

# **Radar Exhibition Opening Ceremony**

*at Worth Café & Craft Centre*



*on 17<sup>th</sup> July 2006*

*by* **Sir Bernard Lovell OBE FRS**

*introduction* Phil Judkins

*exhibition created by* Sq Ldr Mike Dean MBE

## Background

Sir Bernard Lovell opened the radar exhibition in Worth Matravers on Monday 17th July 2006. It tells something of the story of early radar during World War II, and was created by Sq. Ldr. Mike Dean MBE of the Purbeck Radar Museum Trust. The exhibition is in the Worth Café & Craft Centre – close to the sites where significant radar development was carried out from 1940 to 1942.

The exhibition tells the story of how concerns about air defence led to radar development work starting in 1935 and eventually moving to Worth Matravers in 1940. Under Churchill's instructions, top scientists were recruited from



photo: Sq. Ldr. Mike Dean MBE

Sir Bernard Lovell reviews the exhibition with Phil Judkins



photo: Sq. Ldr. Mike Dean MBE

universities to work on radar, and numbers at Worth increased from around 200 in 1940 to about 2000 in 1942! Amidst fears of a German raid, the work was hastily moved to Malvern in 1942.

Sir Bernard was one of the young radar researchers at Worth during the war, and with his radar experience, he went on to become one of the founding fathers of radio astronomy. At 93, he is one of the few remaining radar 'boffins', and is President of the Purbeck Radar Museum Trust.

The exhibition was assisted by a £4,860 grant from the National Lottery Awards for All scheme. It is one of several projects initiated by the Purbeck Radar Museum Trust aimed at increasing public awareness of Purbeck's radar heritage.

Phil Judkins, chairman of the Purbeck Radar Museum Trust introduced Sir Bernard, and their opening speeches are transcribed in these pages. This was made possible a video recording of the opening generously supplied to the Radar Trust by Des Clark and Anna Grayson.

The Worth Café & Craft Centre closed in March 2007. In April 2007, a cut down version of exhibition was created by Sq Ldr Mike Dean and set up in the Swanage Museum & Heritage Centre.

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## Introduction by Phil Judkins

chairman Purbeck Radar Museum Trust

Ladies and Gentlemen,

Worth, as we I think know, is the quintessentially British village – but it hides a secret. For two years from 1940 to 1942, this was Britain's 'silicon valley'. Two thousand of our top scientists, engineers and technicians worked here on radar – what was then our highest secret. In those

two years, the people who worked here laid the foundations, not only for present day radar which keeps us safe by air, by sea, but also of television and of computing. We often think of the United States as being a place where there is a lot of technology. Just one innovation that came forward and was developed here: the strapped resonant cavity magnetron, was described by the United States as the most valuable cargo ever to reach our shores.

This is a heritage to be celebrated, and today [the] Purbeck Radar Museum Trust sets out its new exhibition to make Worth and Swanage's high technology history accessible – and accessible to people who might never go near museums. The exhibition is designed to involve visitors of all levels of understanding and interest. The exhibition is of modest scale – it's not our intention to over-awe visitors, but an interesting fact: as much space {as} is given to radar here as is given in the Science Museum in London. In the Science Museum booklet you will actually find more space devoted to the US invented Barbie Doll than you will to the British invention of radar. Britain has indeed a very curious way, sometimes, of honouring its heritage. The Purbeck Radar Museum Trust will be trying to move the preservation of, and the interest in our technical history some way up the priority list of government in the years to come.

For creating this display there are a number of 'Thank You's' to be given: to the Lottery's Awards for All programme for their funding, to Gordon and Cathy Drew – the owners of the Craft Centre here, to David Tucker the Dorset County Council's Museum advisor for his advice and guidance on the project, to Bill Penley and [Tony Viney] who originated the idea and the Trust, for Jonathan Penley who designed the leaflet illustrating the site, and Phil Wyatt who developed the computer interactive [display]. All of these wish me to give a particular Thank You to Squadron Leader Mike Dean who created this new exhibition, researched, designed and installed it – Mike: to you there is a very particular thanks from all of us – for what you see is very much his creation.



photo: Sq Ldr Mike Dean MBE

Phil Judkins introduces Sir Bernard Lovell



photo: Sq Ldr Mike Dean MBE

Now, to open this exhibition it's my privilege to introduce one of the Worth scientists: Sir Bernard Lovell. For those who have heard Sir Bernard speak, he is one of the most modest of men. It is very well for us I think to remember that it is given to only a few to have founded a science. Sir Bernard did just that: From early experiments just after the war with ex-ministry radar, he moved on to conceive and create the radio telescope at Jodrell Bank which now bears his name. His achievements in radio astronomy

make him one of the giants of British science. But a message I bring relates to his earlier days here in Worth: It's from 76 Squadron RAF at a re-union on Saturday. They heard I would be here, and asked me to say from them the message: "Sir Bernard, your inventions guided us out and guided us home: you saved many of our lives: Thank You".

May I call on Sir Bernard to open the exhibition.

**Sir Bernard Lovell OBE FRS** President of the Purbeck Radar Museum Trust

Mr Chairman, Ladies and Gentleman, it's a great pleasure to be here today.

