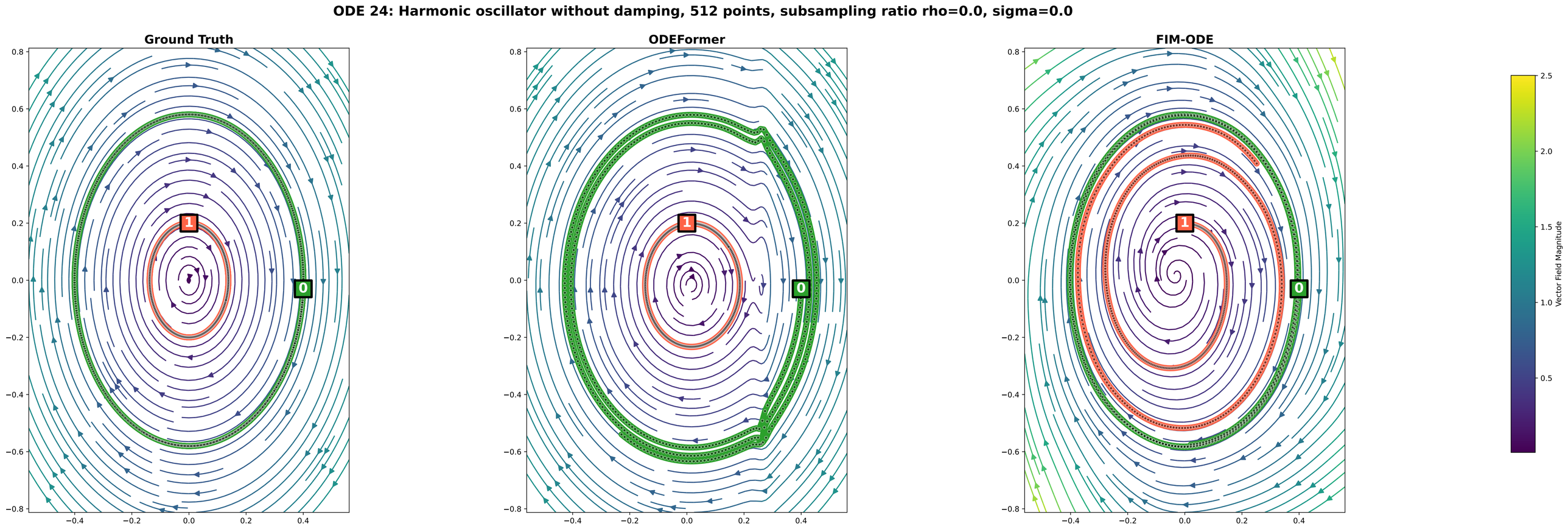
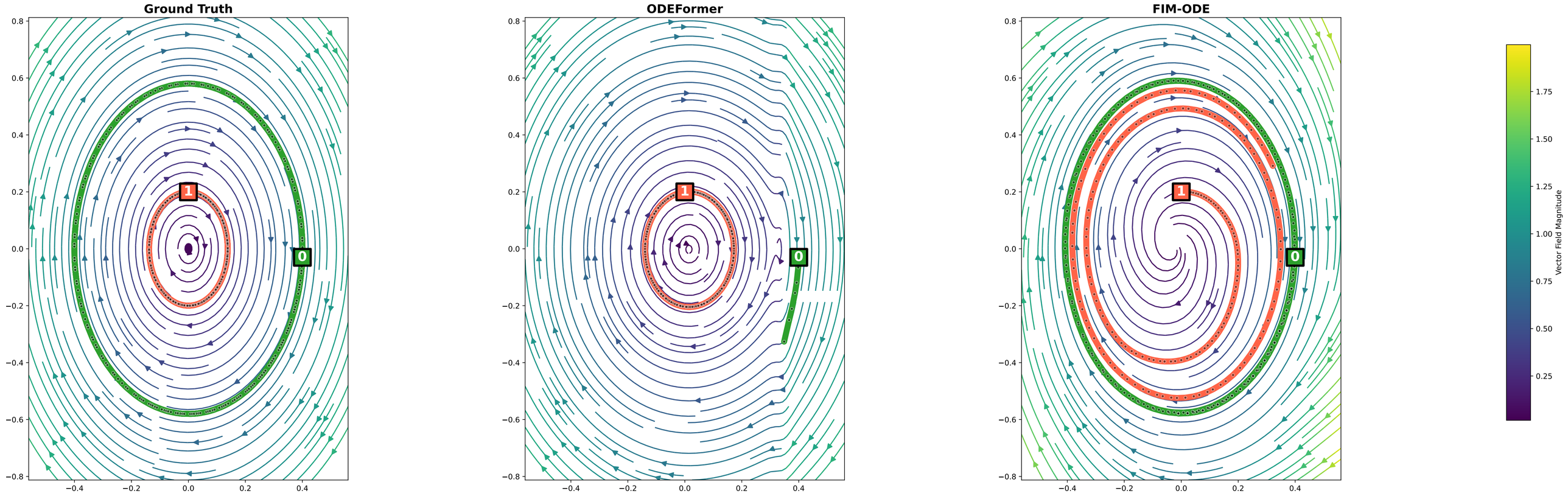
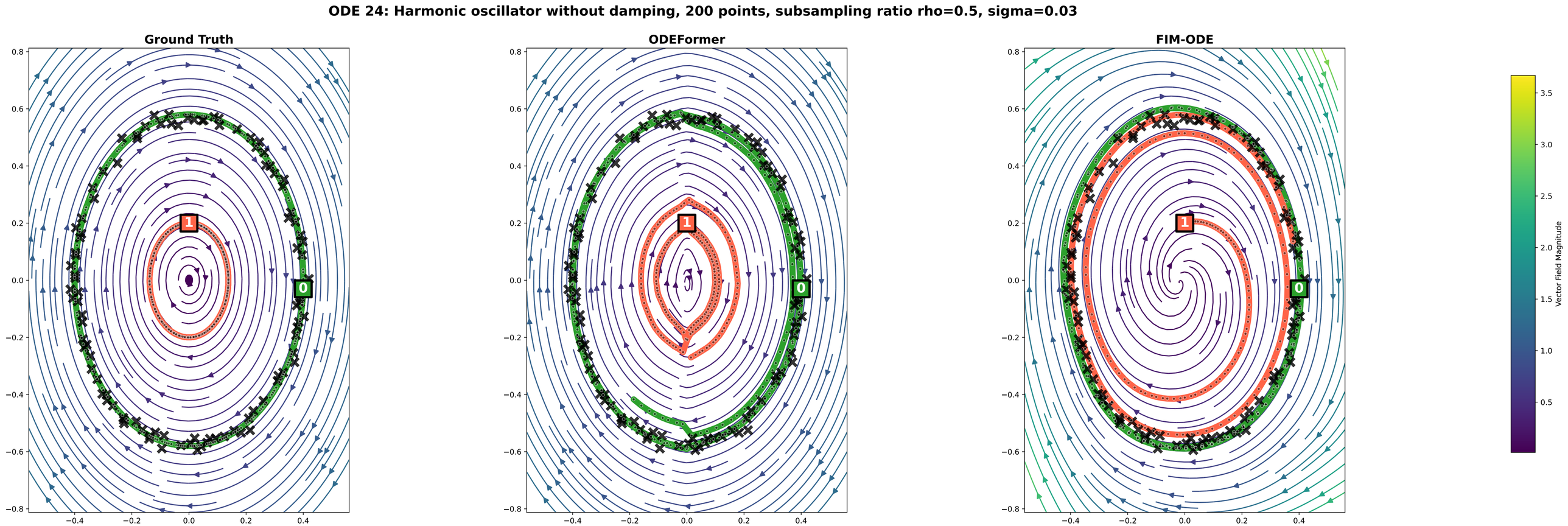
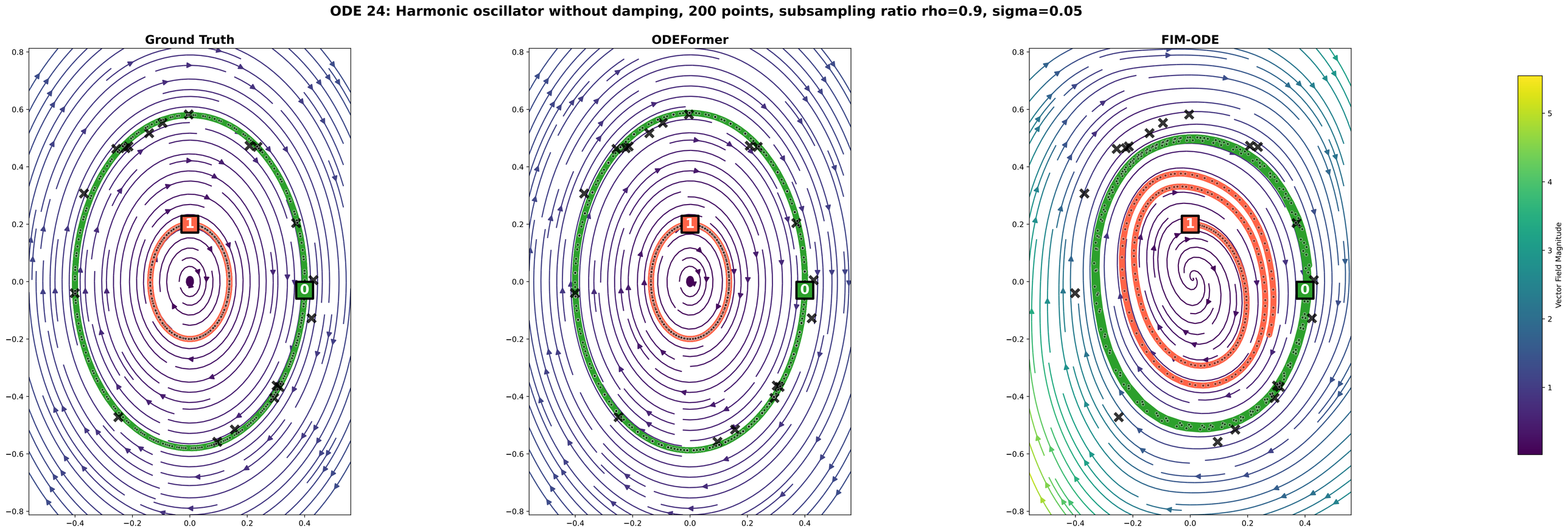
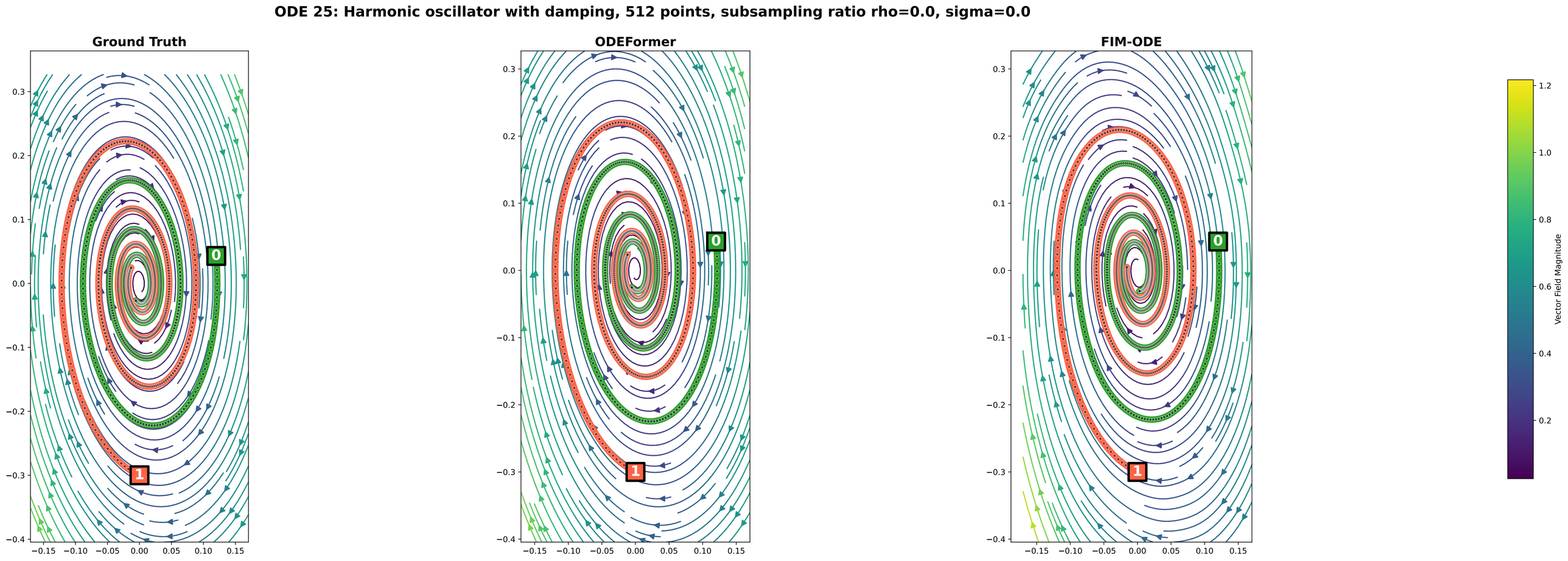
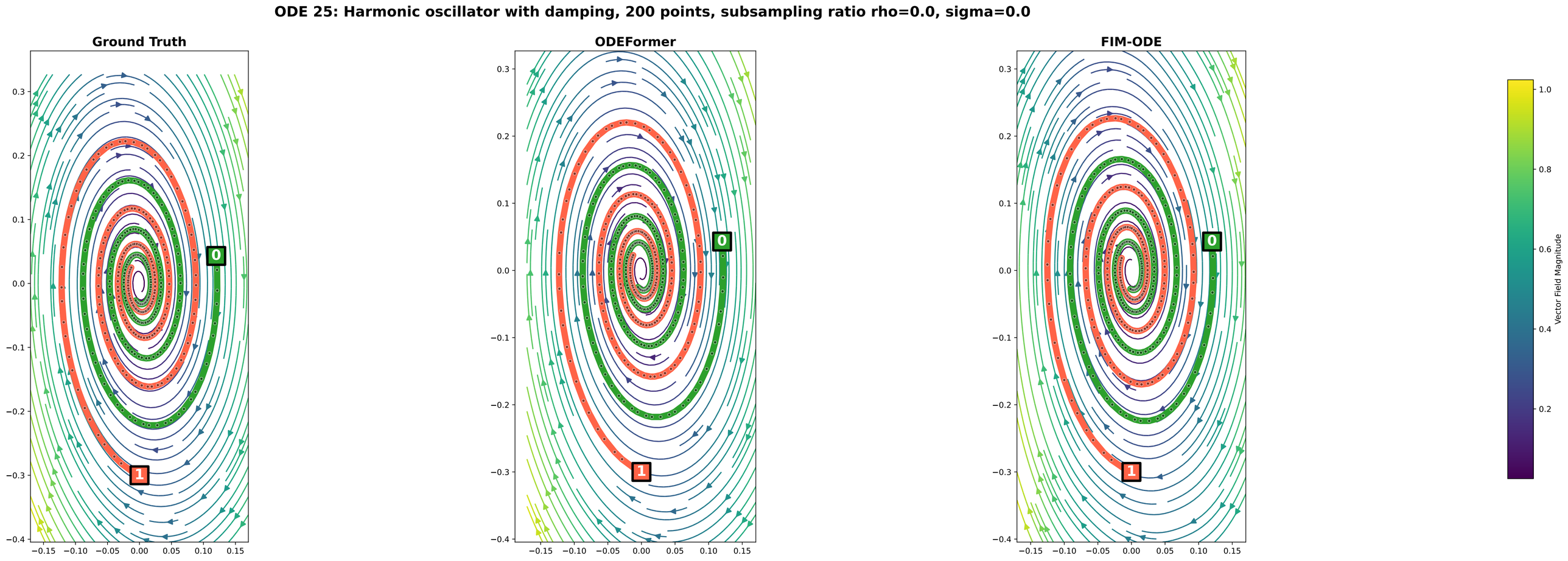

ODE 24: Harmonic oscillator without damping, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 24: Harmonic oscillator without damping, 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

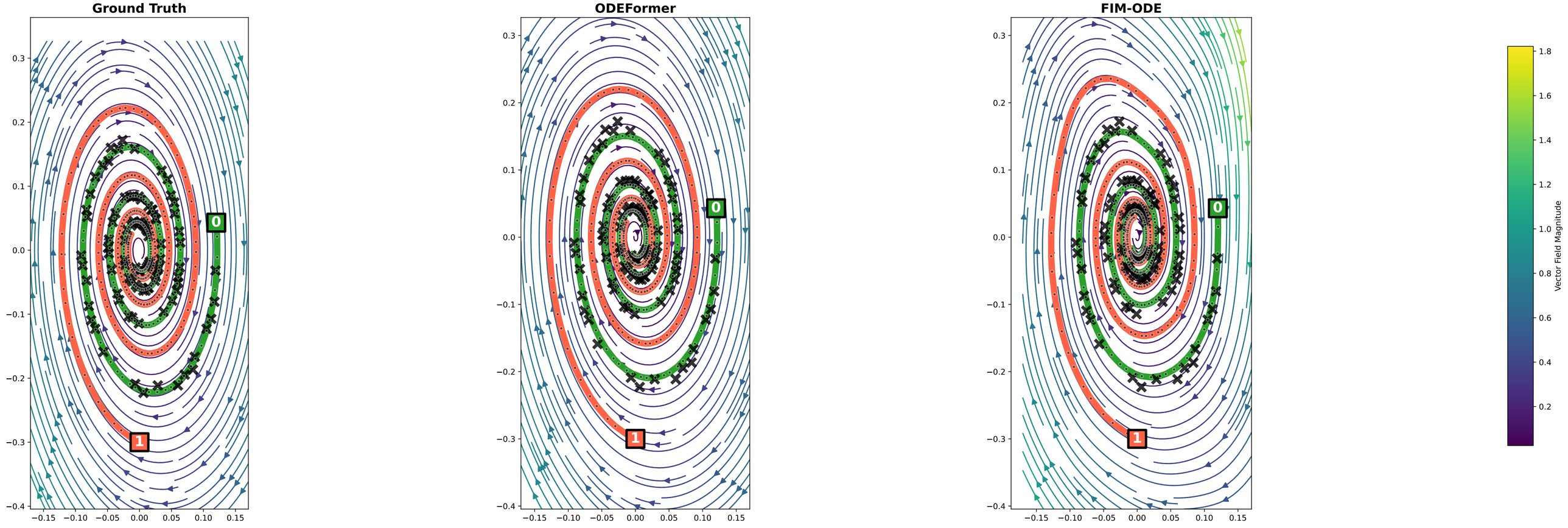

ODE 24: Harmonic oscillator without damping, 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
1
0

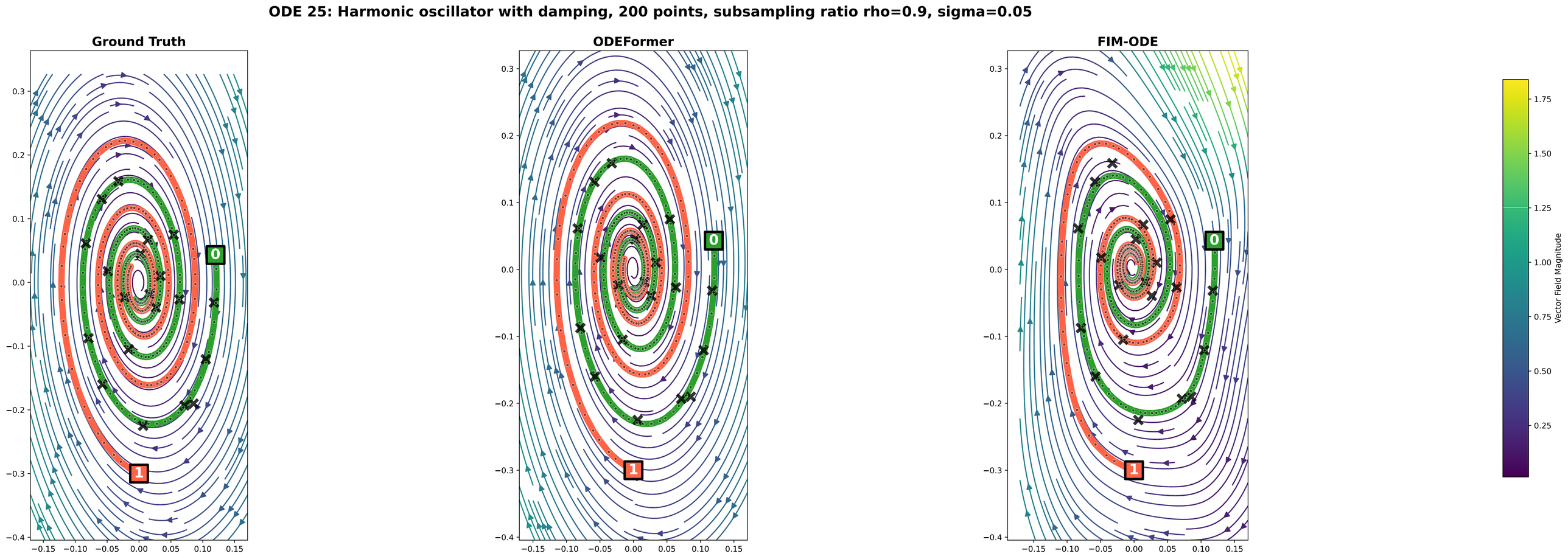

ODE 24: Harmonic oscillator without damping, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
1
0


ODE 25: Harmonic oscillator with damping, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

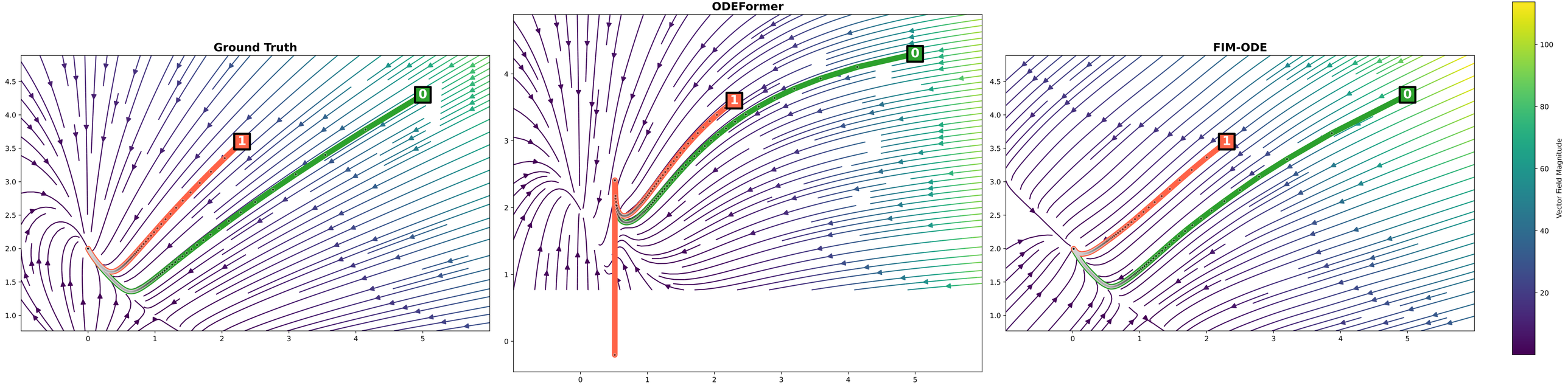

ODE 25: Harmonic oscillator with damping, 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

ODE 25: Harmonic oscillator with damping, 200 points, subsampling ratio rho=0.5, sigma=0.03

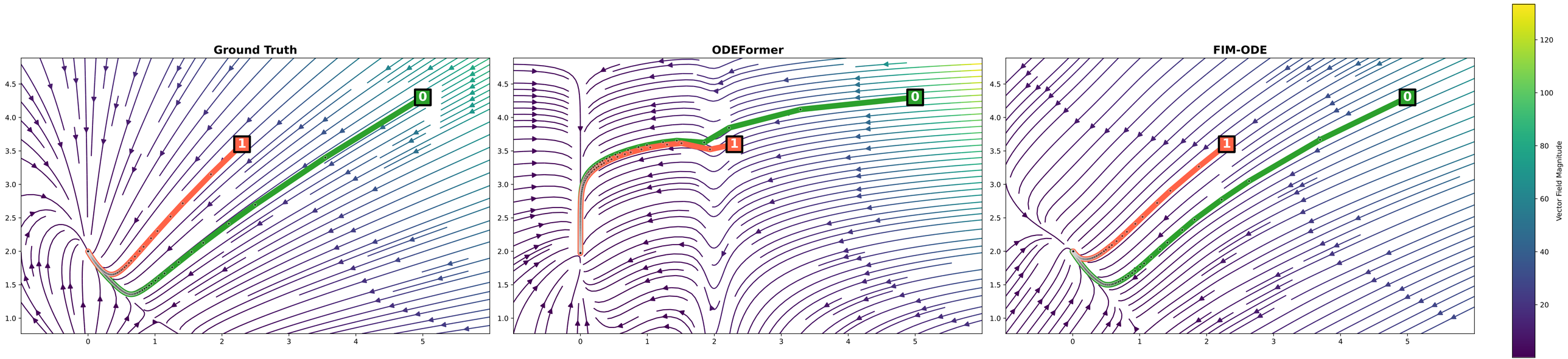



ODE 25: Harmonic oscillator with damping, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

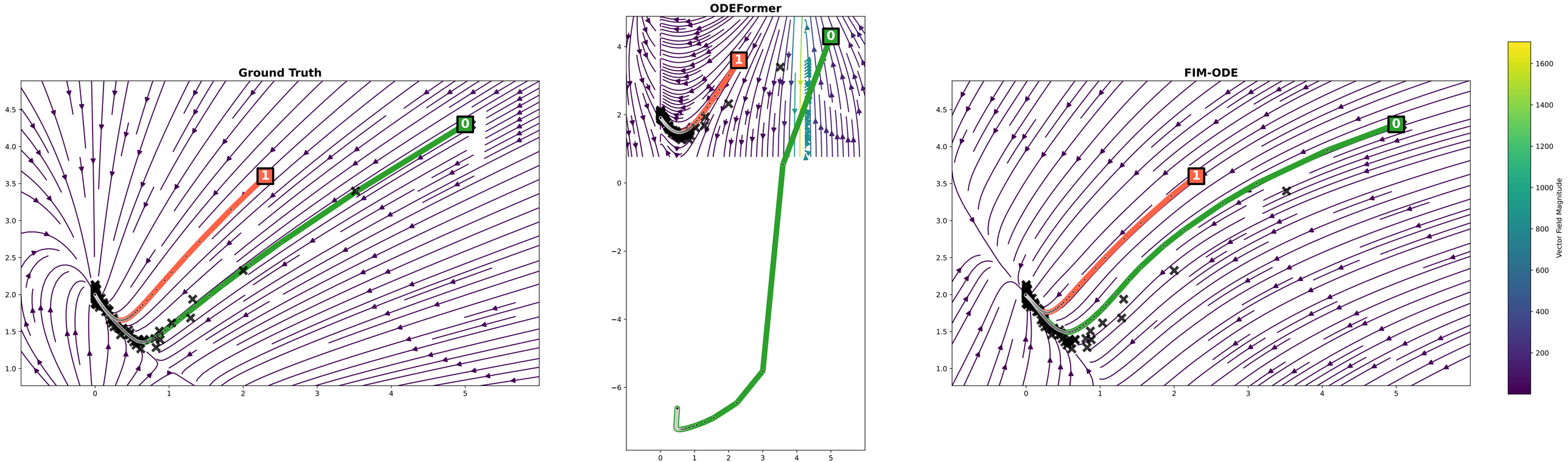
ODE 26: Lotka-Volterra competition model (Strogatz version with sheeps and rabbits), 512 points, subsampling ratio rho=0.0, sigma=0.0



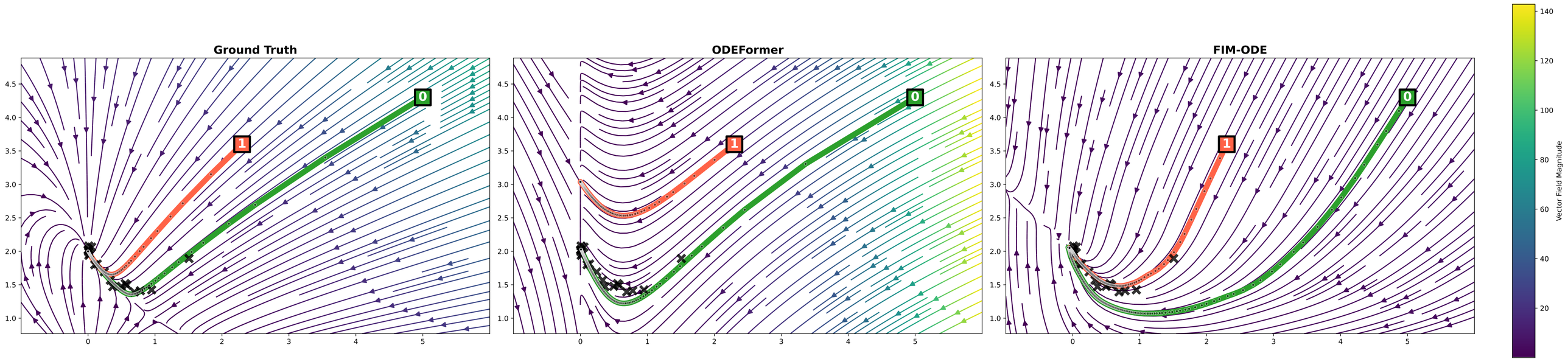
ODE 26: Lotka-Volterra competition model (Strogatz version with sheeps and rabbits), 200 points, subsampling ratio rho=0.0, sigma=0.0

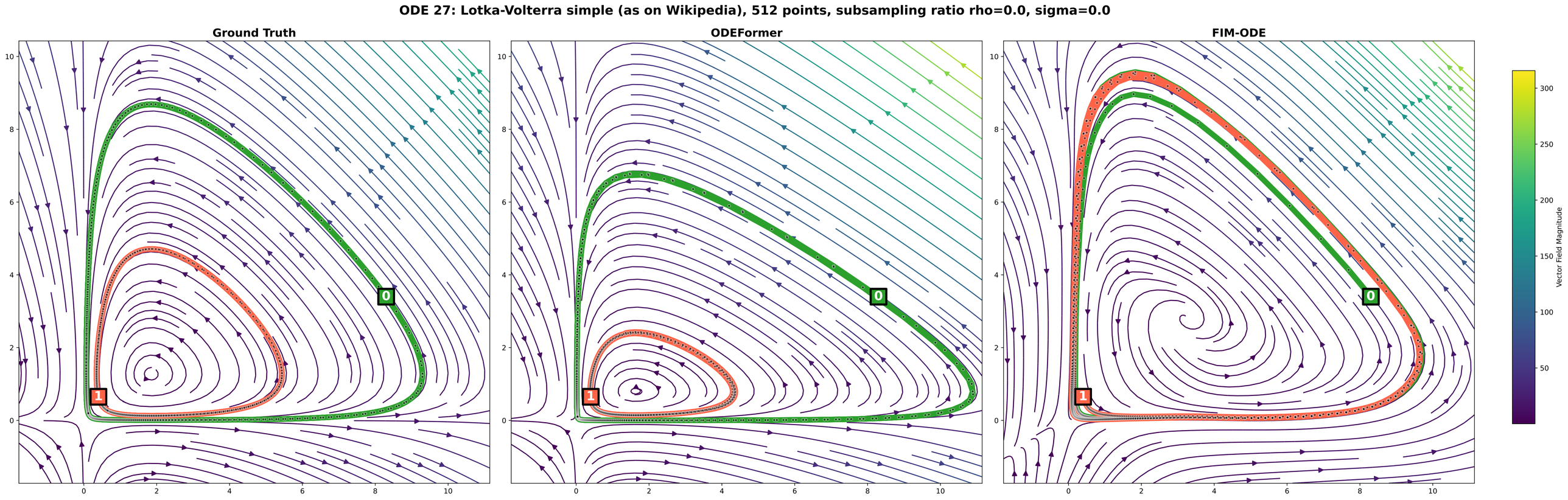


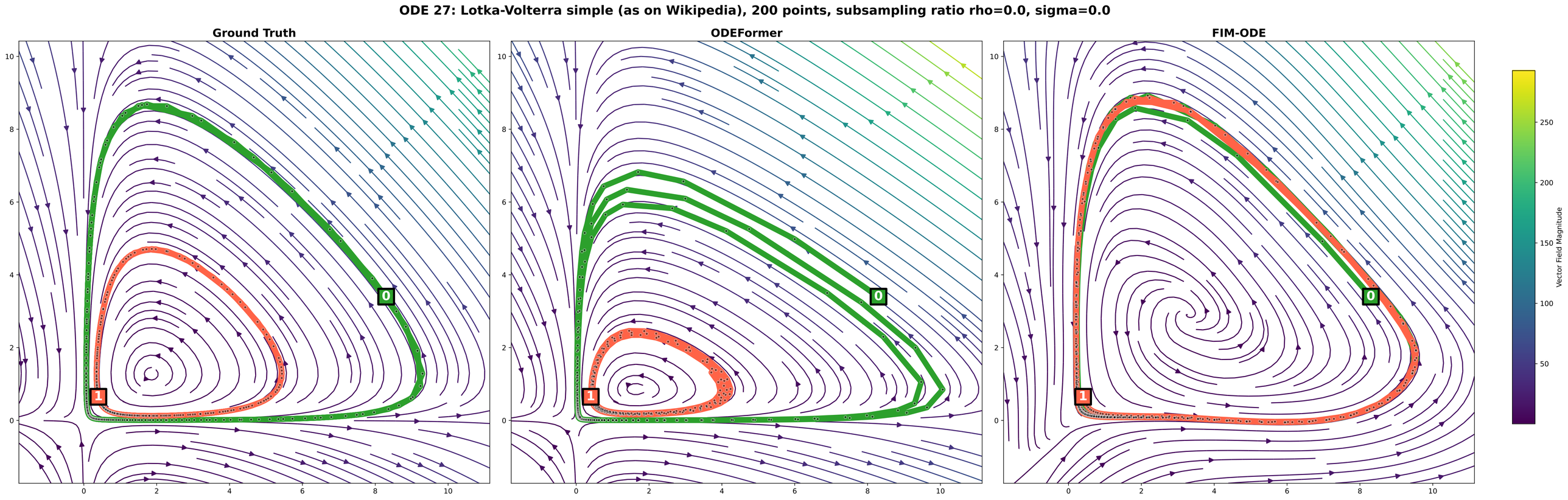
ODE 26: Lotka-Volterra competition model (Strogatz version with sheeps and rabbits), 200 points, subsampling ratio rho=0.5, sigma=0.03

