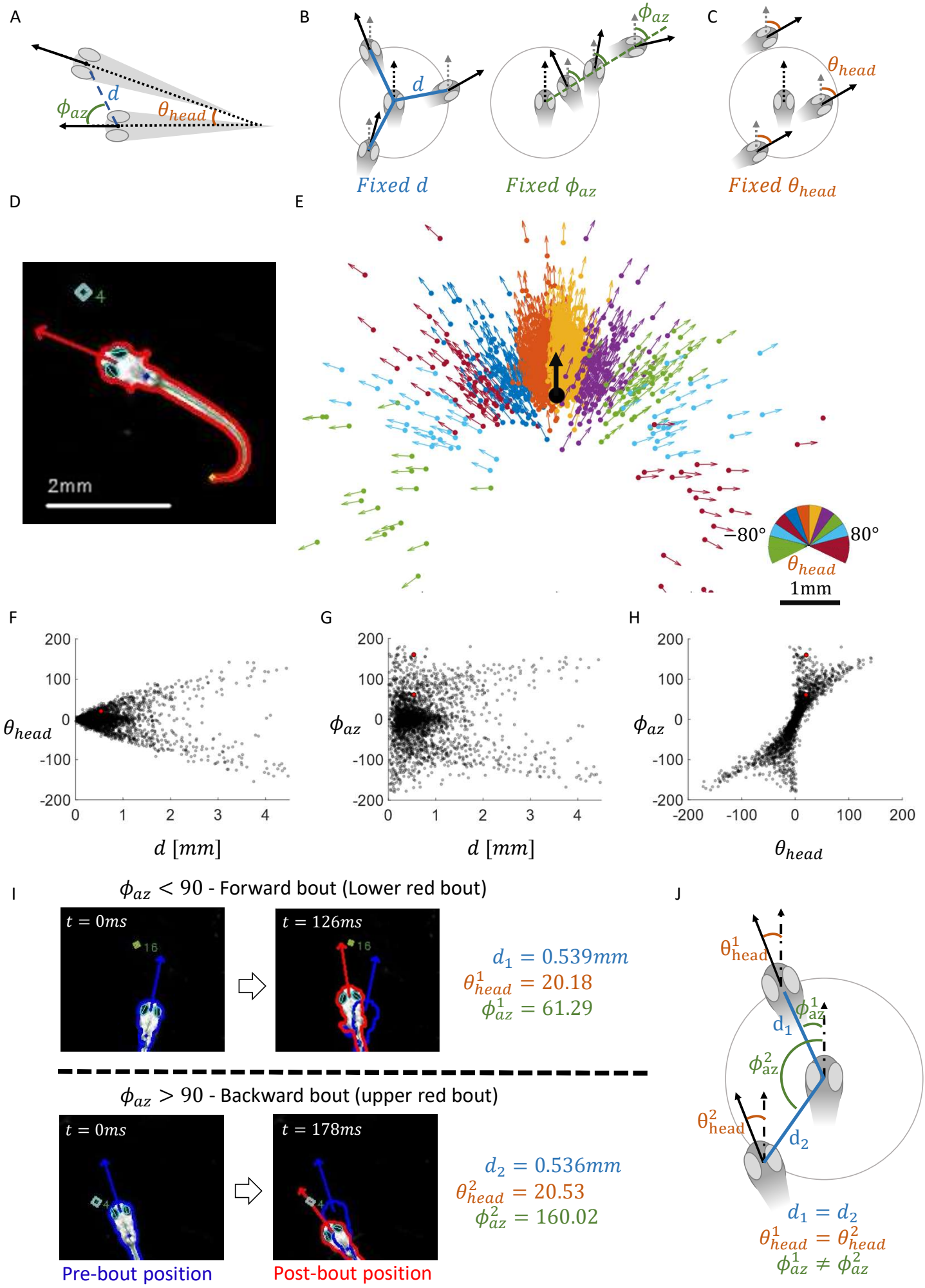
A
ϕ_{az}
d
θ_{head}
B
d
ϕ_{az}
Fixed d
Fixed ϕ_{az}
C
θ_{head}
Fixed θ_{head}
D
2mm
E
−80°
80°
θ_{head}
1mm
F
θ_{head}
d [mm]
G
ϕ_{az}
d [mm]
H
ϕ_{az}
θ_{head}
I
$\phi_{az} < 90$ - Forward bout (Lower red bout)
$t = 0ms$
$t = 126ms$
$d_1 = 0.539mm$
$\theta^1_{head} = 20.18$
$\phi^1_{az} = 61.29$
$\phi_{az} > 90$ - Backward bout (upper red bout)
$t = 0ms$
$t = 178ms$
$d_2 = 0.536mm$
$\theta^2_{head} = 20.53$
$\phi^2_{az} = 160.02$
Pre-bout position
Post-bout position
J
θ^1_{head}
ϕ^1_{az}
d_1
ϕ^2_{az}
θ^2_{head}
d_2
$d_1 = d_2$
$\theta^1_{head} = \theta^2_{head}$
$\phi^1_{az} \neq \phi^2_{az}$