

# 2011 年臺灣國際科學展覽會

## 優勝作品專輯

國家：South Korea

編號：140041

作品名稱

Ring-shaped Round Wing

得獎獎項

三等獎

作者姓名

kisKim In Su Park Mo Se

## **Abstract**

The purpose of our experiment is to analysis a specific ring shaped airplane called 'Round Wing' to know its characteristic. We've done several experiments to find its characteristics.

First, Unlike other airplanes, Round Wing needs little time to recover its stability by comparing duration of flight.

Second, as the eccentricity of the ring increase from 0.5 to 0.95, the stability and duration of flight are increased too. Also the size of body increase 1, 2, 3 times, the duration of flight is increased to 184%, 204%, 222%.

Third, when Round Wings are attached each other by 2, 3, 4 they flew with high stability than before and stayed in the air much longer.

Conclusion, Round Wing has unique characteristic (like high stability, and long duration of flight). And if additional power plant added, it can stay in the air very long. Also it can be used for leisure, patrol, broadcasting, and geological purposes.

## 評語

1. The authors studied the stability and the flight duration of ring-shaped airplanes and their variations. They also provide some results of wind-tunnel testing.
2. This work does give an interesting understanding of such an old paper toy. However, the authors should discuss more on the effect of the geometry on the aerodynamic properties of these airplanes.