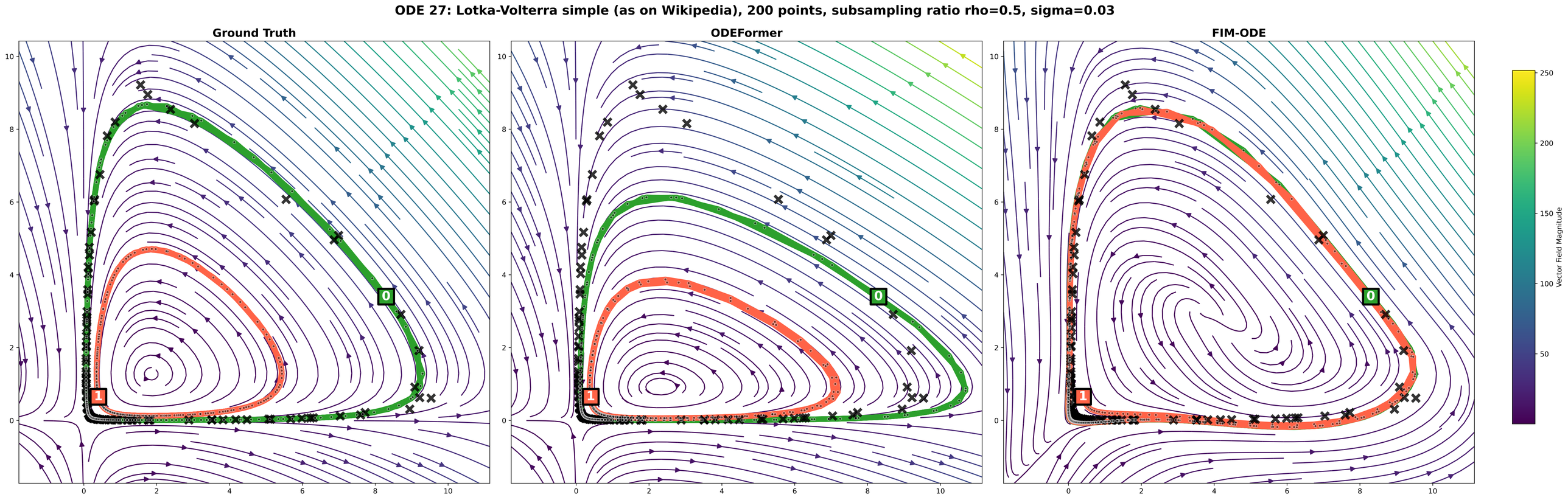


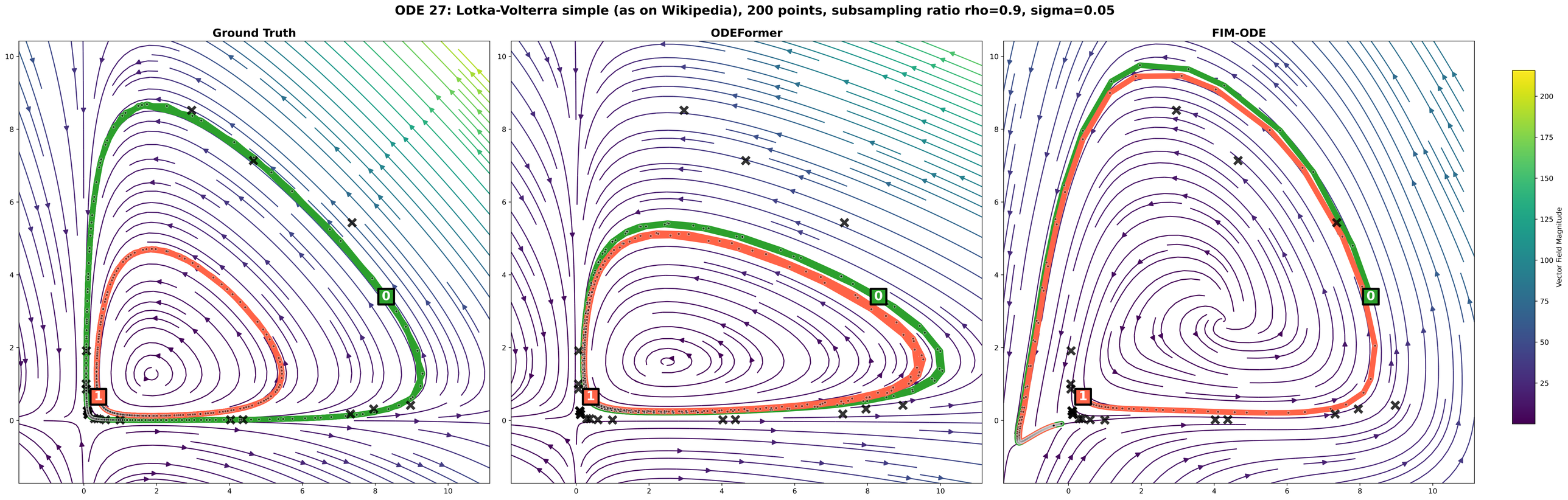
ODE 26: Lotka-Volterra competition model (Strogatz version with sheeps and rabbits), 200 points, subsampling ratio rho=0.9, sigma=0.05



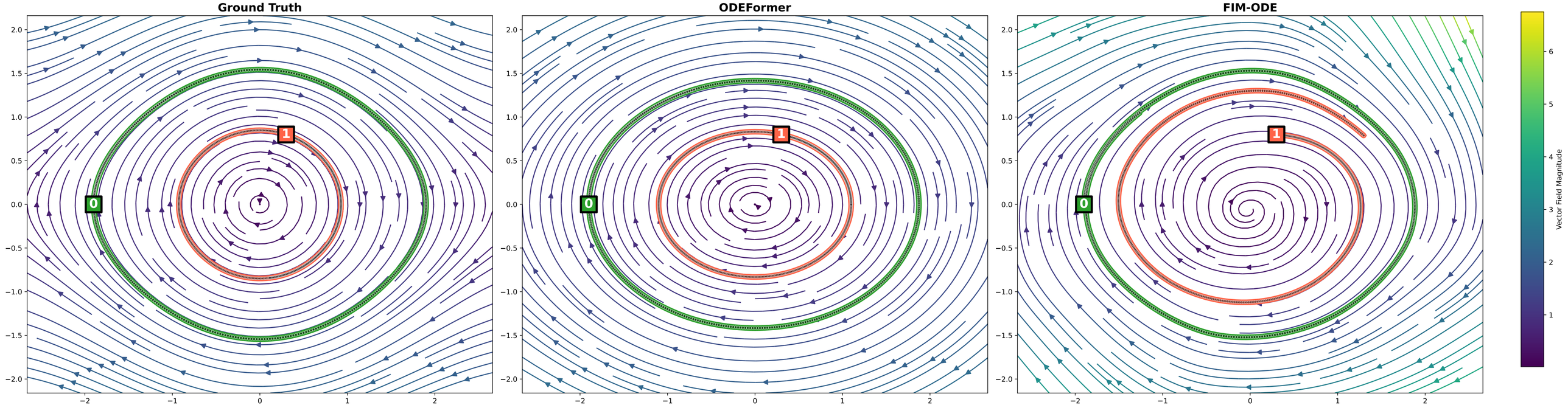

ODE 27: Lotka-Volterra simple (as on Wikipedia), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 27: Lotka-Volterra simple (as on Wikipedia), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

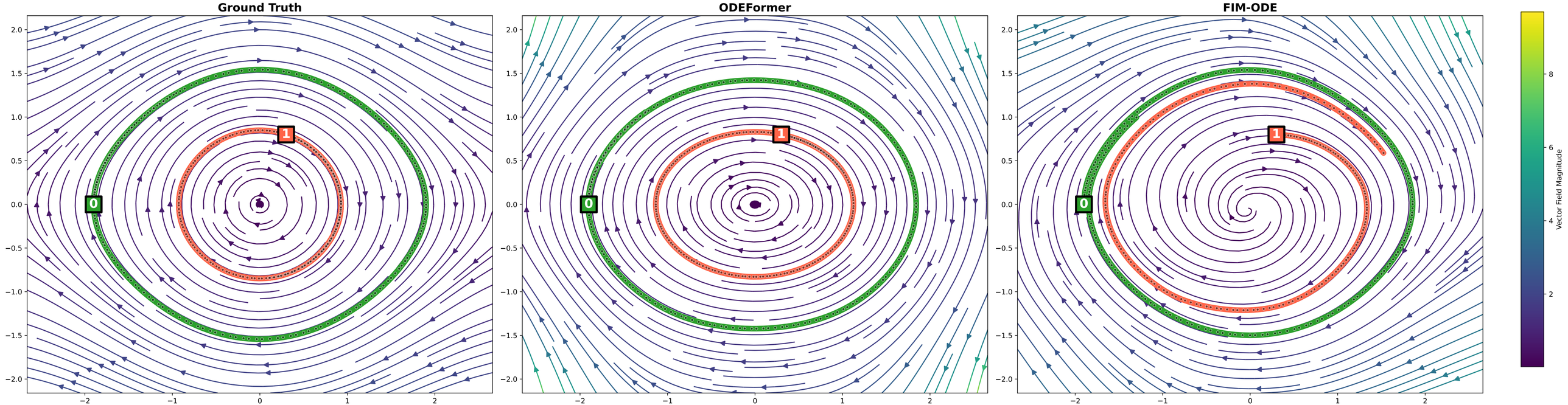

ODE 27: Lotka-Volterra simple (as on Wikipedia), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 27: Lotka-Volterra simple (as on Wikipedia), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

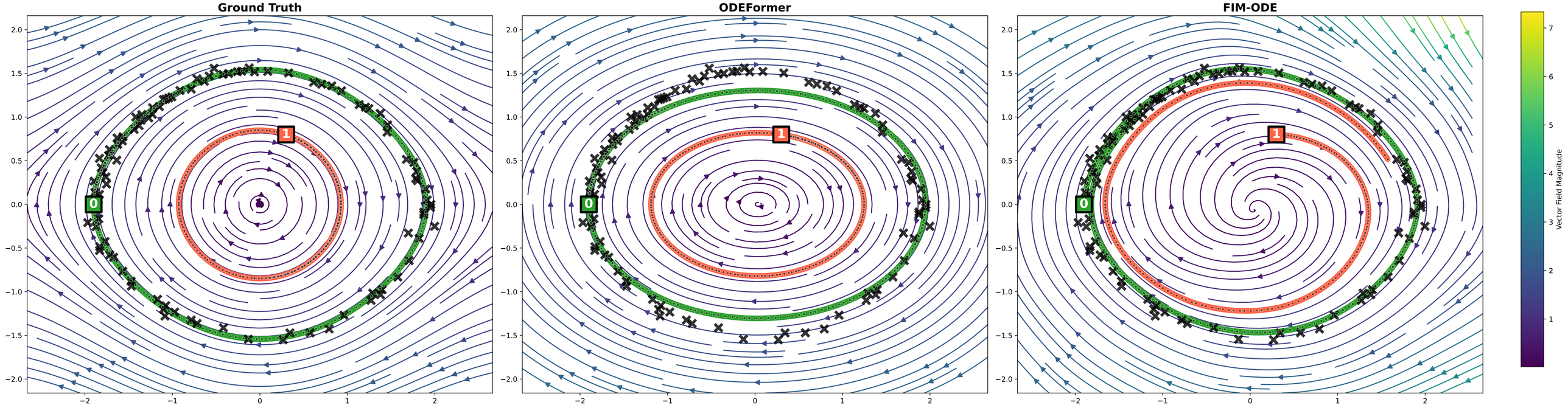
ODE 28: Pendulum without friction, 512 points, subsampling ratio rho=0.0, sigma=0.0



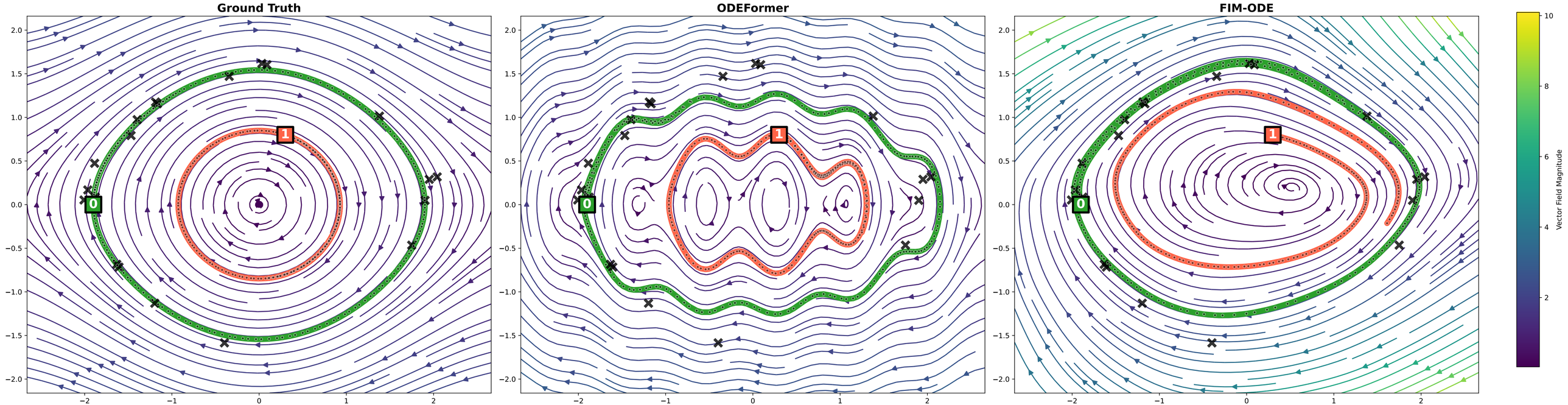
ODE 28: Pendulum without friction, 200 points, subsampling ratio rho=0.0, sigma=0.0

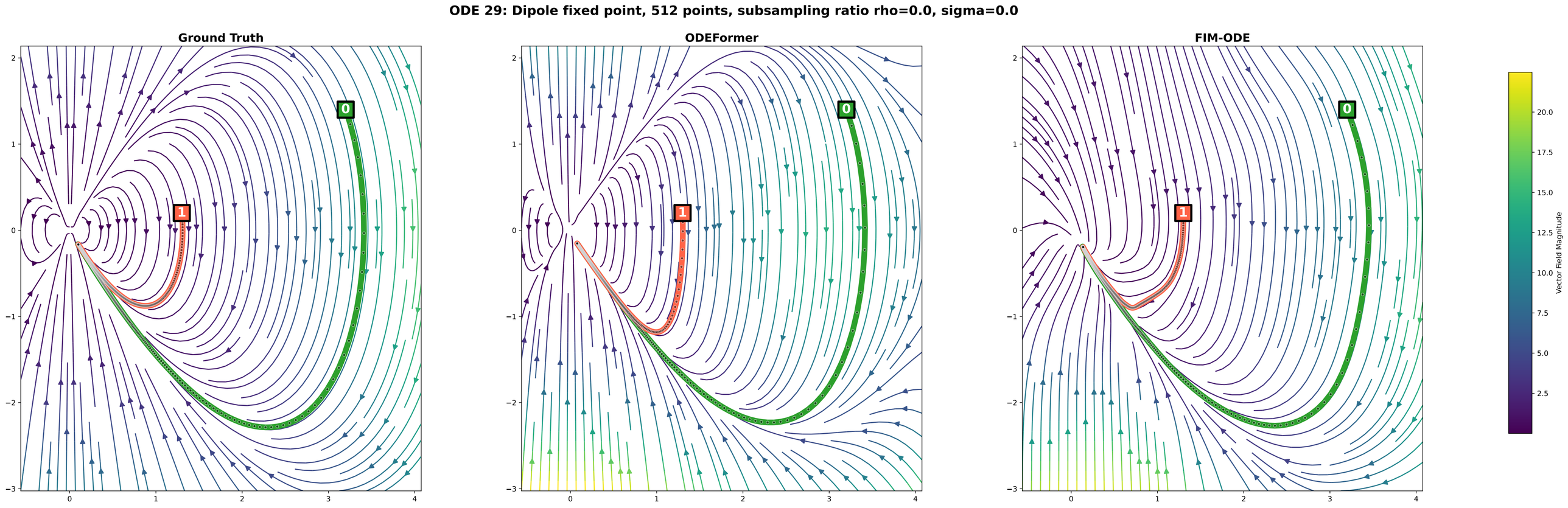


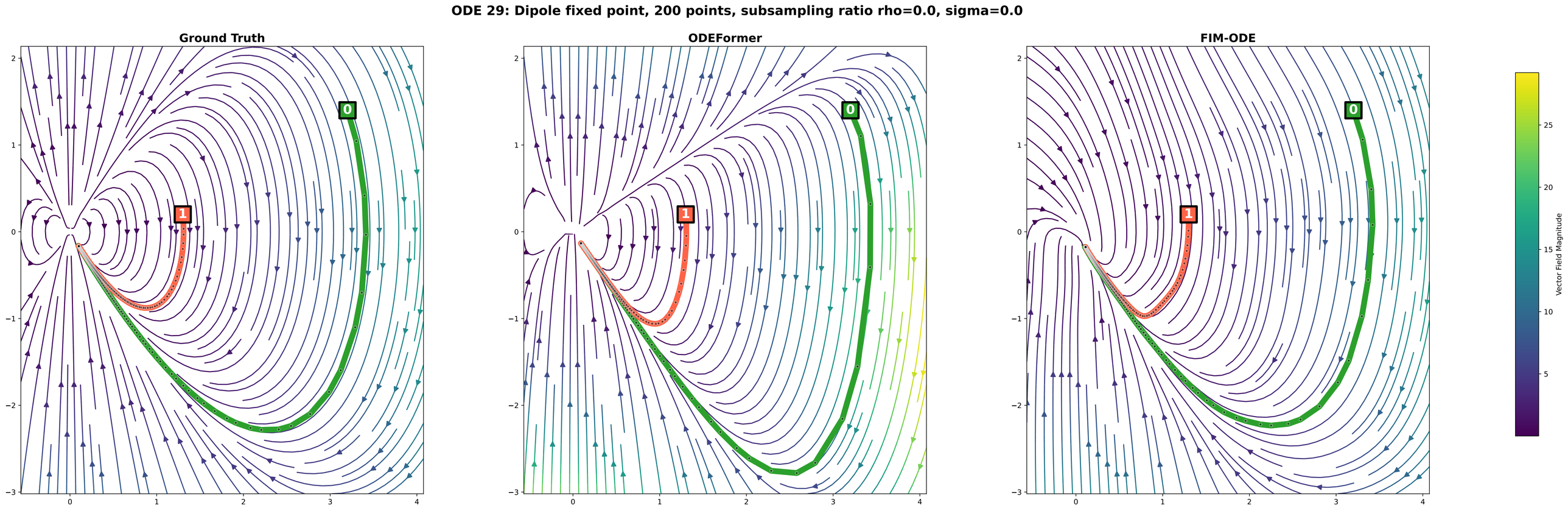
ODE 28: Pendulum without friction, 200 points, subsampling ratio rho=0.5, sigma=0.03

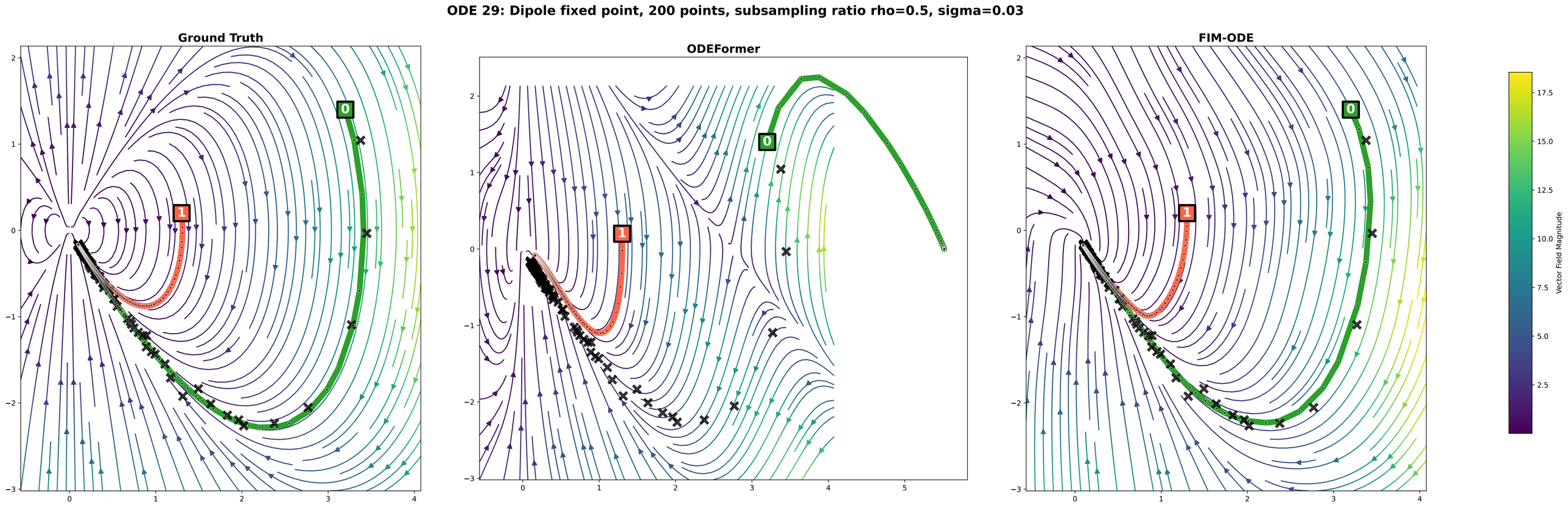


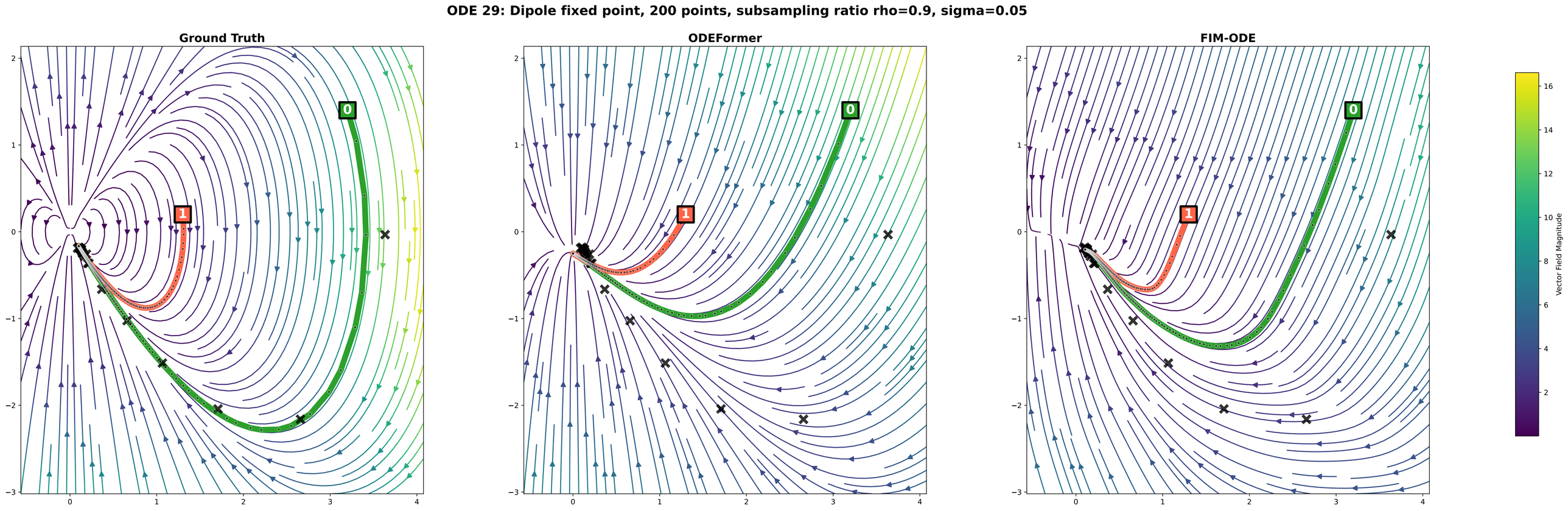
ODE 28: Pendulum without friction, 200 points, subsampling ratio rho=0.9, sigma=0.05

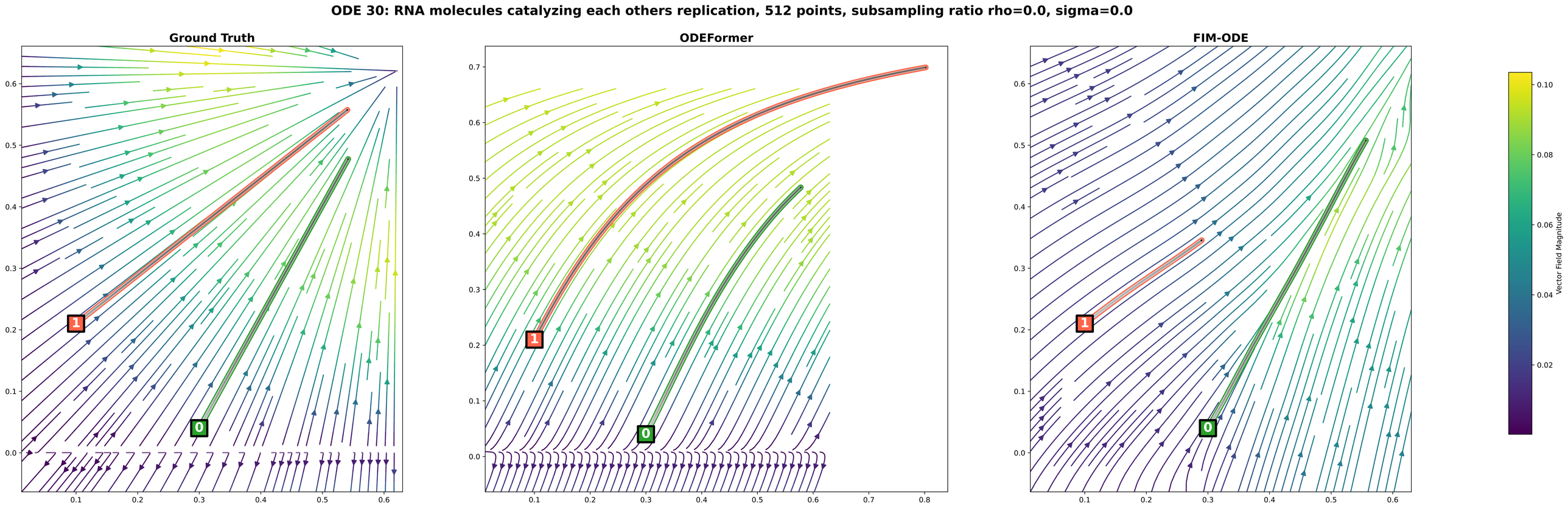


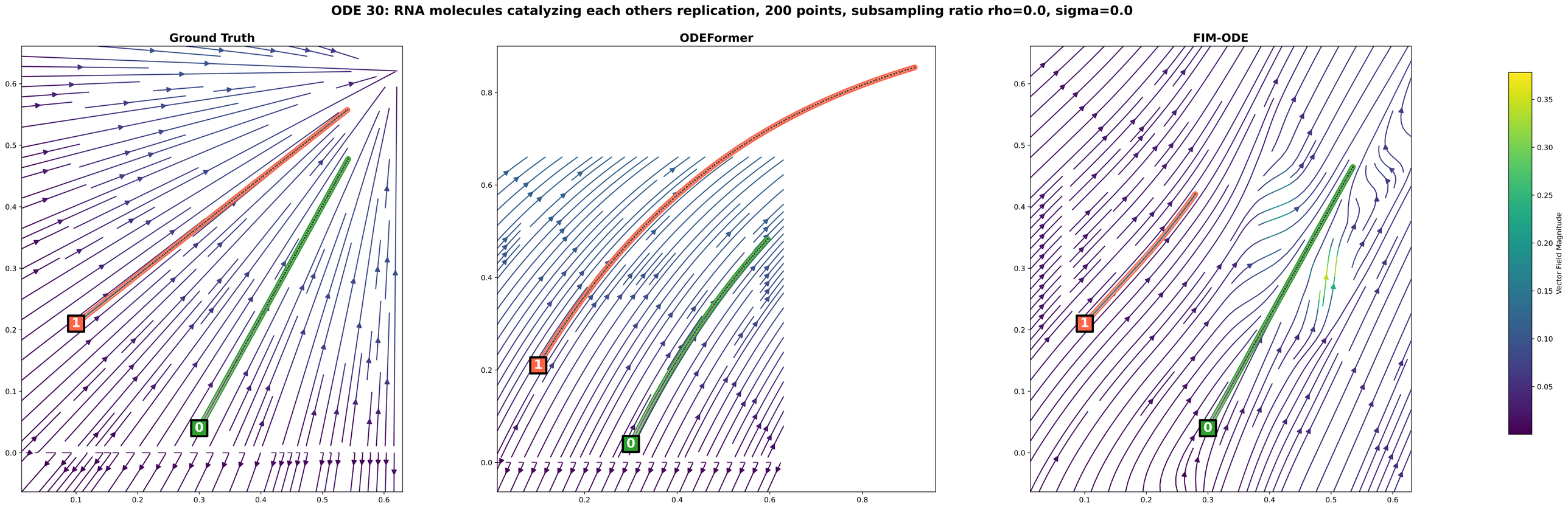

ODE 29: Dipole fixed point, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 29: Dipole fixed point, 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

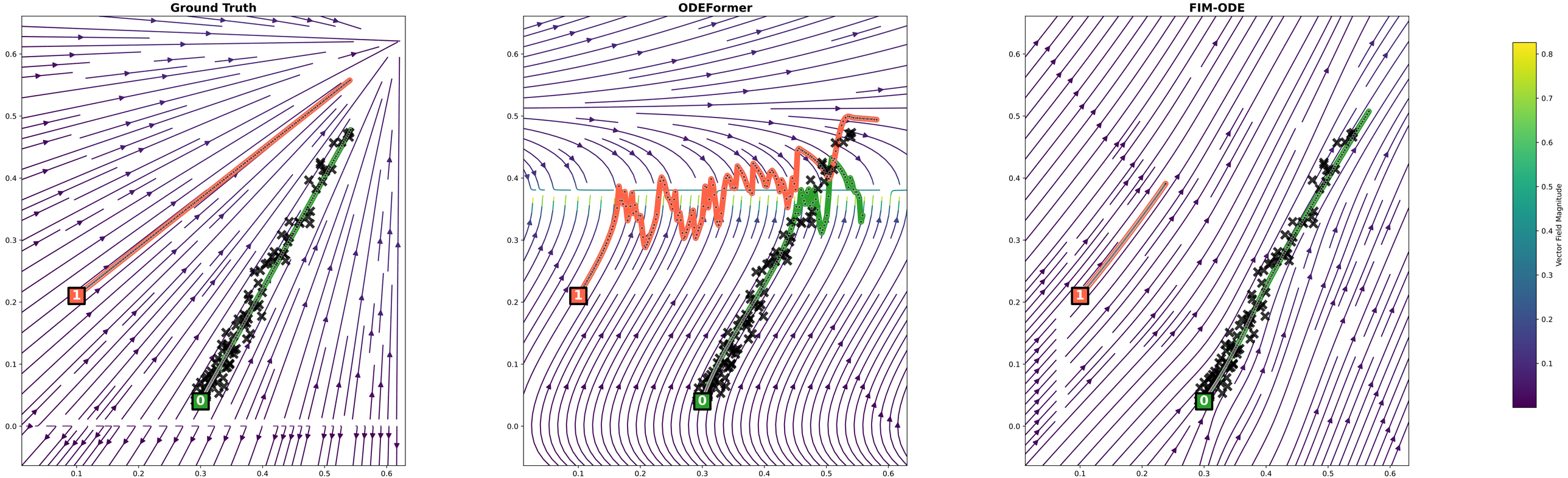

ODE 29: Dipole fixed point, 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

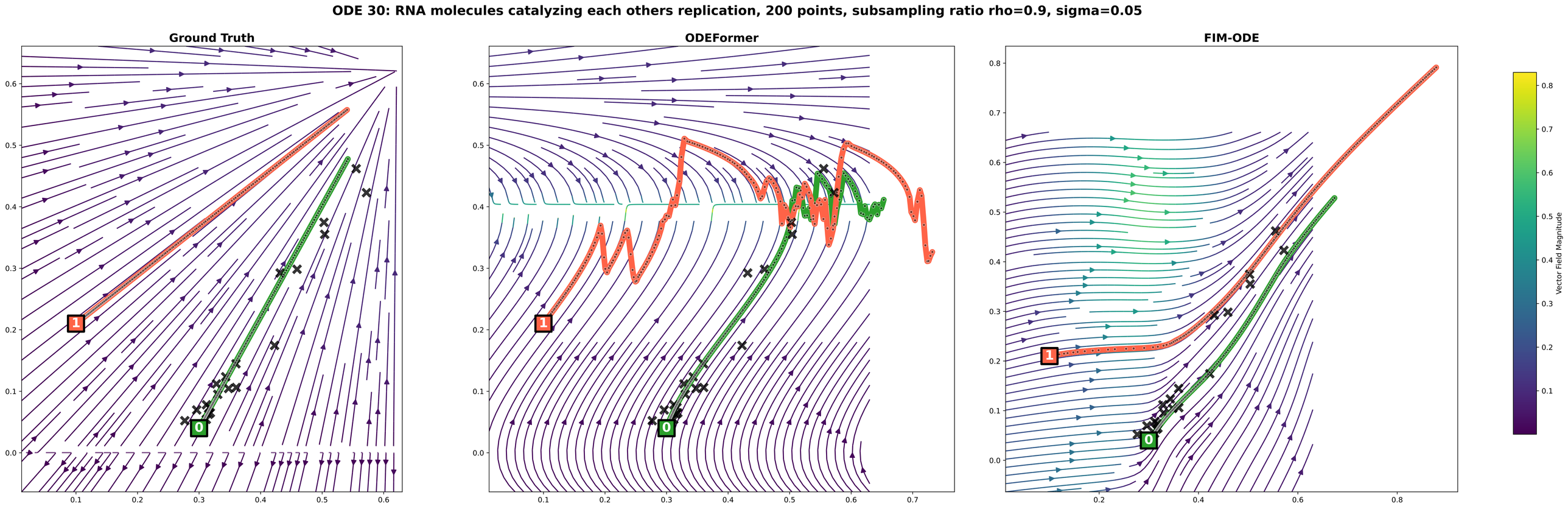

ODE 29: Dipole fixed point, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 30: RNA molecules catalyzing each others replication, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
1
0

