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In [ ]: import torch
import numpy as np
from torch.autograd import Variable
import time

#Call model of layers and its forward step
from Forward_with_Layer_Setting import Net

device = torch.device("cuda:0" if torch.cuda.is_available() else "cpu")

#Call training functions of Loss functions
from NSpde_loss import lossNSpde
from BoundaryLoss import lossBdry
from InitialConditionLoss import lossIC

def create_network(IC_Only_Train):

    net = Net()
    net = net.to(device)

    #Set final times for running training
    time_slices = np.array([.05,.2, .4, .6, .8, 1]) #

    #Load Training Points
    x_domain, y_domain, t_zero, x_Bdry, y_Bdry, x_l_Bdry, x_u_Bdry, y_l_Bdry, y_u_Bdry = twoDimTrainPts(ne

    start = time.time()

    #Start Training only on IC
    if IC_Only_Train == True:
        print('Training Only on the Initial Condition')
        Create_IC_Parameters(x_domain, y_domain, t_zero, 20000, 10**-3, 'IC_Only.pt', record_loss = 100, p
        IC_Done = time.time()
        print('IC Time:\t', IC_Done-start)

    return 0

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time_vec = [0, 0, 0, 0, 0]

#attempt to load IC if it exists
try:
    net.load_state_dict(torch.load("IC_Only.pt"))
except:
    pass

global epsilon #used to track loss
epsilon = []

print('Training PDE')

for i in range(5):
    #Set loop to optimize in progressively smaller learning rates
    if i == 0:
        #First loop uses progressively increasing time intervals
        print('Executing Pass 1')
        iterations = 25000
        learning_rate = 10**-3
    elif i == 1:
        print('Executing Pass 2')
        #time_slices = time_slices[-1]
        iterations = 25000
        learning_rate = 10**-4
    elif i == 2:
        print('Executing Pass 3')
        iterations = 25000
        learning_rate = 10**-5
    elif i == 3:
        print('Executing Pass 4')
        iterations = 25000
        learning_rate = 10**-6
    elif i == 4:
        print('Executing Pass 4')
        iterations = 25000
        learning_rate = 10**-7

    training_loop(net, x_domain, y_domain, t_zero, x_Bdry, y_Bdry, x_l_Bdry, x_u_Bdry,
                  y_l_Bdry, y_u_Bdry, time_slices, iterations, learning_rate, IC_coefficient = 1, reco
    torch.save(net.state_dict(), f"NNlayers_Bubble_{i}.pt")

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        np.savetxt('epsilon.txt', epsilon)
        time_vec[i] = time.time()

    np.savetxt('epsilon.txt', epsilon)

    end = time.time()

    print("Total Time:\t", end-start, '\nPass 1 Time:\t', time_vec[0]-start, '\nPass 2 Time:\t', time_vec[1]-start)

def twoDimTrainPts(net, Domain_collocation, Bdry_collocation):
    #Set of all the recorded xy variables as base data for chasing during training

    # Domain boundary in the range [0, 1]x[0, 2] and time in [0, 1].
    x_l = net.x1_l
    x_u = net.x1_u
    y_l = net.x2_l
    y_u = net.x2_u

    #time starts at lower bound 0, ends at upper bound updated in slices
    t_l = 0

    #Pick IC/NSpde Condition Training Random Points in Numpy
    x_domain = np.random.uniform(low=x_l, high=x_u, size=(Domain_collocation, 1))
    y_domain = np.random.uniform(low=y_l, high=y_u, size=(Domain_collocation, 1))

    #Move to pytorch tensors
    x_domain = Variable(torch.from_numpy(x_domain).float(), requires_grad=True).to(device)
    y_domain = Variable(torch.from_numpy(y_domain).float(), requires_grad=True).to(device)

    #Pick IC Training t starting points to make tensor
    t_zero = Variable(torch.zeros_like(x_domain), requires_grad=True).to(device)

    #Pick BC Training Random Points in Numpy
    x_Bdry = np.random.uniform(low=x_l, high=x_u, size=(Bdry_collocation, 1))
    y_Bdry = np.random.uniform(low=y_l, high=y_u, size=(Bdry_collocation, 1))

    #Move to pytorch tensors
    x_Bdry = Variable(torch.from_numpy(x_Bdry).float(), requires_grad=True).to(device)
    y_Bdry = Variable(torch.from_numpy(y_Bdry).float(), requires_grad=True).to(device)

    ##Pick pts to make tensor for No-Slip Boundary Condition

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x_l_Bdry = Variable(x_l * torch.ones_like(x_Bdry), requires_grad=True).to(device)
x_u_Bdry = Variable(x_u * torch.ones_like(x_Bdry), requires_grad=True).to(device)
y_l_Bdry = Variable(y_l * torch.ones_like(x_Bdry), requires_grad=True).to(device)
y_u_Bdry = Variable(y_u * torch.ones_like(x_Bdry), requires_grad=True).to(device)

return x_domain, y_domain, t_zero, x_Bdry, y_Bdry, x_l_Bdry, x_u_Bdry, y_l_Bdry, y_u_Bdry

def tsliceTrainPts(net, Domain_collocation, Bdry_collocation, final_time):
    #Set of all the recorded t variable as base data for chasing during training

    #time starts at lower bound 0, ends at upper bound updated in slices
    t_l = net.t_l

    #Pick IC/NSpde Condition Training Random Points in Numpy
    t_domain = np.random.uniform(low=t_l, high=final_time, size=(Domain_collocation, 1))

    #Move to pytorch tensors
    t_domain = Variable(torch.from_numpy(t_domain).float(), requires_grad=True).to(device)

    #Pick IC Training t starting points to make tensor
    t_zero = Variable(torch.zeros_like(t_domain), requires_grad=True).to(device)

    #Pick BC Training Random Points in Numpy
    t_Bdry = np.random.uniform(low=t_l, high=final_time, size=(Bdry_collocation, 1))

    #Move to pytorch tensors
    t_Bdry = Variable(torch.from_numpy(t_Bdry).float(), requires_grad=True).to(device)

    return t_domain, t_Bdry

def get_lr(optimizer):
    for param_group in optimizer.param_groups:
        return param_group['lr']

def Create_IC_Parameters(x_domain, y_domain, t_zero, iterations, learning_rate, filename, record_loss, print_loss):
    ICnet = Net().to(device)

    IC_Only_training(ICnet, x_domain, y_domain, t_zero, iterations, learning_rate, record_loss, print_loss)

    torch.save(ICnet.state_dict(), filename)

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def IC_Only_training(net, x_domain, y_domain, t_zero, iterations, learning_rate, record_loss, print_loss):
    device = torch.device("cuda:0" if torch.cuda.is_available() else "cpu")

    #learning rate update
    for g in net.optimizer.param_groups:
        g['lr'] = learning_rate

    #training loop
    epsilon_IC = [] #placeholder to track decreasing loss
    for epoch in range(1, iterations+1):

        # Resetting gradients to zero
        net.optimizer.zero_grad()

        #Loss based on Initial Condition
        loss = lossIC(net, x_domain, y_domain, t_zero)

        loss.backward()

        # Gradient Norm Clipping
        torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=2, error_if_nonfinite=True)

        #Gradient Value Clipping
        nn.utils.clip_grad_value_(net.parameters(), clip_value=1.0)

        net.optimizer.step()

        #Print Loss every 1000 Epochs
        with torch.autograd.no_grad():

            if epoch%record_loss == 0:
                epsilon_IC = np.append(epsilon_IC, loss.cpu().detach().numpy())
            if epoch%print_loss == 0:
                print("Iteration:", epoch, "Initial Condition Loss:", loss.data)

    np.savetxt('epsilon_IC.txt', epsilon_IC)

def training_loop(net, x_domain, y_domain, t_zero, x_Bdry, y_Bdry, x_l_Bdry, x_u_Bdry, y_l_Bdry, y_u_Bdry,
    global epsilon

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device = torch.device("cuda:0" if torch.cuda.is_available() else "cpu")

#learning rate update
for g in net.optimizer.param_groups:
    g['lr'] = learning_rate

for final_time in time_slices:

    with torch.autograd.no_grad():
        print("Current Final Time:", final_time, "Current Learning Rate: ", get_lr(net.optimizer))

    indicator = False
    reset_regularization = 1000

    #Iterate over these points

    t_domain, t_Bdry = tsliceTrainPts(net, Domain_collocation = int(10000), Bdry_collocation = int(1000))
    for epoch in range(1, iterations+1):
        # Loss calculation based on partial differential equation (PDE)

        if epoch%reset_regularization == 0:
            indicator = False

        if epoch%reset_regularization != 0: #To detect error on forward/Backward, add hashtag on this line
            #with torch.autograd.detect_anomaly(): #use this line alternatively by deleting hashtag.

            ###Training steps
            # Resetting gradients to zero
            net.optimizer.zero_grad()

            #Loss based on Initial Condition
            mse_IC = lossIC(net, x_domain, y_domain, t_zero)
            # Gradient Norm Clipping
            torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=1, error_if_nonfinite=1)

            #Loss based on Boundary Condition (Containing No-Slip and Free-slip)
            mse_BC_u, mse_BC_phi, mse_BC_mu = lossBdry(net, x_Bdry, y_Bdry, t_Bdry, x_l_Bdry, x_u_Bdry)
            mse_BC = mse_BC_u+ mse_BC_phi+ mse_BC_mu
            # Gradient Norm Clipping
            torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=1, error_if_nonfinite=1)

            #Loss based on PDE

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mse_NS, mse_NSdiv = lossNSpde(net, x_domain, y_domain, t_domain)
# Gradient Norm Clipping
torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=1, error_if_n

if indicator == False:
    indicator = True
    IC_regular = mse_IC.detach()
    BC_regular = mse_BC.detach()
    pde_regular = mse_NS.detach()
    pdediv_regular = mse_NSdiv.detach()

raw_loss = IC_coefficient * mse_IC + mse_BC + mse_NS + mse_NSdiv

mse_IC = mse_IC #/IC_regular
mse_BC = mse_BC #/BC_regular
mse_NS = mse_NS #/pde_regular
mse_NSdiv = mse_NSdiv #/pddiv_regular

#Combine all Loss functions
loss = 5*mse_BC + 10**3 *mse_IC + 10 * mse_NS + 10 * mse_NSdiv #IC_coefficient *
# Gradient Norm Clipping
torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=1, error_if_n

loss.backward()
# Gradient Norm Clipping
torch.nn.utils.clip_grad_norm_(net.parameters(), max_norm= 5*10**2, norm_type=1, error_if_nonf

#Gradient Value Clipping
#nn.utils.clip_grad_value_(net.parameters(), clip_value=1.0)
net.optimizer.step()

