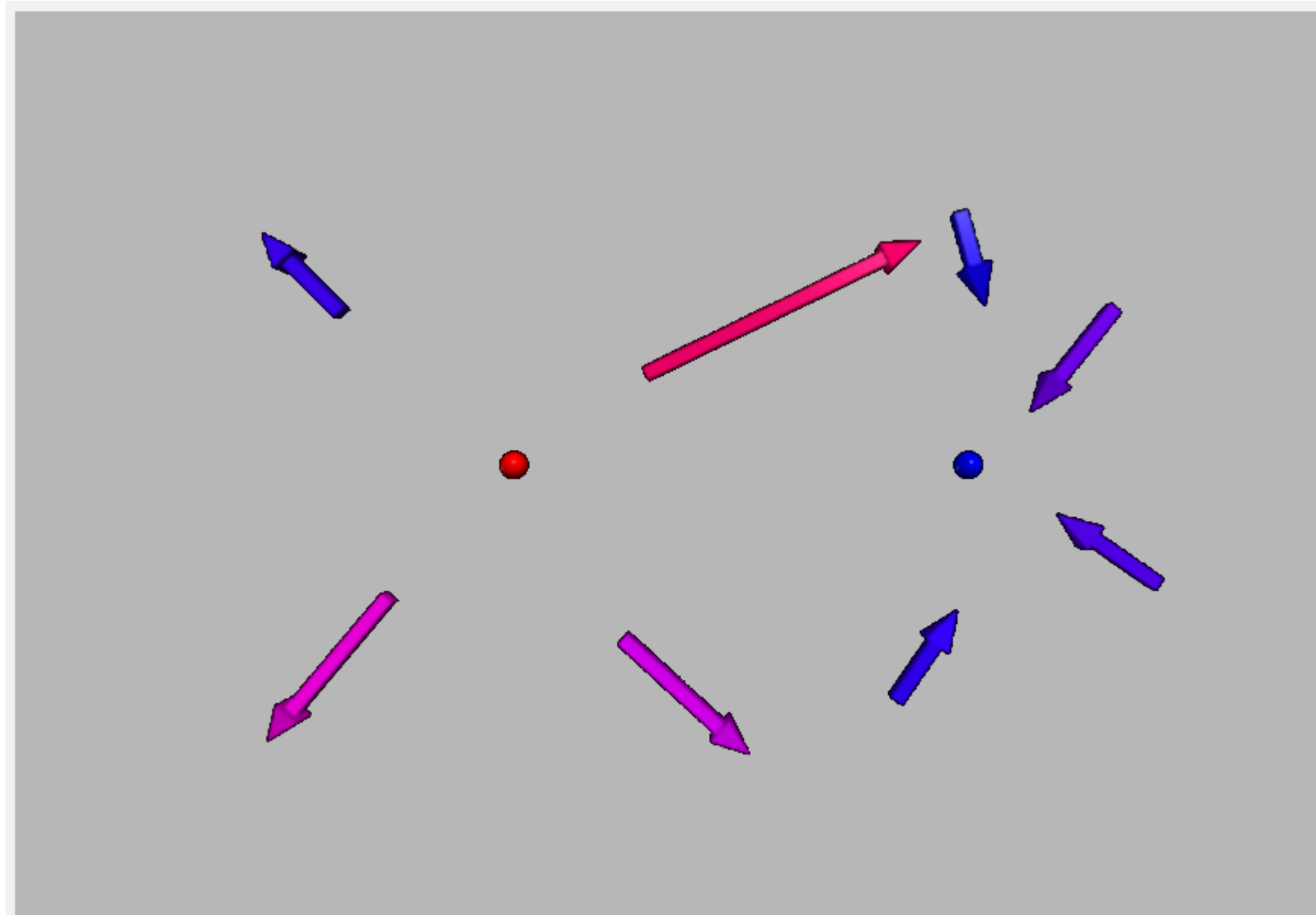```
GlowScript 2.7 VPython

scale = 4e-14/1e17
ec = 1.6e-19 # electron charge
kel = 9e9   # Coulomb constant
scene.range = 2e-13

charges = [sphere(pos=vector(-1e-13,0,0), Q=ec, color=color.red, size=1.2e-14*
            sphere(pos=vector(1e-13,0,0), Q=-ec, color=color.blue, size=1.2e-14*

s = "Click or drag to plot an electric field vector produced by the two charges.\n
s += "On a touch screen, tap, or press and hold, then drag.\n"
s += "Arrows representing the field are bluer if low magnitude, redder if high."
scene.caption = s

def getfield(p):
    f = vec(0,0,0)
    for c in charges:
        f = f + (p-c.pos) * kel * c.Q / mag(p-c.pos)**3
    return f

def mouse_to_field(a):
    p = scene.mouse.pos
    f = getfield(p)
    m = mag(f)
    red = max(1-1e17/m, 0)
    blue = min(1e17/m, 1)
    if red >= blue:
        blue = blue/red
        red = 1.0
    else:
        red = red/blue
```



Click or drag to plot an electric field vector produced by the two charges.
On a touch screen, tap, or press and hold, then drag.
Arrows representing the field are bluer if low magnitude, redder if high.