

Cosmic rays were snared

SCIENCE IN AUSTRALIA

AT Melbourne recently four scientists watched through telescopes a Flying Saucer travelling eastward at a height of more than 70,000 feet.

After travelling a fair distance east it came back at great speed and passed over the city again, travelling westward.

Soon after the Saucer vanished after dropping a glowing starlike object on the earth.

The scientists claimed

ON THE CAR.

The scientists clambered into a car and set off consulting a map.

"We'll capture this one quickly."

Five miles along the chosen road they caught the star's gleam in a patch of distant scrub

They soon had it in their hands a light frame covered with sparkling material, a parachute and packet attached.

But that was all in the day's work no mystery to the finders. Scientists of Melbourne University Physics Department.

Just a bunch of cosmic rays they'd trapped 90,000 feet up.

In Sydney Professor Messel's team has started upper-air cosmic ray research with "all modern cons.," up-to-date balloons and two famous English scientists skilled in the required technique.

quired technique.

But over in Melbourne a group of Australians—J Darby, V D Hopper, Jean Laby, A. R. Wilson—have been successfully trapping cosmic rays for the past two years, learning the job the hard way "from the ground up."

Modern method of trapping cosmic rays is to snare them on silver bromide plates carried up by balloons to over 80,000 feet.

Open-necked gas-filled balloons, able to linger at great heights without dropping or bursting, are used.

The Melbourne team couldn't use these up-to-date open-necked balloons because of expense and difficulties in launching.

So they used rubber balloons, sealed after inflating.

The problem was then to get them up over 80,000 feet without bursting, and to keep them there a while

so as to trap as many cosmic rays as possible.

They first tried strings of

They first tried strings of balloons (one above the other), which burst in turn—too expensive, too “chan-cy.”

Then one balloon inside another, the outer bursting first—but most times it burst the other too.

Then two balloons, one above the other, top one automatically cutting free at 70,000 feet

Next they tried a single balloon with slack string running from side to side within it.

At great heights the balloon expands, pulling string taut, which opens valve.

gas escapes, balloon doesn't burst.

Finally, to this set-up they added a clockwork robot that closes valve after enough gas is lost, then drops a small weight, sending balloon higher.

This stretches the string again, and the sequence re-

again. and the sequence repeats.

By this clever set of gadgets they got their cheap little balloons right up to 90,000 feet. trapping cosmic rays.

Up to 70,000 feet over Melbourne a strong westerly to south-westerly blows; above that height is a strong easterly to south-easterly.

This lucky "set" blows their balloons first eastward then back to westward. Keeping the balloons in sight by theodolites is easy.

To retrieve balloons when they finally sink or burst the scientists attach a "marker" to each. a light round frame covered with aluminium foil.

In the air this shines brilliantly.

Since using this the scientists have been recovering nearly 90 per cent. of their balloons (previously only 25 per cent.).

And those gleaming markers falling through the sunlit sky are adding

the sunlit sky are adding
their quota to Melbourne's
present attack of Flying
Saucer Jitters.

—H. C. McKay