#Print Loss every 1000 Epochs
with torch.autograd.no_grad():
    if epoch%record_loss == 0:
        epsilon = np.append(epsilon, raw_loss.cpu().detach().numpy())
    if epoch%print_loss == 0:
        print("Iteration:", epoch, "\tTotal Loss:", loss.data)
        print("IC Loss: ", mse_IC.data, "\tu BC Loss: ", mse_BC_u.data, "\tphi BC Loss: ", mse

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```
create_network(True)  
create_network(False)
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Training Only on the Initial Condition

Iteration: 1000 Initial Condition Loss: tensor(0.0578, device='cuda:0')
Iteration: 2000 Initial Condition Loss: tensor(0.0244, device='cuda:0')
Iteration: 3000 Initial Condition Loss: tensor(0.0162, device='cuda:0')
Iteration: 4000 Initial Condition Loss: tensor(0.0124, device='cuda:0')
Iteration: 5000 Initial Condition Loss: tensor(0.0114, device='cuda:0')
Iteration: 6000 Initial Condition Loss: tensor(0.0108, device='cuda:0')
Iteration: 7000 Initial Condition Loss: tensor(0.0103, device='cuda:0')
Iteration: 8000 Initial Condition Loss: tensor(0.0102, device='cuda:0')
Iteration: 9000 Initial Condition Loss: tensor(0.0102, device='cuda:0')
Iteration: 10000 Initial Condition Loss: tensor(0.0094, device='cuda:0')
Iteration: 11000 Initial Condition Loss: tensor(0.0093, device='cuda:0')
Iteration: 12000 Initial Condition Loss: tensor(0.0085, device='cuda:0')
Iteration: 13000 Initial Condition Loss: tensor(0.0078, device='cuda:0')
Iteration: 14000 Initial Condition Loss: tensor(0.0073, device='cuda:0')
Iteration: 15000 Initial Condition Loss: tensor(0.0071, device='cuda:0')
Iteration: 16000 Initial Condition Loss: tensor(0.0071, device='cuda:0')
Iteration: 17000 Initial Condition Loss: tensor(0.0070, device='cuda:0')
Iteration: 18000 Initial Condition Loss: tensor(0.0070, device='cuda:0')
Iteration: 19000 Initial Condition Loss: tensor(0.0070, device='cuda:0')
Iteration: 20000 Initial Condition Loss: tensor(0.0069, device='cuda:0')
IC Time: 236.59675693511963

Training PDE

Executing Pass 1

Current Final Time: 0.05 Current Learning Rate: 0.001

Iteration: 200 Total Loss: tensor(2798977.5000, device='cuda:0')
IC Loss: tensor(5.0086, device='cuda:0') u BC Loss: tensor(13.3935, device='cuda:0') phi BC Loss: tensor(68.2345, device='cuda:0') mu BC Loss: tensor(0.1007, device='cuda:0') NS PDE Loss: tensor(279356.0312, device='cuda:0') NS Div Free Loss: tensor(0.0020, device='cuda:0')
Iteration: 400 Total Loss: tensor(6068.8213, device='cuda:0')
IC Loss: tensor(3.7132, device='cuda:0') u BC Loss: tensor(10.6130, device='cuda:0') phi BC Loss: tensor(0.1026, device='cuda:0') mu BC Loss: tensor(0.6382, device='cuda:0') NS PDE Loss: tensor(229.8483, device='cuda:0') NS Div Free Loss: tensor(0.0336, device='cuda:0')
Iteration: 600 Total Loss: tensor(3548.6621, device='cuda:0')
IC Loss: tensor(2.3851, device='cuda:0') u BC Loss: tensor(6.7532, device='cuda:0') phi BC Loss: tensor(0.0821, device='cuda:0') mu BC Loss: tensor(0.4338, device='cuda:0') NS PDE Loss: tensor(112.6555, device='cuda:0') NS Div Free Loss: tensor(0.0624, device='cuda:0')
Iteration: 800 Total Loss: tensor(2619.2209, device='cuda:0')
IC Loss: tensor(1.8091, device='cuda:0') u BC Loss: tensor(4.7814, device='cuda:0') phi BC Loss: tensor(0.1532, device='cuda:0') mu BC Loss: tensor(0.3321, device='cuda:0') NS PDE Loss: tensor(78.3114, device='cuda:0') NS Div Free Loss: tensor(0.0658, device='cuda:0')
Iteration: 1000 Total Loss: tensor(1927.4155, device='cuda:0')

IC Loss: tensor(1.3337, device='cuda:0') u BC Loss: tensor(3.1672, device='cuda:0') phi BC Loss: tensor(0.3537, device='cuda:0') mu BC Loss: tensor(0.2596, device='cuda:0') NS PDE Loss: tensor(57.4205, device='cuda:0') NS Div Free Loss: tensor(0.0614, device='cuda:0')
 Iteration: 1200 Total Loss: tensor(1379.2732, device='cuda:0')
 IC Loss: tensor(0.9770, device='cuda:0') u BC Loss: tensor(1.9497, device='cuda:0') phi BC Loss: tensor(0.4978, device='cuda:0') mu BC Loss: tensor(0.2158, device='cuda:0') NS PDE Loss: tensor(38.8382, device='cuda:0') NS Div Free Loss: tensor(0.0541, device='cuda:0')
 Iteration: 1400 Total Loss: tensor(1061.6599, device='cuda:0')
 IC Loss: tensor(0.7746, device='cuda:0') u BC Loss: tensor(1.1511, device='cuda:0') phi BC Loss: tensor(0.3855, device='cuda:0') mu BC Loss: tensor(0.1913, device='cuda:0') NS PDE Loss: tensor(27.7946, device='cuda:0') NS Div Free Loss: tensor(0.0476, device='cuda:0')
 Iteration: 1600 Total Loss: tensor(797.7917, device='cuda:0')
 IC Loss: tensor(0.6156, device='cuda:0') u BC Loss: tensor(0.4856, device='cuda:0') phi BC Loss: tensor(0.2441, device='cuda:0') mu BC Loss: tensor(0.1644, device='cuda:0') NS PDE Loss: tensor(17.7366, device='cuda:0') NS Div Free Loss: tensor(0.0389, device='cuda:0')
 Iteration: 1800 Total Loss: tensor(669.2109, device='cuda:0')
 IC Loss: tensor(0.5590, device='cuda:0') u BC Loss: tensor(0.2279, device='cuda:0') phi BC Loss: tensor(0.1295, device='cuda:0') mu BC Loss: tensor(0.1418, device='cuda:0') NS PDE Loss: tensor(10.7372, device='cuda:0') NS Div Free Loss: tensor(0.0318, device='cuda:0')
 Iteration: 2000 Total Loss: tensor(614.5929, device='cuda:0')
 IC Loss: tensor(0.5443, device='cuda:0') u BC Loss: tensor(0.1470, device='cuda:0') phi BC Loss: tensor(0.0352, device='cuda:0') mu BC Loss: tensor(0.1248, device='cuda:0') NS PDE Loss: tensor(6.8529, device='cuda:0') NS Div Free Loss: tensor(0.0265, device='cuda:0')
 Iteration: 2200 Total Loss: tensor(594.7391, device='cuda:0')
 IC Loss: tensor(0.5412, device='cuda:0') u BC Loss: tensor(0.1219, device='cuda:0') phi BC Loss: tensor(0.0029, device='cuda:0') mu BC Loss: tensor(0.1117, device='cuda:0') NS PDE Loss: tensor(5.2152, device='cuda:0') NS Div Free Loss: tensor(0.0235, device='cuda:0')
 Iteration: 2400 Total Loss: tensor(586.4156, device='cuda:0')
 IC Loss: tensor(0.5375, device='cuda:0') u BC Loss: tensor(0.1119, device='cuda:0') phi BC Loss: tensor(0.0032, device='cuda:0') mu BC Loss: tensor(0.1023, device='cuda:0') NS PDE Loss: tensor(4.7636, device='cuda:0') NS Div Free Loss: tensor(0.0217, device='cuda:0')
 Iteration: 2600 Total Loss: tensor(579.8525, device='cuda:0')
 IC Loss: tensor(0.5341, device='cuda:0') u BC Loss: tensor(0.1033, device='cuda:0') phi BC Loss: tensor(0.0266, device='cuda:0') mu BC Loss: tensor(0.0946, device='cuda:0') NS PDE Loss: tensor(4.4380, device='cuda:0') NS Div Free Loss: tensor(0.0201, device='cuda:0')
 Iteration: 2800 Total Loss: tensor(573.7995, device='cuda:0')
 IC Loss: tensor(0.5298, device='cuda:0') u BC Loss: tensor(0.0948, device='cuda:0') phi BC Loss: tensor(0.0241, device='cuda:0') mu BC Loss: tensor(0.0882, device='cuda:0') NS PDE Loss: tensor(4.2729, device='cuda:0') NS Div Free Loss: tensor(0.0187, device='cuda:0')
 Iteration: 3000 Total Loss: tensor(568.8683, device='cuda:0')
 IC Loss: tensor(0.5251, device='cuda:0') u BC Loss: tensor(0.0848, device='cuda:0') phi BC Loss: tensor(0.0248, device='cuda:0') mu BC Loss: tensor(0.0833, device='cuda:0') NS PDE Loss: tensor(

