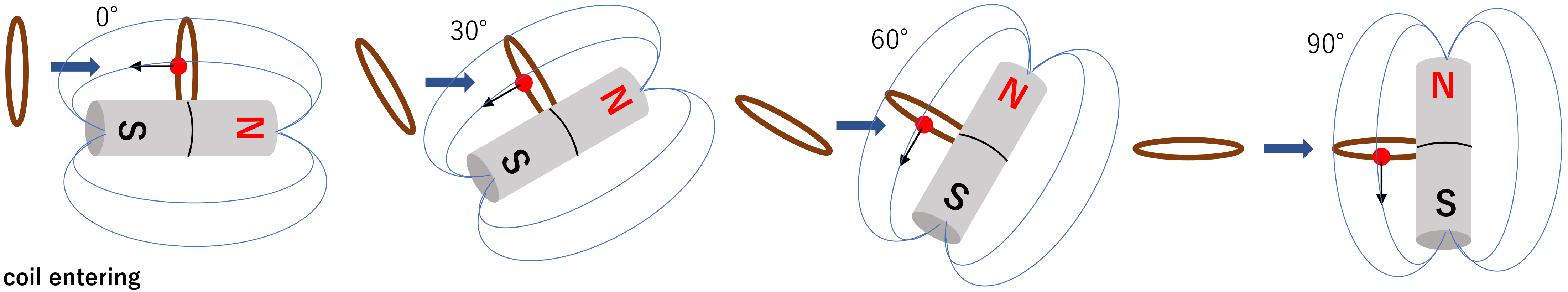
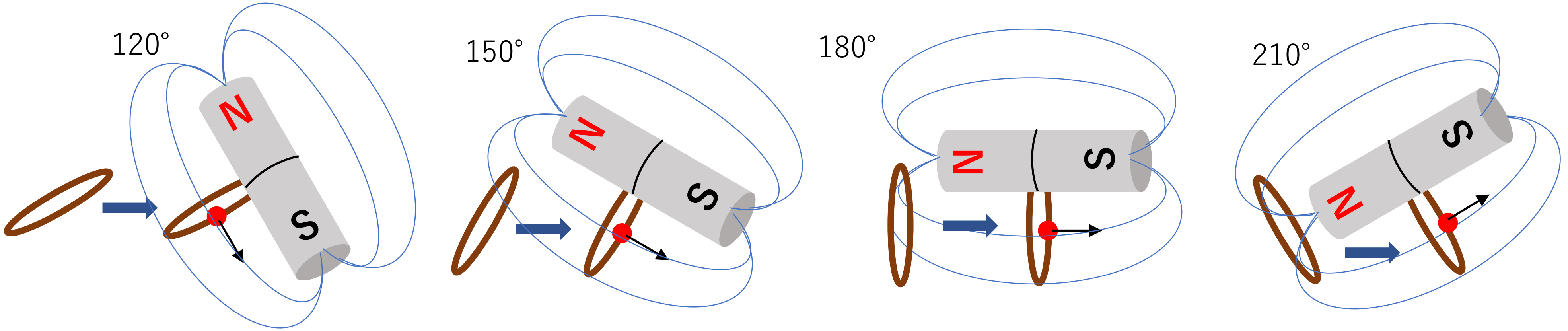
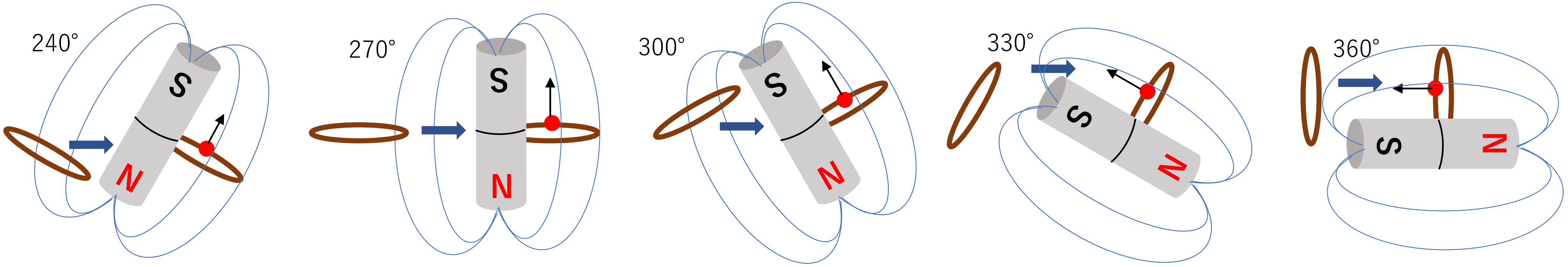


