

Answer on Question #42236-Physics-Atomic Physics

Presume a ship cruises with a constant velocity when the thrust from its engines is a constant 10000N. What is the acceleration of the ship? What is the force of air resistance acting on the ship?

Answer

The acceleration of the ship is **zero**, because a ship cruises with a constant velocity.

The force of air resistance acting on the ship is equal to the thrust from engines and directed oppositely to it:

$$F_{air} = 10000N.$$