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r(4.2617, device='cuda:0')      NS Div Free Loss: tensor(0.0174, device='cuda:0')
Iteration: 3200      Total Loss: tensor(560.2725, device='cuda:0')
IC Loss: tensor(0.5209, device='cuda:0')      u BC Loss: tensor(0.0697, device='cuda:0')      phi BC Los
s: tensor(0.1226, device='cuda:0')      mu BC Loss: tensor(0.0802, device='cuda:0')      NS PDE Loss: tenso
r(3.7880, device='cuda:0')      NS Div Free Loss: tensor(0.0159, device='cuda:0')
Iteration: 3400      Total Loss: tensor(225.2520, device='cuda:0')
IC Loss: tensor(0.1941, device='cuda:0')      u BC Loss: tensor(0.0552, device='cuda:0')      phi BC Los
s: tensor(0.0067, device='cuda:0')      mu BC Loss: tensor(0.0808, device='cuda:0')      NS PDE Loss: tenso
r(3.0292, device='cuda:0')      NS Div Free Loss: tensor(0.0126, device='cuda:0')
Iteration: 3600      Total Loss: tensor(45.5798, device='cuda:0')
IC Loss: tensor(0.0319, device='cuda:0')      u BC Loss: tensor(0.0478, device='cuda:0')      phi BC Los
s: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.0673, device='cuda:0')      NS PDE Loss: tenso
r(1.2943, device='cuda:0')      NS Div Free Loss: tensor(0.0118, device='cuda:0')
Iteration: 3800      Total Loss: tensor(33.7748, device='cuda:0')
IC Loss: tensor(0.0238, device='cuda:0')      u BC Loss: tensor(0.0452, device='cuda:0')      phi BC Los
s: tensor(0.0005, device='cuda:0')      mu BC Loss: tensor(0.0491, device='cuda:0')      NS PDE Loss: tenso
r(0.9436, device='cuda:0')      NS Div Free Loss: tensor(0.0108, device='cuda:0')
Iteration: 4000      Total Loss: tensor(27.7127, device='cuda:0')
IC Loss: tensor(0.0198, device='cuda:0')      u BC Loss: tensor(0.0428, device='cuda:0')      phi BC Los
s: tensor(0.0012, device='cuda:0')      mu BC Loss: tensor(0.0348, device='cuda:0')      NS PDE Loss: tenso
r(0.7390, device='cuda:0')      NS Div Free Loss: tensor(0.0101, device='cuda:0')
Iteration: 4200      Total Loss: tensor(28.2192, device='cuda:0')
IC Loss: tensor(0.0178, device='cuda:0')      u BC Loss: tensor(0.0407, device='cuda:0')      phi BC Los
s: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.0266, device='cuda:0')      NS PDE Loss: tenso
r(0.9992, device='cuda:0')      NS Div Free Loss: tensor(0.0097, device='cuda:0')
Iteration: 4400      Total Loss: tensor(24.2910, device='cuda:0')
IC Loss: tensor(0.0164, device='cuda:0')      u BC Loss: tensor(0.0389, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.0204, device='cuda:0')      NS PDE Loss: tenso
r(0.7512, device='cuda:0')      NS Div Free Loss: tensor(0.0093, device='cuda:0')
Iteration: 4600      Total Loss: tensor(21.5346, device='cuda:0')
IC Loss: tensor(0.0154, device='cuda:0')      u BC Loss: tensor(0.0374, device='cuda:0')      phi BC Los
s: tensor(0.0005, device='cuda:0')      mu BC Loss: tensor(0.0161, device='cuda:0')      NS PDE Loss: tenso
r(0.5813, device='cuda:0')      NS Div Free Loss: tensor(0.0090, device='cuda:0')
Iteration: 4800      Total Loss: tensor(19.5669, device='cuda:0')
IC Loss: tensor(0.0145, device='cuda:0')      u BC Loss: tensor(0.0360, device='cuda:0')      phi BC Los
s: tensor(0.0010, device='cuda:0')      mu BC Loss: tensor(0.0129, device='cuda:0')      NS PDE Loss: tenso
r(0.4702, device='cuda:0')      NS Div Free Loss: tensor(0.0087, device='cuda:0')
Iteration: 5000      Total Loss: tensor(18.5494, device='cuda:0')
IC Loss: tensor(0.0139, device='cuda:0')      u BC Loss: tensor(0.0348, device='cuda:0')      phi BC Los
s: tensor(0.0009, device='cuda:0')      mu BC Loss: tensor(0.0105, device='cuda:0')      NS PDE Loss: tenso
r(0.4377, device='cuda:0')      NS Div Free Loss: tensor(0.0084, device='cuda:0')
Iteration: 5200      Total Loss: tensor(17.4961, device='cuda:0')

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IC Loss: tensor(0.0132, device='cuda:0') u BC Loss: tensor(0.0329, device='cuda:0') phi BC Loss: tensor(0.0004, device='cuda:0') mu BC Loss: tensor(0.0085, device='cuda:0') NS PDE Loss: tensor(0.4035, device='cuda:0') NS Div Free Loss: tensor(0.0080, device='cuda:0')
 Iteration: 5400 Total Loss: tensor(16.8076, device='cuda:0')
 IC Loss: tensor(0.0126, device='cuda:0') u BC Loss: tensor(0.0318, device='cuda:0') phi BC Loss: tensor(0.0006, device='cuda:0') mu BC Loss: tensor(0.0069, device='cuda:0') NS PDE Loss: tensor(0.3945, device='cuda:0') NS Div Free Loss: tensor(0.0076, device='cuda:0')
 Iteration: 5600 Total Loss: tensor(16.4904, device='cuda:0')
 IC Loss: tensor(0.0121, device='cuda:0') u BC Loss: tensor(0.0302, device='cuda:0') phi BC Loss: tensor(0.0004, device='cuda:0') mu BC Loss: tensor(0.0058, device='cuda:0') NS PDE Loss: tensor(0.4132, device='cuda:0') NS Div Free Loss: tensor(0.0071, device='cuda:0')
 Iteration: 5800 Total Loss: tensor(20.7474, device='cuda:0')
 IC Loss: tensor(0.0128, device='cuda:0') u BC Loss: tensor(0.0273, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.0050, device='cuda:0') NS PDE Loss: tensor(0.7752, device='cuda:0') NS Div Free Loss: tensor(0.0064, device='cuda:0')
 Iteration: 6000 Total Loss: tensor(17.1535, device='cuda:0')
 IC Loss: tensor(0.0119, device='cuda:0') u BC Loss: tensor(0.0254, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.0046, device='cuda:0') NS PDE Loss: tensor(0.5022, device='cuda:0') NS Div Free Loss: tensor(0.0060, device='cuda:0')
 Iteration: 6200 Total Loss: tensor(20.4877, device='cuda:0')
 IC Loss: tensor(0.0110, device='cuda:0') u BC Loss: tensor(0.0242, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.0043, device='cuda:0') NS PDE Loss: tensor(0.9239, device='cuda:0') NS Div Free Loss: tensor(0.0056, device='cuda:0')
 Iteration: 6400 Total Loss: tensor(15.5223, device='cuda:0')
 IC Loss: tensor(0.0107, device='cuda:0') u BC Loss: tensor(0.0228, device='cuda:0') phi BC Loss: tensor(0.0001, device='cuda:0') mu BC Loss: tensor(0.0042, device='cuda:0') NS PDE Loss: tensor(0.4607, device='cuda:0') NS Div Free Loss: tensor(0.0054, device='cuda:0')
 Iteration: 6600 Total Loss: tensor(15.3717, device='cuda:0')
 IC Loss: tensor(0.0108, device='cuda:0') u BC Loss: tensor(0.0215, device='cuda:0') phi BC Loss: tensor(0.0001, device='cuda:0') mu BC Loss: tensor(0.0041, device='cuda:0') NS PDE Loss: tensor(0.4430, device='cuda:0') NS Div Free Loss: tensor(0.0051, device='cuda:0')
 Iteration: 6800 Total Loss: tensor(13.5941, device='cuda:0')
 IC Loss: tensor(0.0105, device='cuda:0') u BC Loss: tensor(0.0204, device='cuda:0') phi BC Loss: tensor(9.5466e-05, device='cuda:0') mu BC Loss: tensor(0.0040, device='cuda:0') NS PDE Loss: tensor(0.2972, device='cuda:0') NS Div Free Loss: tensor(0.0047, device='cuda:0')
 Iteration: 7000 Total Loss: tensor(12.1943, device='cuda:0')
 IC Loss: tensor(0.0103, device='cuda:0') u BC Loss: tensor(0.0194, device='cuda:0') phi BC Loss: tensor(7.1083e-05, device='cuda:0') mu BC Loss: tensor(0.0040, device='cuda:0') NS PDE Loss: tensor(0.1691, device='cuda:0') NS Div Free Loss: tensor(0.0043, device='cuda:0')
 Iteration: 7200 Total Loss: tensor(12.9783, device='cuda:0')
 IC Loss: tensor(0.0108, device='cuda:0') u BC Loss: tensor(0.0184, device='cuda:0') phi BC Loss: tensor(2.7841e-05, device='cuda:0') mu BC Loss: tensor(0.0038, device='cuda:0') NS PDE Loss:

s: tensor(0.2016, device='cuda:0')	NS Div Free Loss: tensor(0.0039, device='cuda:0')	
Iteration: 7400	Total Loss: tensor(16.5809, device='cuda:0')	
IC Loss: tensor(0.0108, device='cuda:0')	u BC Loss: tensor(0.0168, device='cuda:0')	phi BC Los
s: tensor(1.9310e-05, device='cuda:0')	mu BC Loss: tensor(0.0036, device='cuda:0')	NS PDE Los
s: tensor(0.5621, device='cuda:0')	NS Div Free Loss: tensor(0.0035, device='cuda:0')	
Iteration: 7600	Total Loss: tensor(11.8225, device='cuda:0')	
IC Loss: tensor(0.0104, device='cuda:0')	u BC Loss: tensor(0.0166, device='cuda:0')	phi BC Los
s: tensor(1.1396e-05, device='cuda:0')	mu BC Loss: tensor(0.0035, device='cuda:0')	NS PDE Los
s: tensor(0.1291, device='cuda:0')	NS Div Free Loss: tensor(0.0033, device='cuda:0')	
Iteration: 7800	Total Loss: tensor(13.7275, device='cuda:0')	
IC Loss: tensor(0.0100, device='cuda:0')	u BC Loss: tensor(0.0159, device='cuda:0')	phi BC Los
s: tensor(8.5054e-06, device='cuda:0')	mu BC Loss: tensor(0.0035, device='cuda:0')	NS PDE Los
s: tensor(0.3620, device='cuda:0')	NS Div Free Loss: tensor(0.0031, device='cuda:0')	
Iteration: 8000	Total Loss: tensor(12.1147, device='cuda:0')	
IC Loss: tensor(0.0099, device='cuda:0')	u BC Loss: tensor(0.0150, device='cuda:0')	phi BC Los
s: tensor(4.5029e-06, device='cuda:0')	mu BC Loss: tensor(0.0035, device='cuda:0')	NS PDE Los
s: tensor(0.2141, device='cuda:0')	NS Div Free Loss: tensor(0.0029, device='cuda:0')	
Iteration: 8200	Total Loss: tensor(17.2717, device='cuda:0')	
IC Loss: tensor(0.0103, device='cuda:0')	u BC Loss: tensor(0.0136, device='cuda:0')	phi BC Los
s: tensor(1.3829e-06, device='cuda:0')	mu BC Loss: tensor(0.0034, device='cuda:0')	NS PDE Los
s: tensor(0.6817, device='cuda:0')	NS Div Free Loss: tensor(0.0025, device='cuda:0')	
Iteration: 8400	Total Loss: tensor(13.6112, device='cuda:0')	
IC Loss: tensor(0.0096, device='cuda:0')	u BC Loss: tensor(0.0138, device='cuda:0')	phi BC Los
s: tensor(7.4776e-07, device='cuda:0')	mu BC Loss: tensor(0.0032, device='cuda:0')	NS PDE Los
s: tensor(0.3872, device='cuda:0')	NS Div Free Loss: tensor(0.0023, device='cuda:0')	
Iteration: 8600	Total Loss: tensor(12.3870, device='cuda:0')	
IC Loss: tensor(0.0095, device='cuda:0')	u BC Loss: tensor(0.0132, device='cuda:0')	phi BC Los
s: tensor(5.2774e-07, device='cuda:0')	mu BC Loss: tensor(0.0031, device='cuda:0')	NS PDE Los
s: tensor(0.2792, device='cuda:0')	NS Div Free Loss: tensor(0.0020, device='cuda:0')	
Iteration: 8800	Total Loss: tensor(18.5116, device='cuda:0')	
IC Loss: tensor(0.0094, device='cuda:0')	u BC Loss: tensor(0.0126, device='cuda:0')	phi BC Los
s: tensor(3.7267e-07, device='cuda:0')	mu BC Loss: tensor(0.0030, device='cuda:0')	NS PDE Los
s: tensor(0.9009, device='cuda:0')	NS Div Free Loss: tensor(0.0017, device='cuda:0')	
Iteration: 9000	Total Loss: tensor(12.3045, device='cuda:0')	
IC Loss: tensor(0.0095, device='cuda:0')	u BC Loss: tensor(0.0119, device='cuda:0')	phi BC Los
s: tensor(2.3501e-07, device='cuda:0')	mu BC Loss: tensor(0.0031, device='cuda:0')	NS PDE Los
s: tensor(0.2733, device='cuda:0')	NS Div Free Loss: tensor(0.0018, device='cuda:0')	
Iteration: 9200	Total Loss: tensor(14.0074, device='cuda:0')	
IC Loss: tensor(0.0093, device='cuda:0')	u BC Loss: tensor(0.0113, device='cuda:0')	phi BC Los
s: tensor(1.3073e-07, device='cuda:0')	mu BC Loss: tensor(0.0031, device='cuda:0')	NS PDE Los
s: tensor(0.4619, device='cuda:0')	NS Div Free Loss: tensor(0.0017, device='cuda:0')	
Iteration: 9400	Total Loss: tensor(25.2040, device='cuda:0')	

