

*Latest in Science..*

# THEY CHART THE WINDS WITH TINSEL

**I**F out motoring you happen upon a patch of bush covered with thousands of glittering tinfoil strips two inches long and see a "flying saucer" overhead, don't panic.

It's no Martian invasion — merely a C.S.I.R.O. weather balloon plotting speed and direction of upper winds with "windows."

"Windows" was Allied bombing squad-

ARMED BOMBING squad-  
rons' code name for  
bundles of strips of  
metal foil.

Dropped from planes  
as they approached  
their target the myriad  
strips, spreading and  
floating at various  
heights and rates, reg-  
istered as "planes" on  
enemy radar, sending  
A.A. gun-  
ners' range  
and height  
estimates  
haywire.

T o d a y  
C.S.I.R.O. uses the tinfoil  
trick to plot speeds and  
directions of upper winds  
by radar.

A weather balloon re-  
leases, by robot control,  
bundles of metal foil strips  
at various heights as it  
rises.

Each packet contains  
more than 10,000 strips  
each two inches long.

A series of bundles is  
dropped in some definite

dropped in some definite pattern.

The strips would fall through still air, at a known rate, one metre a second.

They're tracked from the ground by radar, which automatically measures and registers their horizontal and vertical motions.

As these motions are due to winds, the winds' speed and direction can be calculated, making allowance for the tinfoil's own "free fall."

The same method is used for tracking air currents within and around clouds (clouds are transparent to radar).

By this means new and valuable information about rainclouds and other cloud types has been obtained.

The maximum period over which the tinfoil can be followed is 15 to 20 minutes, but that's quite enough to get accurate measures of wind and air-current speeds.

Since in good weather  
a balloon can rise to 100,-  
000 feet and

## SCIENCE IN AUSTRALIA

... the sky's  
the limit" for  
radar, winds  
at all practi-  
cal flying  
heights can

be charted.

To get good radar echoes  
from tinsel strips the  
length of the strips  
must be half that of the  
wavelength of the radar.

That's why, using 10  
centimetre wavelength  
radar, the strips are five  
centimetres (roughly two  
inches) long.

—H. C. McKay