The angle of the coil entering the center of the bar magnet in Experiment 2

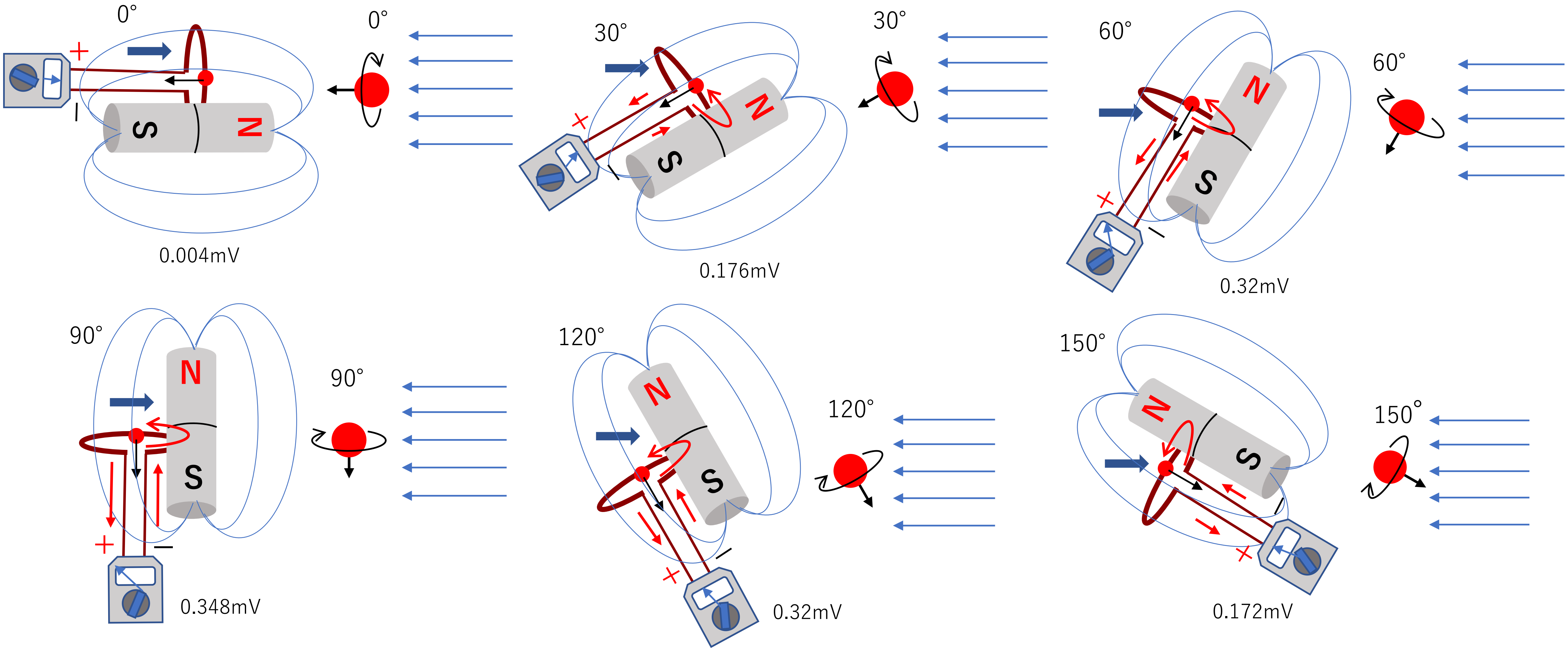
The coil always enters at 90° to the center of the bar magnet.
Red spheres represent electrons.
The black "←" of the electron is the direction of the electron (the direction of the magnetic field).
The blue "→" is the movement of the coil.