IC Loss: tensor(0.0093, device='cuda:0')	u BC Loss: tensor(0.0116, device='cuda:0')	phi BC Los
s: tensor(1.2070e-07, device='cuda:0')	mu BC Loss: tensor(0.0030, device='cuda:0')	NS PDE Los
s: tensor(1.5801, device='cuda:0')	NS Div Free Loss: tensor(0.0015, device='cuda:0')	
Iteration: 9600	Total Loss: tensor(16.9218, device='cuda:0')	
IC Loss: tensor(0.0092, device='cuda:0')	u BC Loss: tensor(0.0108, device='cuda:0')	phi BC Los
s: tensor(8.0186e-08, device='cuda:0')	mu BC Loss: tensor(0.0028, device='cuda:0')	NS PDE Los
s: tensor(0.7670, device='cuda:0')	NS Div Free Loss: tensor(0.0013, device='cuda:0')	
Iteration: 9800	Total Loss: tensor(15.1398, device='cuda:0')	
IC Loss: tensor(0.0096, device='cuda:0')	u BC Loss: tensor(0.0104, device='cuda:0')	phi BC Los
s: tensor(5.3433e-08, device='cuda:0')	mu BC Loss: tensor(0.0028, device='cuda:0')	NS PDE Los
s: tensor(0.5507, device='cuda:0')	NS Div Free Loss: tensor(0.0012, device='cuda:0')	
Iteration: 10000	Total Loss: tensor(18.8140, device='cuda:0')	
IC Loss: tensor(0.0093, device='cuda:0')	u BC Loss: tensor(0.0102, device='cuda:0')	phi BC Los
s: tensor(4.1822e-08, device='cuda:0')	mu BC Loss: tensor(0.0028, device='cuda:0')	NS PDE Los
s: tensor(0.9390, device='cuda:0')	NS Div Free Loss: tensor(0.0011, device='cuda:0')	
Iteration: 10200	Total Loss: tensor(24.4396, device='cuda:0')	
IC Loss: tensor(0.0095, device='cuda:0')	u BC Loss: tensor(0.0097, device='cuda:0')	phi BC Los
s: tensor(2.4542e-08, device='cuda:0')	mu BC Loss: tensor(0.0026, device='cuda:0')	NS PDE Los
s: tensor(1.4908, device='cuda:0')	NS Div Free Loss: tensor(0.0009, device='cuda:0')	
Iteration: 10400	Total Loss: tensor(14.6394, device='cuda:0')	
IC Loss: tensor(0.0092, device='cuda:0')	u BC Loss: tensor(0.0099, device='cuda:0')	phi BC Los
s: tensor(2.9427e-08, device='cuda:0')	mu BC Loss: tensor(0.0025, device='cuda:0')	NS PDE Los
s: tensor(0.5369, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 10600	Total Loss: tensor(15.9990, device='cuda:0')	
IC Loss: tensor(0.0114, device='cuda:0')	u BC Loss: tensor(0.0086, device='cuda:0')	phi BC Los
s: tensor(3.1362e-08, device='cuda:0')	mu BC Loss: tensor(0.0024, device='cuda:0')	NS PDE Los
s: tensor(0.4528, device='cuda:0')	NS Div Free Loss: tensor(0.0007, device='cuda:0')	
Iteration: 10800	Total Loss: tensor(10.5493, device='cuda:0')	
IC Loss: tensor(0.0090, device='cuda:0')	u BC Loss: tensor(0.0089, device='cuda:0')	phi BC Los
s: tensor(1.0864e-08, device='cuda:0')	mu BC Loss: tensor(0.0025, device='cuda:0')	NS PDE Los
s: tensor(0.1475, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 11000	Total Loss: tensor(10.2663, device='cuda:0')	
IC Loss: tensor(0.0089, device='cuda:0')	u BC Loss: tensor(0.0087, device='cuda:0')	phi BC Los
s: tensor(7.8302e-09, device='cuda:0')	mu BC Loss: tensor(0.0024, device='cuda:0')	NS PDE Los
s: tensor(0.1303, device='cuda:0')	NS Div Free Loss: tensor(0.0007, device='cuda:0')	
Iteration: 11200	Total Loss: tensor(11.3711, device='cuda:0')	
IC Loss: tensor(0.0089, device='cuda:0')	u BC Loss: tensor(0.0085, device='cuda:0')	phi BC Los
s: tensor(7.0985e-09, device='cuda:0')	mu BC Loss: tensor(0.0022, device='cuda:0')	NS PDE Los
s: tensor(0.2386, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')	
Iteration: 11400	Total Loss: tensor(12.5825, device='cuda:0')	
IC Loss: tensor(0.0093, device='cuda:0')	u BC Loss: tensor(0.0083, device='cuda:0')	phi BC Los
s: tensor(7.5318e-09, device='cuda:0')	mu BC Loss: tensor(0.0019, device='cuda:0')	NS PDE Los

s: tensor(0.3205, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 11600	Total Loss: tensor(13.9397, device='cuda:0')	
IC Loss: tensor(0.0112, device='cuda:0')	u BC Loss: tensor(0.0081, device='cuda:0')	phi BC Los
s: tensor(9.3182e-09, device='cuda:0')	mu BC Loss: tensor(0.0018, device='cuda:0')	NS PDE Los
s: tensor(0.2700, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 11800	Total Loss: tensor(13.0922, device='cuda:0')	
IC Loss: tensor(0.0092, device='cuda:0')	u BC Loss: tensor(0.0081, device='cuda:0')	phi BC Los
s: tensor(3.6957e-09, device='cuda:0')	mu BC Loss: tensor(0.0018, device='cuda:0')	NS PDE Los
s: tensor(0.3795, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 12000	Total Loss: tensor(18.3433, device='cuda:0')	
IC Loss: tensor(0.0088, device='cuda:0')	u BC Loss: tensor(0.0085, device='cuda:0')	phi BC Los
s: tensor(2.3874e-09, device='cuda:0')	mu BC Loss: tensor(0.0018, device='cuda:0')	NS PDE Los
s: tensor(0.9512, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 12200	Total Loss: tensor(19.5866, device='cuda:0')	
IC Loss: tensor(0.0087, device='cuda:0')	u BC Loss: tensor(0.0078, device='cuda:0')	phi BC Los
s: tensor(1.7183e-09, device='cuda:0')	mu BC Loss: tensor(0.0020, device='cuda:0')	NS PDE Los
s: tensor(1.0812, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 12400	Total Loss: tensor(11.5614, device='cuda:0')	
IC Loss: tensor(0.0087, device='cuda:0')	u BC Loss: tensor(0.0073, device='cuda:0')	phi BC Los
s: tensor(1.3828e-09, device='cuda:0')	mu BC Loss: tensor(0.0022, device='cuda:0')	NS PDE Los
s: tensor(0.2781, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 12600	Total Loss: tensor(10.2701, device='cuda:0')	
IC Loss: tensor(0.0098, device='cuda:0')	u BC Loss: tensor(0.0072, device='cuda:0')	phi BC Los
s: tensor(1.3264e-09, device='cuda:0')	mu BC Loss: tensor(0.0018, device='cuda:0')	NS PDE Los
s: tensor(0.0401, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 12800	Total Loss: tensor(13.4006, device='cuda:0')	
IC Loss: tensor(0.0088, device='cuda:0')	u BC Loss: tensor(0.0070, device='cuda:0')	phi BC Los
s: tensor(5.7829e-10, device='cuda:0')	mu BC Loss: tensor(0.0016, device='cuda:0')	NS PDE Los
s: tensor(0.4561, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 13000	Total Loss: tensor(11.0538, device='cuda:0')	
IC Loss: tensor(0.0087, device='cuda:0')	u BC Loss: tensor(0.0072, device='cuda:0')	phi BC Los
s: tensor(4.4730e-10, device='cuda:0')	mu BC Loss: tensor(0.0016, device='cuda:0')	NS PDE Los
s: tensor(0.2316, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 13200	Total Loss: tensor(13.6065, device='cuda:0')	
IC Loss: tensor(0.0129, device='cuda:0')	u BC Loss: tensor(0.0069, device='cuda:0')	phi BC Los
s: tensor(3.8154e-10, device='cuda:0')	mu BC Loss: tensor(0.0015, device='cuda:0')	NS PDE Los
s: tensor(0.0706, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 13400	Total Loss: tensor(11.2224, device='cuda:0')	
IC Loss: tensor(0.0086, device='cuda:0')	u BC Loss: tensor(0.0068, device='cuda:0')	phi BC Los
s: tensor(2.4201e-10, device='cuda:0')	mu BC Loss: tensor(0.0015, device='cuda:0')	NS PDE Los
s: tensor(0.2587, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 13600	Total Loss: tensor(9.6305, device='cuda:0')	

