

## STEM ACTIVITY 2 EXTENSION

# RADAR DATA

In this activity you will follow some of the steps that the men and women of the RAF followed in order to process data during the Battle of Britain.

### WHAT YOU'LL NEED

- Radar Plotting Sheet
- Protractor, pencil, ruler and calculator

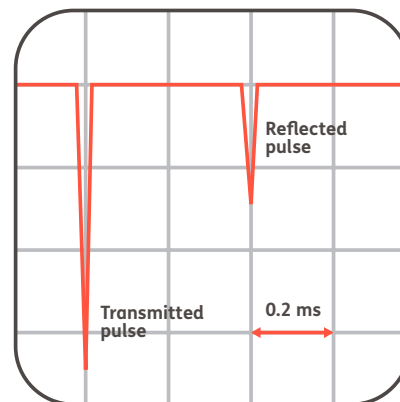
### WHAT YOU NEED TO DO

1. The type of radar display used by the RAF during the Battle of Britain is shown on the right.
  - (a) Each horizontal division represents 0.2 milliseconds. Radio waves travel at 300,000 km/sec. Work out the range of the target.
  - (b) The target is known as F1. Add your answer to the data for station F to complete the table.
2. The positions of two radar stations used by the RAF are shown on the Radar Plotting Sheet. The station at Fairlight (Station F) was about 45 km away from the one at Beachy Head (Station BH).
  - (a) Range and bearing data for targets from both stations is shown in the table. Use a protractor and ruler to mark the position of these targets on the Radar plotting sheet (scale 1 cm = 5 km). Label each target your mark with their code (BH1, F1 etc).
  - (b) Now, look at the targets that you have plotted. Decide which pairs of plots (eg BH1 and F3) could be the same target (aircraft). Which pairs are likely to be two separate targets? (There are no right or wrong answers in this exercise, but in the Second World War the judgement of an experienced operator was critical).



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### RADAR DISPLAY



### RADAR DATA

#### Targets detected by Station F

Target code	Range	Bearing
F1		110°
F2	70 km	190°
F3	70 km	130°

#### Targets detected by Station BH

Target code	Range	Bearing
BH1	50 km	150°
BH2	70 km	130°
BH3	90 km	110°