I arrived here just over 66 years ago, and it was then as peaceful as it is now, except that the Germans had broken the barriers and were advancing on Paris. I don't think then we realised how much danger we were in, but those who have read the accounts of the cabinet meetings that took place in London in a week in May 1940 will realise how fortunate we are to be here today. Then, just after Chamberlain had resigned as Prime Minister, there was the high level meeting to discuss who should succeed him as Prime Minister. The battle was between Halifax and Churchill. Halifax nearly won – he would have made peace through Mussolini. He was very much favoured by the king – but in the end, and oddly and fortunately because of Chamberlain's intervention, Churchill was appointed as Prime Minister. When he attended the palace and was being driven away, his chauffeur turned to him and said "Mr Churchill, may I congratulate you". Mr Churchill said "Thank you Thompson, but I fear that it may already be too late." It nearly was too late: the Germans were advancing on Paris, our expeditionary force were being rescued in a most heroic and remarkable manner, and the Battle of Britain had only just begun.

Well we were here throughout the Battle of Britain in which the radar developed before the war played a most important part. In fact it is extremely unlikely that without the help



photo Des Clarke

Sir Bernard Lovell with Phil Judkins

of the Chain radar stations around the coast, that we could have succeeded in the Battle of Britain. We were then working close [to] here on the site (of which photographs are preserved in this exhibition I am pleased to say,) and frequently machine gunned, and witnessing the battles to the left towards the Isle of Wight and Southampton and to the right towards Portland. It seemed extremely hard to believe that we could survive for very long, and Rowe, the chief {establishment} [superintendent] of the research station, was ordered to divert all his effort to the equipment which already existed and to concentrate on installing it in aircraft, and make it work better. We had a visit from Lord Dowding, the Commander in Chief of Fighter Command, who demanded that we all concentrate our efforts on the useless 1½ metre airborne interception radar that was then going into service.

*continued...*



photo: Sq Ldr Mike Dean MBE

Onlookers with a mounted copy of radar exhibition in background.

After the Battle of Britain was over in September of '40, as expected and as predicted by Sir Henry Tizard, the Night Battle began and the terrible bombing of London - and unfortunately Churchill blamed Lord Dowding for failing to deal with the night battle. At that time it was beyond the technological capability of what then existed. What made it possible was finally developed here at Worth Matravers, and it was from the Ground Controlled Interception that first was demonstrated on the cliffs close-by, that the German night battle was finally defeated. In those days, it was a question of defence, but then attention soon turned to attack and the fundamentals of the attack which then developed first of all by enabling bomber command to find its targets, and perhaps most important in overcoming the U-boat menace they began here. I think it is often forgotten, that though we were only here for two years, it was here that most of the fundamental work was done.

After the commando raid on Bruneval in February of 1942, the Germans assembled a parachute battalion on the Normandy peninsula, and the evidence was that they intended to capture us. Churchill ordered us to get out before the next full moon, and history shows and we remember that, in April and May of 1942, we made a hasty retreat to Malvern. When at Malvern, we



photo: Jonathan Penley

Sir Bernard Lovell and Phil Judkins

continued at Malvern for the rest of the war – but that was mainly putting the finishing touches to much of the development which had occurred here, and this is why I always regard Worth Matravers as being the most important part certainly of my own career as a young man where we first handled the precious cavity magnetron, then regarded as a most important Allied secret, an now incidentally forming the power source of every microwave oven in the country – but then not so: a closely guarded secret. It was first used, and first formed part of the equipment from which detected the first aircraft echoes from this site in Worth Matravers.

I think I am not going to speak for much longer because most of you will find the details in this exhibition here. {and} I am extremely glad and would like to congratulate the new chairman and the members of the Trust for persisting in this very difficult task of providing this important memorial to a very historic period in the country. I might finally add that it's often said that the contribution made by the British scientists to the winning of the war was because we were better than the German scientists. That is not correct. The real essence [was] that we were so closely integrated both with the political and the chiefs of staff requirement: that this did not exist in Germany, and we were instantly aware of the



photo: Jonathan Penley

Sir Bernard Lovell & Mike Dean MBE

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troubles and demands of the armed services and reacted to them as quickly as possible with no-one asking how much it would cost. That is why we were able to do things so quickly.

So, Mr chairman, it gives me very great pleasure, first of all to be here today and to be able to thank you for providing this important memorial to this historic period in the history of this country.

I declare this exhibition open.

{Unveiling of plaque}



photo: Jonathan Penley



photo: Jonathan Penley

Sir Bernard Lovell, Phil Judkins & Mike Dean

Unveiling the plaque

Purbeck Radar Museum Trust

Exhibit  
commemorating radar development  
at  
Worth Matravers  
1940 – 1942

Opened  
by  
Sir Bernard Lovell OBE FRS  
17th July 2006

Wording on the plaque

more information: [www.purbeckradar.org.uk](http://www.purbeckradar.org.uk)



photos: Sq Ldr Mike Dean MBE

The radar exhibition



photo: Sq Ldr Mike Dean MBE

Phil Judkins introduces Sir Bernard Lovell



photo: Sq Ldr Mike Dean MBE

George Willey, Sir Bernard Lovell & Bill Penley outside the Square & Compass



photo: Sq Ldr Mike Dean MBE

Anna Grayson & Des Clarke recording the ceremony on video



photo: © Des Clarke

Anna Grayson with Sir Bernard Lovell  
Anna Grayson's father Harry worked with Sir Bernard on H2S.



photo: © Des Clarke

Phil Wyatt, Bill Penley & a teacher from Purbeck School



photo: © Des Clarke

Bill Penley