IC Loss: tensor(0.0086, device='cuda:0')	u BC Loss: tensor(0.0067, device='cuda:0')	phi BC Los
s: tensor(1.6734e-10, device='cuda:0')	mu BC Loss: tensor(0.0014, device='cuda:0')	NS PDE Los
s: tensor(0.0983, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 13800	Total Loss: tensor(10.9684, device='cuda:0')	
IC Loss: tensor(0.0086, device='cuda:0')	u BC Loss: tensor(0.0064, device='cuda:0')	phi BC Los
s: tensor(1.1758e-10, device='cuda:0')	mu BC Loss: tensor(0.0014, device='cuda:0')	NS PDE Los
s: tensor(0.2362, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 14000	Total Loss: tensor(10.3520, device='cuda:0')	
IC Loss: tensor(0.0085, device='cuda:0')	u BC Loss: tensor(0.0065, device='cuda:0')	phi BC Los
s: tensor(8.9992e-11, device='cuda:0')	mu BC Loss: tensor(0.0012, device='cuda:0')	NS PDE Los
s: tensor(0.1768, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14200	Total Loss: tensor(11.2422, device='cuda:0')	
IC Loss: tensor(0.0109, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(1.2850e-10, device='cuda:0')	mu BC Loss: tensor(0.0010, device='cuda:0')	NS PDE Los
s: tensor(0.0332, device='cuda:0')	NS Div Free Loss: tensor(9.2499e-05, device='cuda:0')	
Iteration: 14400	Total Loss: tensor(14.9847, device='cuda:0')	
IC Loss: tensor(0.0091, device='cuda:0')	u BC Loss: tensor(0.0058, device='cuda:0')	phi BC Los
s: tensor(3.6435e-11, device='cuda:0')	mu BC Loss: tensor(0.0011, device='cuda:0')	NS PDE Los
s: tensor(0.5867, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14600	Total Loss: tensor(13.6947, device='cuda:0')	
IC Loss: tensor(0.0085, device='cuda:0')	u BC Loss: tensor(0.0060, device='cuda:0')	phi BC Los
s: tensor(1.2309e-11, device='cuda:0')	mu BC Loss: tensor(0.0013, device='cuda:0')	NS PDE Los
s: tensor(0.5158, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 14800	Total Loss: tensor(14.5400, device='cuda:0')	
IC Loss: tensor(0.0086, device='cuda:0')	u BC Loss: tensor(0.0057, device='cuda:0')	phi BC Los
s: tensor(1.1469e-11, device='cuda:0')	mu BC Loss: tensor(0.0013, device='cuda:0')	NS PDE Los
s: tensor(0.5945, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 15000	Total Loss: tensor(11.6868, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0061, device='cuda:0')	phi BC Los
s: tensor(1.0669e-11, device='cuda:0')	mu BC Loss: tensor(0.0011, device='cuda:0')	NS PDE Los
s: tensor(0.3212, device='cuda:0')	NS Div Free Loss: tensor(9.8226e-05, device='cuda:0')	
Iteration: 15200	Total Loss: tensor(9.9910, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0058, device='cuda:0')	phi BC Los
s: tensor(8.7716e-12, device='cuda:0')	mu BC Loss: tensor(0.0015, device='cuda:0')	NS PDE Los
s: tensor(0.1522, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15400	Total Loss: tensor(10.2883, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(7.3333e-12, device='cuda:0')	mu BC Loss: tensor(0.0016, device='cuda:0')	NS PDE Los
s: tensor(0.1831, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 15600	Total Loss: tensor(11.7669, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0054, device='cuda:0')	phi BC Los
s: tensor(6.4190e-12, device='cuda:0')	mu BC Loss: tensor(0.0017, device='cuda:0')	NS PDE Los

s: tensor(0.3309, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 15800	Total Loss: tensor(10.1647, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0054, device='cuda:0')	phi BC Los
s: tensor(5.3971e-12, device='cuda:0')	mu BC Loss: tensor(0.0017, device='cuda:0')	NS PDE Los
s: tensor(0.1709, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 16000	Total Loss: tensor(20.3178, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(4.4506e-12, device='cuda:0')	mu BC Loss: tensor(0.0017, device='cuda:0')	NS PDE Los
s: tensor(1.1876, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 16200	Total Loss: tensor(11.9222, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0054, device='cuda:0')	phi BC Los
s: tensor(1.1598e-10, device='cuda:0')	mu BC Loss: tensor(0.0014, device='cuda:0')	NS PDE Los
s: tensor(0.3513, device='cuda:0')	NS Div Free Loss: tensor(8.7470e-05, device='cuda:0')	
Iteration: 16400	Total Loss: tensor(11.2687, device='cuda:0')	
IC Loss: tensor(0.0084, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(2.2900e-10, device='cuda:0')	mu BC Loss: tensor(0.0013, device='cuda:0')	NS PDE Los
s: tensor(0.2881, device='cuda:0')	NS Div Free Loss: tensor(5.2107e-05, device='cuda:0')	
Iteration: 16600	Total Loss: tensor(10.2263, device='cuda:0')	
IC Loss: tensor(0.0083, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(1.1641e-09, device='cuda:0')	mu BC Loss: tensor(0.0012, device='cuda:0')	NS PDE Los
s: tensor(0.1864, device='cuda:0')	NS Div Free Loss: tensor(3.9371e-05, device='cuda:0')	
Iteration: 16800	Total Loss: tensor(9.0200, device='cuda:0')	
IC Loss: tensor(0.0083, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(6.8400e-09, device='cuda:0')	mu BC Loss: tensor(0.0010, device='cuda:0')	NS PDE Los
s: tensor(0.0654, device='cuda:0')	NS Div Free Loss: tensor(3.5500e-05, device='cuda:0')	
Iteration: 17000	Total Loss: tensor(24.2674, device='cuda:0')	
IC Loss: tensor(0.0221, device='cuda:0')	u BC Loss: tensor(0.0057, device='cuda:0')	phi BC Los
s: tensor(2.1387e-08, device='cuda:0')	mu BC Loss: tensor(0.0009, device='cuda:0')	NS PDE Los
s: tensor(0.2143, device='cuda:0')	NS Div Free Loss: tensor(2.8825e-05, device='cuda:0')	
Iteration: 17200	Total Loss: tensor(11.5286, device='cuda:0')	
IC Loss: tensor(0.0083, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(1.0268e-07, device='cuda:0')	mu BC Loss: tensor(0.0010, device='cuda:0')	NS PDE Los
s: tensor(0.3215, device='cuda:0')	NS Div Free Loss: tensor(4.0539e-05, device='cuda:0')	
Iteration: 17400	Total Loss: tensor(10.2278, device='cuda:0')	
IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(2.5247e-07, device='cuda:0')	mu BC Loss: tensor(0.0009, device='cuda:0')	NS PDE Los
s: tensor(0.1958, device='cuda:0')	NS Div Free Loss: tensor(4.7496e-05, device='cuda:0')	
Iteration: 17600	Total Loss: tensor(11.0899, device='cuda:0')	
IC Loss: tensor(0.0083, device='cuda:0')	u BC Loss: tensor(0.0054, device='cuda:0')	phi BC Los
s: tensor(1.4949e-06, device='cuda:0')	mu BC Loss: tensor(0.0009, device='cuda:0')	NS PDE Los
s: tensor(0.2782, device='cuda:0')	NS Div Free Loss: tensor(4.6884e-05, device='cuda:0')	
Iteration: 17800	Total Loss: tensor(11.4541, device='cuda:0')	

IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(4.9524e-06, device='cuda:0')	mu BC Loss: tensor(0.0010, device='cuda:0')	NS PDE Los
s: tensor(0.3233, device='cuda:0')	NS Div Free Loss: tensor(5.7171e-05, device='cuda:0')	
Iteration: 18000	Total Loss: tensor(38.5057, device='cuda:0')	
IC Loss: tensor(0.0164, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(8.2791e-05, device='cuda:0')	mu BC Loss: tensor(0.0009, device='cuda:0')	NS PDE Los
s: tensor(2.2023, device='cuda:0')	NS Div Free Loss: tensor(5.1914e-05, device='cuda:0')	
Iteration: 18200	Total Loss: tensor(13.5288, device='cuda:0')	
IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(2.2682e-05, device='cuda:0')	mu BC Loss: tensor(0.0009, device='cuda:0')	NS PDE Los
s: tensor(0.5337, device='cuda:0')	NS Div Free Loss: tensor(2.3431e-05, device='cuda:0')	
Iteration: 18400	Total Loss: tensor(14.7449, device='cuda:0')	
IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(4.6450e-06, device='cuda:0')	mu BC Loss: tensor(0.0008, device='cuda:0')	NS PDE Los
s: tensor(0.6468, device='cuda:0')	NS Div Free Loss: tensor(2.1631e-05, device='cuda:0')	
Iteration: 18600	Total Loss: tensor(10.2184, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(3.1584e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(0.2061, device='cuda:0')	NS Div Free Loss: tensor(1.4374e-05, device='cuda:0')	
Iteration: 18800	Total Loss: tensor(10.7215, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(2.7496e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(0.2545, device='cuda:0')	NS Div Free Loss: tensor(1.3287e-05, device='cuda:0')	
Iteration: 19000	Total Loss: tensor(9.4468, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(5.9039e-05, device='cuda:0')	mu BC Loss: tensor(0.0006, device='cuda:0')	NS PDE Los
s: tensor(0.1332, device='cuda:0')	NS Div Free Loss: tensor(1.2534e-05, device='cuda:0')	
Iteration: 19200	Total Loss: tensor(10.9864, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(3.0641e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(0.2884, device='cuda:0')	NS Div Free Loss: tensor(1.8491e-05, device='cuda:0')	
Iteration: 19400	Total Loss: tensor(9.1800, device='cuda:0')	
IC Loss: tensor(0.0080, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(4.7657e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(0.1115, device='cuda:0')	NS Div Free Loss: tensor(2.0563e-05, device='cuda:0')	
Iteration: 19600	Total Loss: tensor(9.4313, device='cuda:0')	
IC Loss: tensor(0.0080, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(3.2825e-05, device='cuda:0')	mu BC Loss: tensor(0.0006, device='cuda:0')	NS PDE Los
s: tensor(0.1378, device='cuda:0')	NS Div Free Loss: tensor(2.1247e-05, device='cuda:0')	
Iteration: 19800	Total Loss: tensor(18.6404, device='cuda:0')	
IC Loss: tensor(0.0099, device='cuda:0')	u BC Loss: tensor(0.0052, device='cuda:0')	phi BC Los
s: tensor(3.4062e-06, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los

