H. A. Marsh, it completed a total of about 50 minutes on that day, at the impressive loaded weight of 14,600 lb, which is probably the greatest ever lifted by a helicopter.