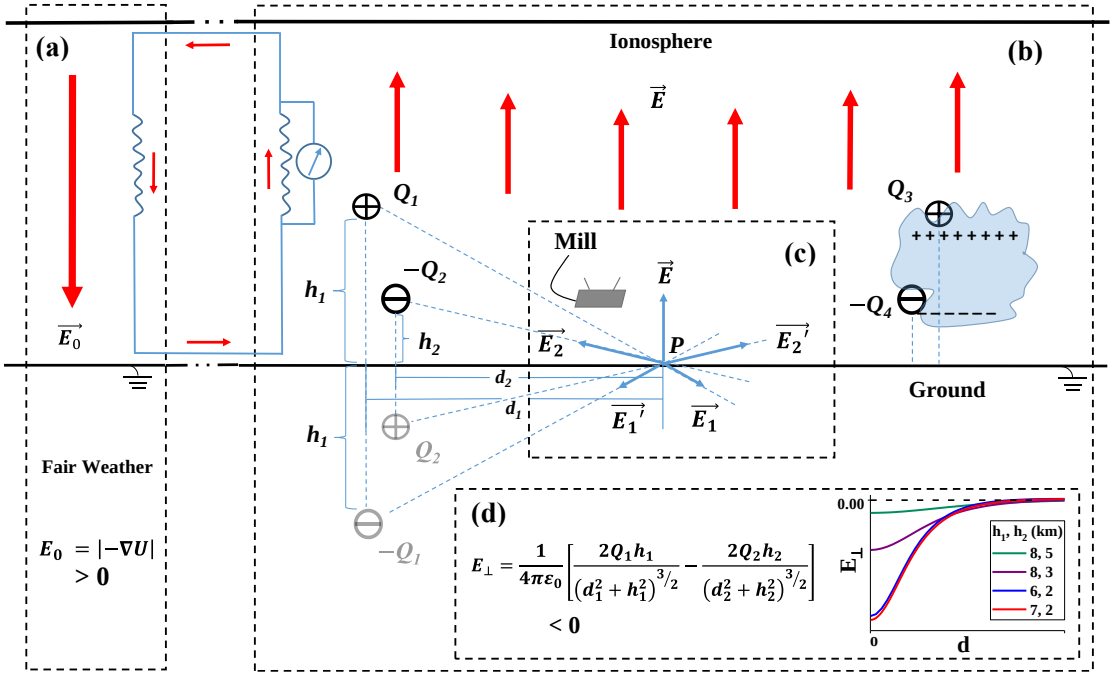
(a)
(b)
Ionosphere
$\vec{E}$
Q_1
Q_3
$-Q_2$
$-Q_4$
h_1
h_2
$\vec{E_0}$
Mill
(c)
$\vec{E}$
$\vec{E_2}$
$\vec{E_2}'$
P
d_2
d_1
$\vec{E_1}'$
$\vec{E_1}$
Ground
h_1
Q_2
$-Q_1$
Fair Weather
$E_0 = |-\nabla U| > 0$
(d)
$E_\perp = \frac{1}{4\pi\varepsilon_0}\left[\frac{2Q_1h_1}{(d_1^2+h_1^2)^{3/2}} - \frac{2Q_2h_2}{(d_2^2+h_2^2)^{3/2}}\right] < 0$
0.00
$E_\perp$
0
d
h_1, h_2 (km)
8, 5
8, 3
6, 2
7, 2