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s: tensor(0.8693, device='cuda:0')    NS Div Free Loss: tensor(1.2384e-05, device='cuda:0')
Iteration: 20000    Total Loss: tensor(10.0992, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0052, device='cuda:0')    phi BC Los
s: tensor(3.5430e-05, device='cuda:0')    mu BC Loss: tensor(0.0006, device='cuda:0')    NS PDE Los
s: tensor(0.2103, device='cuda:0')    NS Div Free Loss: tensor(1.1548e-05, device='cuda:0')
Iteration: 20200    Total Loss: tensor(11.9508, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0052, device='cuda:0')    phi BC Los
s: tensor(2.5513e-05, device='cuda:0')    mu BC Loss: tensor(0.0007, device='cuda:0')    NS PDE Los
s: tensor(0.3958, device='cuda:0')    NS Div Free Loss: tensor(1.4323e-05, device='cuda:0')
Iteration: 20400    Total Loss: tensor(11.6515, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(1.9680e-05, device='cuda:0')    mu BC Loss: tensor(0.0008, device='cuda:0')    NS PDE Los
s: tensor(0.3661, device='cuda:0')    NS Div Free Loss: tensor(2.8170e-05, device='cuda:0')
Iteration: 20600    Total Loss: tensor(11.2343, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(1.3251e-05, device='cuda:0')    mu BC Loss: tensor(0.0009, device='cuda:0')    NS PDE Los
s: tensor(0.3257, device='cuda:0')    NS Div Free Loss: tensor(3.4541e-05, device='cuda:0')
Iteration: 20800    Total Loss: tensor(11.4667, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(9.8724e-06, device='cuda:0')    mu BC Loss: tensor(0.0009, device='cuda:0')    NS PDE Los
s: tensor(0.3472, device='cuda:0')    NS Div Free Loss: tensor(3.7971e-05, device='cuda:0')
Iteration: 21000    Total Loss: tensor(24.4772, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0051, device='cuda:0')    phi BC Los
s: tensor(1.3433e-05, device='cuda:0')    mu BC Loss: tensor(0.0009, device='cuda:0')    NS PDE Los
s: tensor(1.6468, device='cuda:0')    NS Div Free Loss: tensor(4.0829e-05, device='cuda:0')
Iteration: 21200    Total Loss: tensor(10.4039, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(4.2751e-06, device='cuda:0')    mu BC Loss: tensor(0.0008, device='cuda:0')    NS PDE Los
s: tensor(0.2331, device='cuda:0')    NS Div Free Loss: tensor(3.0615e-05, device='cuda:0')
Iteration: 21400    Total Loss: tensor(25.8402, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(1.5148e-05, device='cuda:0')    mu BC Loss: tensor(0.0005, device='cuda:0')    NS PDE Los
s: tensor(1.7908, device='cuda:0')    NS Div Free Loss: tensor(1.9875e-05, device='cuda:0')
Iteration: 21600    Total Loss: tensor(20.9161, device='cuda:0')
IC Loss: tensor(0.0114, device='cuda:0')    u BC Loss: tensor(0.0052, device='cuda:0')    phi BC Los
s: tensor(0., device='cuda:0')    mu BC Loss: tensor(0.0007, device='cuda:0')    NS PDE Loss: tenso
r(0.9494, device='cuda:0')    NS Div Free Loss: tensor(1.8374e-05, device='cuda:0')
Iteration: 21800    Total Loss: tensor(11.8997, device='cuda:0')
IC Loss: tensor(0.0088, device='cuda:0')    u BC Loss: tensor(0.0046, device='cuda:0')    phi BC Los
s: tensor(2.4801e-08, device='cuda:0')    mu BC Loss: tensor(0.0005, device='cuda:0')    NS PDE Los
s: tensor(0.3035, device='cuda:0')    NS Div Free Loss: tensor(1.2177e-05, device='cuda:0')
Iteration: 22000    Total Loss: tensor(18.1114, device='cuda:0')

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IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.0051, device='cuda:0')	phi BC Los
s: tensor(1.6125e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(1.0194, device='cuda:0')	NS Div Free Loss: tensor(1.4655e-05, device='cuda:0')	
Iteration: 22200	Total Loss: tensor(14.3221, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.0050, device='cuda:0')	phi BC Los
s: tensor(1.0794e-05, device='cuda:0')	mu BC Loss: tensor(0.0007, device='cuda:0')	NS PDE Los
s: tensor(0.6421, device='cuda:0')	NS Div Free Loss: tensor(1.6761e-05, device='cuda:0')	
Iteration: 22400	Total Loss: tensor(12.7294, device='cuda:0')	
IC Loss: tensor(0.0095, device='cuda:0')	u BC Loss: tensor(0.0052, device='cuda:0')	phi BC Los
s: tensor(2.1843e-08, device='cuda:0')	mu BC Loss: tensor(0.0006, device='cuda:0')	NS PDE Los
s: tensor(0.3167, device='cuda:0')	NS Div Free Loss: tensor(1.1152e-05, device='cuda:0')	
Iteration: 22600	Total Loss: tensor(8.3164, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.0051, device='cuda:0')	phi BC Los
s: tensor(5.1686e-06, device='cuda:0')	mu BC Loss: tensor(0.0006, device='cuda:0')	NS PDE Los
s: tensor(0.0434, device='cuda:0')	NS Div Free Loss: tensor(1.0720e-05, device='cuda:0')	
Iteration: 22800	Total Loss: tensor(10.2975, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0052, device='cuda:0')	phi BC Los
s: tensor(4.5661e-06, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.2441, device='cuda:0')	NS Div Free Loss: tensor(1.1494e-05, device='cuda:0')	
Iteration: 23000	Total Loss: tensor(10.5093, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(2.3883e-06, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.2665, device='cuda:0')	NS Div Free Loss: tensor(1.2470e-05, device='cuda:0')	
Iteration: 23200	Total Loss: tensor(10.5903, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0053, device='cuda:0')	phi BC Los
s: tensor(1.1041e-06, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.2751, device='cuda:0')	NS Div Free Loss: tensor(1.2723e-05, device='cuda:0')	
Iteration: 23400	Total Loss: tensor(10.0983, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0051, device='cuda:0')	phi BC Los
s: tensor(6.1111e-07, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.2275, device='cuda:0')	NS Div Free Loss: tensor(1.0066e-05, device='cuda:0')	
Iteration: 23600	Total Loss: tensor(9.2727, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0051, device='cuda:0')	phi BC Los
s: tensor(3.5393e-07, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.1464, device='cuda:0')	NS Div Free Loss: tensor(1.0251e-05, device='cuda:0')	
Iteration: 23800	Total Loss: tensor(8.9301, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0051, device='cuda:0')	phi BC Los
s: tensor(1.2394e-07, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los
s: tensor(0.1130, device='cuda:0')	NS Div Free Loss: tensor(1.0586e-05, device='cuda:0')	
Iteration: 24000	Total Loss: tensor(9.6672, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.0050, device='cuda:0')	phi BC Los
s: tensor(4.9916e-08, device='cuda:0')	mu BC Loss: tensor(0.0005, device='cuda:0')	NS PDE Los

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s: tensor(0.1883, device='cuda:0')    NS Div Free Loss: tensor(1.0713e-05, device='cuda:0')
Iteration: 24200    Total Loss: tensor(10.0836, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0048, device='cuda:0')    phi BC Los
s: tensor(6.9993e-09, device='cuda:0')    mu BC Loss: tensor(0.0004, device='cuda:0')    NS PDE Los
s: tensor(0.2061, device='cuda:0')    NS Div Free Loss: tensor(1.2552e-05, device='cuda:0')
Iteration: 24400    Total Loss: tensor(9.6592, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(3.7654e-06, device='cuda:0')    mu BC Loss: tensor(0.0004, device='cuda:0')    NS PDE Los
s: tensor(0.1866, device='cuda:0')    NS Div Free Loss: tensor(1.3732e-05, device='cuda:0')
Iteration: 24600    Total Loss: tensor(9.7191, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(3.0464e-06, device='cuda:0')    mu BC Loss: tensor(0.0004, device='cuda:0')    NS PDE Los
s: tensor(0.1945, device='cuda:0')    NS Div Free Loss: tensor(1.4967e-05, device='cuda:0')
Iteration: 24800    Total Loss: tensor(9.0258, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')    u BC Loss: tensor(0.0050, device='cuda:0')    phi BC Los
s: tensor(1.2978e-06, device='cuda:0')    mu BC Loss: tensor(0.0003, device='cuda:0')    NS PDE Los
s: tensor(0.1265, device='cuda:0')    NS Div Free Loss: tensor(1.5360e-05, device='cuda:0')
Iteration: 25000    Total Loss: tensor(8.6007, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')    u BC Loss: tensor(0.0051, device='cuda:0')    phi BC Los
s: tensor(5.1068e-07, device='cuda:0')    mu BC Loss: tensor(0.0003, device='cuda:0')    NS PDE Los
s: tensor(0.0858, device='cuda:0')    NS Div Free Loss: tensor(1.4464e-05, device='cuda:0')
Current Final Time: 0.2 Current Learning Rate: 0.001
Iteration: 200    Total Loss: tensor(27.4657, device='cuda:0')
IC Loss: tensor(0.0094, device='cuda:0')    u BC Loss: tensor(0.0701, device='cuda:0')    phi BC Los
s: tensor(1.2909e-10, device='cuda:0')    mu BC Loss: tensor(0.0164, device='cuda:0')    NS PDE Los
s: tensor(1.7614, device='cuda:0')    NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 400    Total Loss: tensor(23.0152, device='cuda:0')
IC Loss: tensor(0.0085, device='cuda:0')    u BC Loss: tensor(0.0767, device='cuda:0')    phi BC Los
s: tensor(0., device='cuda:0')    mu BC Loss: tensor(0.0212, device='cuda:0')    NS PDE Loss: tenso
r(1.4070, device='cuda:0')    NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 600    Total Loss: tensor(23.5870, device='cuda:0')
IC Loss: tensor(0.0085, device='cuda:0')    u BC Loss: tensor(0.0747, device='cuda:0')    phi BC Los
s: tensor(0., device='cuda:0')    mu BC Loss: tensor(0.0220, device='cuda:0')    NS PDE Loss: tenso
r(1.4594, device='cuda:0')    NS Div Free Loss: tensor(1.1157e-05, device='cuda:0')
Iteration: 800    Total Loss: tensor(16.6445, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0')    u BC Loss: tensor(0.0731, device='cuda:0')    phi BC Los
s: tensor(0., device='cuda:0')    mu BC Loss: tensor(0.0199, device='cuda:0')    NS PDE Loss: tenso
r(0.7782, device='cuda:0')    NS Div Free Loss: tensor(1.8068e-05, device='cuda:0')
Iteration: 1000    Total Loss: tensor(15.4883, device='cuda:0')
IC Loss: tensor(0.0088, device='cuda:0')    u BC Loss: tensor(0.0733, device='cuda:0')    phi BC Los
s: tensor(0., device='cuda:0')    mu BC Loss: tensor(0.0209, device='cuda:0')    NS PDE Loss: tenso
r(0.6227, device='cuda:0')    NS Div Free Loss: tensor(5.1428e-05, device='cuda:0')

