

$$81 = 146 \text{ g rans}$$

$$82 = 57 \text{ g rans}$$

$$s/w \cdot \delta y \langle 5500, 4000, - \rangle = 12d$$

$$w \langle 81, 51 \rangle = 1$$

$$|P_{1,i}| = 85.0 \text{ kg m/s}$$

$$P_{1,i} = (48.0, -37.6) \text{ kg m/s}$$

$$\langle 15, 18 \rangle \text{ cm}$$

$$s/w \cdot \delta y \langle 6100, 0, 0 \rangle = 1d$$

$$w \langle 51, 48 \rangle = 1$$

$$P_{2,i} = \langle 30, -18.8 \rangle \text{ kg m/s}$$

$$|P_{2,i}| = 35.4 \text{ kg m/s}$$

$$\langle 24, 15 \rangle \text{ cm}$$

$$s/w \cdot \delta y \langle 1500, 0, 0 \rangle = 12d$$

$$w \langle 91, 4 \rangle$$

$$P_{1,i} = 52.8 \text{ kg m/s}$$

$$P_{1,i} = (12.8, -51.2) \text{ kg m/s}$$

$$\langle -4, 16 \rangle \text{ cm}$$

$$s/w \cdot \delta y \langle 700, 0, 0 \rangle = 12d$$

$$w \langle 91, 58 \rangle = 1$$

$$\langle 25, -16 \rangle \text{ cm}$$

$$|P_{2,i}| = 37.1 \text{ kg m/s}$$

$$P_{2,i} = \langle 31.3, -20 \rangle \text{ kg m/s}$$

$$80112 = 1469$$

$$80112 = 579$$