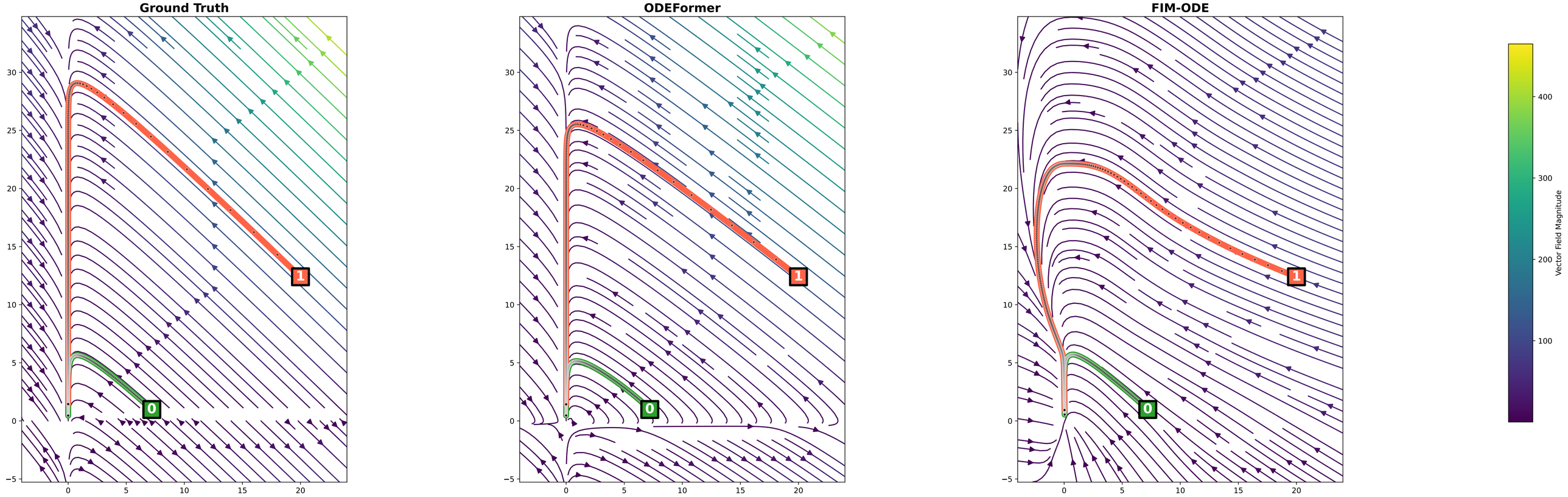

ODE 30: RNA molecules catalyzing each others replication, 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

ODE 30: RNA molecules catalyzing each others replication, 200 points, subsampling ratio rho=0.5, sigma=0.03

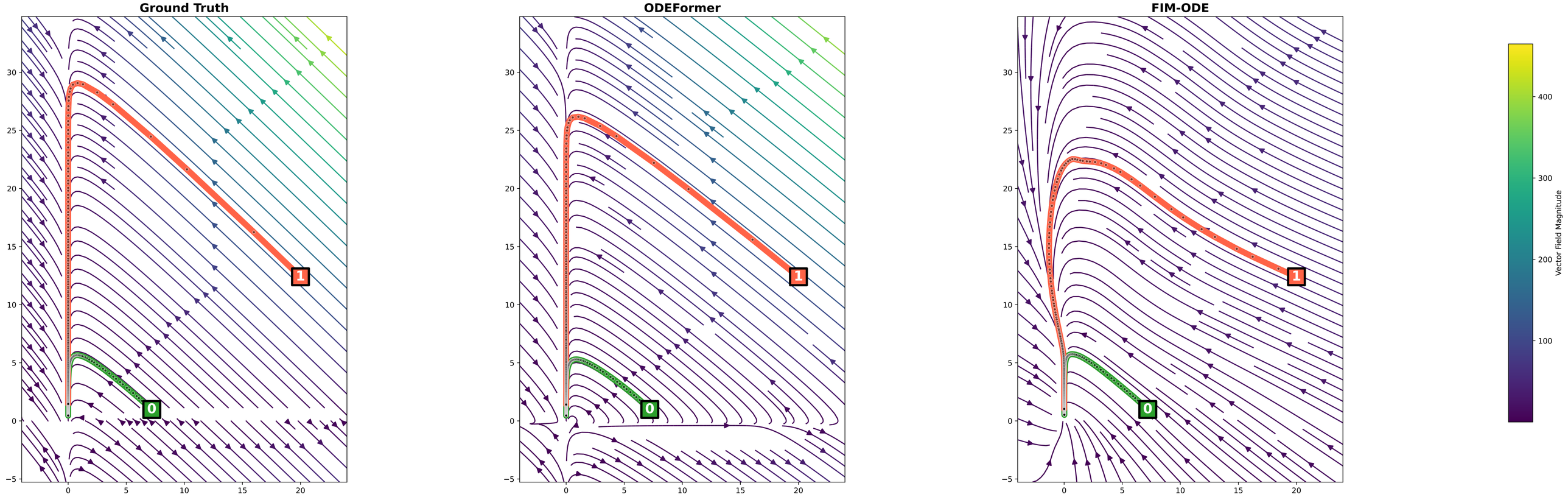



ODE 30: RNA molecules catalyzing each others replication, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude

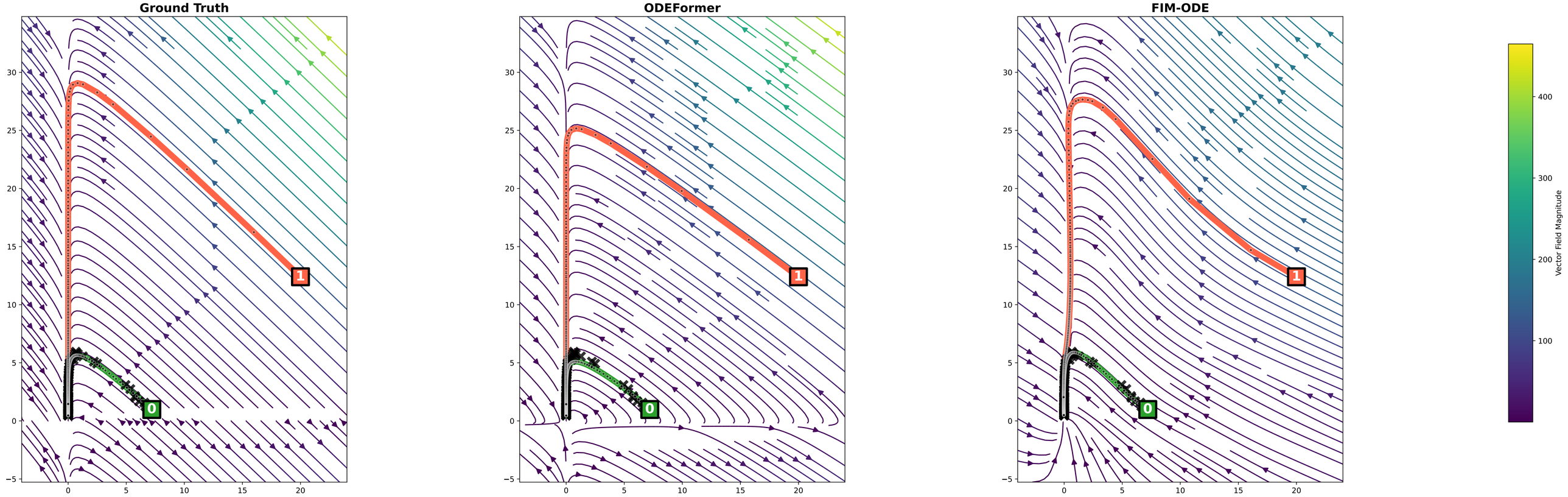
ODE 31: SIR infection model only for healthy and sick, 512 points, subsampling ratio rho=0.0, sigma=0.0



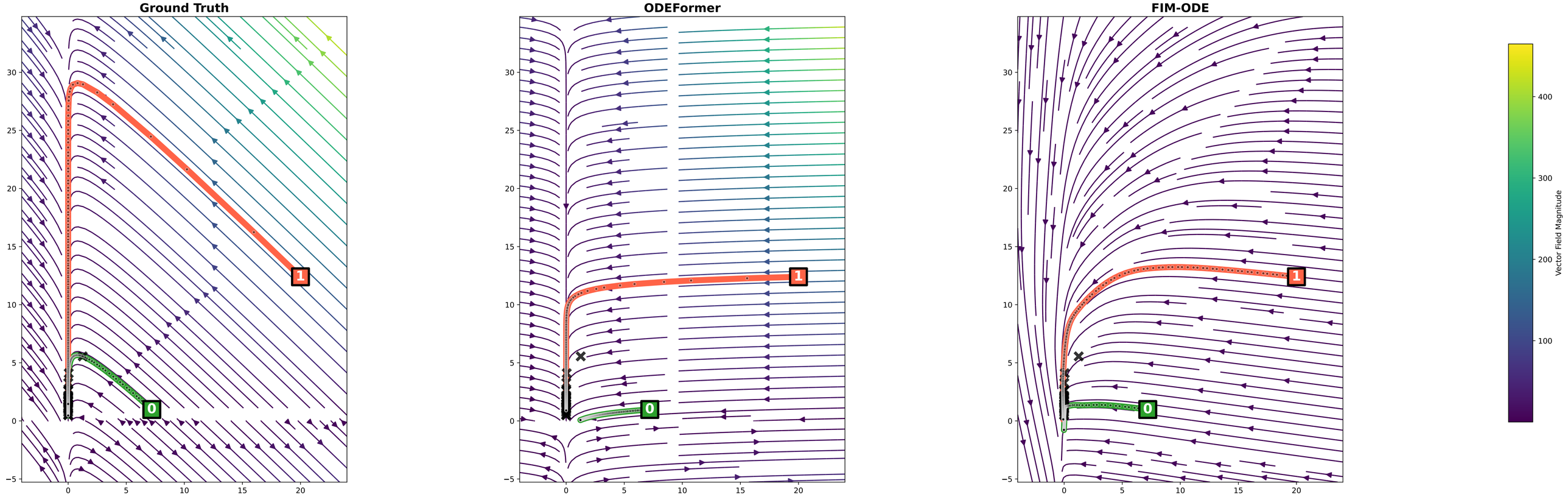
ODE 31: SIR infection model only for healthy and sick, 200 points, subsampling ratio rho=0.0, sigma=0.0

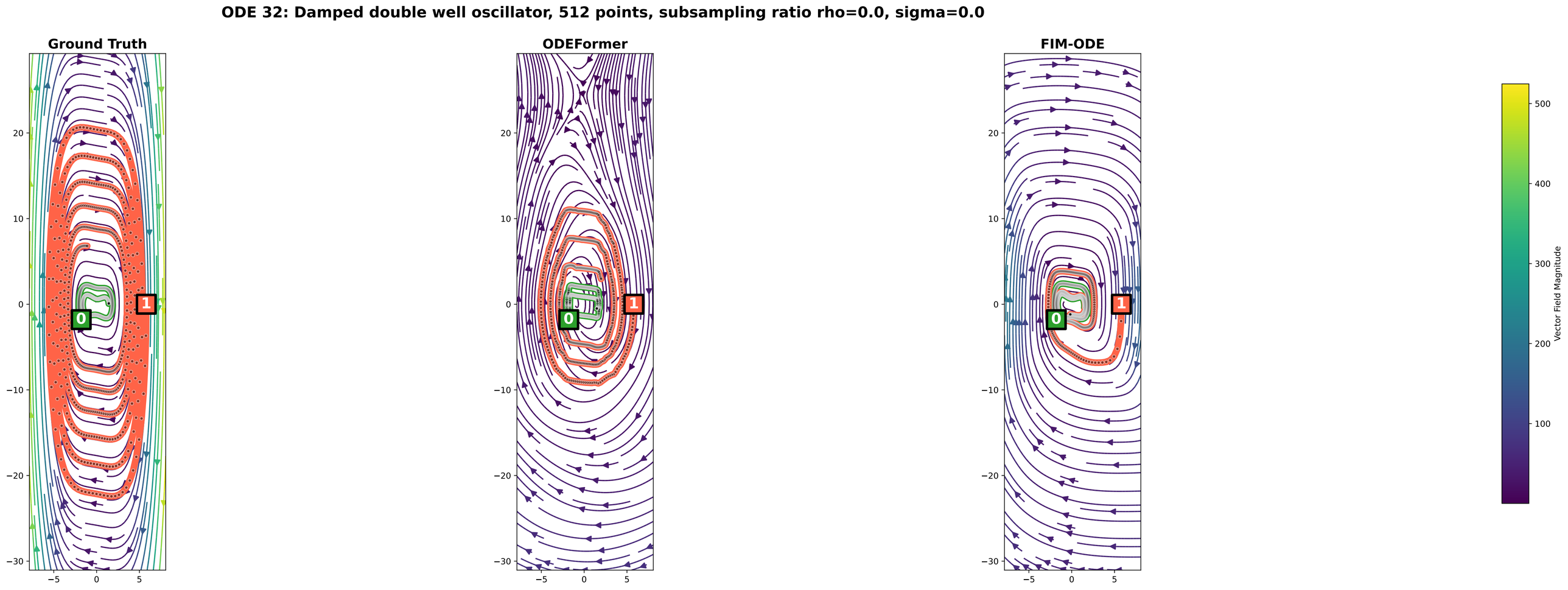


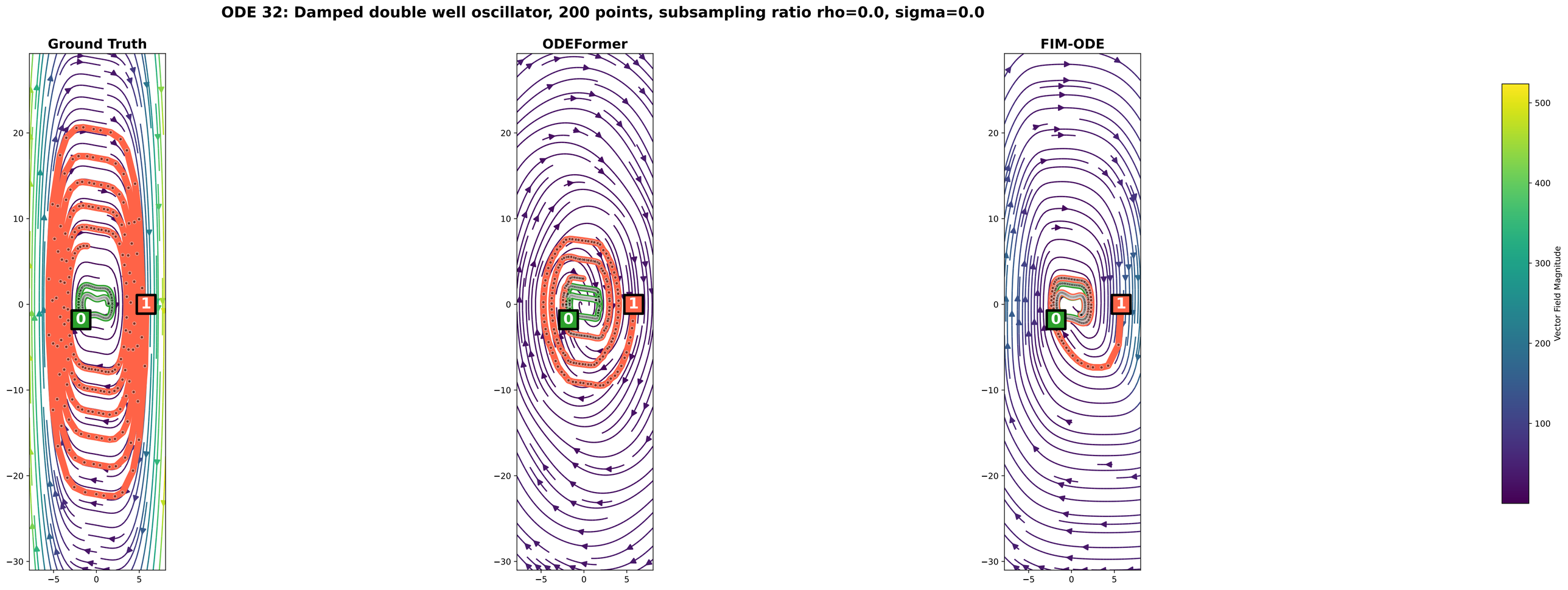
ODE 31: SIR infection model only for healthy and sick, 200 points, subsampling ratio rho=0.5, sigma=0.03

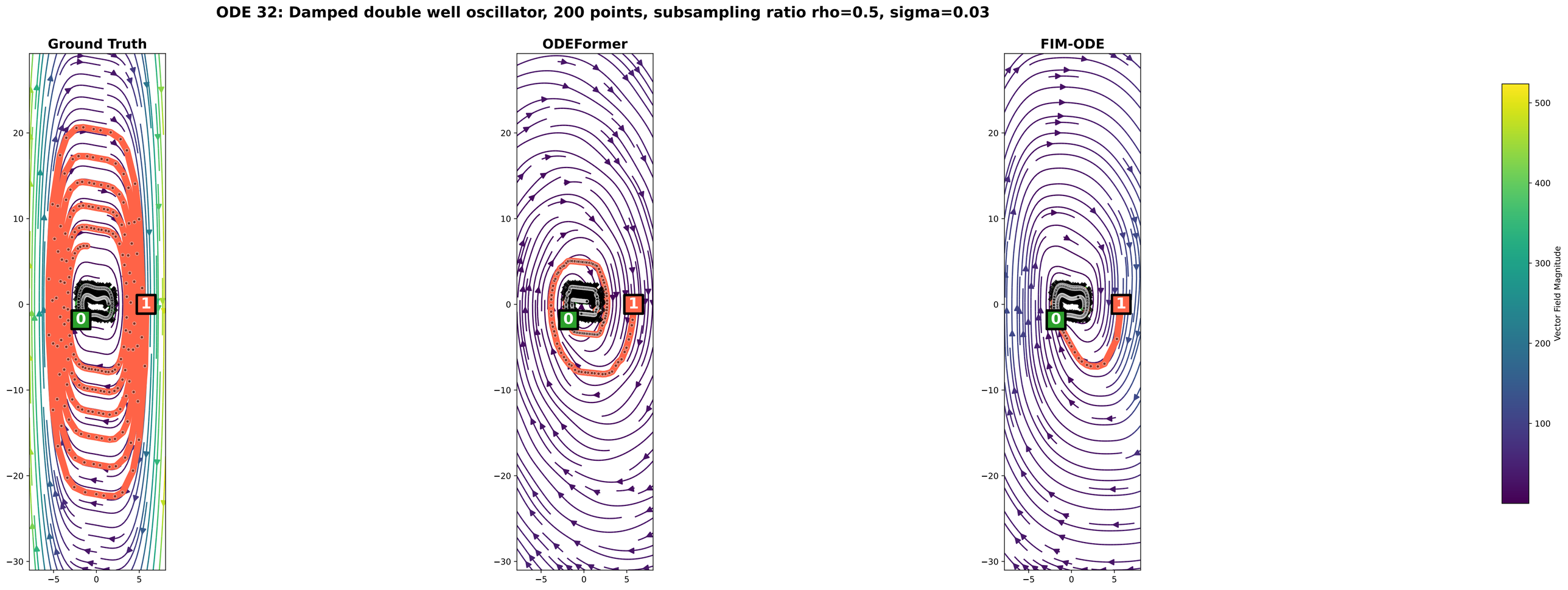


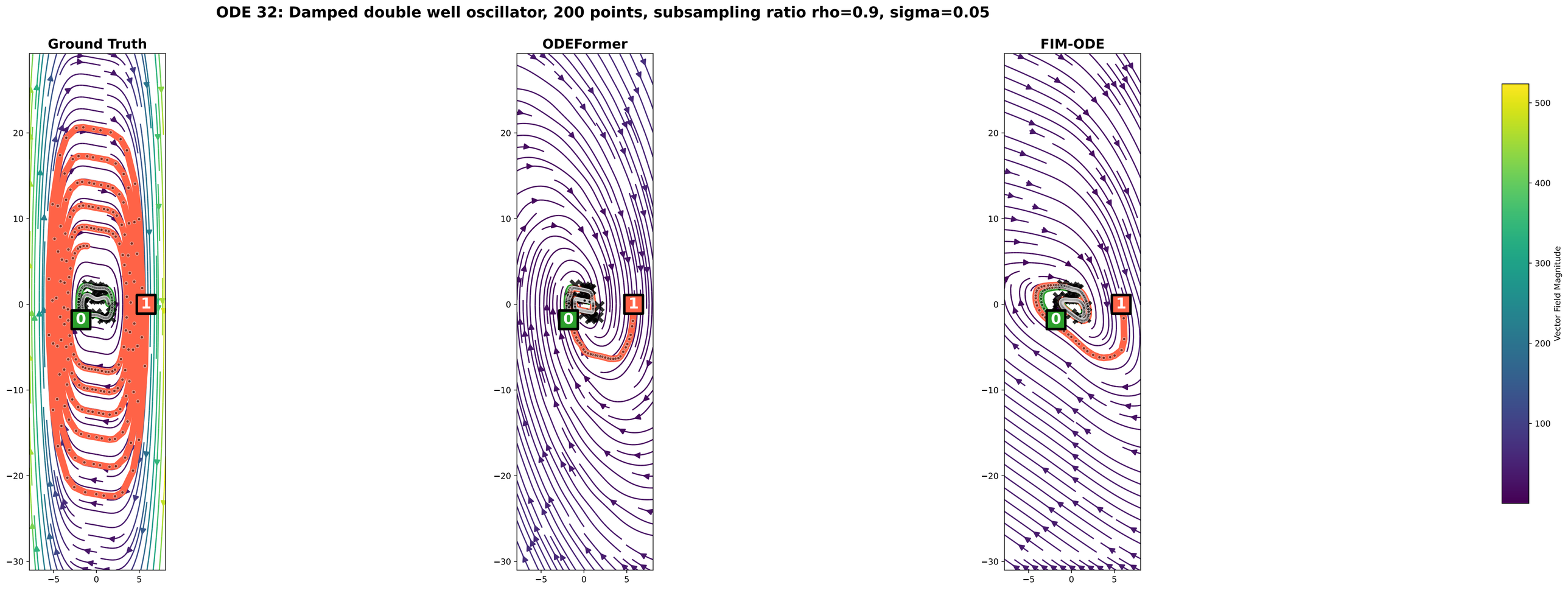
ODE 31: SIR infection model only for healthy and sick, 200 points, subsampling ratio rho=0.9, sigma=0.05

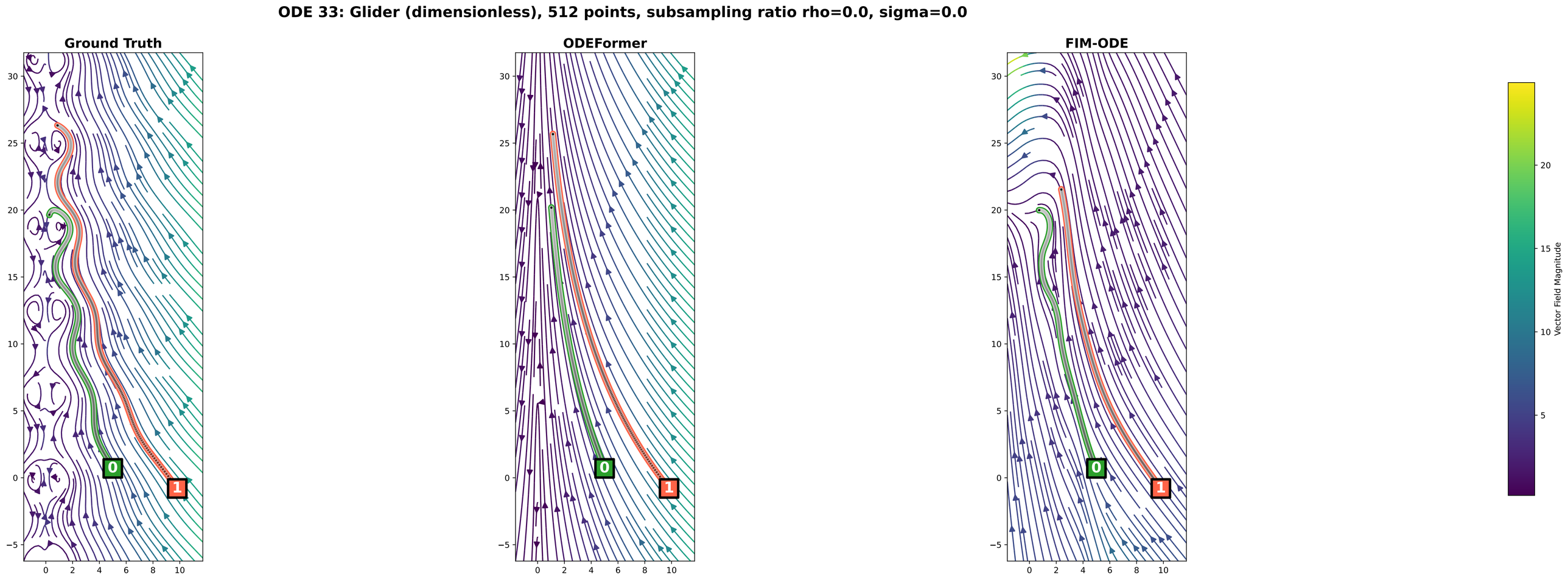


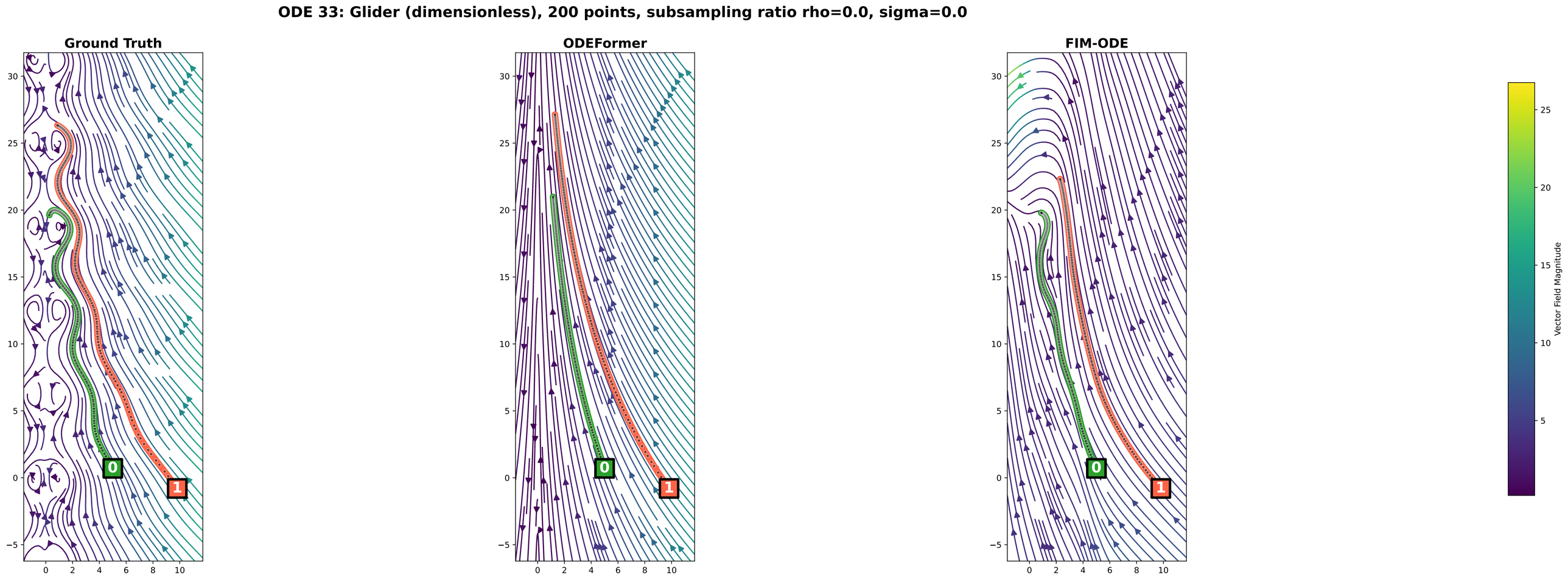

ODE 32: Damped double well oscillator, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude
100
200
300
400
500

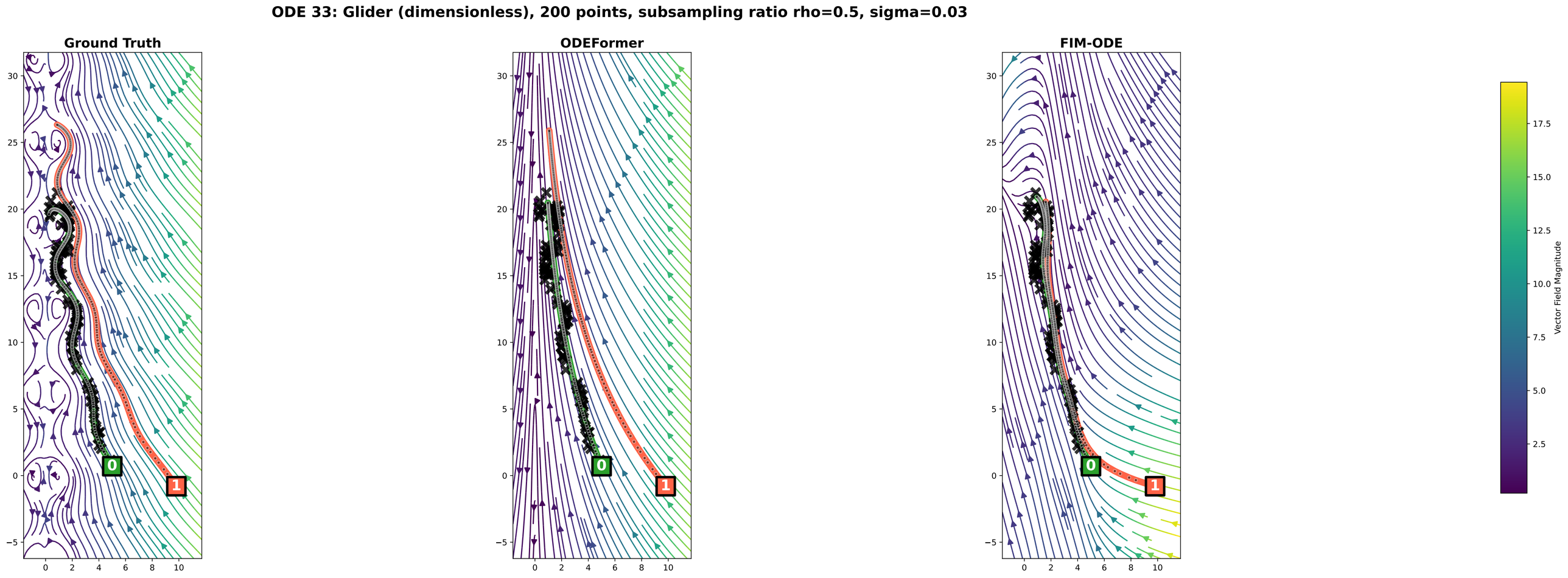

ODE 32: Damped double well oscillator, 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude
100
200
300
400
500

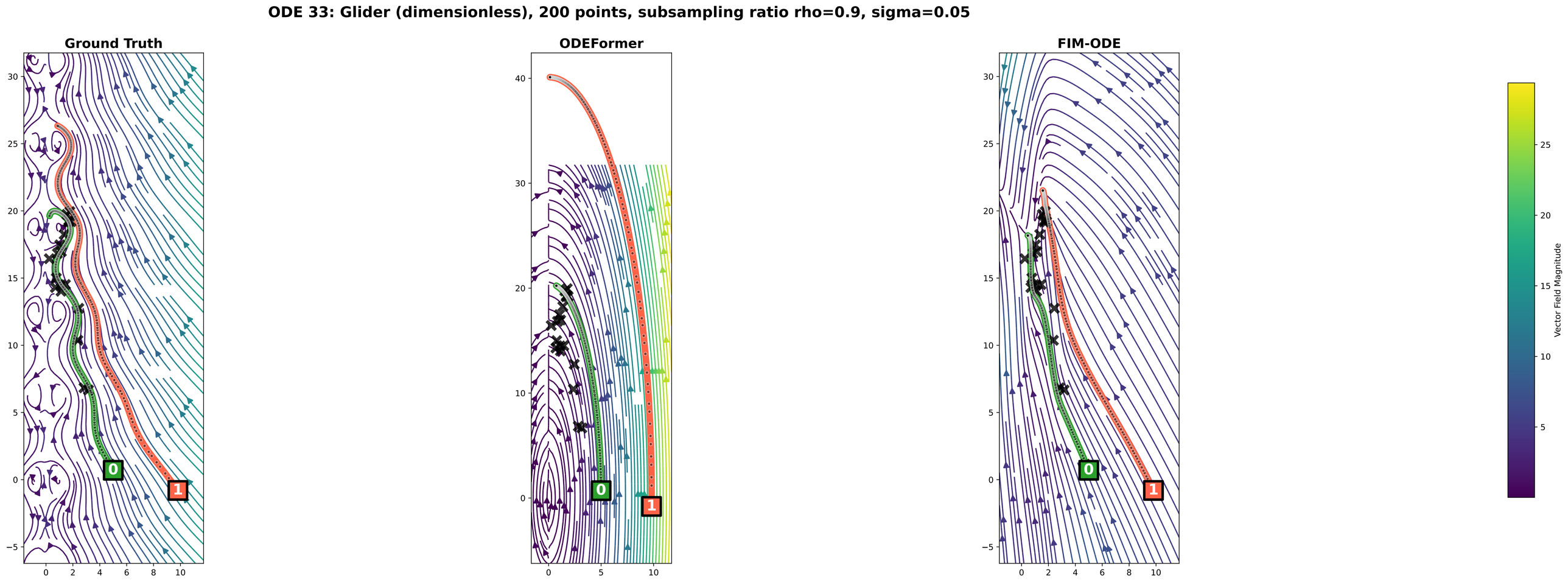

ODE 32: Damped double well oscillator, 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude
500
400
300
200
100
20
10
0
−10
−20
−30
−5
0
5


ODE 32: Damped double well oscillator, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude
100
200
300
400
500

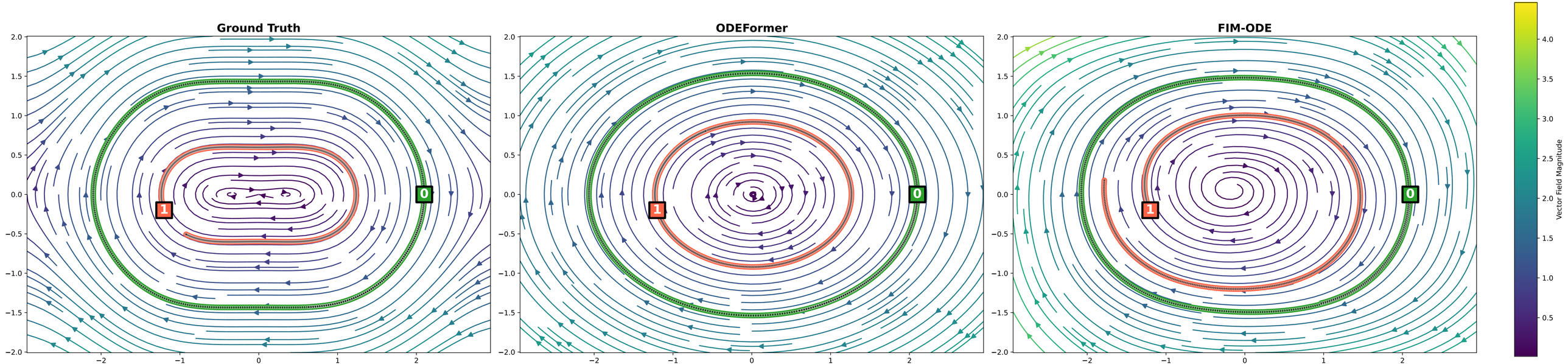

ODE 33: Glider (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 33: Glider (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