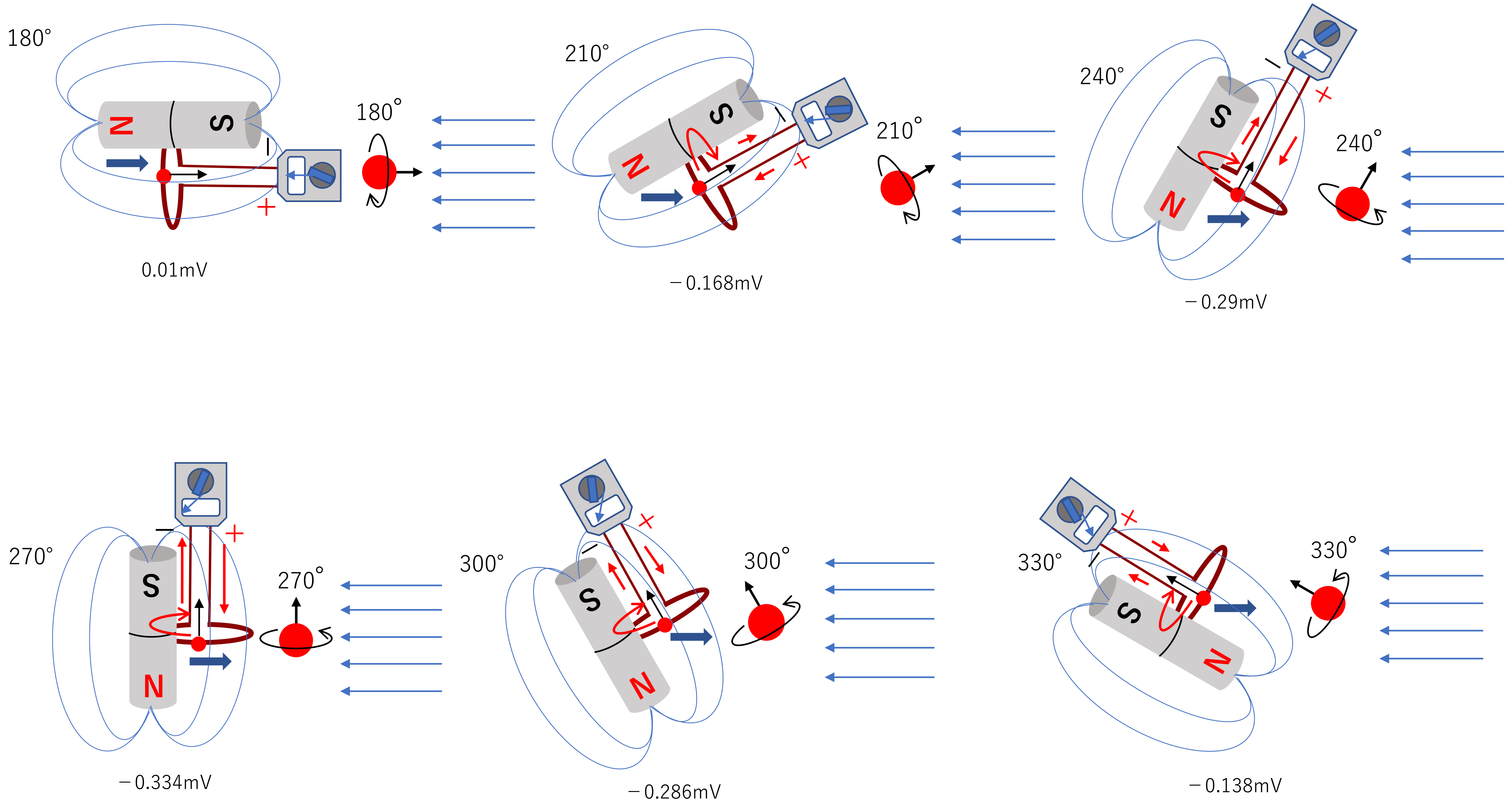




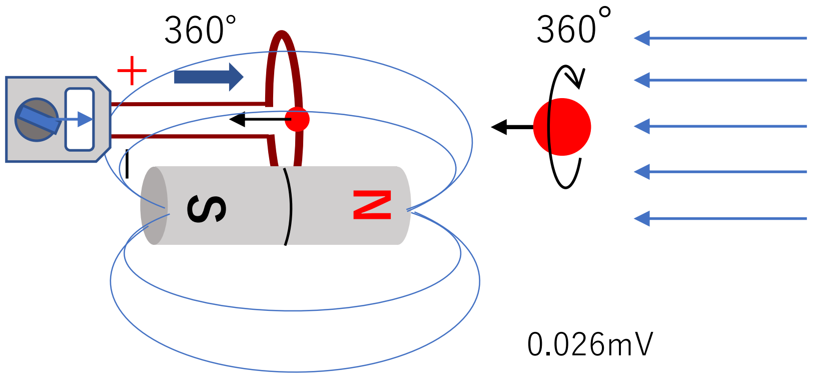
The angle at which the coil enters the magnetic field, the magnitude of the electromotive force, and the change in the direction of the electromotive force

