

reader. Weightless and rigid beam A_1A_2 with two equal masses m_A at the ends is suspended at point O by using a weightless and tensionless quartz fiber L in length and d in diameter. The beam arms are equal to each other: $|OA_1| = |OA_2| = h$. The plane of the beam A_1A_2 rotation about point O is perpendicular to the vector of the Earth's gravitational field intensity \underline{E}_{Terra} .

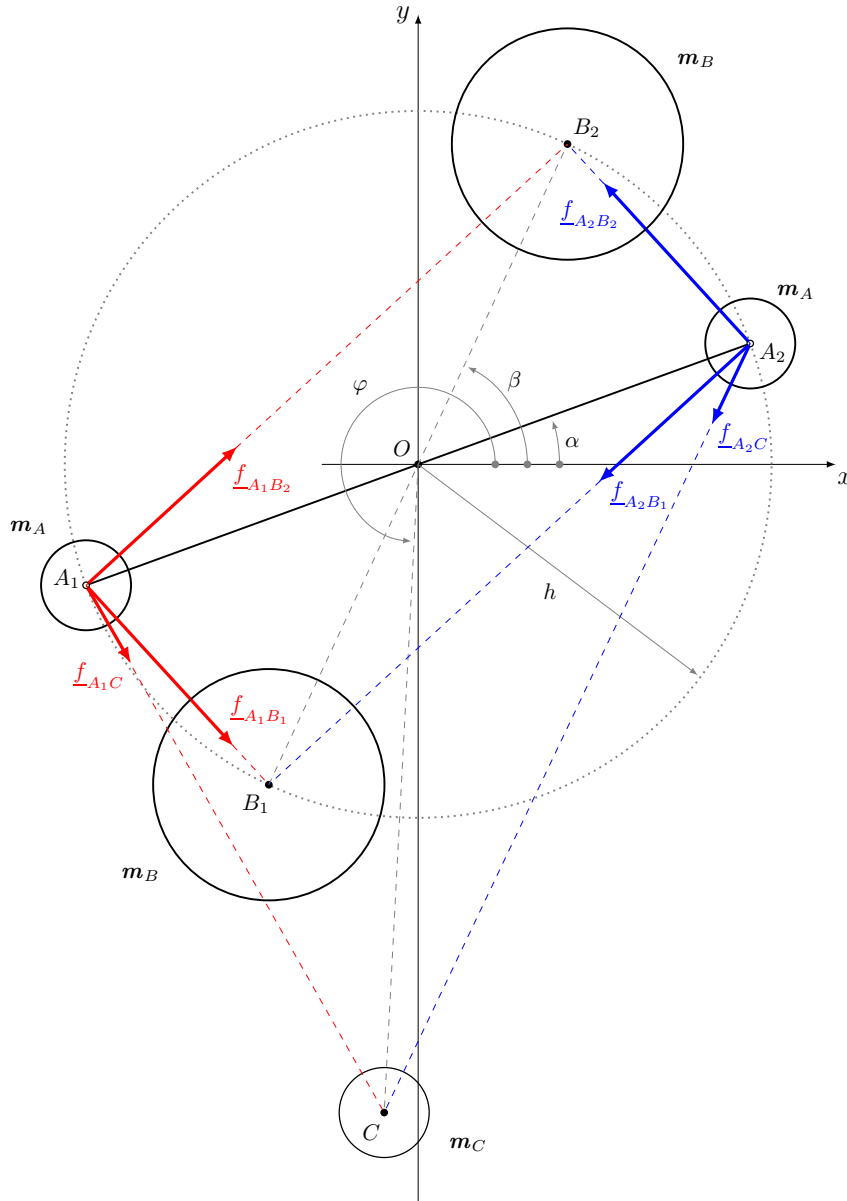


Figure 2: The torsion balance schematic model.

The controllable gravitational action on the torsion balance masses is realized through two motionless masses m_B located at points B_1 and B_2 on the circle of radius h . Orientation of the motionless masses m_B is defined by angle β between axis Ox and the line connecting points B_1 and B_2 . As the positive direction, the counterclockwise rotation is taken. In addition, let us take into account the effect of gravitational anomaly m_C located outside the torsion balance at the distance h_C from point O with azimuth φ that is the angle between axis Ox and straight line OC .