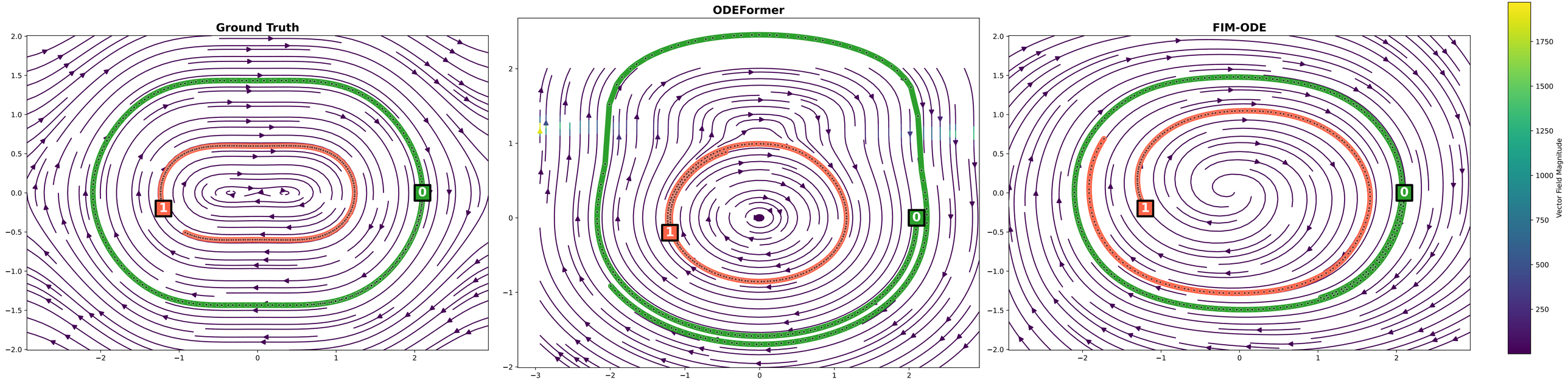

ODE 33: Glider (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 33: Glider (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

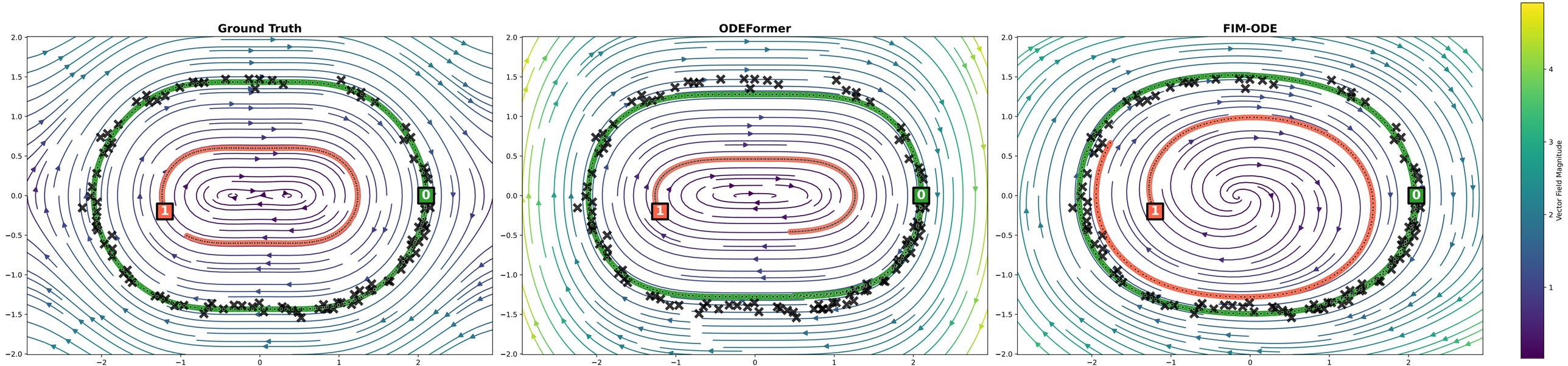
ODE 34: Frictionless bead on a rotating hoop (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0



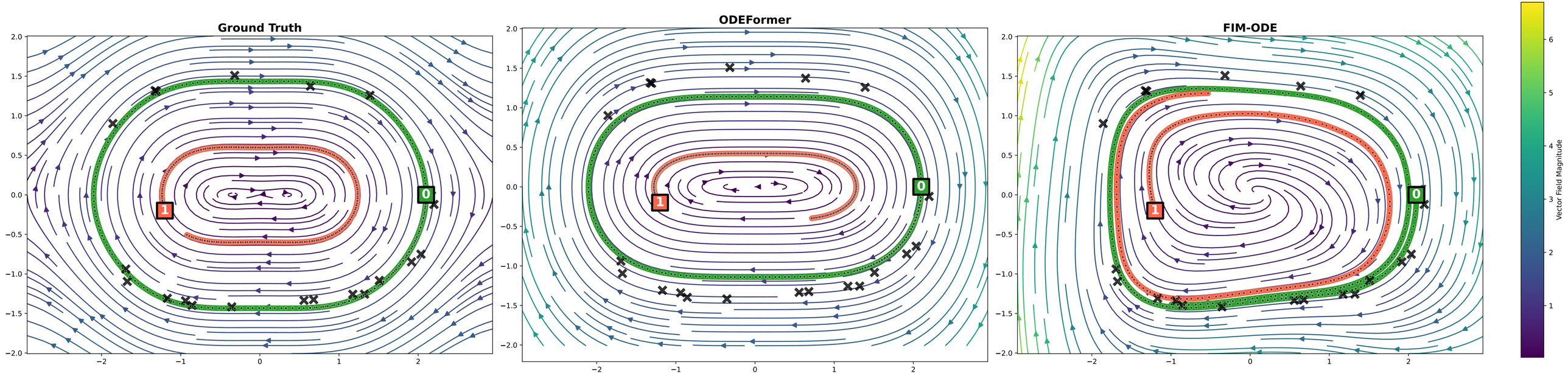
ODE 34: Frictionless bead on a rotating hoop (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0



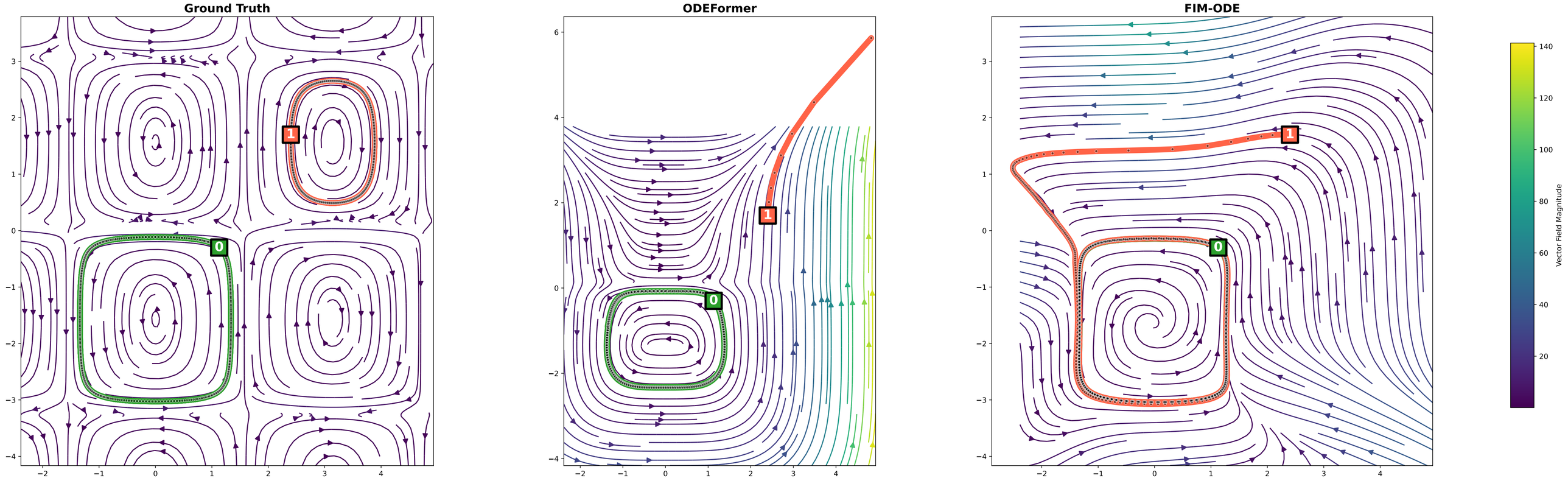
ODE 34: Frictionless bead on a rotating hoop (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03



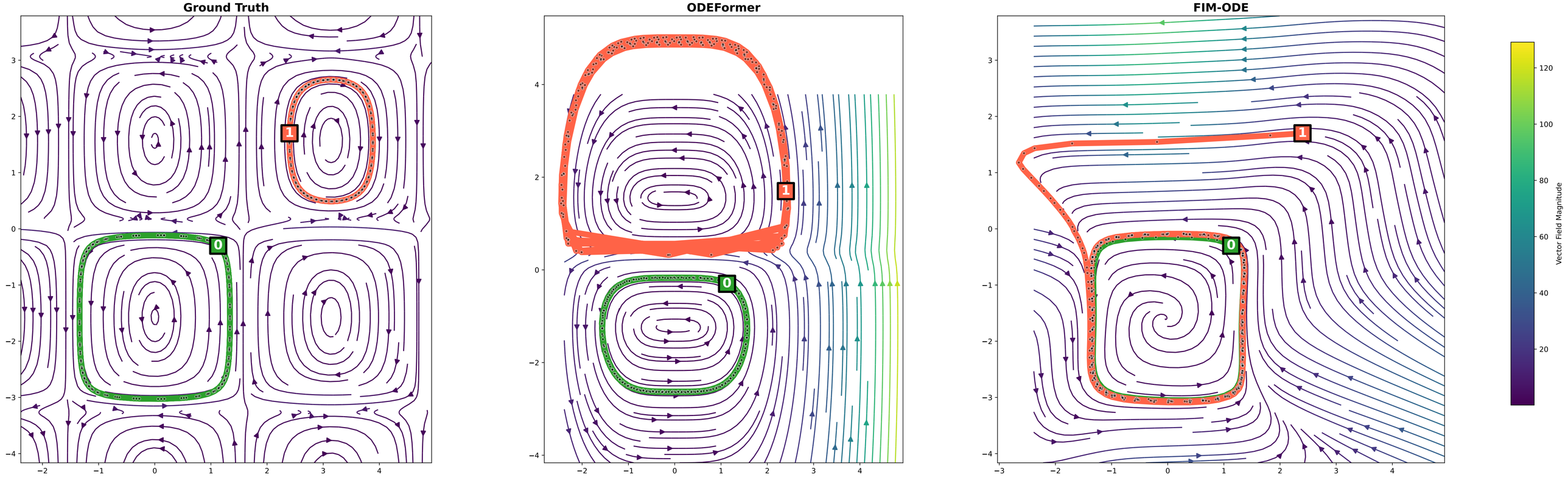
ODE 34: Frictionless bead on a rotating hoop (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05

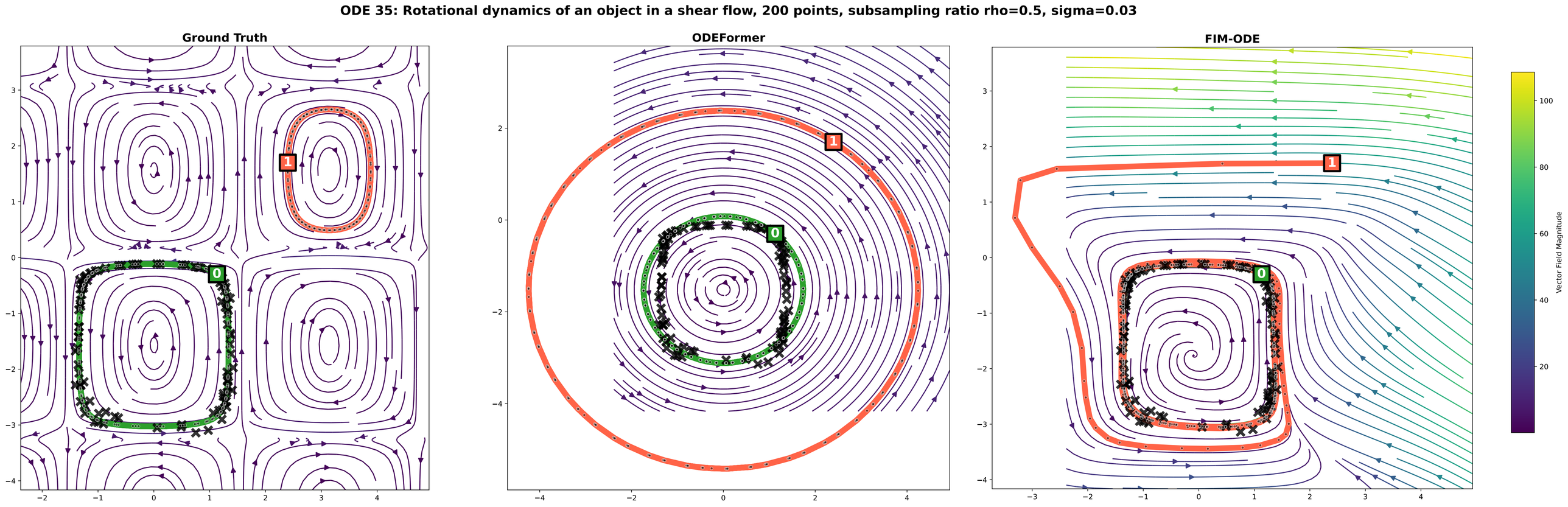


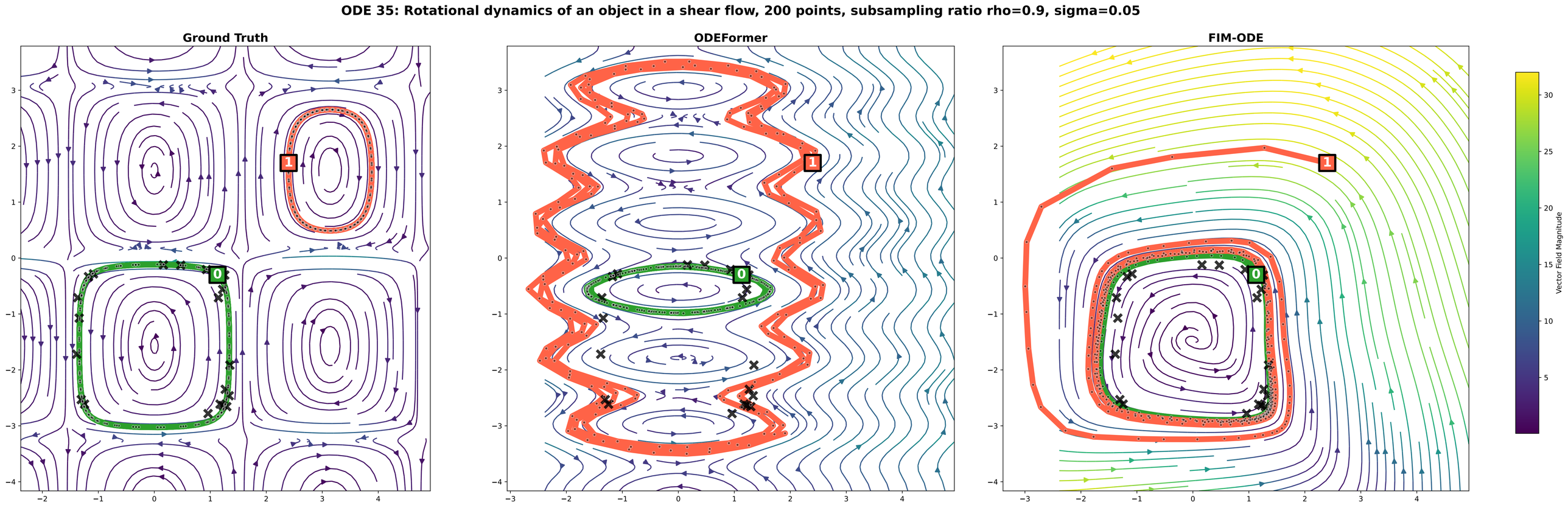
ODE 35: Rotational dynamics of an object in a shear flow, 512 points, subsampling ratio rho=0.0, sigma=0.0

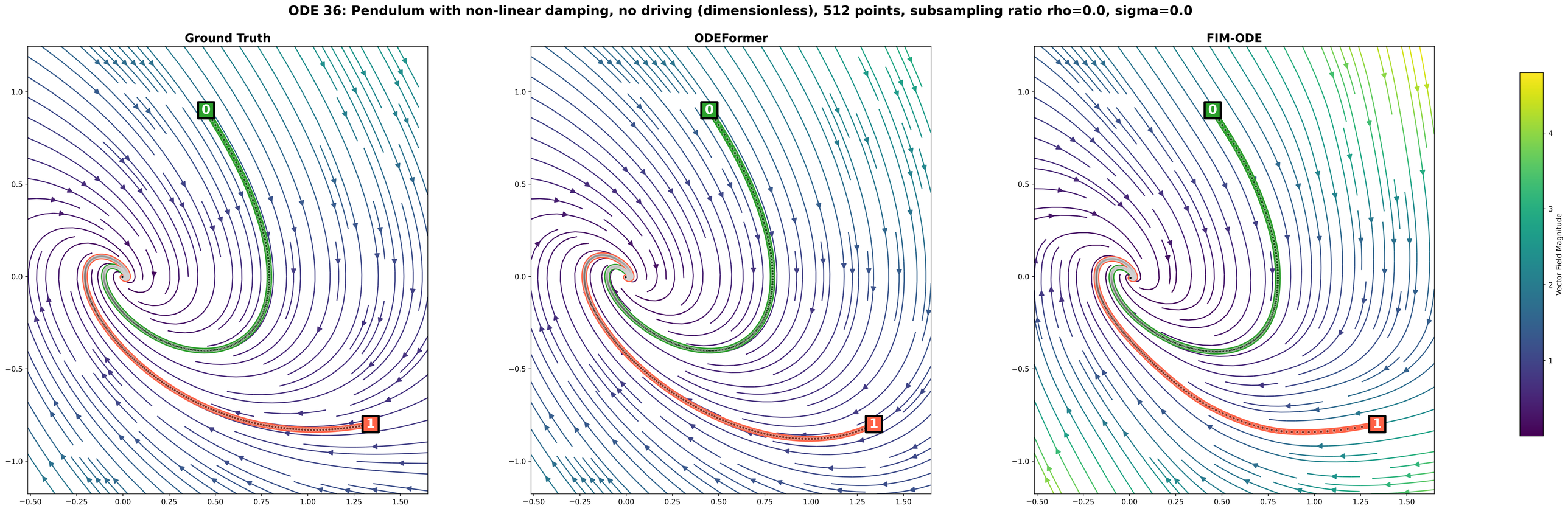


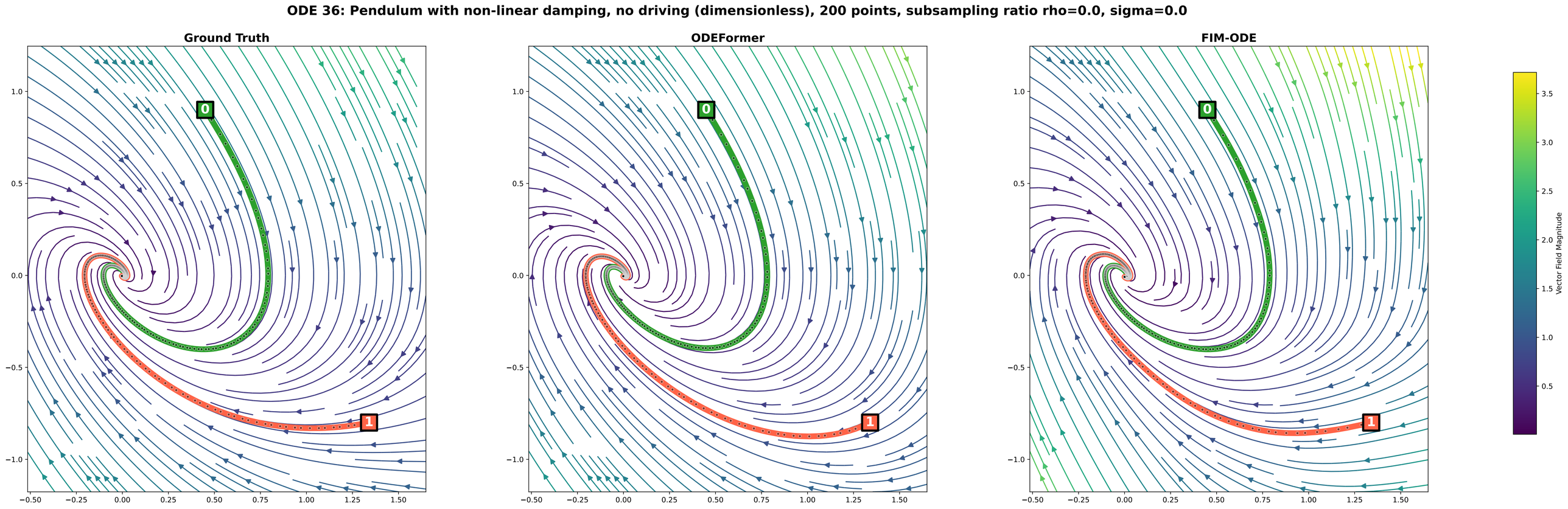
ODE 35: Rotational dynamics of an object in a shear flow, 200 points, subsampling ratio rho=0.0, sigma=0.0

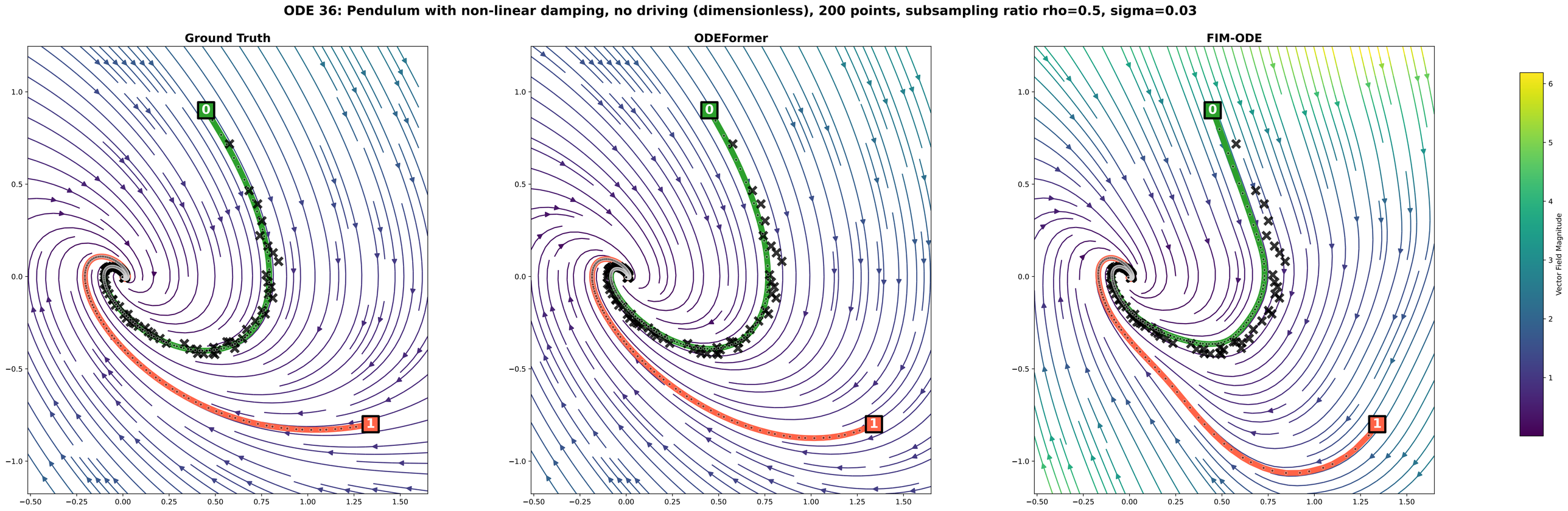


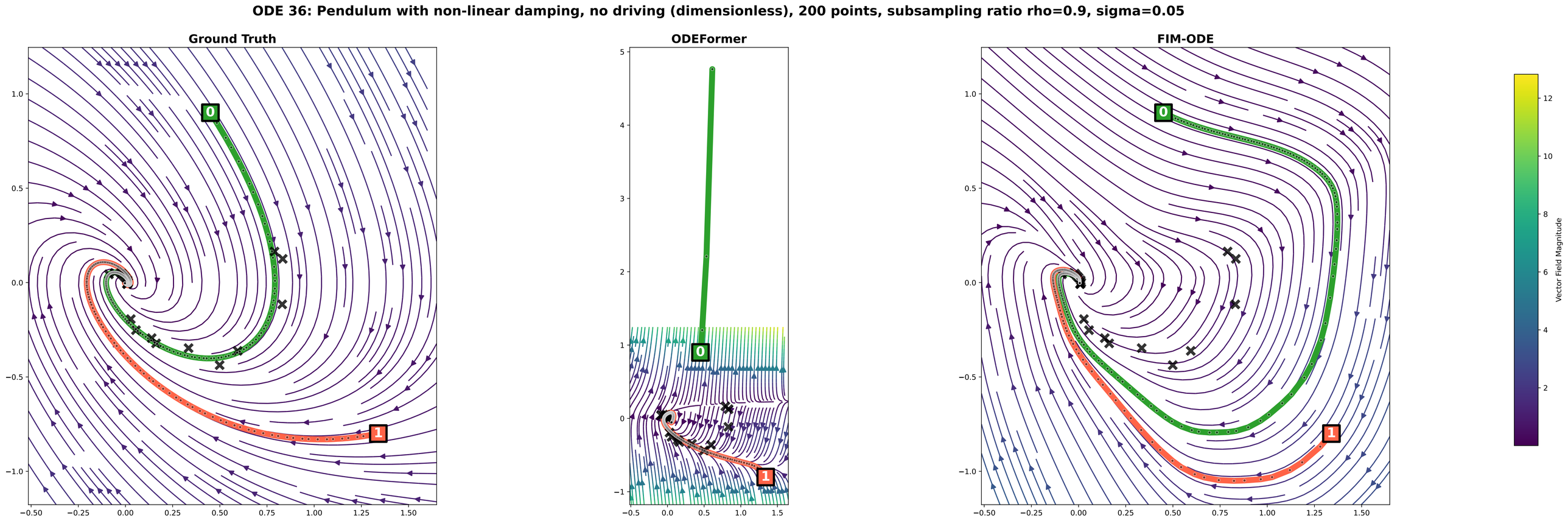

ODE 35: Rotational dynamics of an object in a shear flow, 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude

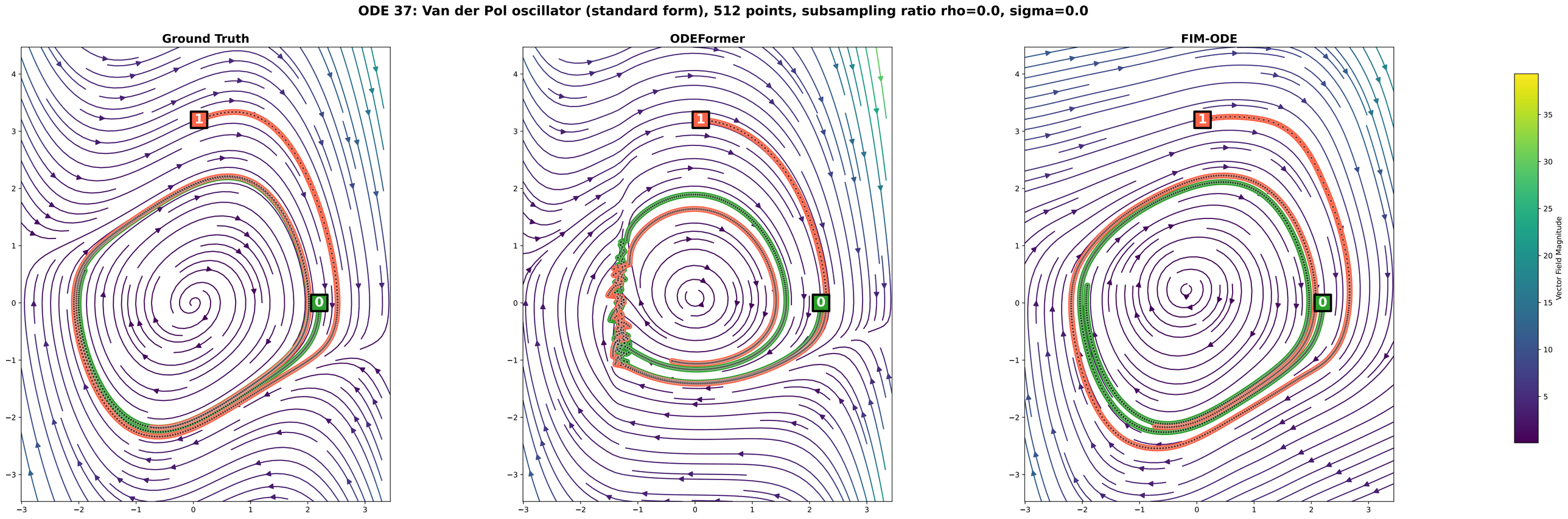

ODE 35: Rotational dynamics of an object in a shear flow, 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
1
0

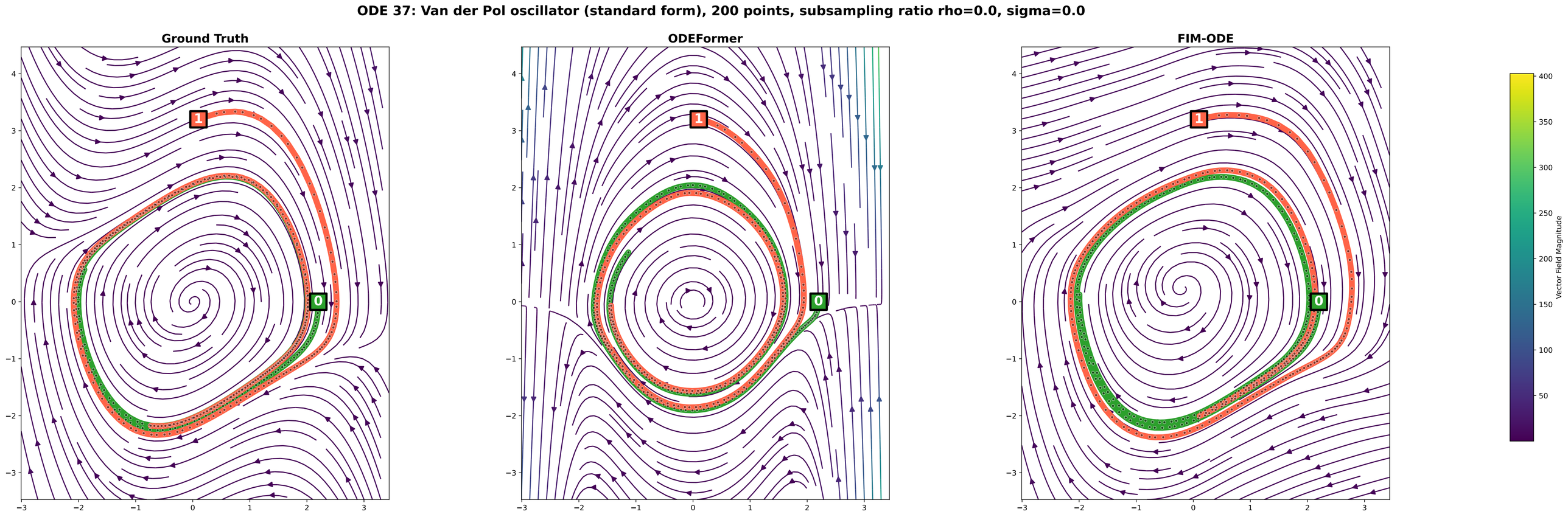

ODE 36: Pendulum with non-linear damping, no driving (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

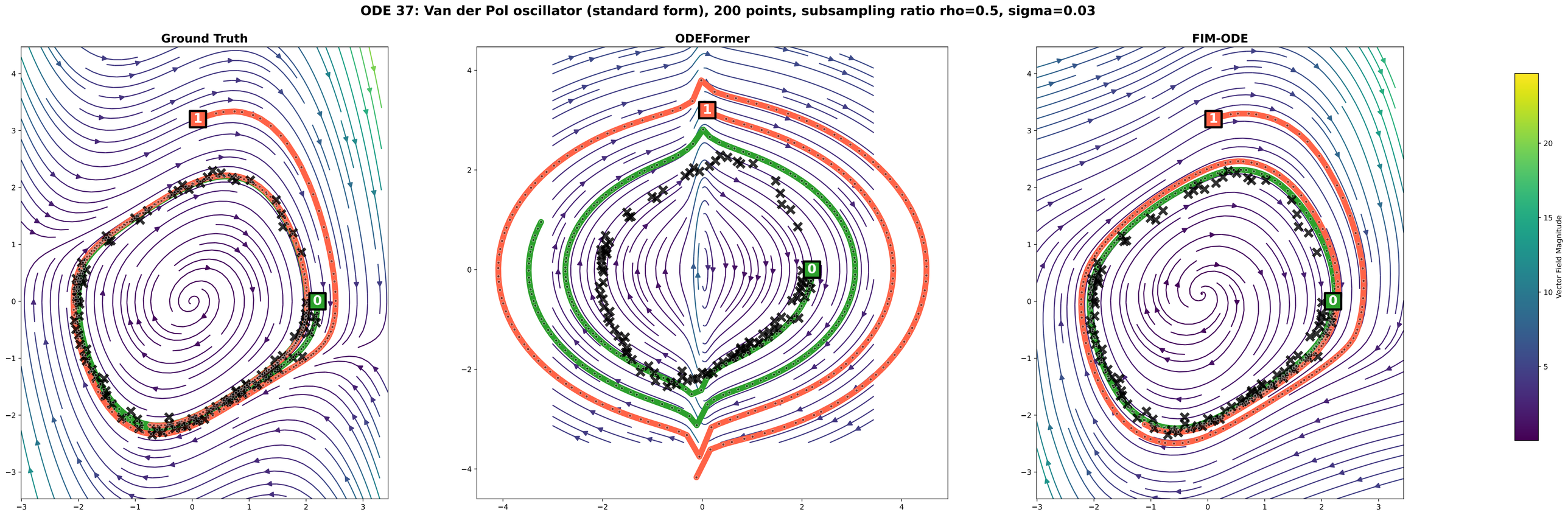

ODE 36: Pendulum with non-linear damping, no driving (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