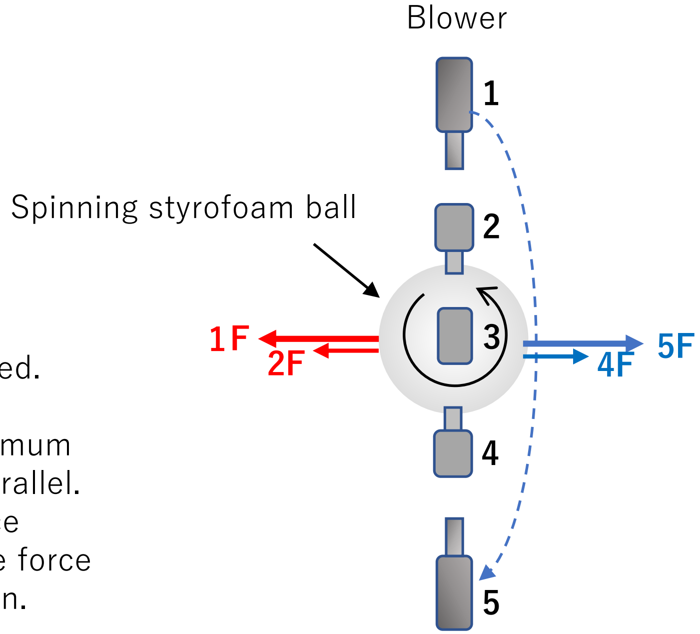
Red spheres represent electrons. An enlarged view of electrons in the coil is the large electron on the right. The thin blue "←" to the right of the large electron represents the movement of the magnetic flux density. The black "←" of the electron is the direction of the electron (the direction of the magnetic field). The thick blue "➞" indicates the direction of coil movement. The red "→" represents the movement of electrons. Angles greater than 0° and less than 180° move the electrons towards the front, while angles greater than 180° and less than 360° move the electrons towards the back. The electromotive force is maximum at 90° and 270°, and is almost zero at 0°, 180°, and 360°. Beyond 180°, the electromotive force reverses and the electrons move in the opposite direction.



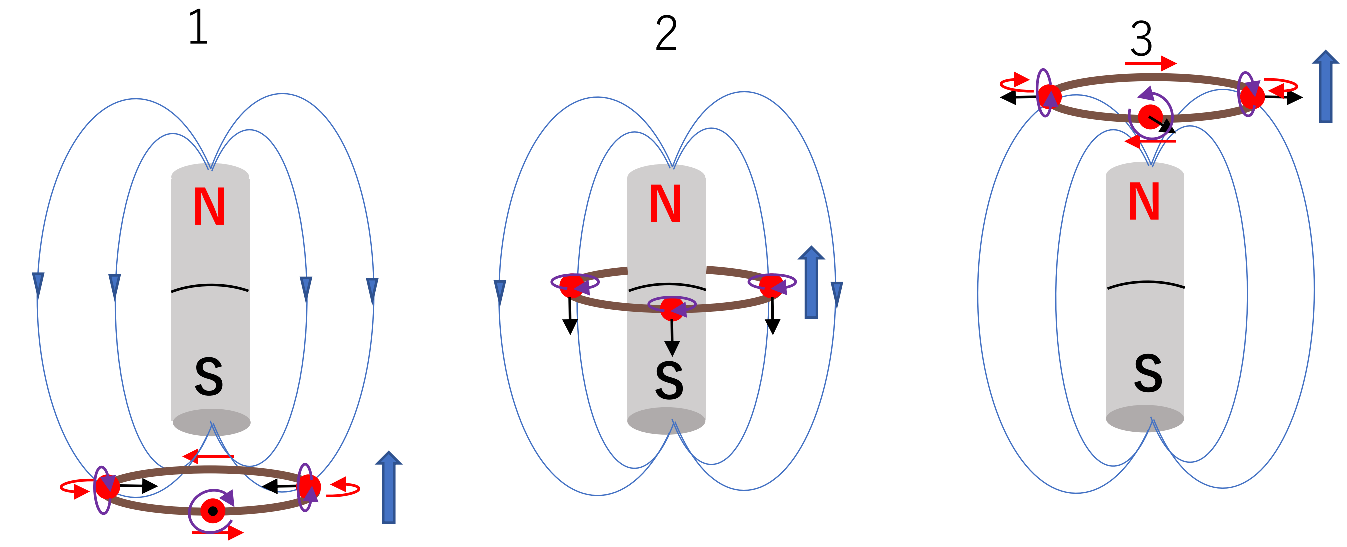


180°
N
S
180°
0.01mV
210°
S
N
210°
－0.168mV
240°
S
N
240°
－0.29mV
270°
S
N
270°
－0.334mV
300°
S
N
300°
－0.286mV
330°
S
N
330°
－0.138mV





Experiments and considerations that motivated the research
The electromotive force of a circular coil passing through the magnetic field of a bar magnet was measured. At 1, the electromotive force becomes maximum and gradually weakens, and at the center of 2, the electromotive force becomes 0. After that, the electromotive force reverses direction, reaching the maximum electromotive force at 3. In 1 the magnetic flux density hits the electron perpendicularly, in 2 it hits it parallel. And at 3 the electrons are in the opposite direction to 1. Therefore, I thought that the electromotive force might be reversed. Therefore, I have been conducting research based on the idea that the electromotive force changes depending on the angle at which the magnetic flux density hits the axis of rotation of the electron.



Top view of Figure 1f
The blower rotates on the rotating polystyrene ball in steps of 15 degrees as indicated by the dotted arrows in steps 1 to 5.
When the blower is at position 1, the styrofoam sphere receives a Magnus effect of **1F**.
Receives the Magnus effect of **2F** at 2, 0 at 3, **4F** at 4, and **5F** at 5.