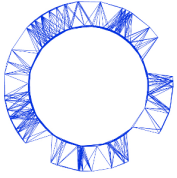


# Theory



IPhO 2018  
Lisbon, Portugal

# A2-1

Japanese (Japan)

## ニュートリノはどこに？ (10 点)

### Part A. ATLAS 検出器の物理 (4.0 点)

**A.1** (0.5 pt)

$$r =$$

**A.2** (0.5 pt)

$$p =$$

**A.3** (1.0 pt)

$$\xi = \quad n = \quad k =$$

**A.4** (1.0 pt)

$$\alpha =$$

**A.5** (0.5 pt)

$$\Delta E =$$

**A.6** (0.5 pt)

$$\omega(t) =$$

### Part B. ニュートリノを探す (6.0 点)

**B.1** (1.5 pt)

$$m_W^2 =$$

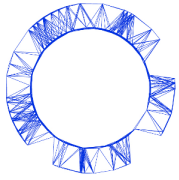
**B.2** (1.5 pt)

$$p_z^\nu = \quad \text{or} \quad p_z^\nu =$$

**B.3** (1.0 pt)

$$m_t = \quad \text{or} \quad m_t =$$

## Theory



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**B.4** (1.0 pt)

解のうち最も可能性が高いもの：

**B.5** (1.0 pt)

$d =$