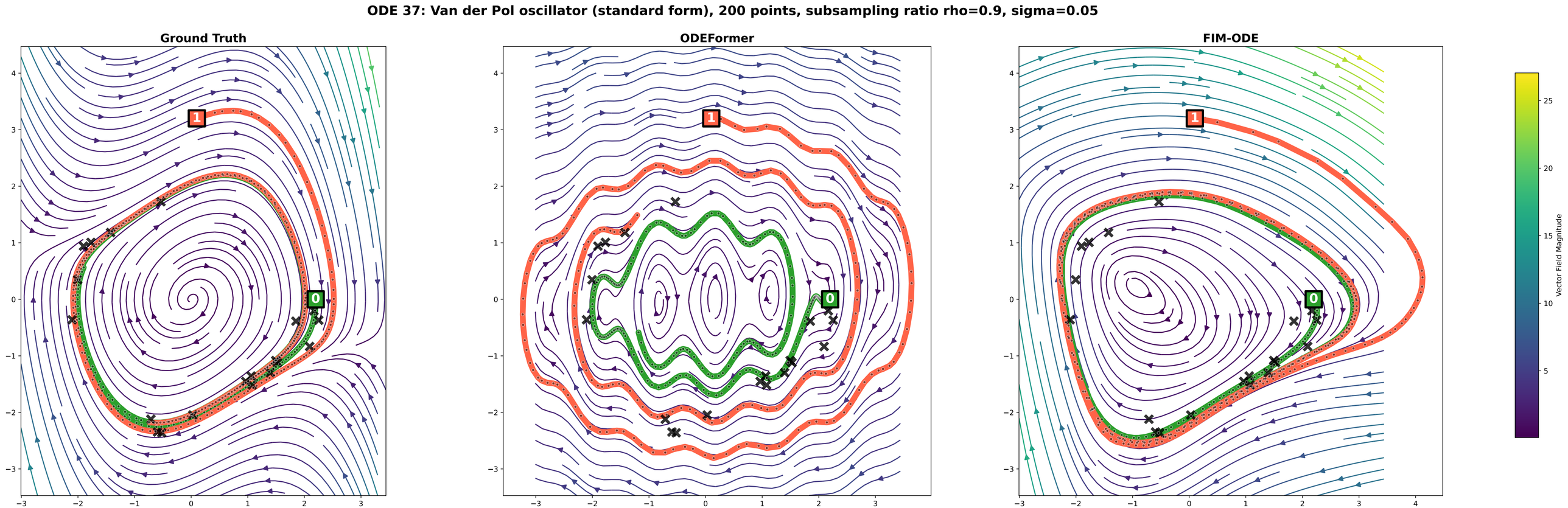

ODE 36: Pendulum with non-linear damping, no driving (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 36: Pendulum with non-linear damping, no driving (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

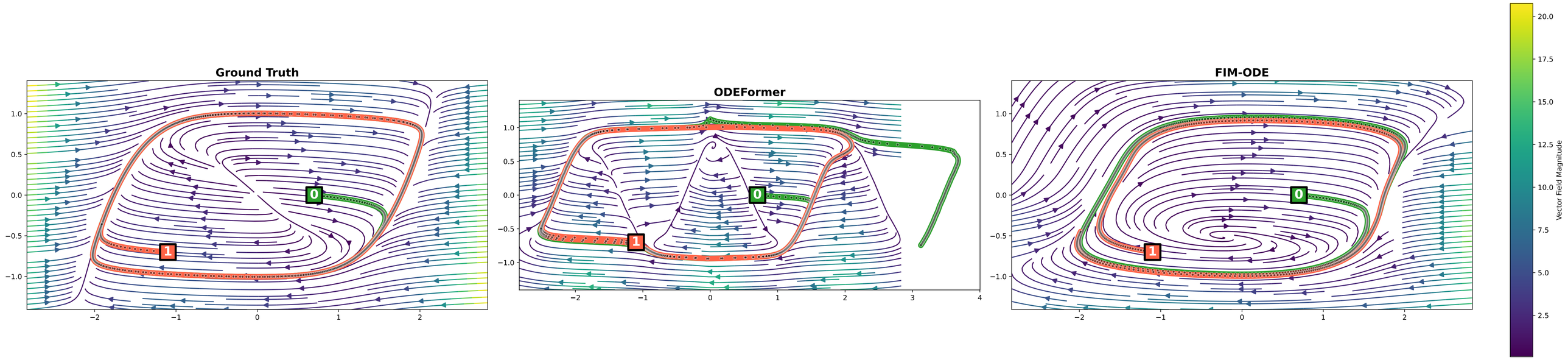

ODE 37: Van der Pol oscillator (standard form), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 37: Van der Pol oscillator (standard form), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

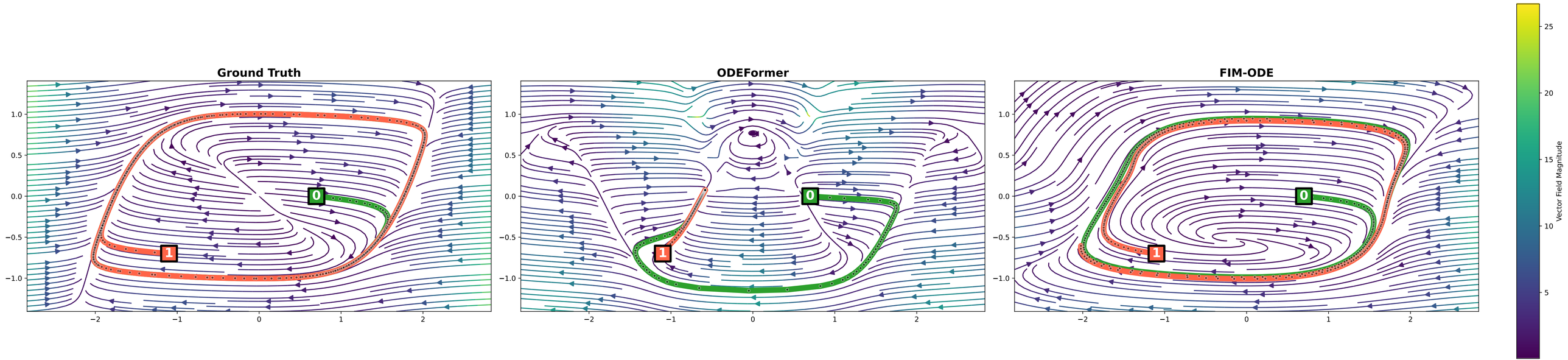

ODE 37: Van der Pol oscillator (standard form), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 37: Van der Pol oscillator (standard form), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

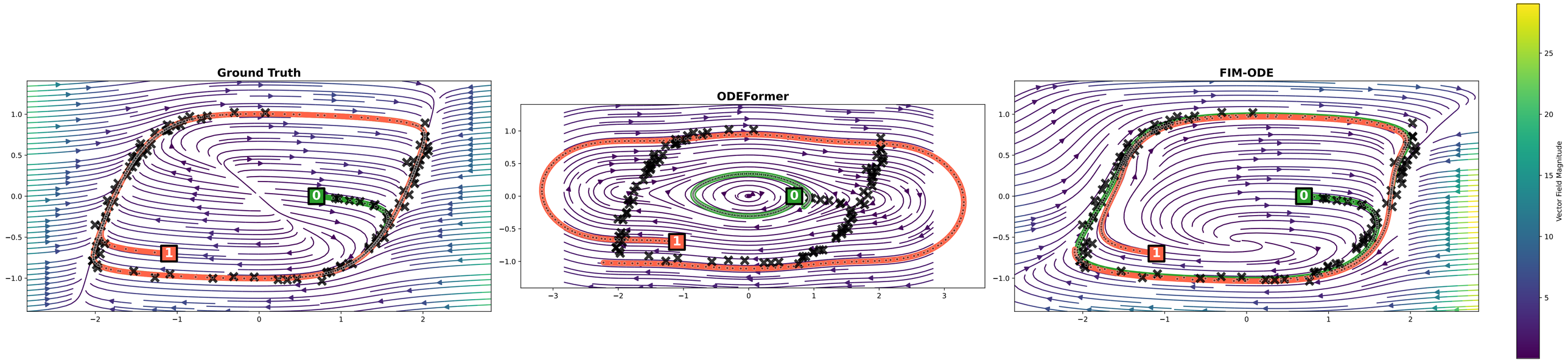
ODE 38: Van der Pol oscillator (simplified form from Strogatz), 512 points, subsampling ratio rho=0.0, sigma=0.0



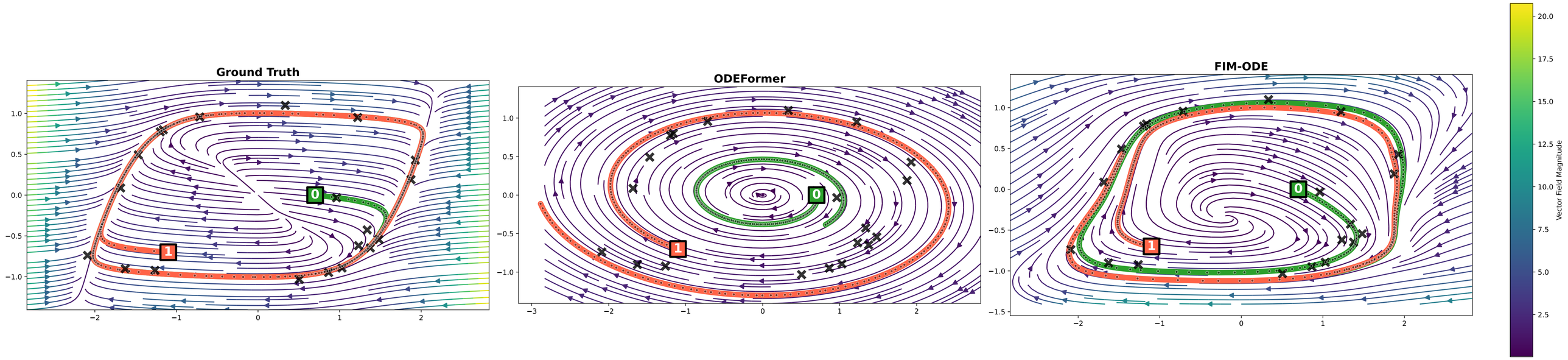
ODE 38: Van der Pol oscillator (simplified form from Strogatz), 200 points, subsampling ratio rho=0.0, sigma=0.0

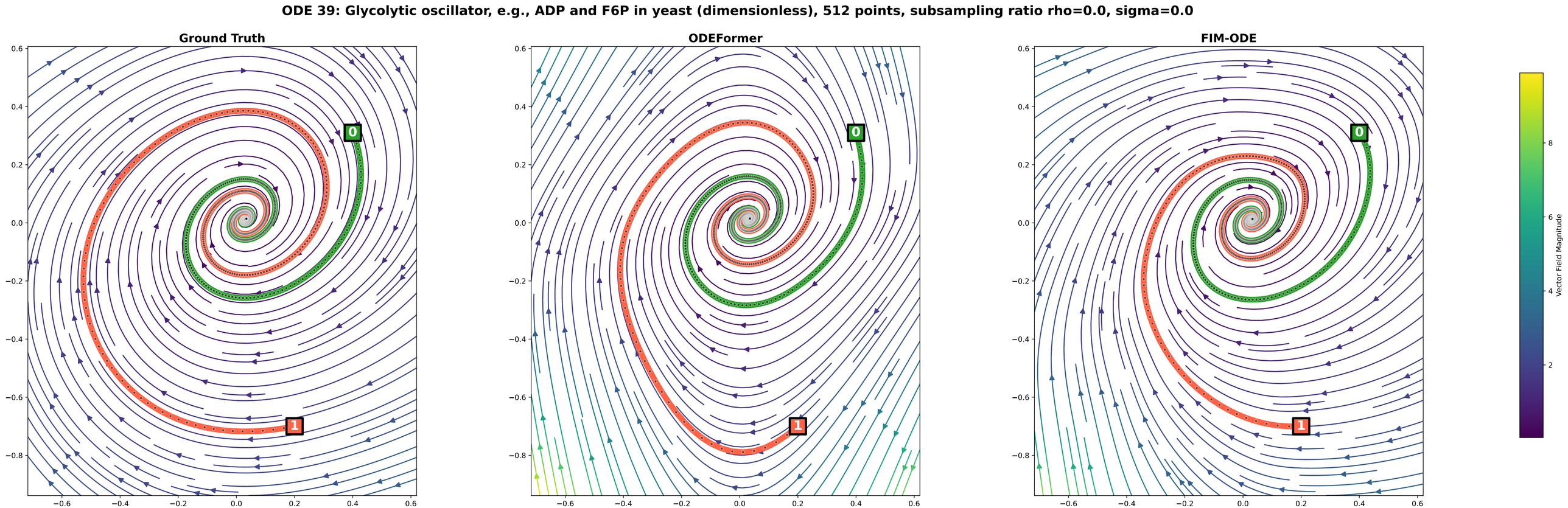


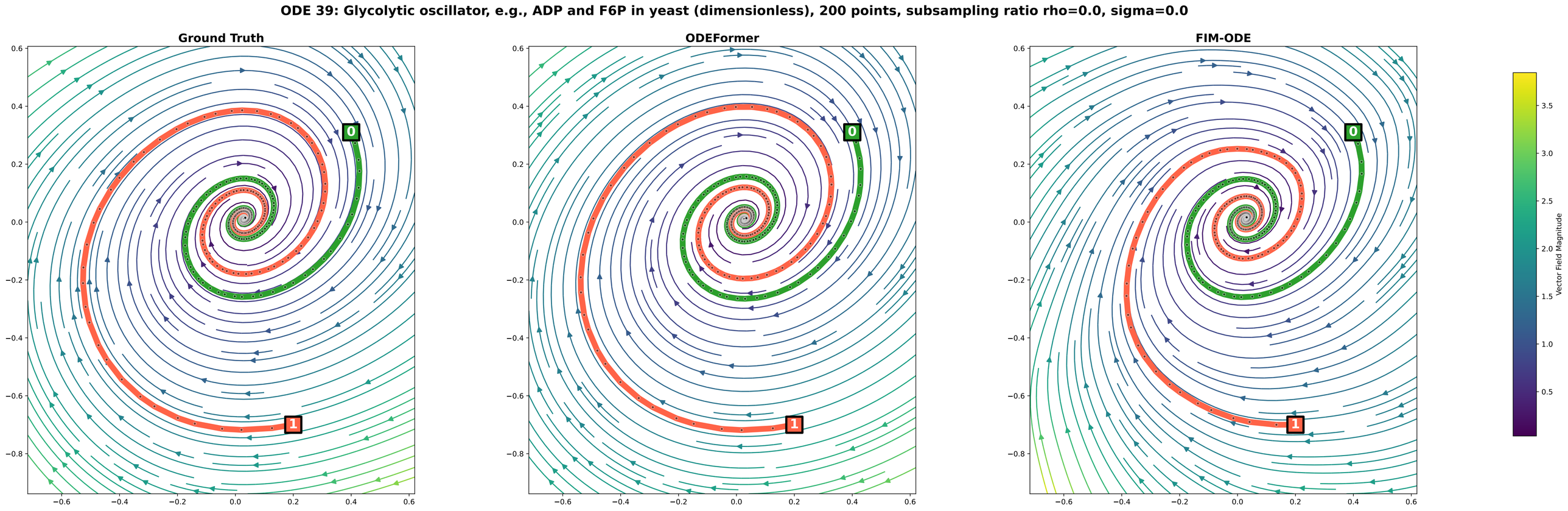
ODE 38: Van der Pol oscillator (simplified form from Strogatz), 200 points, subsampling ratio rho=0.5, sigma=0.03

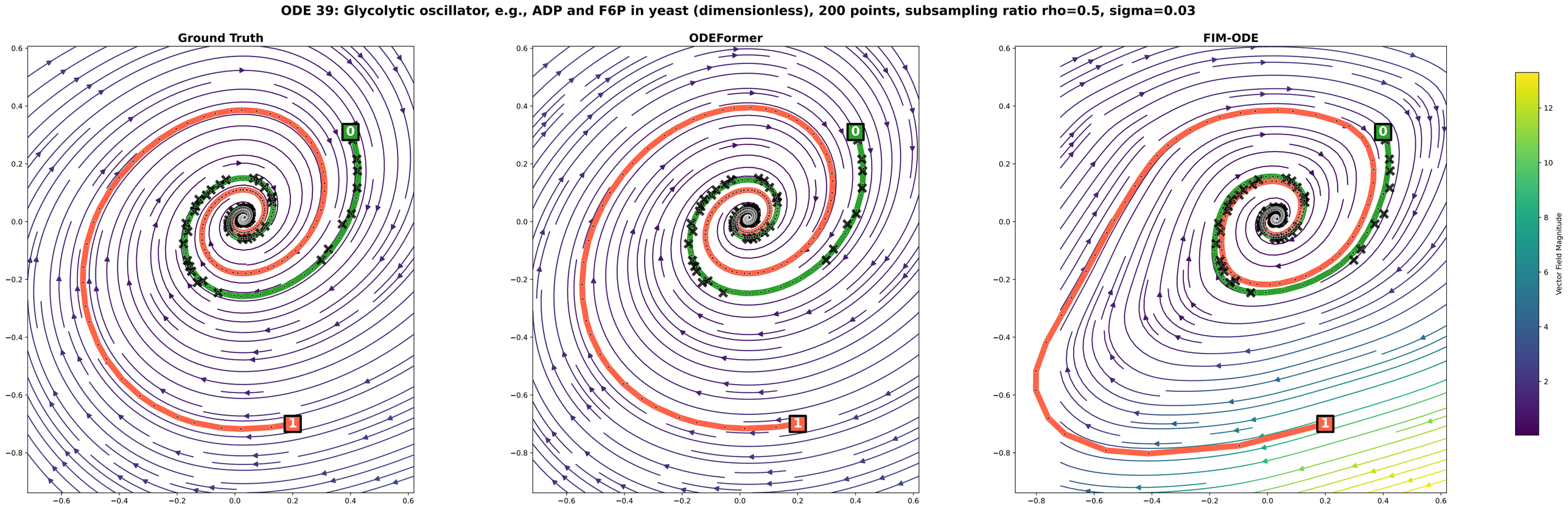


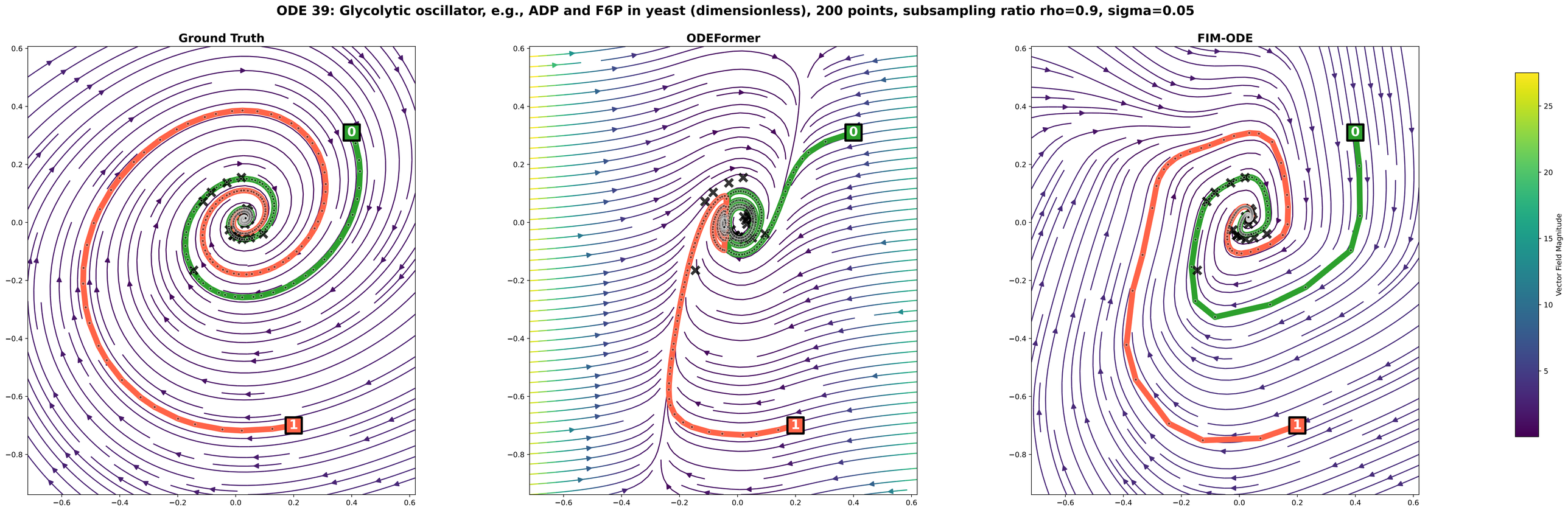
ODE 38: Van der Pol oscillator (simplified form from Strogatz), 200 points, subsampling ratio rho=0.9, sigma=0.05

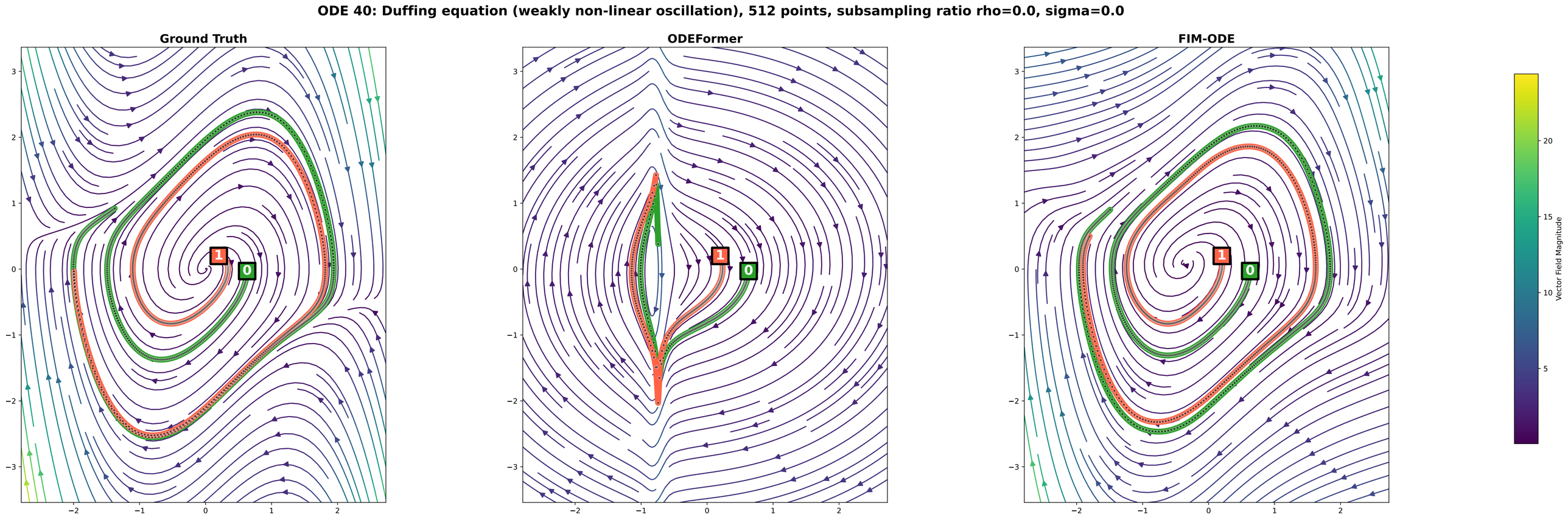



ODE 39: Glycolytic oscillator, e.g., ADP and F6P in yeast (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

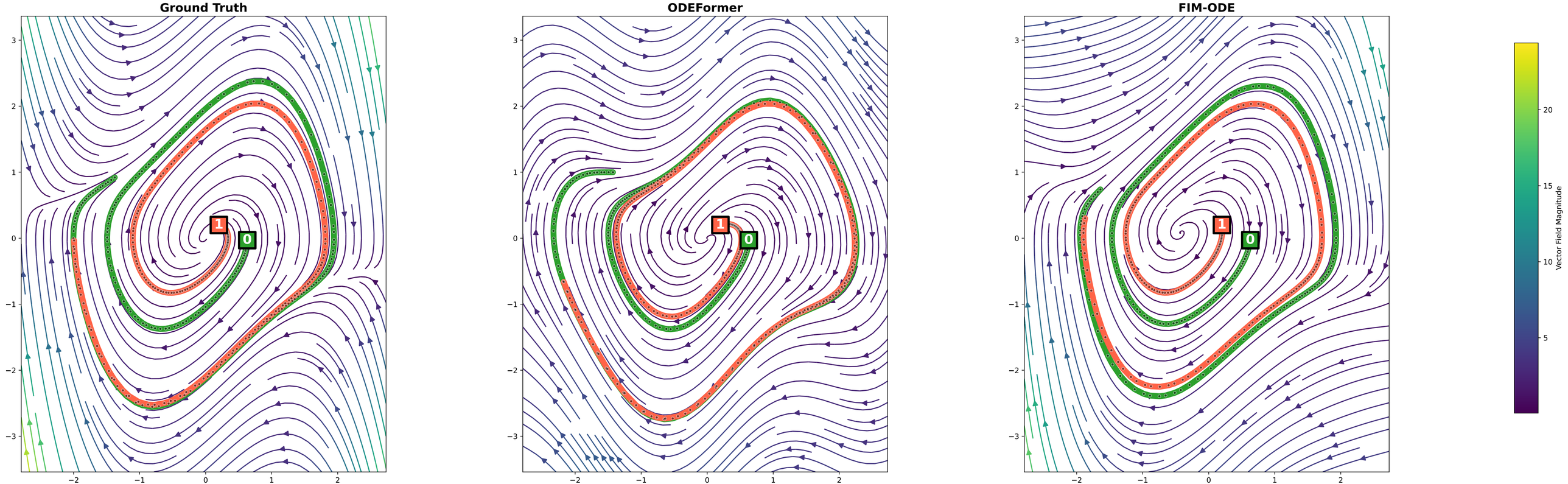

ODE 39: Glycolytic oscillator, e.g., ADP and F6P in yeast (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

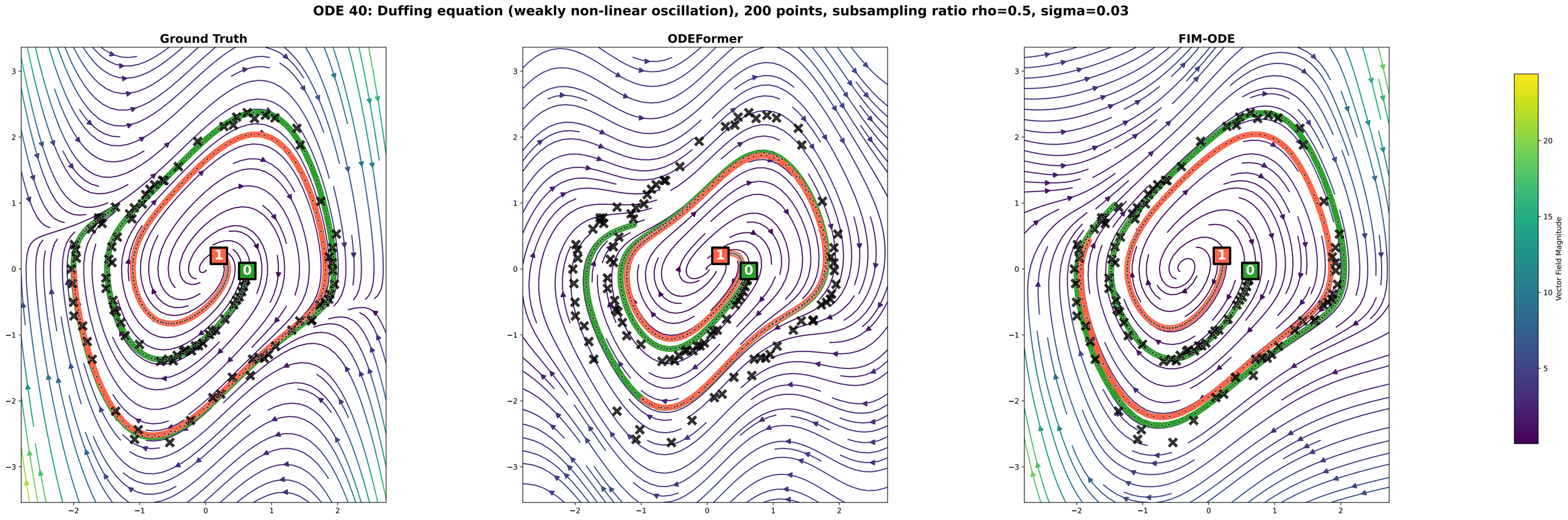

ODE 39: Glycolytic oscillator, e.g., ADP and F6P in yeast (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude


ODE 39: Glycolytic oscillator, e.g., ADP and F6P in yeast (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

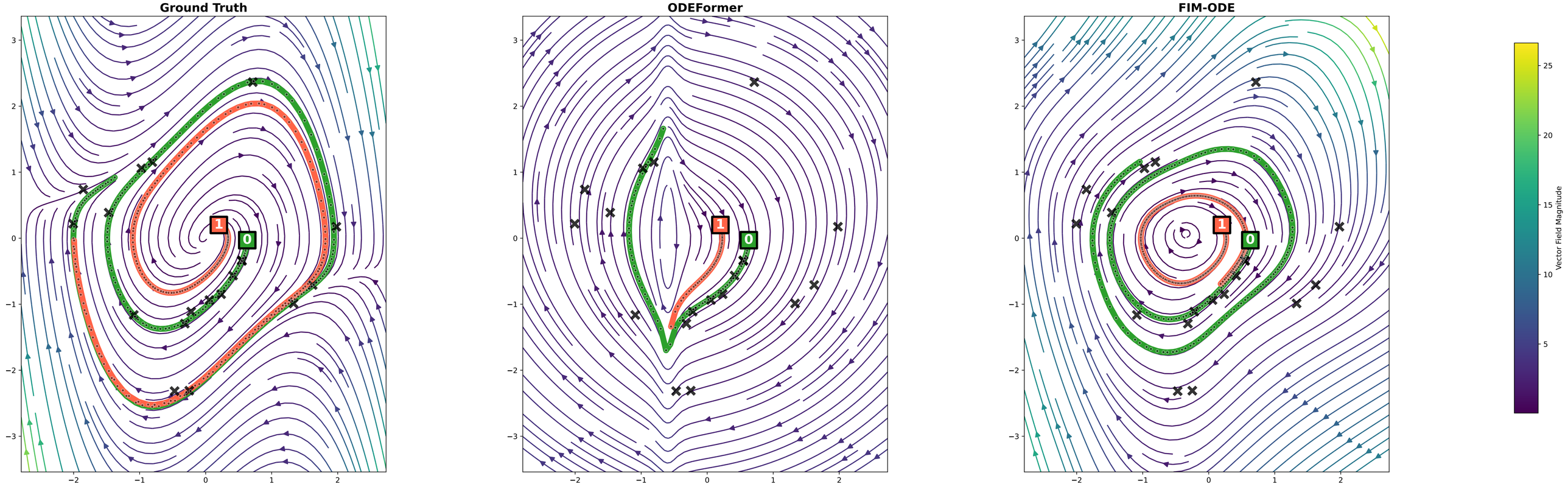

ODE 40: Duffing equation (weakly non-linear oscillation), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

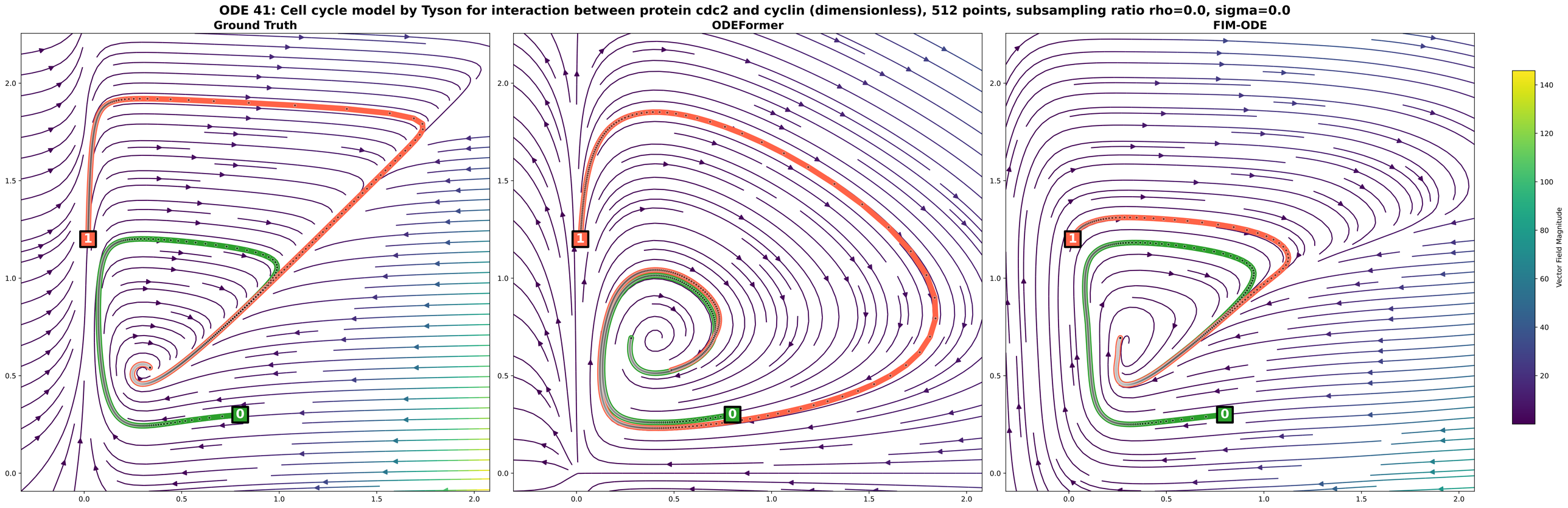
ODE 40: Duffing equation (weakly non-linear oscillation), 200 points, subsampling ratio rho=0.0, sigma=0.0



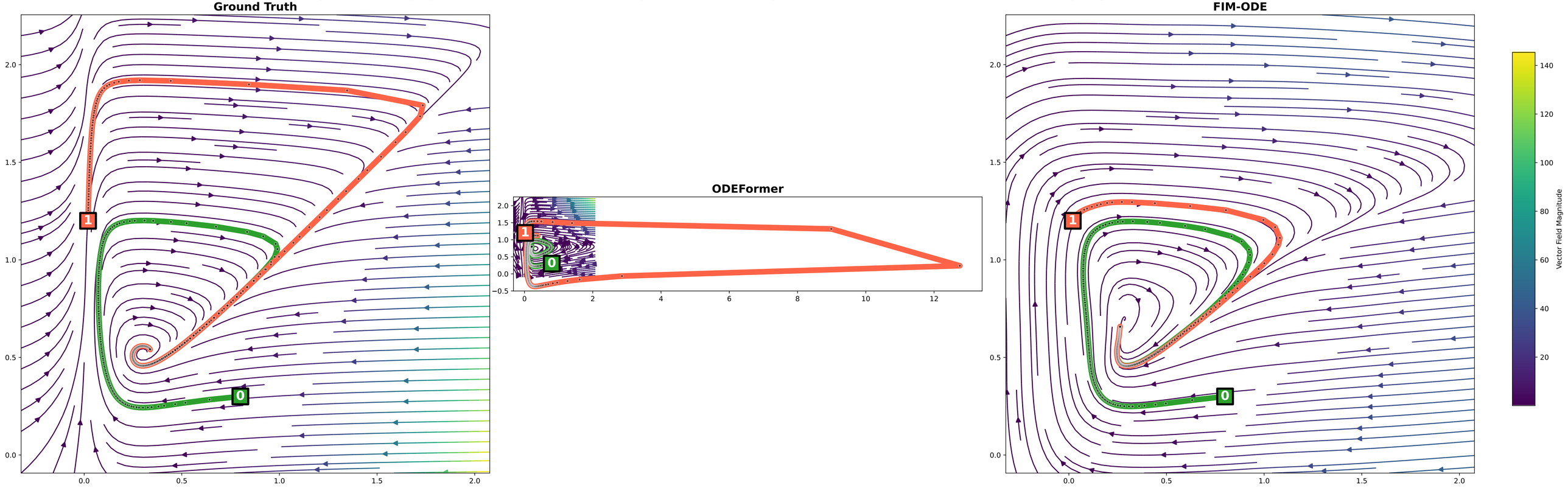

ODE 40: Duffing equation (weakly non-linear oscillation), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

