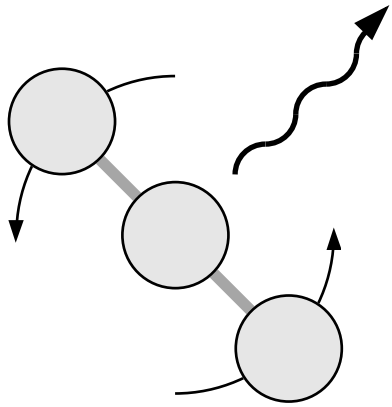

PHYSICS OLYMPICS WORLD WIDE 2000

LIVERPOOL, UK
PERTH, AUSTRALIA
YALE, USA

Spin Doctor

Aim To simulate the rotational motion of a nucleus as it loses energy by emission of γ-rays.

Method The 'nucleus' comprises three team members at each end and the middle of the nuclear axis. The γ-ray photons are thrown to the fourth team member, the 'detector'.

Rotation starts with the nuclear axis perpendicular to the line joining the nucleus to the detector. The nucleus rotates with a period given below, and changes abruptly each time a photon is emitted, which occurs after every two rotations.

Initial rotation period = 5 s	After 2 photons, period = 8 s
After 1 photon, period = 6 s	After 3 photons, period = 16 s

Time limit 15 minutes of practice motion plus 10 minutes of judging.

Ranking The ranking order will be determined by the accuracy of the motion of the team members.

Team ***Result***

Do not write below line

Rank