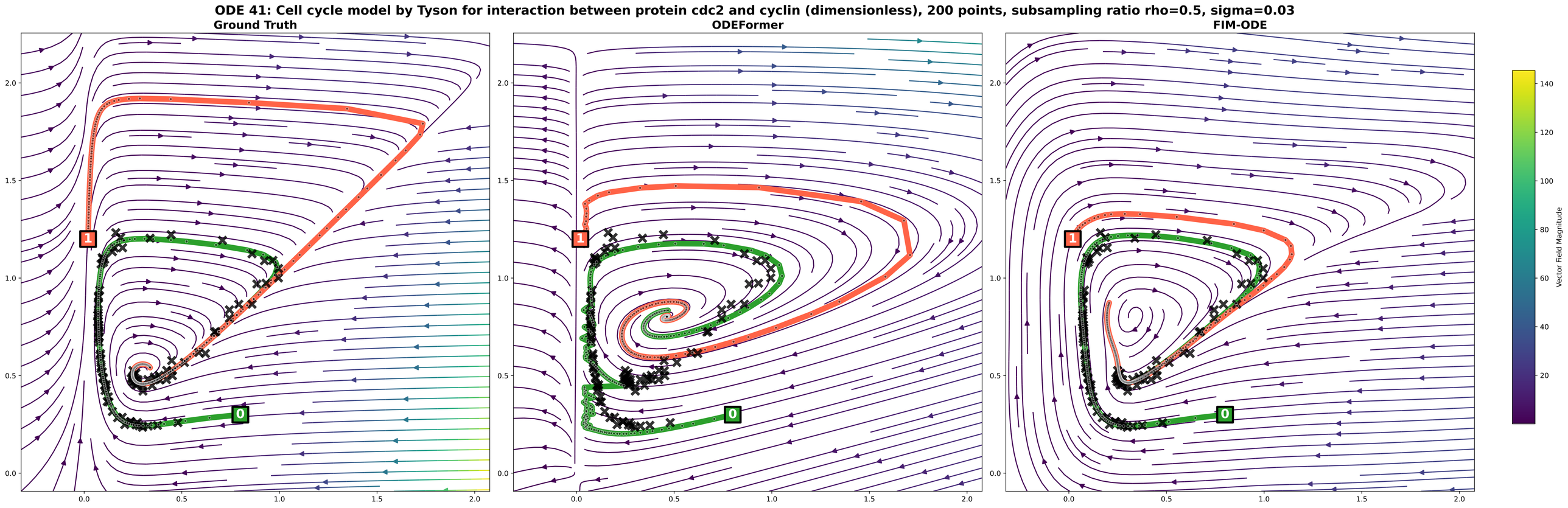
ODE 40: Duffing equation (weakly non-linear oscillation), 200 points, subsampling ratio rho=0.9, sigma=0.05

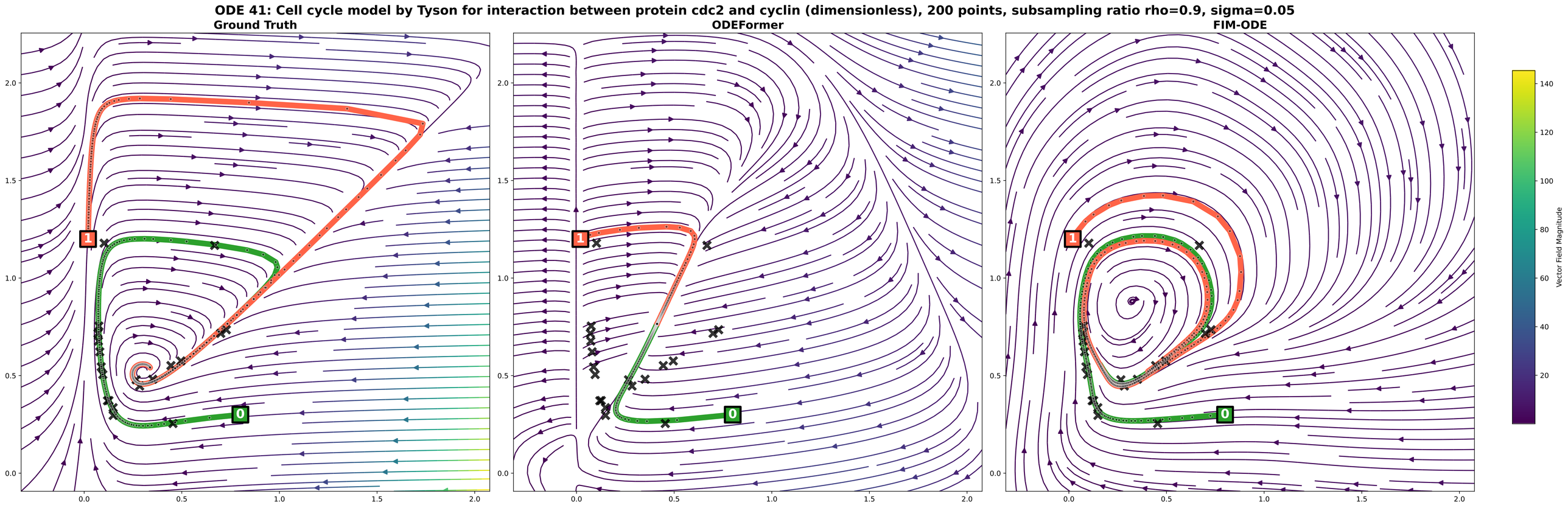


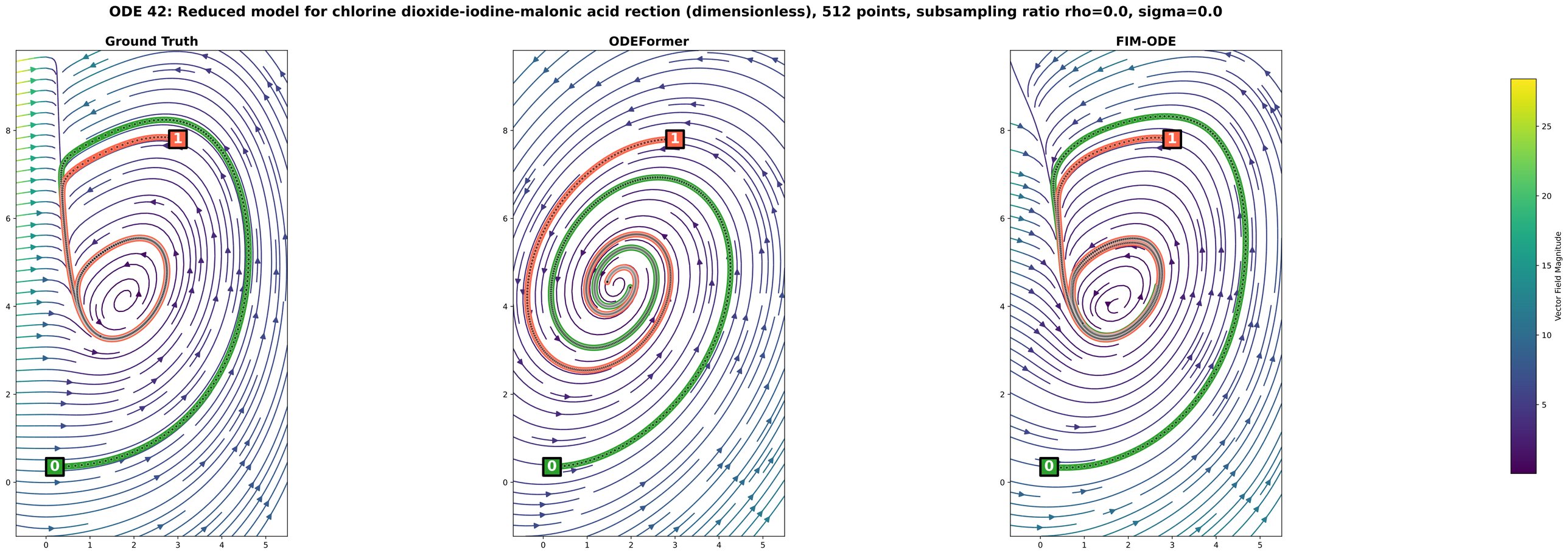

ODE 41: Cell cycle model by Tyson for interaction between protein cdc2 and cyclin (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

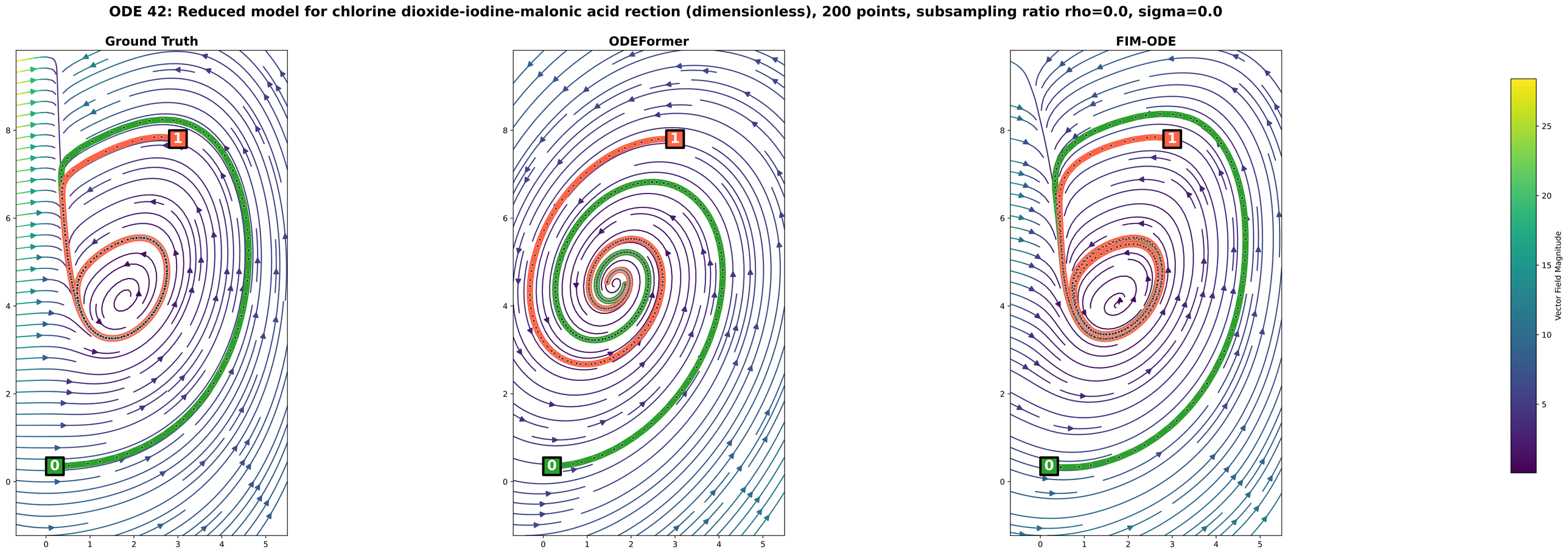
ODE 41: Cell cycle model by Tyson for interaction between protein cdc2 and cyclin (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0

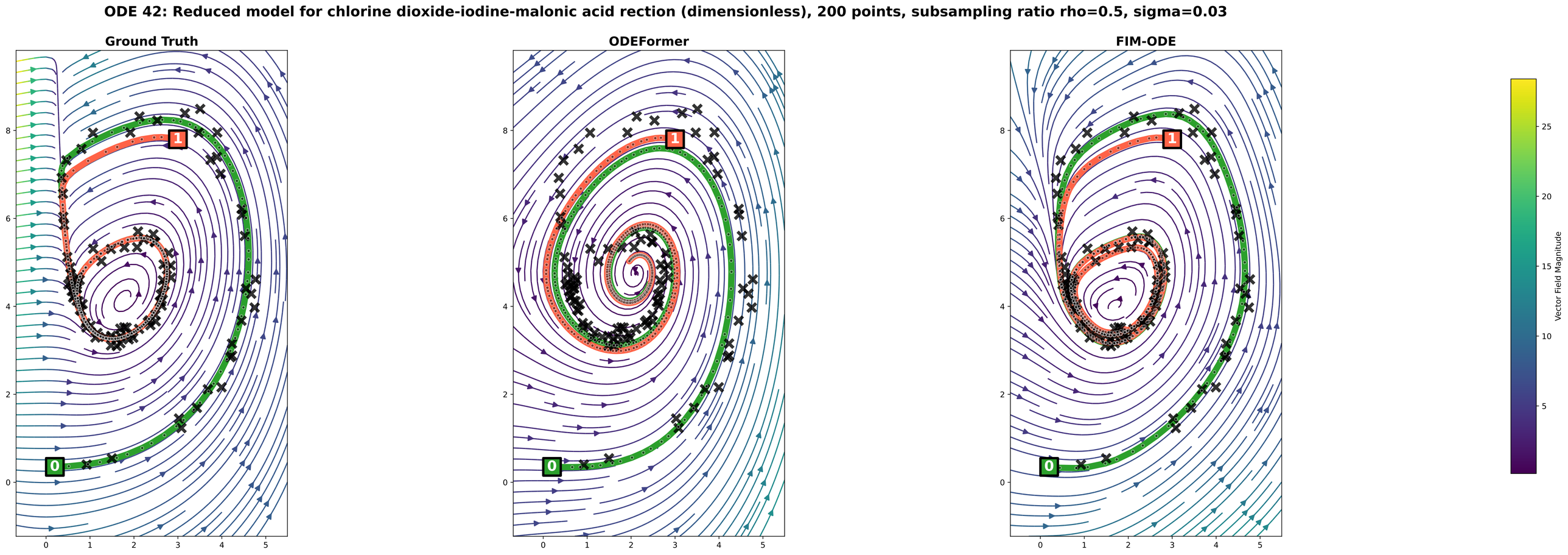


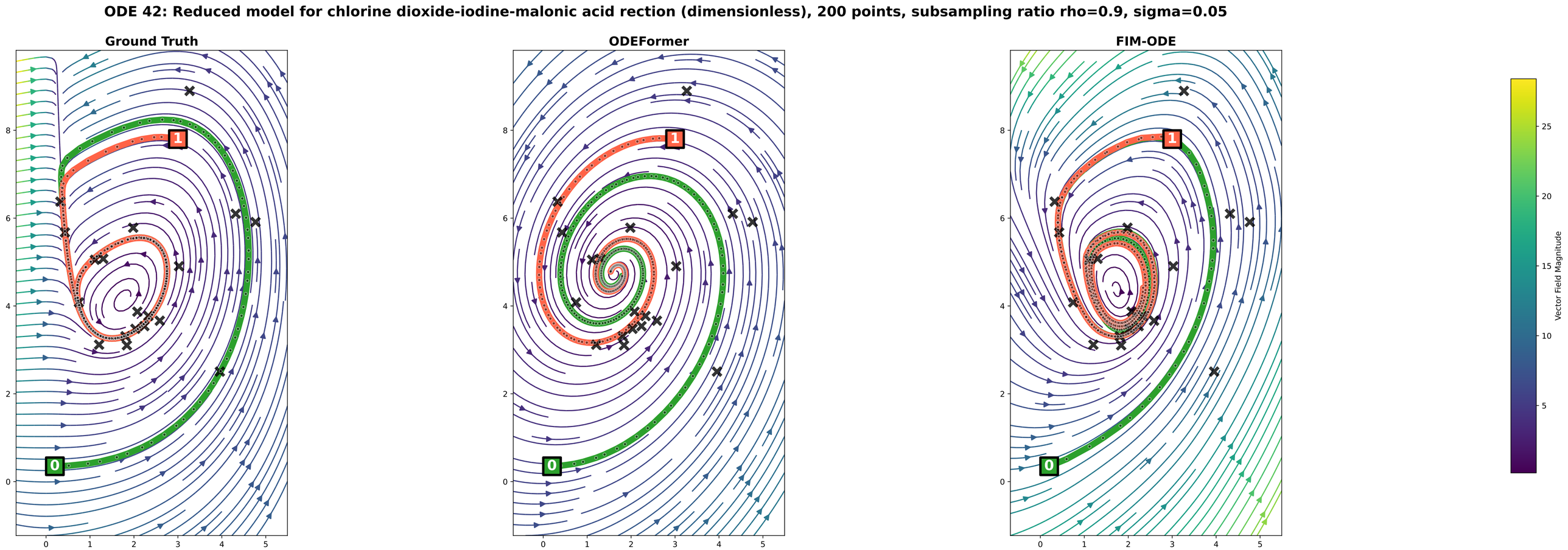

ODE 41: Cell cycle model by Tyson for interaction between protein cdc2 and cyclin (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 41: Cell cycle model by Tyson for interaction between protein cdc2 and cyclin (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

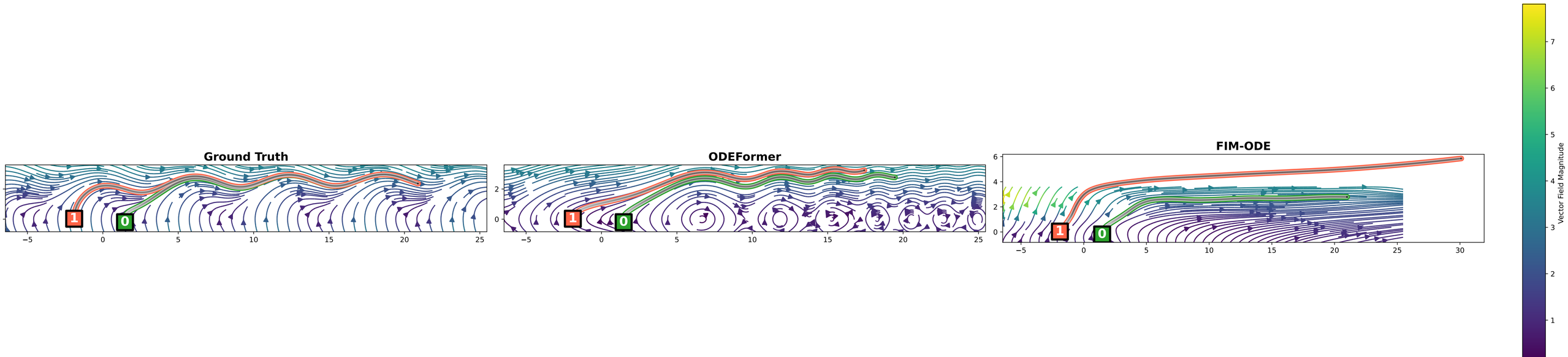

ODE 42: Reduced model for chlorine dioxide-iodine-malonic acid rection (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 42: Reduced model for chlorine dioxide-iodine-malonic acid rection (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

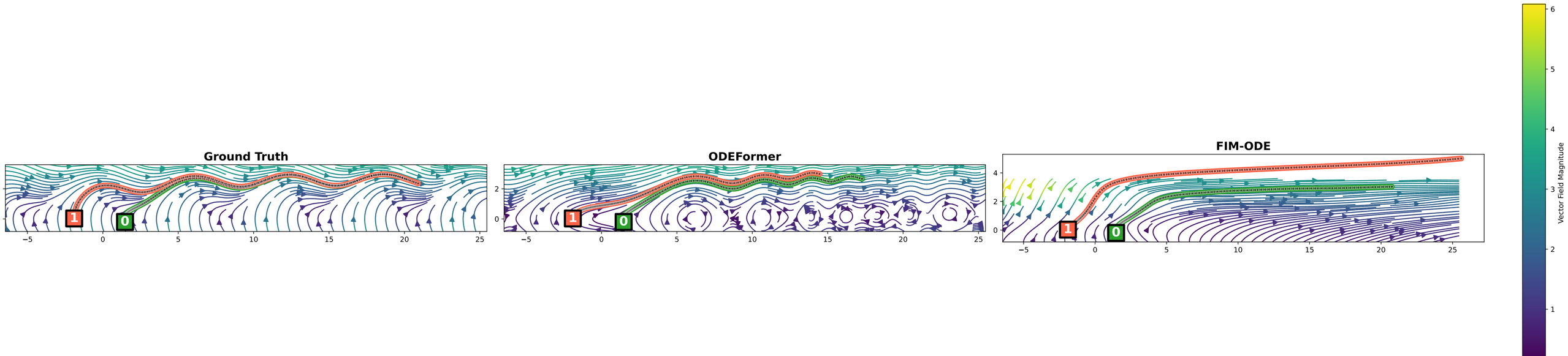

ODE 42: Reduced model for chlorine dioxide-iodine-malonic acid rection (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude


ODE 42: Reduced model for chlorine dioxide-iodine-malonic acid rection (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

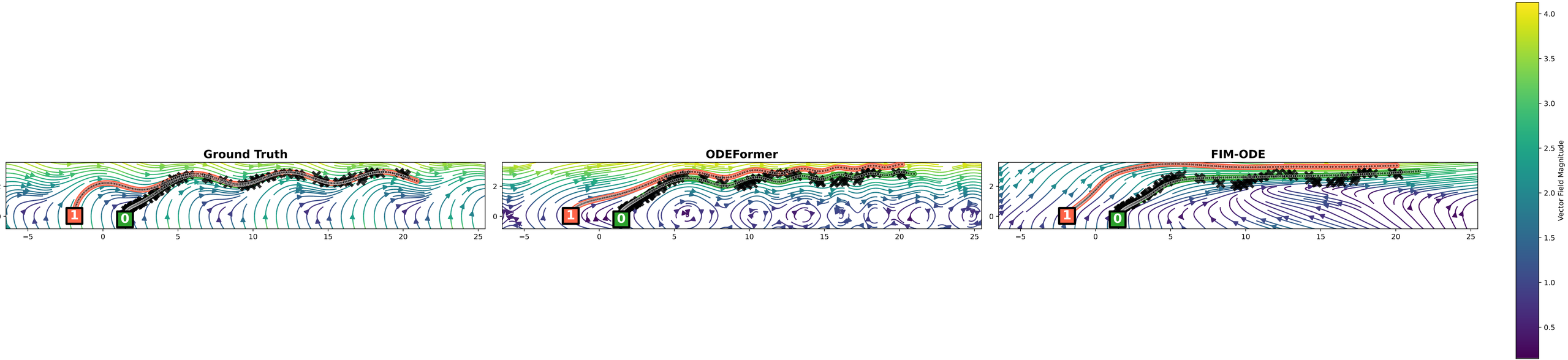
ODE 43: Driven pendulum with linear damping / Josephson junction (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0



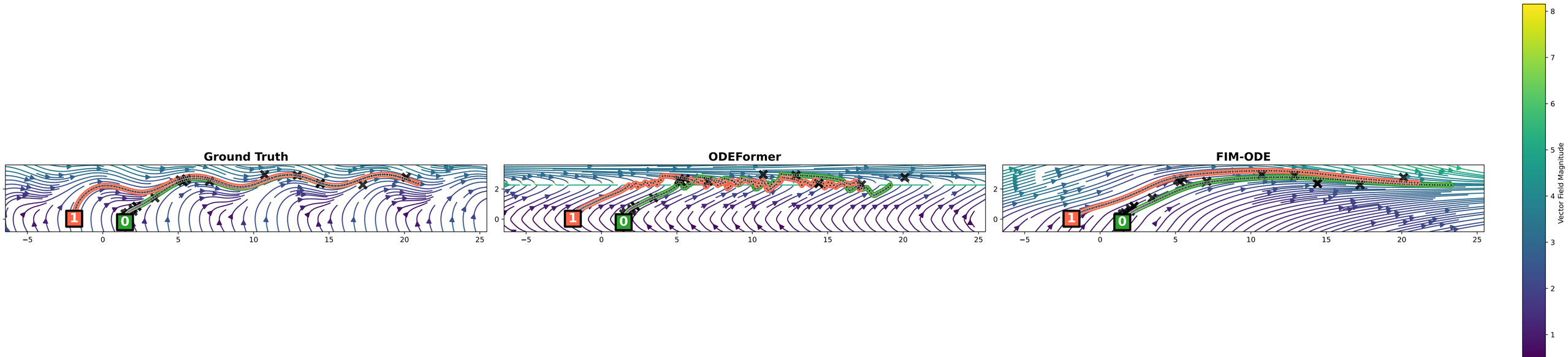
ODE 43: Driven pendulum with linear damping / Josephson junction (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0



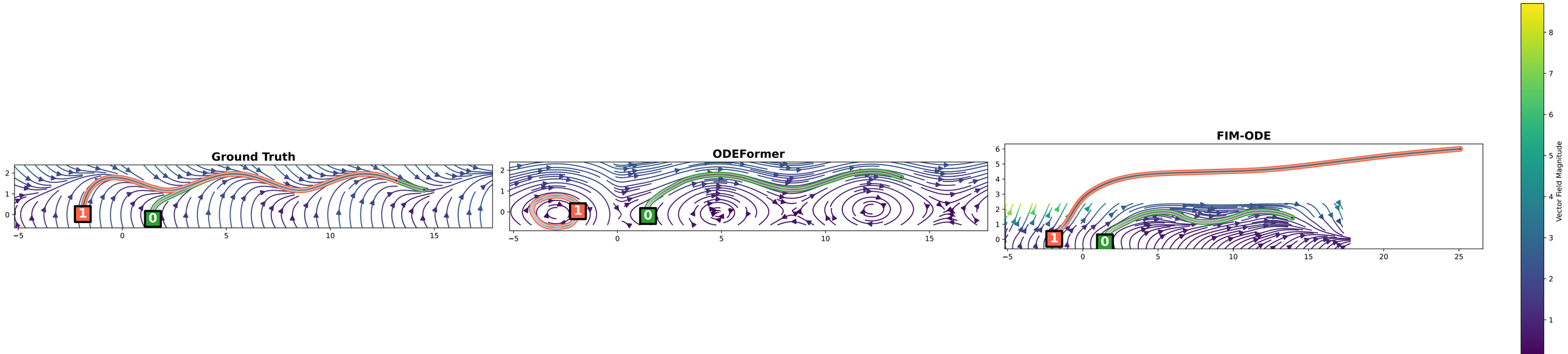
ODE 43: Driven pendulum with linear damping / Josephson junction (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03



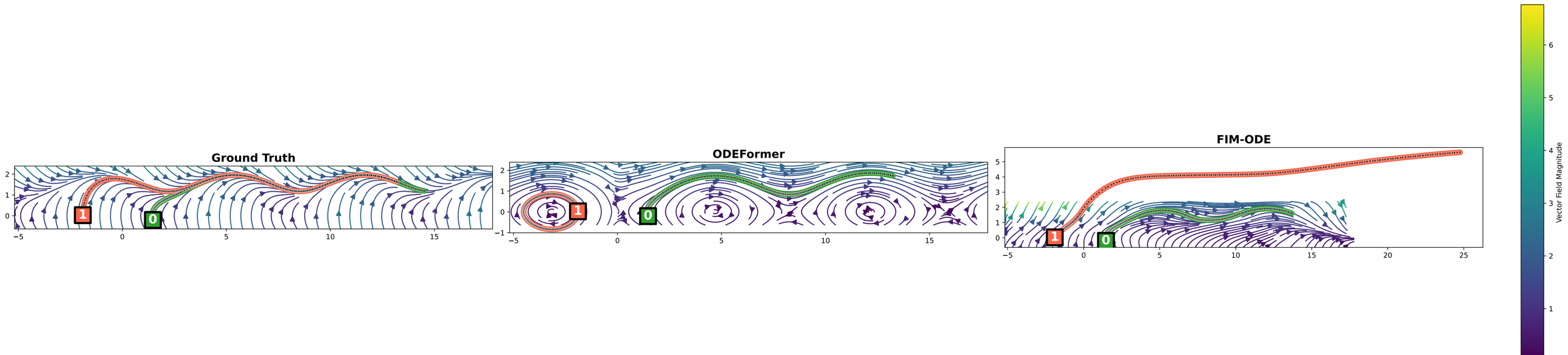
ODE 43: Driven pendulum with linear damping / Josephson junction (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05



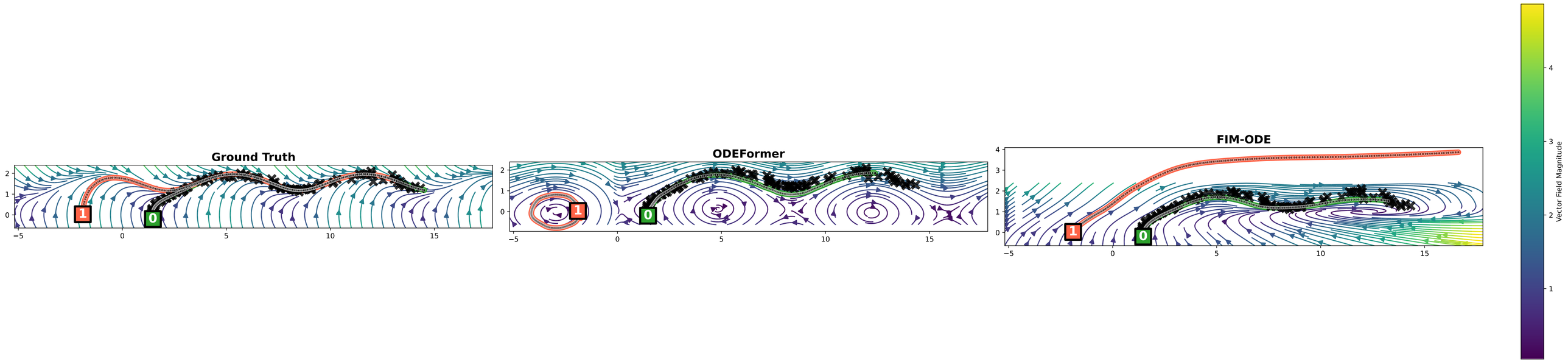
ODE 44: Driven pendulum with quadratic damping (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0



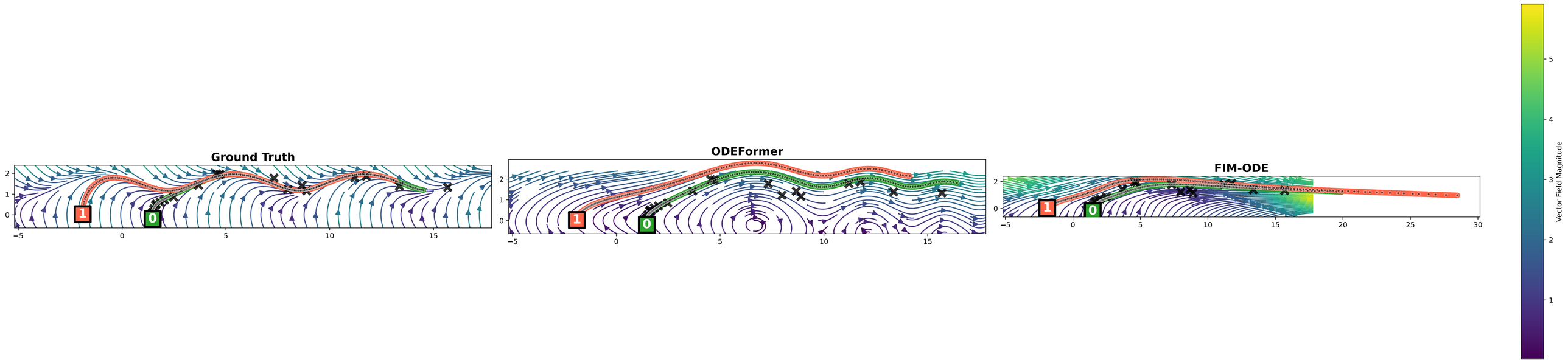
ODE 44: Driven pendulum with quadratic damping (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0

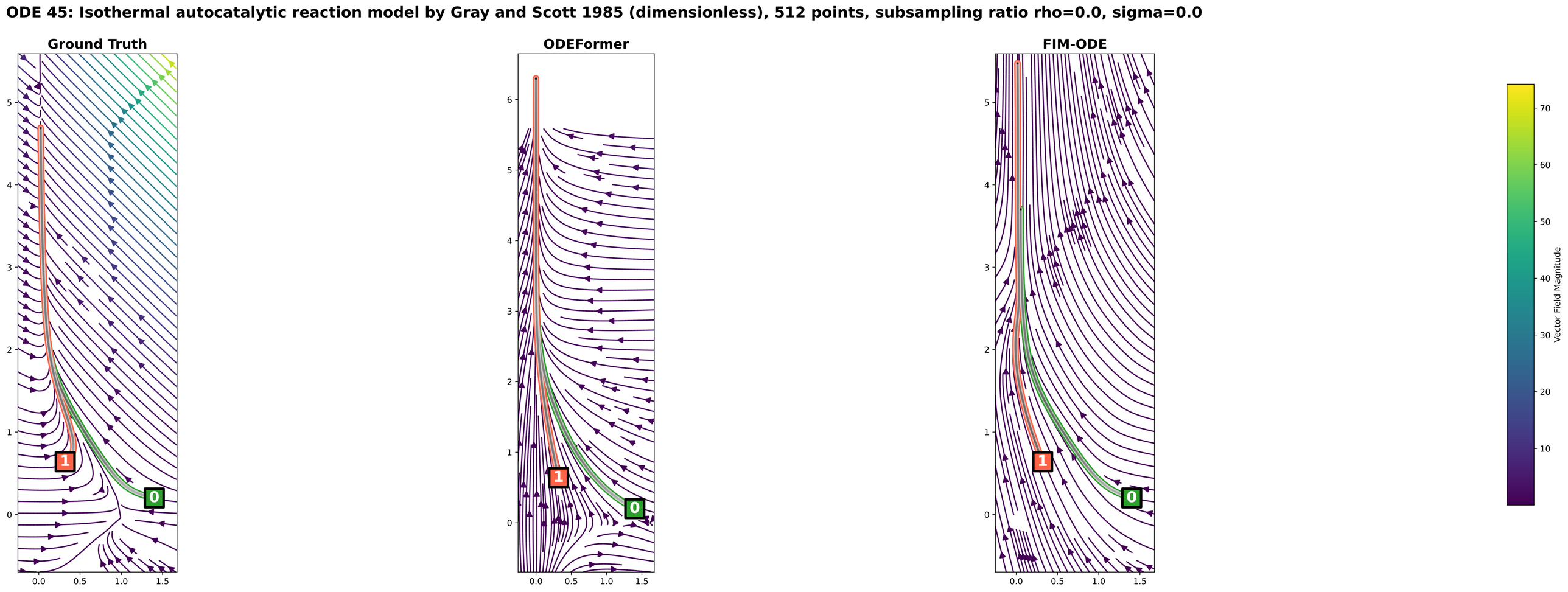


ODE 44: Driven pendulum with quadratic damping (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03

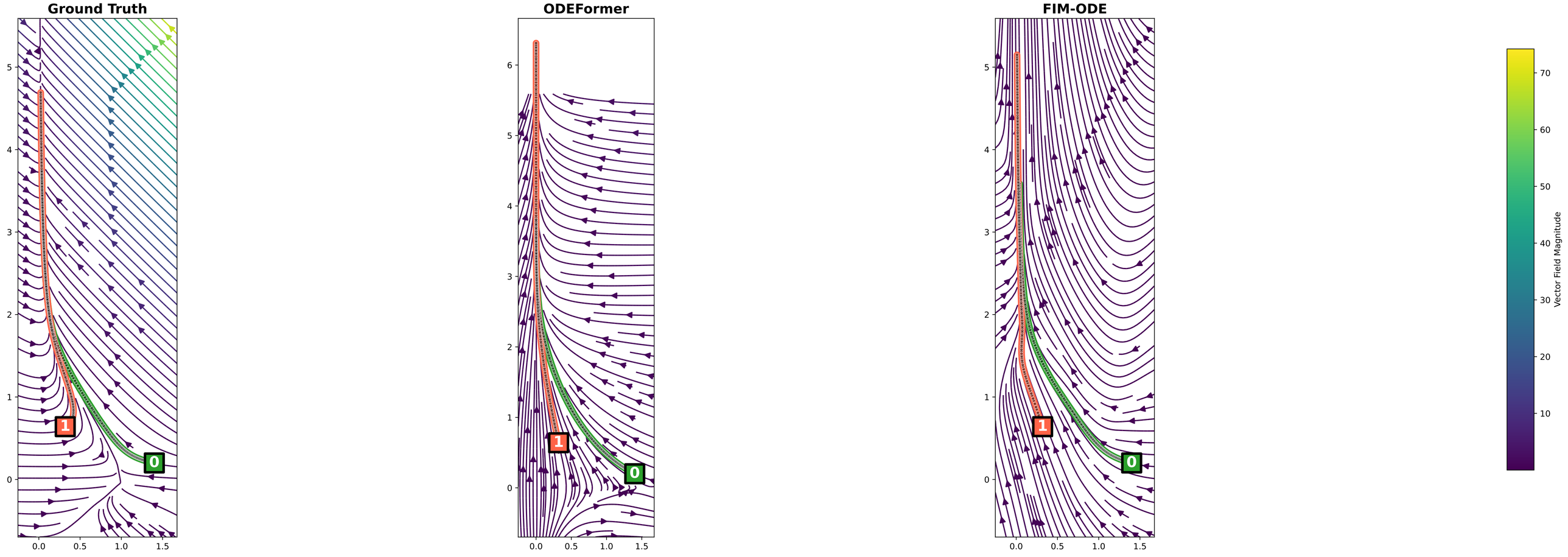


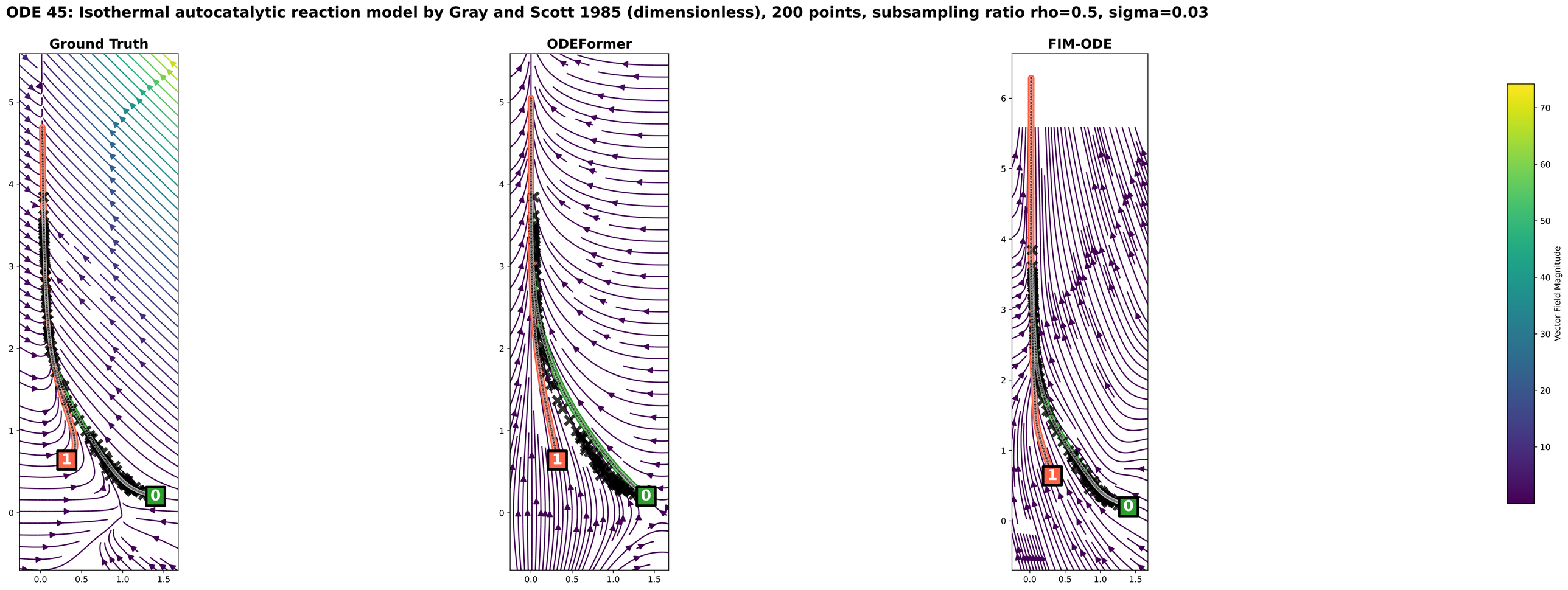
ODE 44: Driven pendulum with quadratic damping (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05



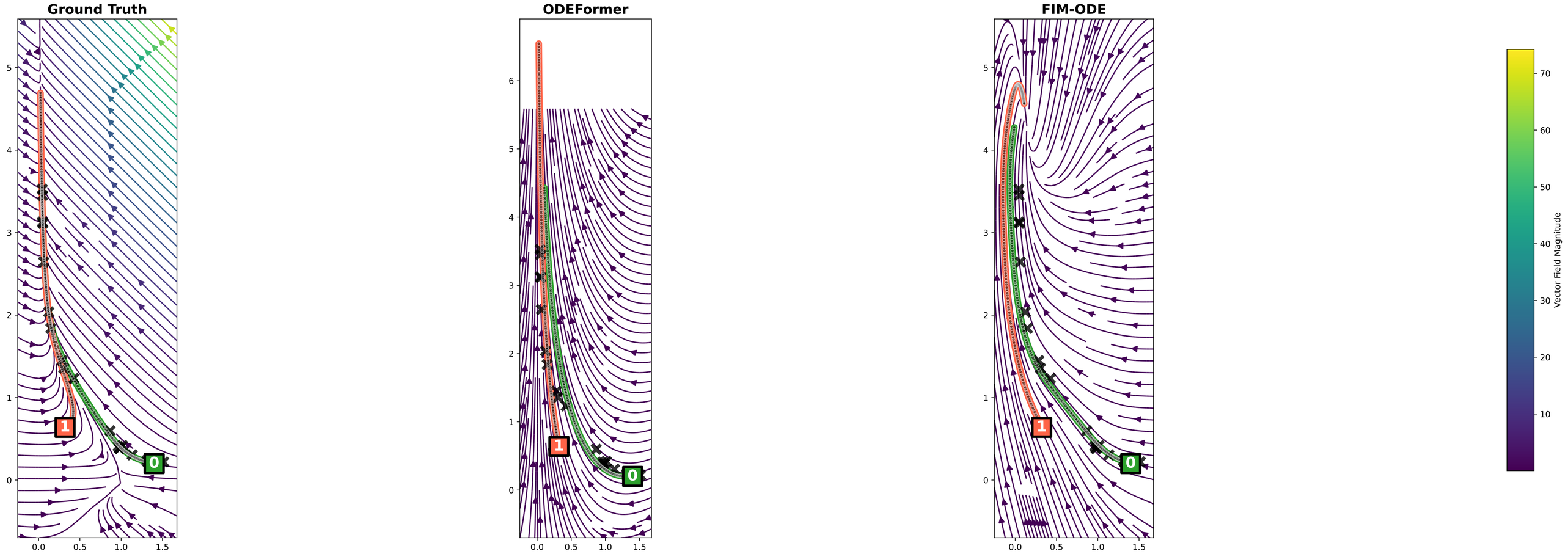

ODE 45: Isothermal autocatalytic reaction model by Gray and Scott 1985 (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

ODE 45: Isothermal autocatalytic reaction model by Gray and Scott 1985 (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0

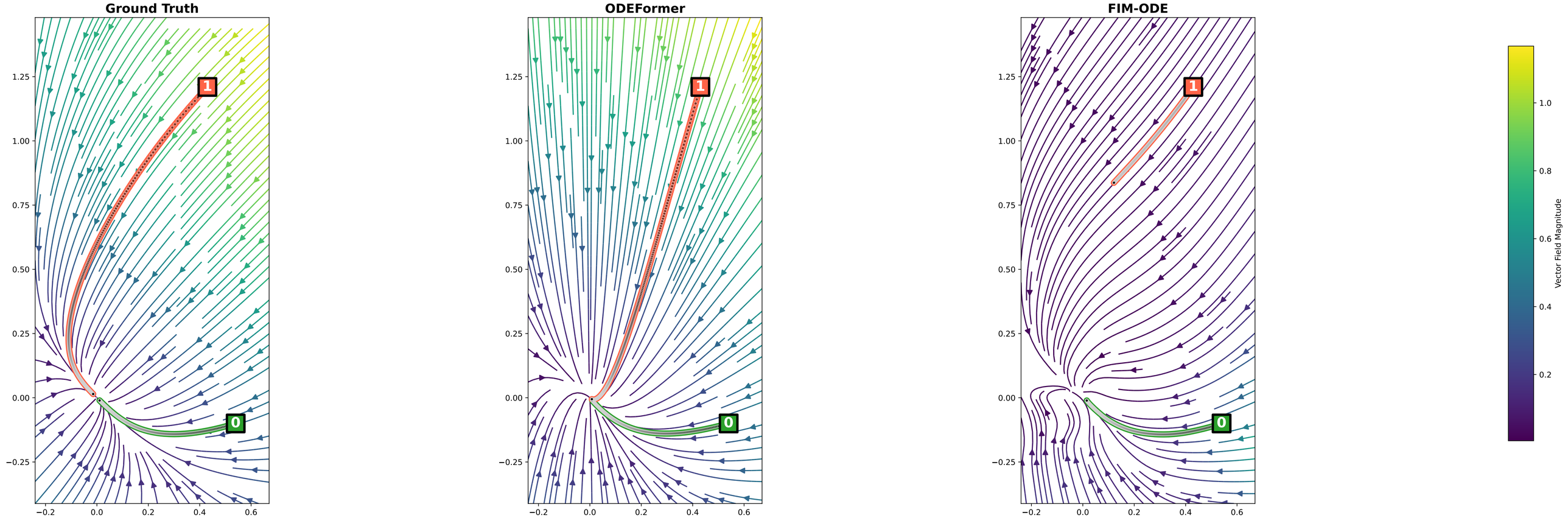



ODE 45: Isothermal autocatalytic reaction model by Gray and Scott 1985 (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

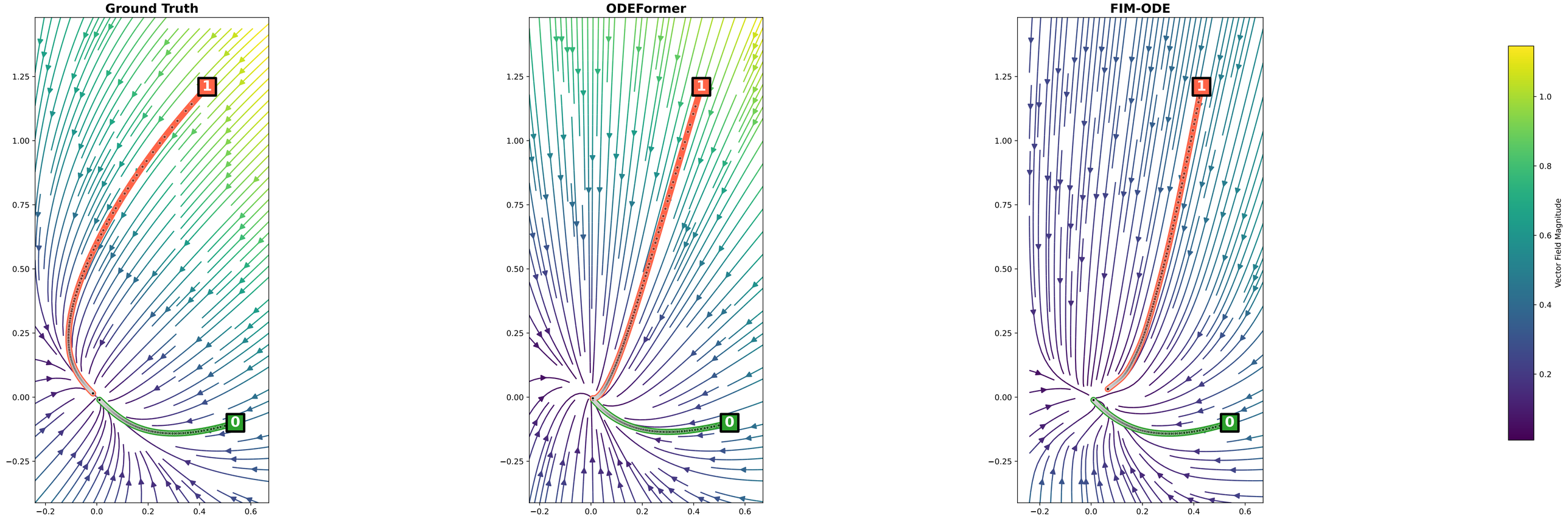
ODE 45: Isothermal autocatalytic reaction model by Gray and Scott 1985 (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05



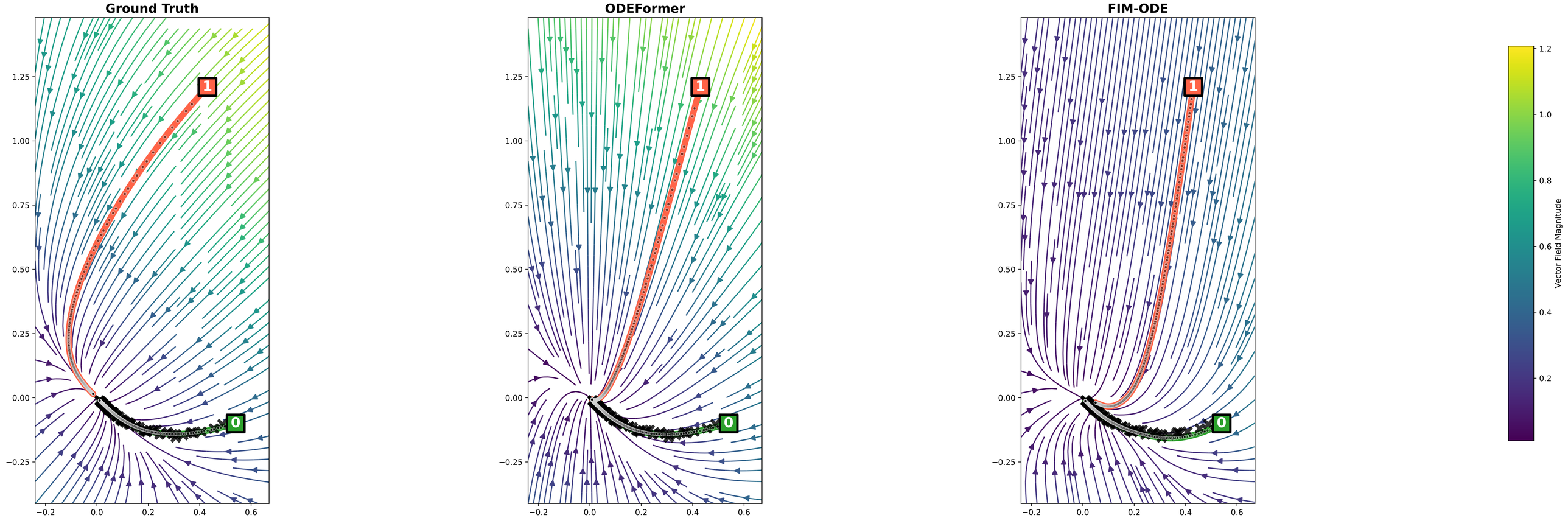
ODE 46: Interacting bar magnets, 512 points, subsampling ratio rho=0.0, sigma=0.0



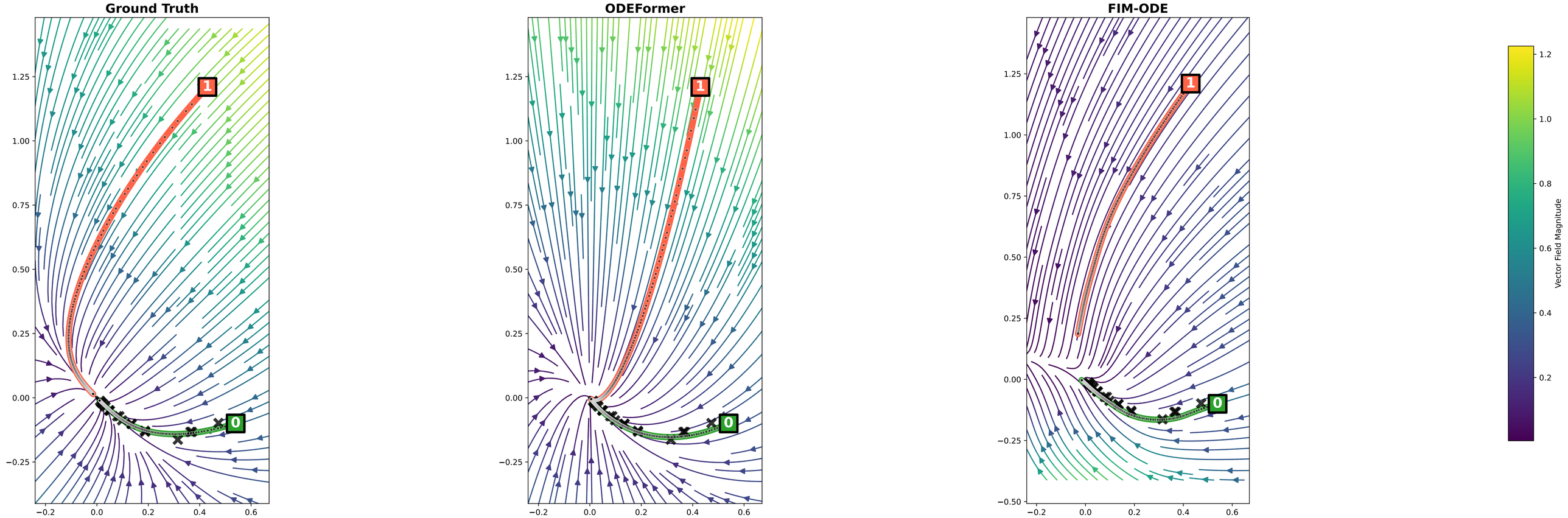
ODE 46: Interacting bar magnets, 200 points, subsampling ratio rho=0.0, sigma=0.0

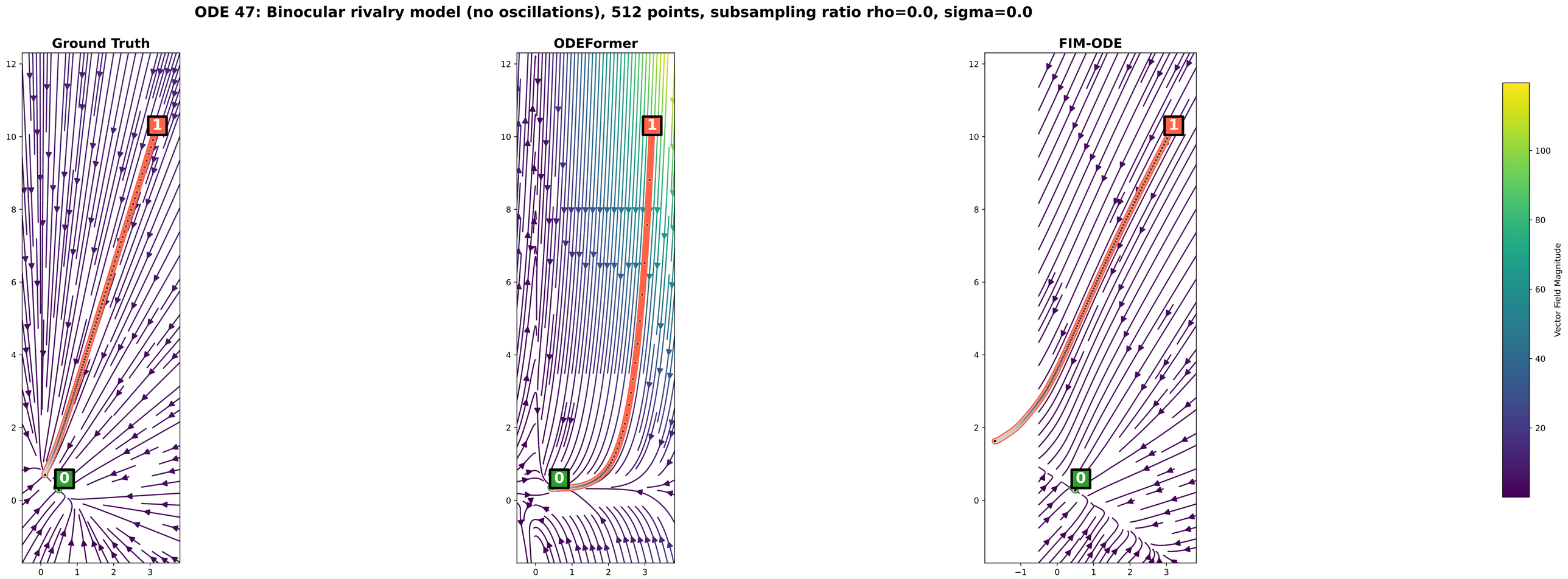


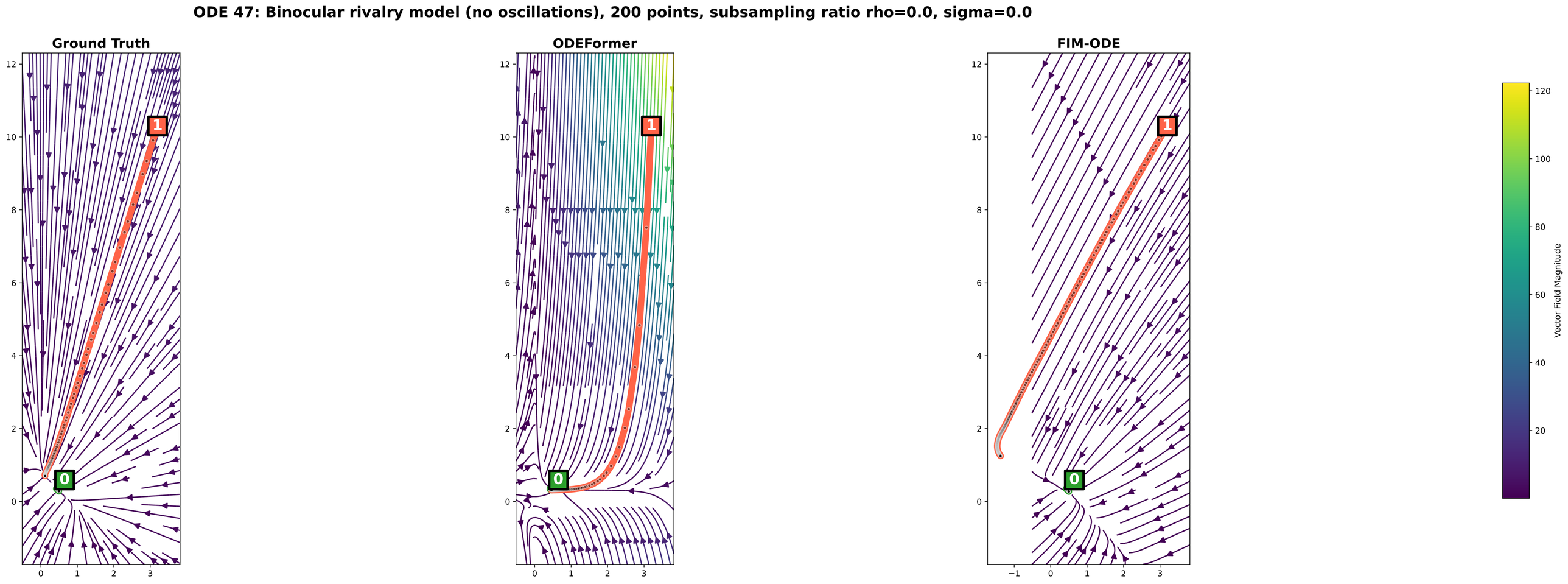
ODE 46: Interacting bar magnets, 200 points, subsampling ratio rho=0.5, sigma=0.03



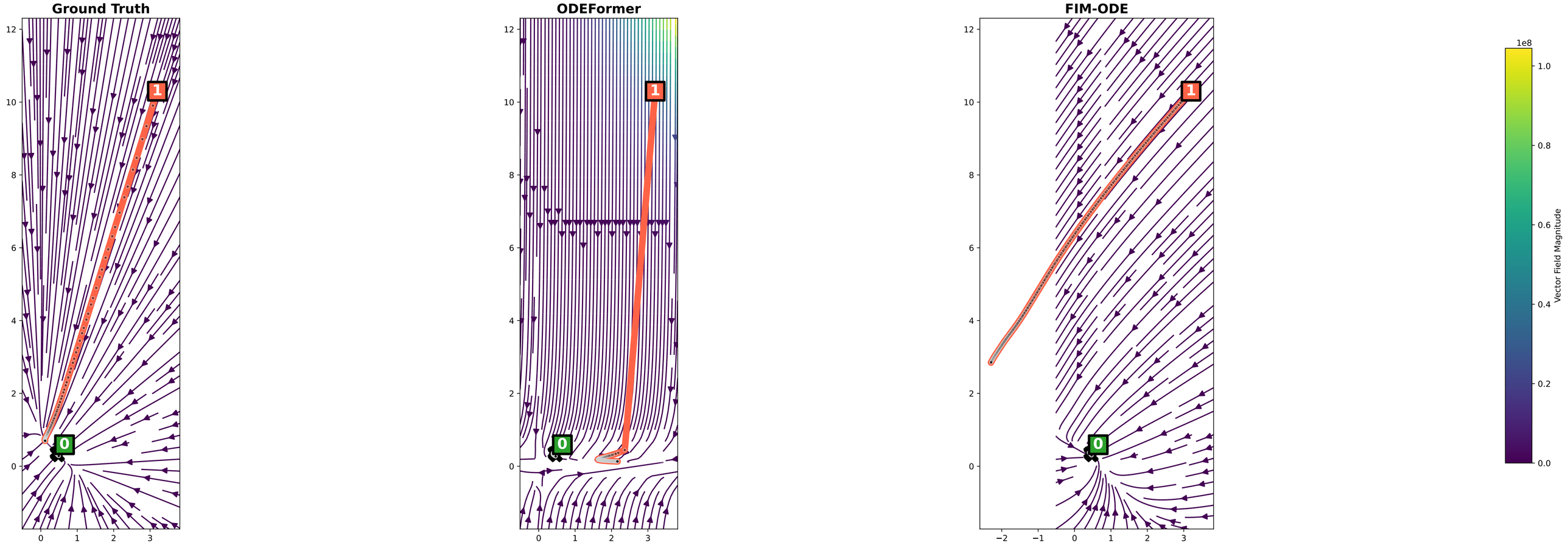
ODE 46: Interacting bar magnets, 200 points, subsampling ratio rho=0.9, sigma=0.05

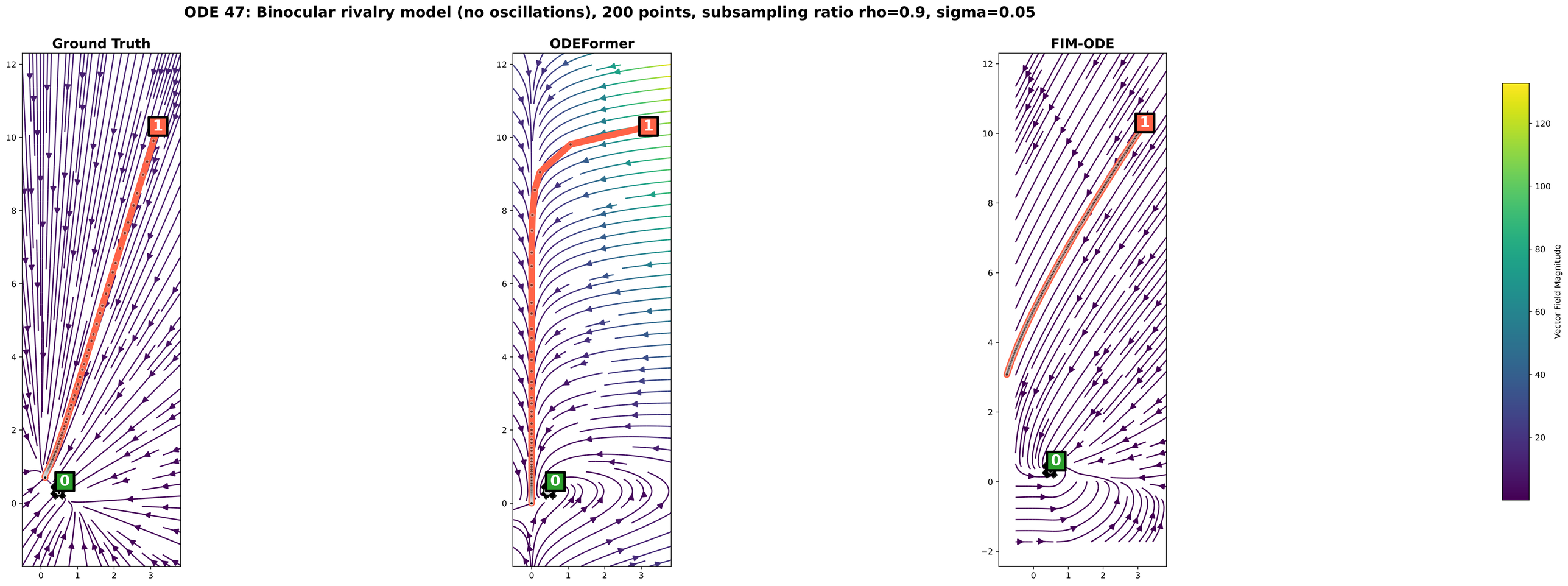


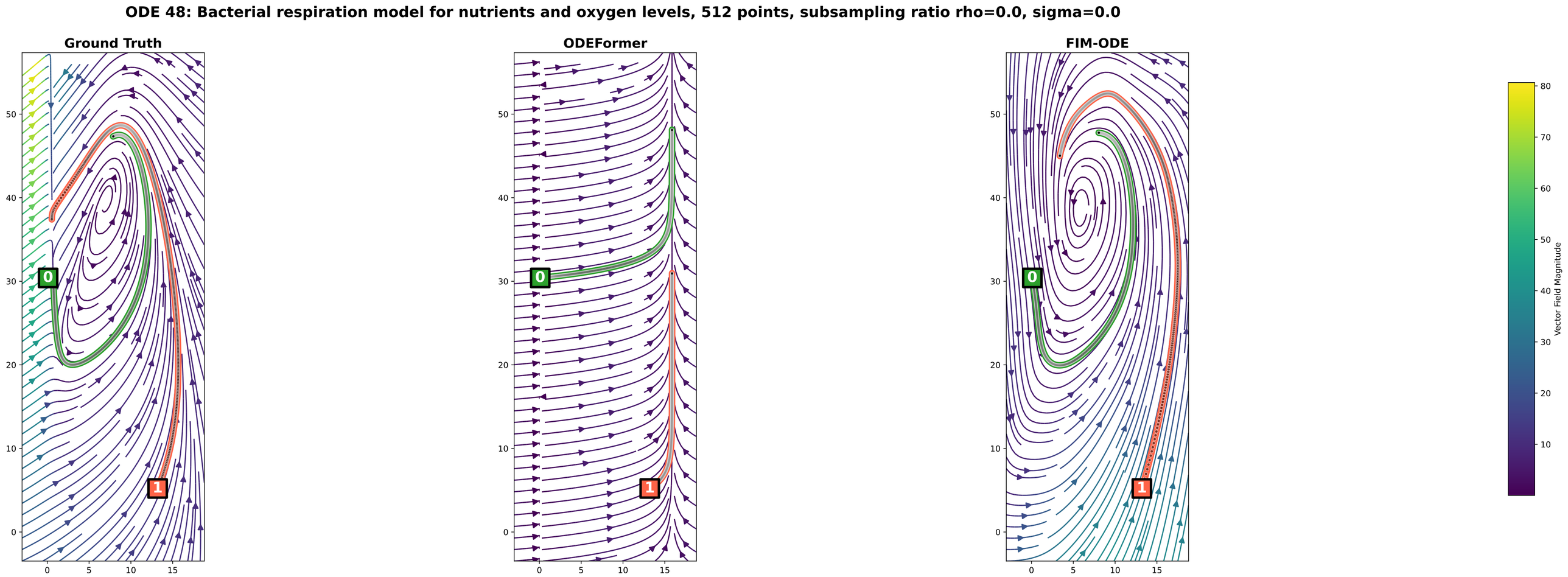

ODE 47: Binocular rivalry model (no oscillations), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 47: Binocular rivalry model (no oscillations), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

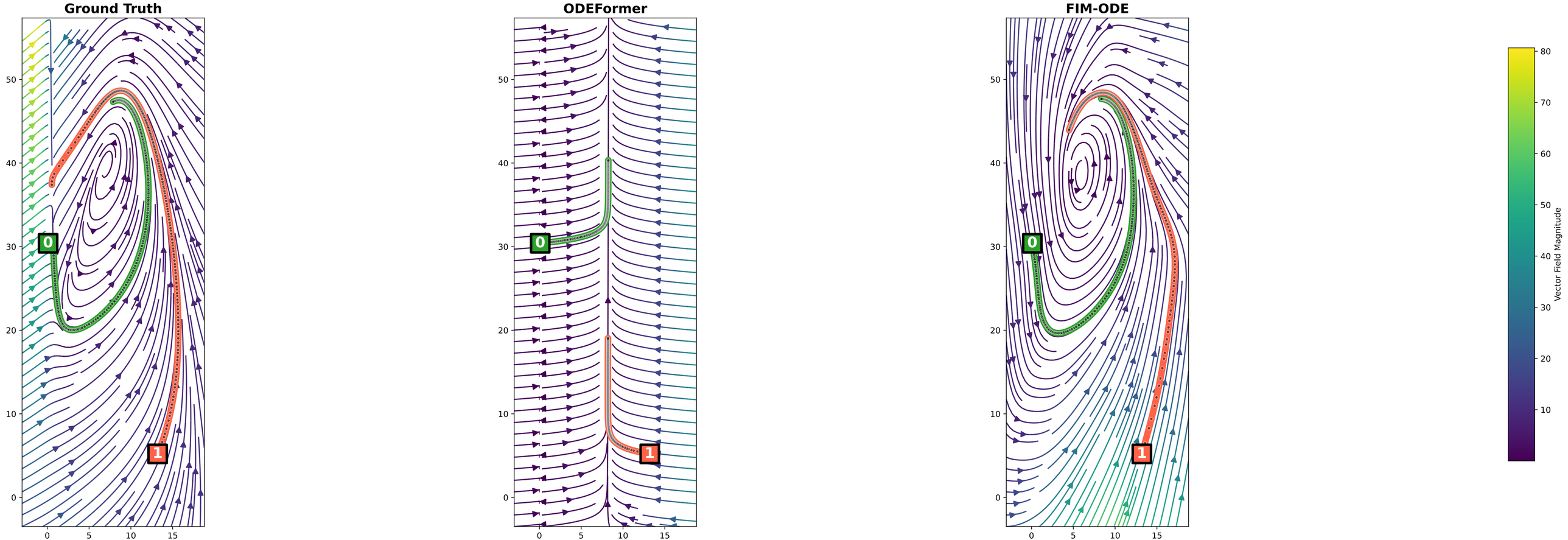
ODE 47: Binocular rivalry model (no oscillations), 200 points, subsampling ratio rho=0.5, sigma=0.03



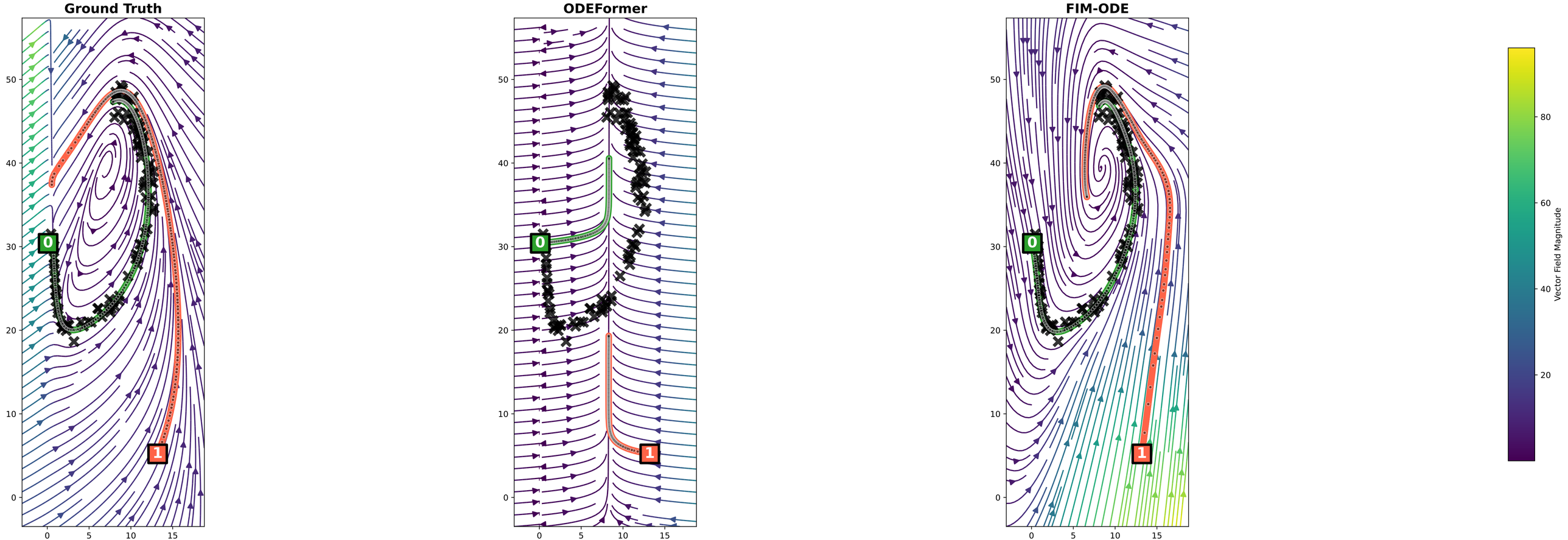

ODE 47: Binocular rivalry model (no oscillations), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude


ODE 48: Bacterial respiration model for nutrients and oxygen levels, 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
0
1
Vector Field Magnitude

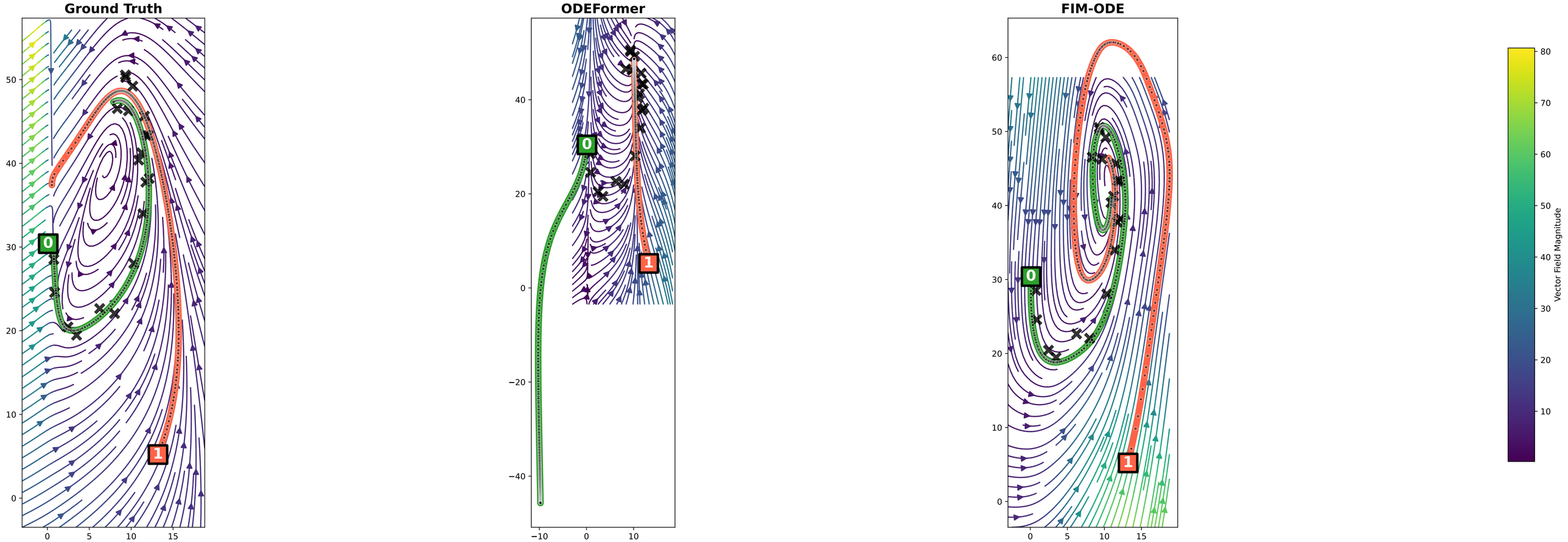
ODE 48: Bacterial respiration model for nutrients and oxygen levels, 200 points, subsampling ratio rho=0.0, sigma=0.0

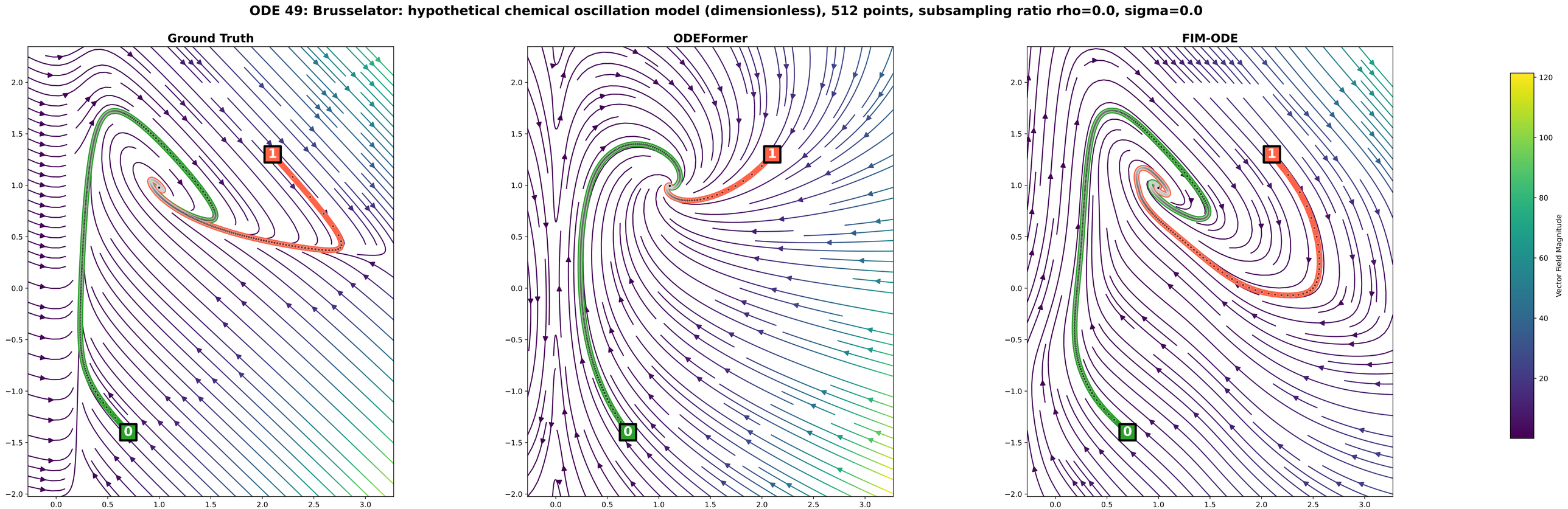


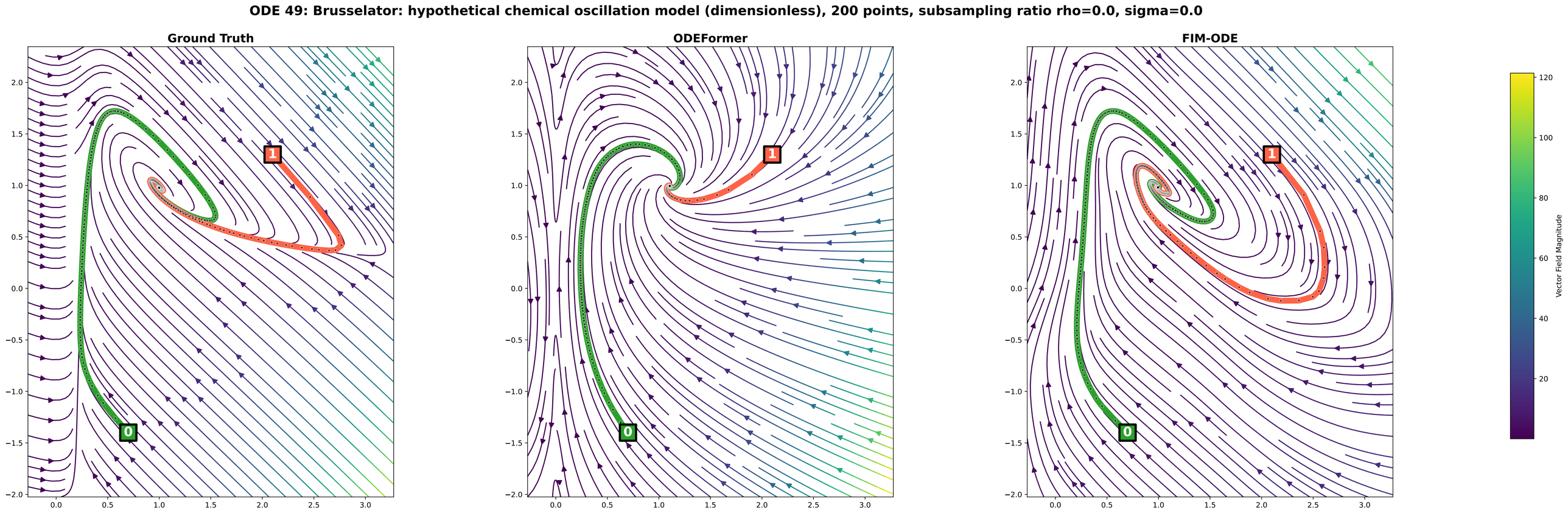
ODE 48: Bacterial respiration model for nutrients and oxygen levels, 200 points, subsampling ratio rho=0.5, sigma=0.03

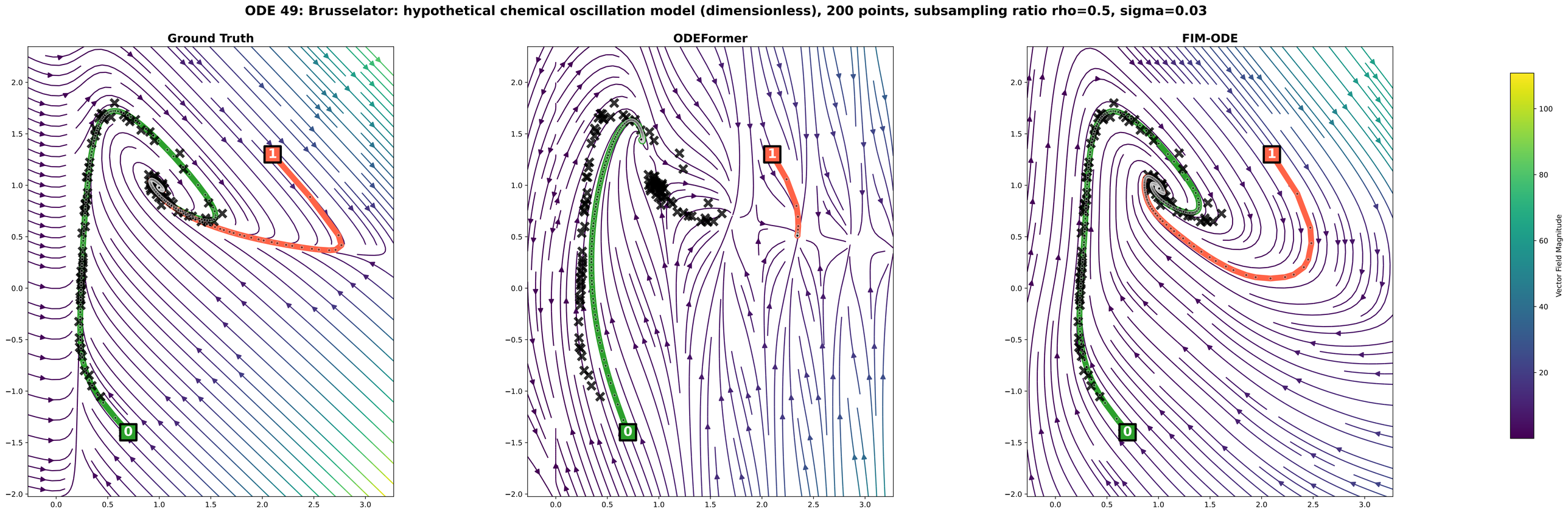


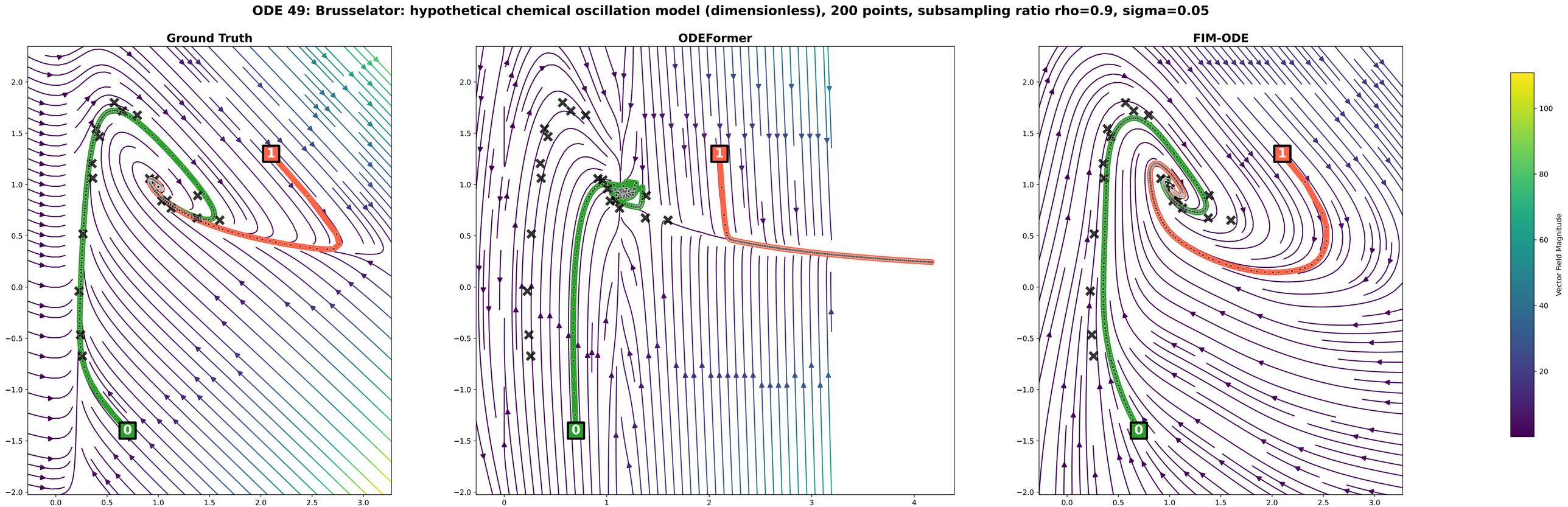
ODE 48: Bacterial respiration model for nutrients and oxygen levels, 200 points, subsampling ratio rho=0.9, sigma=0.05

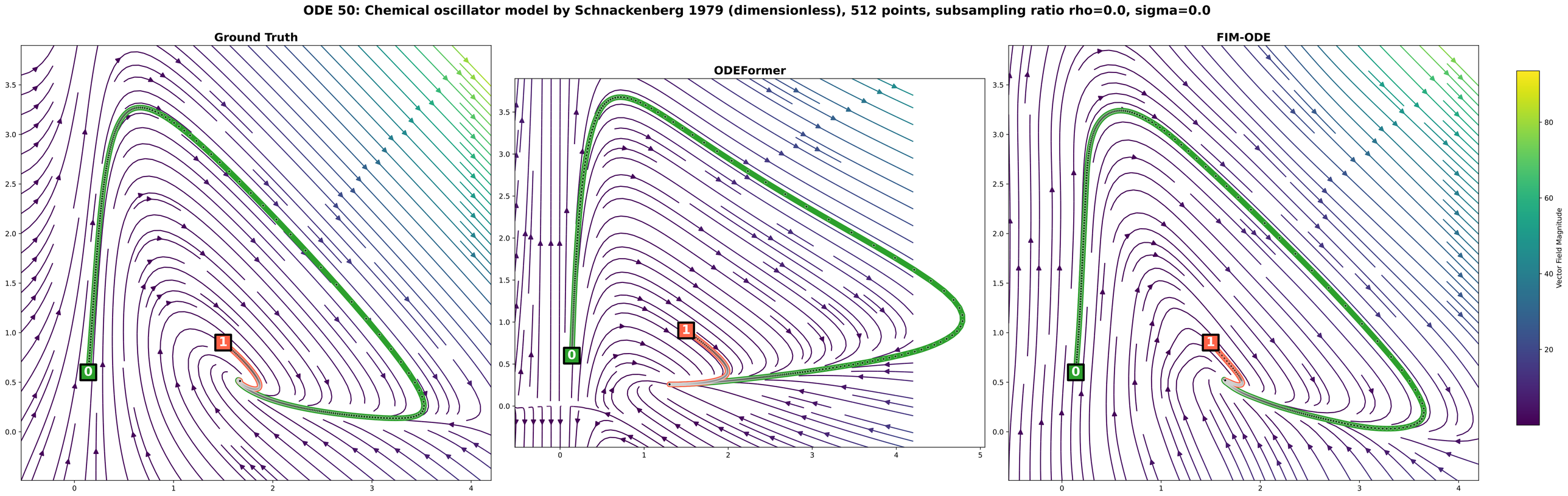



ODE 49: Brusselator: hypothetical chemical oscillation model (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

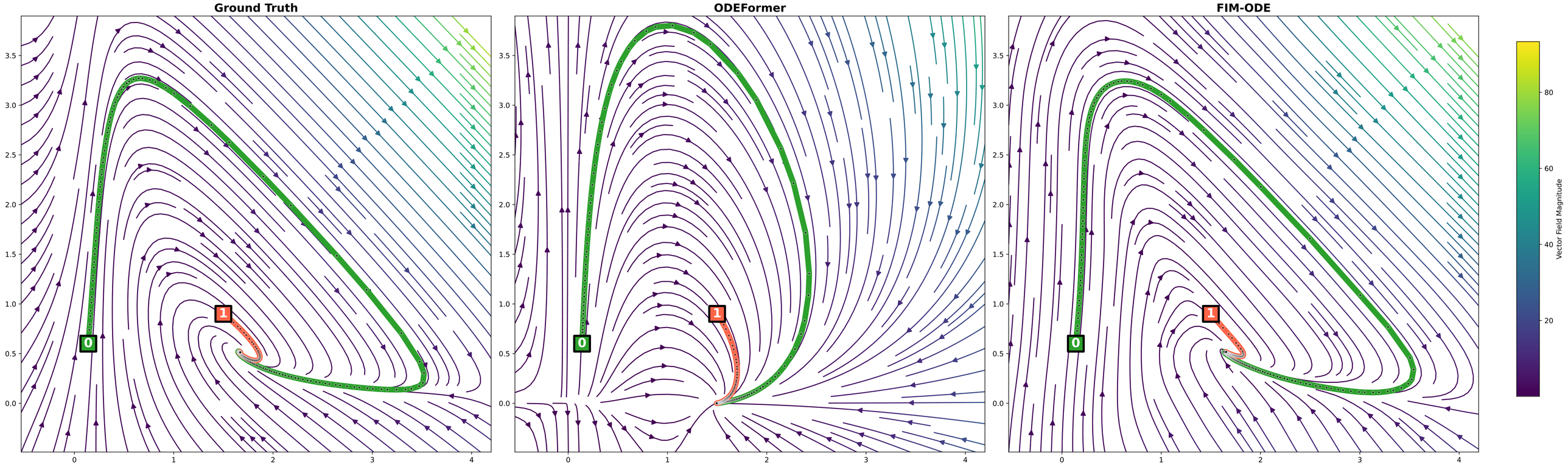

ODE 49: Brusselator: hypothetical chemical oscillation model (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
1
0
Vector Field Magnitude

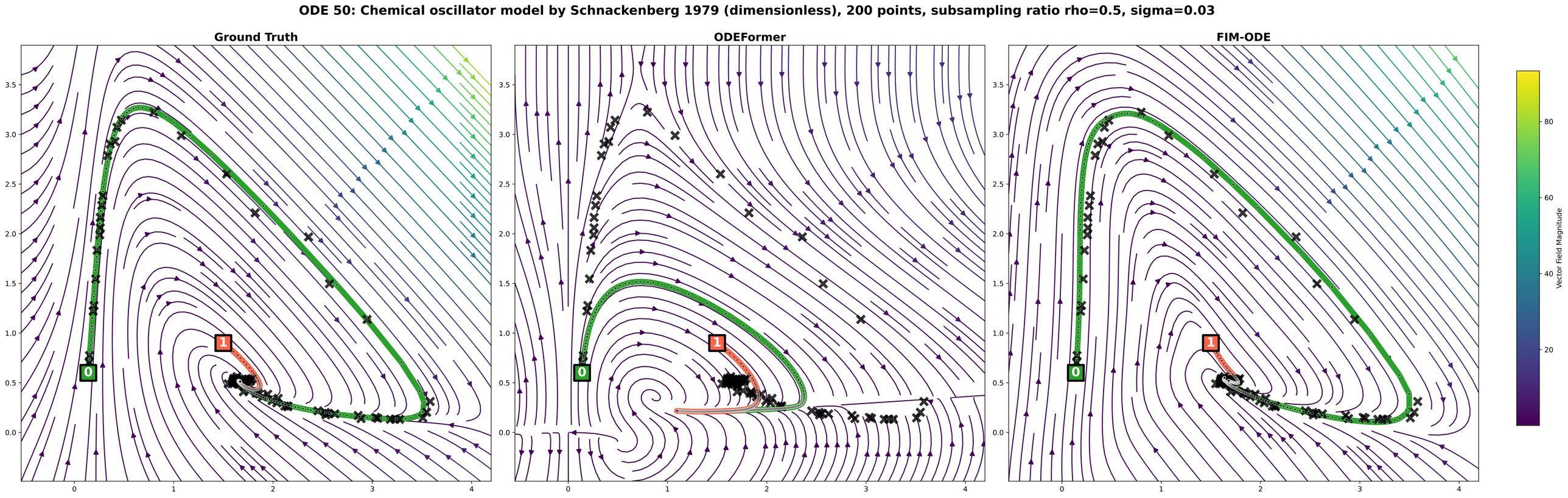

ODE 49: Brusselator: hypothetical chemical oscillation model (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
1
0

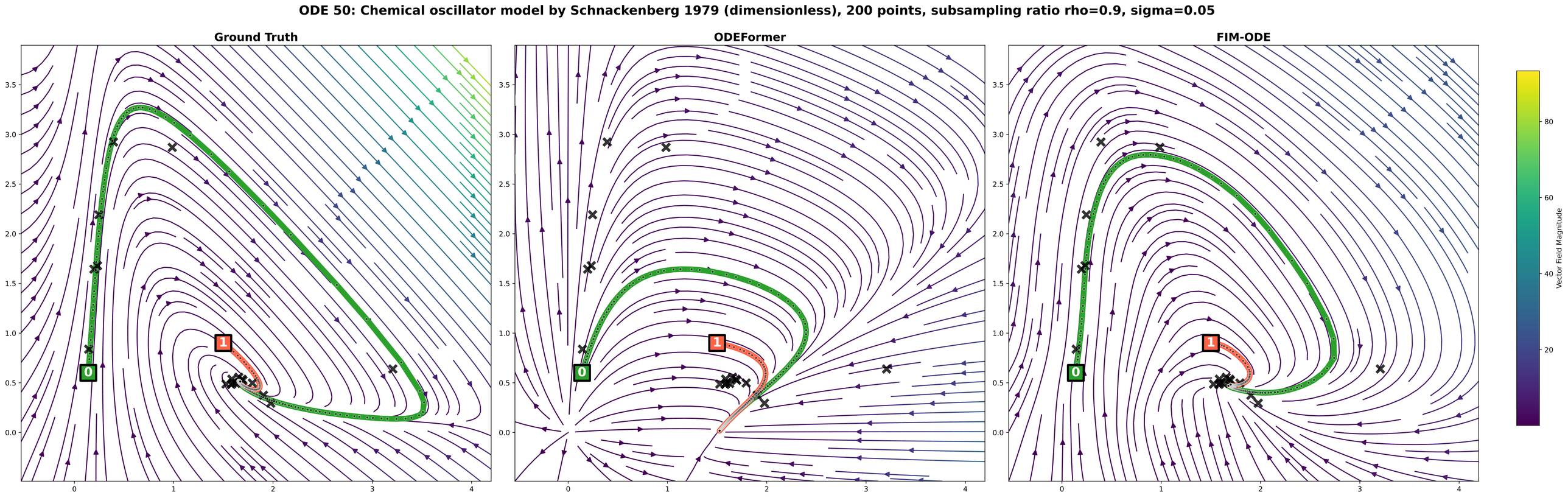

ODE 49: Brusselator: hypothetical chemical oscillation model (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
0
1


ODE 50: Chemical oscillator model by Schnackenberg 1979 (dimensionless), 512 points, subsampling ratio rho=0.0, sigma=0.0
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
0
1

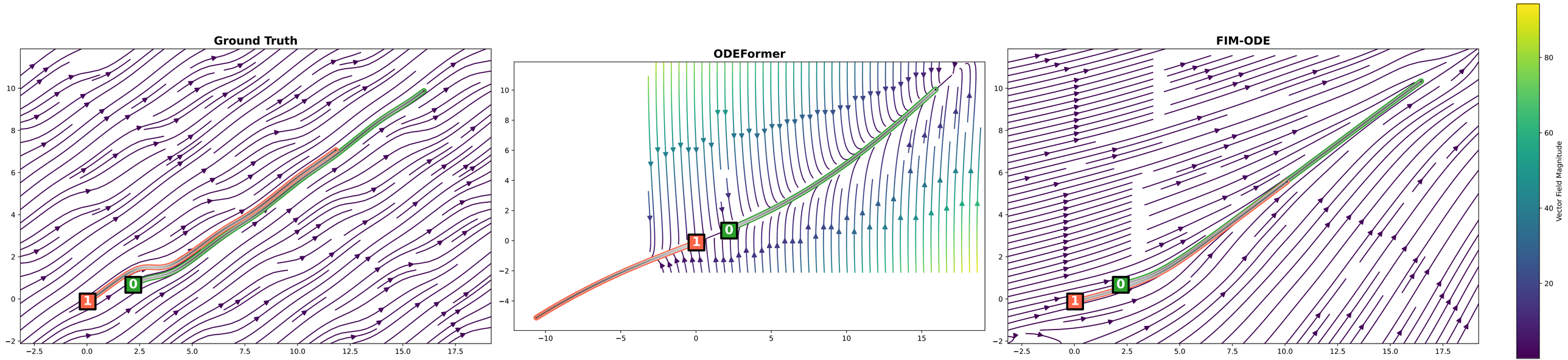
ODE 50: Chemical oscillator model by Schnackenberg 1979 (dimensionless), 200 points, subsampling ratio rho=0.0, sigma=0.0



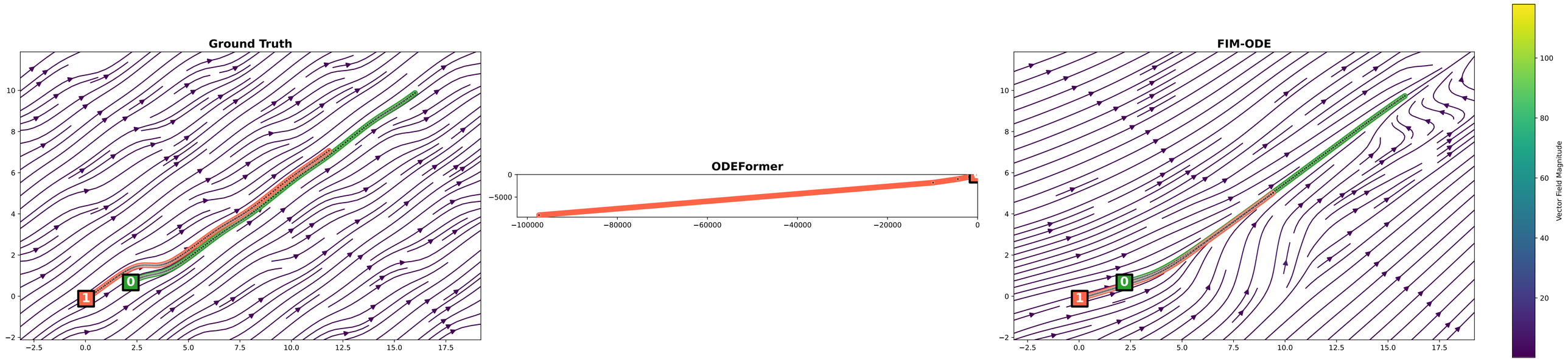

ODE 50: Chemical oscillator model by Schnackenberg 1979 (dimensionless), 200 points, subsampling ratio rho=0.5, sigma=0.03
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
0
1


ODE 50: Chemical oscillator model by Schnackenberg 1979 (dimensionless), 200 points, subsampling ratio rho=0.9, sigma=0.05
Ground Truth
ODEFormer
FIM-ODE
Vector Field Magnitude
0
1

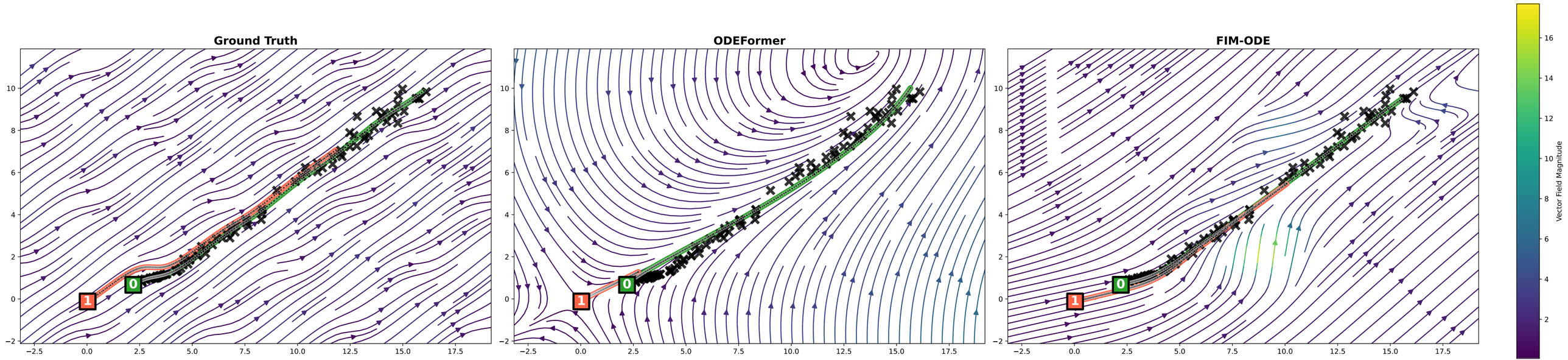
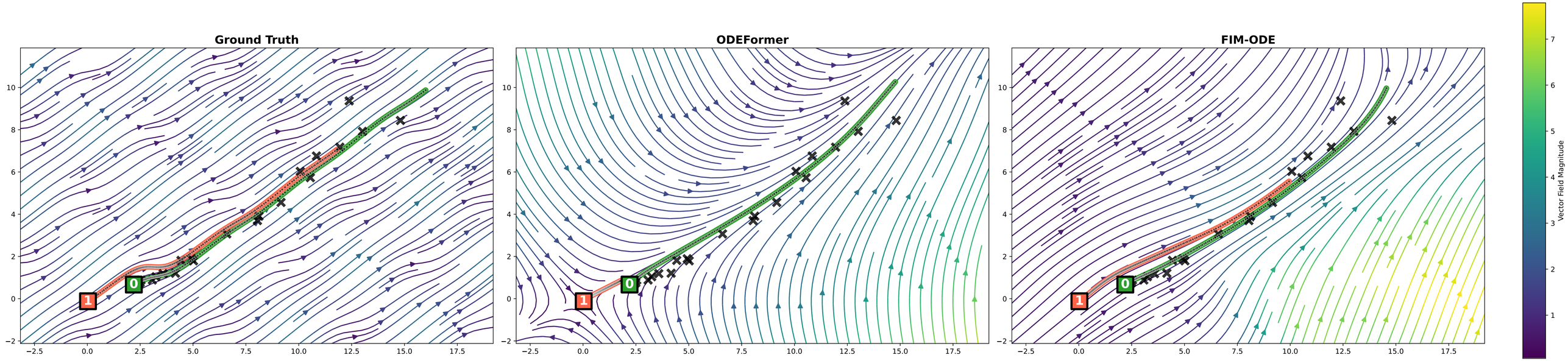
ODE 51: Oscillator death model by Ermentrout and Kopell 1990, 512 points, subsampling ratio rho=0.0, sigma=0.0



ODE 51: Oscillator death model by Ermentrout and Kopell 1990, 200 points, subsampling ratio rho=0.0, sigma=0.0



ODE 51: Oscillator death model by Ermentrout and Kopell 1990, 200 points, subsampling ratio rho=0.5, sigma=0.03



ODE 51: Oscillator death model by Ermentrout and Kopell 1990, 200 points, subsampling ratio rho=0.9, sigma=0.05