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Iteration: 1200      Total Loss: tensor(13.9170, device='cuda:0')
IC Loss:  tensor(0.0083, device='cuda:0')      u BC Loss:  tensor(0.0735, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0228, device='cuda:0')      NS PDE Loss:  tenso
r(0.5115, device='cuda:0')      NS Div Free Loss:  tensor(5.7027e-05, device='cuda:0')
Iteration: 1400      Total Loss: tensor(15.4312, device='cuda:0')
IC Loss:  tensor(0.0084, device='cuda:0')      u BC Loss:  tensor(0.0739, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0238, device='cuda:0')      NS PDE Loss:  tenso
r(0.6549, device='cuda:0')      NS Div Free Loss:  tensor(5.9092e-05, device='cuda:0')
Iteration: 1600      Total Loss: tensor(23.9583, device='cuda:0')
IC Loss:  tensor(0.0082, device='cuda:0')      u BC Loss:  tensor(0.0750, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0241, device='cuda:0')      NS PDE Loss:  tenso
r(1.5252, device='cuda:0')      NS Div Free Loss:  tensor(6.4612e-05, device='cuda:0')
Iteration: 1800      Total Loss: tensor(16.1549, device='cuda:0')
IC Loss:  tensor(0.0082, device='cuda:0')      u BC Loss:  tensor(0.0740, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0238, device='cuda:0')      NS PDE Loss:  tenso
r(0.7444, device='cuda:0')      NS Div Free Loss:  tensor(7.3183e-05, device='cuda:0')
Iteration: 2000      Total Loss: tensor(34.1457, device='cuda:0')
IC Loss:  tensor(0.0083, device='cuda:0')      u BC Loss:  tensor(0.0748, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0240, device='cuda:0')      NS PDE Loss:  tenso
r(2.5389, device='cuda:0')      NS Div Free Loss:  tensor(5.6590e-05, device='cuda:0')
Iteration: 2200      Total Loss: tensor(29.2347, device='cuda:0')
IC Loss:  tensor(0.0083, device='cuda:0')      u BC Loss:  tensor(0.0759, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0241, device='cuda:0')      NS PDE Loss:  tenso
r(2.0474, device='cuda:0')      NS Div Free Loss:  tensor(4.2075e-05, device='cuda:0')
Iteration: 2400      Total Loss: tensor(19.6157, device='cuda:0')
IC Loss:  tensor(0.0086, device='cuda:0')      u BC Loss:  tensor(0.0753, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0246, device='cuda:0')      NS PDE Loss:  tenso
r(1.0543, device='cuda:0')      NS Div Free Loss:  tensor(3.3274e-05, device='cuda:0')
Iteration: 2600      Total Loss: tensor(13.1560, device='cuda:0')
IC Loss:  tensor(0.0081, device='cuda:0')      u BC Loss:  tensor(0.0752, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0235, device='cuda:0')      NS PDE Loss:  tenso
r(0.4578, device='cuda:0')      NS Div Free Loss:  tensor(3.5479e-05, device='cuda:0')
Iteration: 2800      Total Loss: tensor(12.7596, device='cuda:0')
IC Loss:  tensor(0.0081, device='cuda:0')      u BC Loss:  tensor(0.0753, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0231, device='cuda:0')      NS PDE Loss:  tenso
r(0.4186, device='cuda:0')      NS Div Free Loss:  tensor(2.7693e-05, device='cuda:0')
Iteration: 3000      Total Loss: tensor(13.8560, device='cuda:0')
IC Loss:  tensor(0.0081, device='cuda:0')      u BC Loss:  tensor(0.0759, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0225, device='cuda:0')      NS PDE Loss:  tenso
r(0.5269, device='cuda:0')      NS Div Free Loss:  tensor(2.3804e-05, device='cuda:0')
Iteration: 3200      Total Loss: tensor(12.4752, device='cuda:0')
IC Loss:  tensor(0.0081, device='cuda:0')      u BC Loss:  tensor(0.0757, device='cuda:0')      phi BC Los

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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0215, device='cuda:0')      NS PDE Loss: tensor(0.3872, device='cuda:0')      NS Div Free Loss: tensor(2.0540e-05, device='cuda:0')
Iteration: 3400      Total Loss: tensor(12.7228, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0760, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0204, device='cuda:0')      NS PDE Loss: tensor(0.4116, device='cuda:0')      NS Div Free Loss: tensor(1.6707e-05, device='cuda:0')
Iteration: 3600      Total Loss: tensor(21.2904, device='cuda:0')
IC Loss: tensor(0.0118, device='cuda:0')      u BC Loss: tensor(0.0761, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0199, device='cuda:0')      NS PDE Loss: tensor(0.8985, device='cuda:0')      NS Div Free Loss: tensor(1.7508e-05, device='cuda:0')
Iteration: 3800      Total Loss: tensor(19.7192, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0767, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0198, device='cuda:0')      NS PDE Loss: tensor(1.1165, device='cuda:0')      NS Div Free Loss: tensor(1.3144e-05, device='cuda:0')
Iteration: 4000      Total Loss: tensor(14.0907, device='cuda:0')
IC Loss: tensor(0.0092, device='cuda:0')      u BC Loss: tensor(0.0775, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0203, device='cuda:0')      NS PDE Loss: tensor(0.4448, device='cuda:0')      NS Div Free Loss: tensor(6.7942e-06, device='cuda:0')
Iteration: 4200      Total Loss: tensor(26.3926, device='cuda:0')
IC Loss: tensor(0.0104, device='cuda:0')      u BC Loss: tensor(0.0767, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0193, device='cuda:0')      NS PDE Loss: tensor(1.5557, device='cuda:0')      NS Div Free Loss: tensor(1.2615e-05, device='cuda:0')
Iteration: 4400      Total Loss: tensor(11.2105, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0770, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0185, device='cuda:0')      NS PDE Loss: tensor(0.2654, device='cuda:0')      NS Div Free Loss: tensor(1.3858e-05, device='cuda:0')
Iteration: 4600      Total Loss: tensor(10.9489, device='cuda:0')
IC Loss: tensor(0.0082, device='cuda:0')      u BC Loss: tensor(0.0770, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0175, device='cuda:0')      NS PDE Loss: tensor(0.2244, device='cuda:0')      NS Div Free Loss: tensor(1.5658e-05, device='cuda:0')
Iteration: 4800      Total Loss: tensor(12.0138, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0770, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0173, device='cuda:0')      NS PDE Loss: tensor(0.3414, device='cuda:0')      NS Div Free Loss: tensor(1.4493e-05, device='cuda:0')
Iteration: 5000      Total Loss: tensor(13.2939, device='cuda:0')
IC Loss: tensor(0.0087, device='cuda:0')      u BC Loss: tensor(0.0774, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0172, device='cuda:0')      NS PDE Loss: tensor(0.4128, device='cuda:0')      NS Div Free Loss: tensor(1.0349e-05, device='cuda:0')
Iteration: 5200      Total Loss: tensor(24.9604, device='cuda:0')
IC Loss: tensor(0.0090, device='cuda:0')      u BC Loss: tensor(0.0784, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0172, device='cuda:0')      NS PDE Loss: tensor(1.5442, device='cuda:0')      NS Div Free Loss: tensor(1.1049e-05, device='cuda:0')

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Iteration: 5400 Total Loss: tensor(14.1968, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0') u BC Loss: tensor(0.0780, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0166, device='cuda:0') NS PDE Loss: tensor(0.5670, device='cuda:0')
NS Div Free Loss: tensor(1.4225e-05, device='cuda:0')

Iteration: 5600 Total Loss: tensor(22.4170, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0') u BC Loss: tensor(0.0769, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0166, device='cuda:0') NS PDE Loss: tensor(1.3860, device='cuda:0')
NS Div Free Loss: tensor(1.3264e-05, device='cuda:0')

Iteration: 5800 Total Loss: tensor(16.5843, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0165, device='cuda:0') NS PDE Loss: tensor(0.8090, device='cuda:0')
NS Div Free Loss: tensor(1.0413e-05, device='cuda:0')

Iteration: 6000 Total Loss: tensor(20.4925, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0') u BC Loss: tensor(0.0773, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0163, device='cuda:0') NS PDE Loss: tensor(1.1968, device='cuda:0')
NS Div Free Loss: tensor(9.2780e-06, device='cuda:0')

Iteration: 6200 Total Loss: tensor(12.1818, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0') u BC Loss: tensor(0.0778, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0157, device='cuda:0') NS PDE Loss: tensor(0.3597, device='cuda:0')
NS Div Free Loss: tensor(1.2564e-05, device='cuda:0')

Iteration: 6400 Total Loss: tensor(12.5250, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.0778, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0157, device='cuda:0') NS PDE Loss: tensor(0.4036, device='cuda:0')
NS Div Free Loss: tensor(1.3891e-05, device='cuda:0')

Iteration: 6600 Total Loss: tensor(12.1869, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.0779, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0155, device='cuda:0') NS PDE Loss: tensor(0.3710, device='cuda:0')
NS Div Free Loss: tensor(1.2361e-05, device='cuda:0')

Iteration: 6800 Total Loss: tensor(13.9078, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0') u BC Loss: tensor(0.0780, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0156, device='cuda:0') NS PDE Loss: tensor(0.5065, device='cuda:0')
NS Div Free Loss: tensor(1.1012e-05, device='cuda:0')

Iteration: 7000 Total Loss: tensor(15.8949, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0160, device='cuda:0') NS PDE Loss: tensor(0.7430, device='cuda:0')
NS Div Free Loss: tensor(9.9082e-06, device='cuda:0')

Iteration: 7200 Total Loss: tensor(13.1536, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0155, device='cuda:0') NS PDE Loss: tensor(0.4278, device='cuda:0')
NS Div Free Loss: tensor(8.5197e-06, device='cuda:0')

Iteration: 7400 Total Loss: tensor(12.2356, device='cuda:0')
IC Loss: tensor(0.0082, device='cuda:0') u BC Loss: tensor(0.0781, device='cuda:0') phi BC Loss:


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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0159, device='cuda:0')      NS PDE Loss: tensor(0.3519, device='cuda:0')      NS Div Free Loss: tensor(7.9082e-06, device='cuda:0')
Iteration: 7600      Total Loss: tensor(12.7208, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0771, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0156, device='cuda:0')      NS PDE Loss: tensor(0.4195, device='cuda:0')      NS Div Free Loss: tensor(1.4646e-05, device='cuda:0')
Iteration: 7800      Total Loss: tensor(21.9494, device='cuda:0')
IC Loss: tensor(0.0087, device='cuda:0')      u BC Loss: tensor(0.0760, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0152, device='cuda:0')      NS PDE Loss: tensor(1.2839, device='cuda:0')      NS Div Free Loss: tensor(1.2435e-05, device='cuda:0')
Iteration: 8000      Total Loss: tensor(45.8311, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0779, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0172, device='cuda:0')      NS PDE Loss: tensor(3.7330, device='cuda:0')      NS Div Free Loss: tensor(8.4851e-06, device='cuda:0')
Iteration: 8200      Total Loss: tensor(32.0088, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0780, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0173, device='cuda:0')      NS PDE Loss: tensor(2.3517, device='cuda:0')      NS Div Free Loss: tensor(7.1711e-06, device='cuda:0')
Iteration: 8400      Total Loss: tensor(27.2610, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0781, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0175, device='cuda:0')      NS PDE Loss: tensor(1.8719, device='cuda:0')      NS Div Free Loss: tensor(6.5345e-06, device='cuda:0')
Iteration: 8600      Total Loss: tensor(12.8158, device='cuda:0')
IC Loss: tensor(0.0089, device='cuda:0')      u BC Loss: tensor(0.0783, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0175, device='cuda:0')      NS PDE Loss: tensor(0.3426, device='cuda:0')      NS Div Free Loss: tensor(6.1407e-06, device='cuda:0')
Iteration: 8800      Total Loss: tensor(13.1389, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0775, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0168, device='cuda:0')      NS PDE Loss: tensor(0.4665, device='cuda:0')      NS Div Free Loss: tensor(1.2837e-05, device='cuda:0')
Iteration: 9000      Total Loss: tensor(13.6182, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0')      u BC Loss: tensor(0.0773, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0157, device='cuda:0')      NS PDE Loss: tensor(0.4717, device='cuda:0')      NS Div Free Loss: tensor(1.2429e-05, device='cuda:0')
Iteration: 9200      Total Loss: tensor(12.5147, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0778, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0176, device='cuda:0')      NS PDE Loss: tensor(0.4078, device='cuda:0')      NS Div Free Loss: tensor(9.4551e-06, device='cuda:0')
Iteration: 9400      Total Loss: tensor(11.0544, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0778, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0180, device='cuda:0')      NS PDE Loss: tensor(0.2540, device='cuda:0')      NS Div Free Loss: tensor(7.1687e-06, device='cuda:0')

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Iteration: 9600      Total Loss: tensor(13.0093, device='cuda:0')
IC Loss:  tensor(0.0082, device='cuda:0')      u BC Loss:  tensor(0.0777, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0181, device='cuda:0')      NS PDE Loss:  tenso
r(0.4358, device='cuda:0')      NS Div Free Loss:  tensor(6.5232e-06, device='cuda:0')
Iteration: 9800      Total Loss: tensor(12.5000, device='cuda:0')
IC Loss:  tensor(0.0081, device='cuda:0')      u BC Loss:  tensor(0.0776, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0182, device='cuda:0')      NS PDE Loss:  tenso
r(0.3922, device='cuda:0')      NS Div Free Loss:  tensor(6.2415e-06, device='cuda:0')
Iteration: 10000     Total Loss: tensor(12.6685, device='cuda:0')
IC Loss:  tensor(0.0079, device='cuda:0')      u BC Loss:  tensor(0.0784, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0181, device='cuda:0')      NS PDE Loss:  tenso
r(0.4243, device='cuda:0')      NS Div Free Loss:  tensor(6.5544e-06, device='cuda:0')
Iteration: 10200     Total Loss: tensor(12.9908, device='cuda:0')
IC Loss:  tensor(0.0079, device='cuda:0')      u BC Loss:  tensor(0.0774, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0180, device='cuda:0')      NS PDE Loss:  tenso
r(0.4569, device='cuda:0')      NS Div Free Loss:  tensor(1.4715e-05, device='cuda:0')
Iteration: 10400     Total Loss: tensor(10.6411, device='cuda:0')
IC Loss:  tensor(0.0080, device='cuda:0')      u BC Loss:  tensor(0.0783, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0180, device='cuda:0')      NS PDE Loss:  tenso
r(0.2190, device='cuda:0')      NS Div Free Loss:  tensor(1.7237e-05, device='cuda:0')
Iteration: 10600     Total Loss: tensor(17.8146, device='cuda:0')
IC Loss:  tensor(0.0083, device='cuda:0')      u BC Loss:  tensor(0.0775, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0171, device='cuda:0')      NS PDE Loss:  tenso
r(0.9019, device='cuda:0')      NS Div Free Loss:  tensor(1.1004e-05, device='cuda:0')
Iteration: 10800     Total Loss: tensor(29.1688, device='cuda:0')
IC Loss:  tensor(0.0079, device='cuda:0')      u BC Loss:  tensor(0.0766, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0186, device='cuda:0')      NS PDE Loss:  tenso
r(2.0758, device='cuda:0')      NS Div Free Loss:  tensor(1.4035e-05, device='cuda:0')
Iteration: 11000     Total Loss: tensor(11.9590, device='cuda:0')
IC Loss:  tensor(0.0079, device='cuda:0')      u BC Loss:  tensor(0.0783, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0184, device='cuda:0')      NS PDE Loss:  tenso
r(0.3534, device='cuda:0')      NS Div Free Loss:  tensor(1.6327e-05, device='cuda:0')
Iteration: 11200     Total Loss: tensor(12.6374, device='cuda:0')
IC Loss:  tensor(0.0087, device='cuda:0')      u BC Loss:  tensor(0.0774, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0183, device='cuda:0')      NS PDE Loss:  tenso
r(0.3498, device='cuda:0')      NS Div Free Loss:  tensor(9.2138e-06, device='cuda:0')
Iteration: 11400     Total Loss: tensor(26.7964, device='cuda:0')
IC Loss:  tensor(0.0079, device='cuda:0')      u BC Loss:  tensor(0.0778, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.0195, device='cuda:0')      NS PDE Loss:  tenso
r(1.8394, device='cuda:0')      NS Div Free Loss:  tensor(1.1523e-05, device='cuda:0')
Iteration: 11600     Total Loss: tensor(12.7523, device='cuda:0')
IC Loss:  tensor(0.0082, device='cuda:0')      u BC Loss:  tensor(0.0775, device='cuda:0')      phi BC Los

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s: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0192, device='cuda:0') NS PDE Loss: tensor(0.4037, device='cuda:0') NS Div Free Loss: tensor(1.2220e-05, device='cuda:0')

Iteration: 11800 Total Loss: tensor(18.8761, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0195, device='cuda:0') NS PDE Loss: tensor(1.0485, device='cuda:0') NS Div Free Loss: tensor(9.1647e-06, device='cuda:0')

Iteration: 12000 Total Loss: tensor(12.3852, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0780, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0196, device='cuda:0') NS PDE Loss: tensor(0.4008, device='cuda:0') NS Div Free Loss: tensor(7.8820e-06, device='cuda:0')

Iteration: 12200 Total Loss: tensor(10.8556, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0193, device='cuda:0') NS PDE Loss: tensor(0.2485, device='cuda:0') NS Div Free Loss: tensor(1.3112e-05, device='cuda:0')

Iteration: 12400 Total Loss: tensor(12.4664, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0772, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0191, device='cuda:0') NS PDE Loss: tensor(0.4086, device='cuda:0') NS Div Free Loss: tensor(1.4842e-05, device='cuda:0')

Iteration: 12600 Total Loss: tensor(10.0304, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0194, device='cuda:0') NS PDE Loss: tensor(0.1640, device='cuda:0') NS Div Free Loss: tensor(1.3406e-05, device='cuda:0')

Iteration: 12800 Total Loss: tensor(10.5646, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0773, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0194, device='cuda:0') NS PDE Loss: tensor(0.2177, device='cuda:0') NS Div Free Loss: tensor(1.4128e-05, device='cuda:0')

Iteration: 13000 Total Loss: tensor(10.4414, device='cuda:0')

IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0773, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0194, device='cuda:0') NS PDE Loss: tensor(0.2058, device='cuda:0') NS Div Free Loss: tensor(1.4243e-05, device='cuda:0')

Iteration: 13200 Total Loss: tensor(10.9359, device='cuda:0')

IC Loss: tensor(0.0086, device='cuda:0') u BC Loss: tensor(0.0762, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0192, device='cuda:0') NS PDE Loss: tensor(0.1856, device='cuda:0') NS Div Free Loss: tensor(1.1725e-05, device='cuda:0')

Iteration: 13400 Total Loss: tensor(25.7169, device='cuda:0')

IC Loss: tensor(0.0089, device='cuda:0') u BC Loss: tensor(0.0760, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0206, device='cuda:0') NS PDE Loss: tensor(1.6372, device='cuda:0') NS Div Free Loss: tensor(8.4079e-06, device='cuda:0')

Iteration: 13600 Total Loss: tensor(15.8804, device='cuda:0')

IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0778, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(0.7533, device='cuda:0') NS Div Free Loss: tensor(1.1218e-05, device='cuda:0')

Iteration: 13800 Total Loss: tensor(24.1029, device='cuda:0')
 IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.0766, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(1.5588, device='cuda:0')
 NS Div Free Loss: tensor(1.2140e-05, device='cuda:0')
 Iteration: 14000 Total Loss: tensor(11.2444, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0772, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0217, device='cuda:0') NS PDE Loss: tensor(0.2901, device='cuda:0')
 NS Div Free Loss: tensor(1.5623e-05, device='cuda:0')
 Iteration: 14200 Total Loss: tensor(11.0777, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0222, device='cuda:0') NS PDE Loss: tensor(0.2738, device='cuda:0')
 NS Div Free Loss: tensor(1.2131e-05, device='cuda:0')
 Iteration: 14400 Total Loss: tensor(10.9912, device='cuda:0')
 IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0219, device='cuda:0') NS PDE Loss: tensor(0.2639, device='cuda:0')
 NS Div Free Loss: tensor(1.0967e-05, device='cuda:0')
 Iteration: 14600 Total Loss: tensor(10.4835, device='cuda:0')
 IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0217, device='cuda:0') NS PDE Loss: tensor(0.2135, device='cuda:0')
 NS Div Free Loss: tensor(1.0954e-05, device='cuda:0')
 Iteration: 14800 Total Loss: tensor(10.2217, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0217, device='cuda:0') NS PDE Loss: tensor(0.1888, device='cuda:0')
 NS Div Free Loss: tensor(1.0679e-05, device='cuda:0')
 Iteration: 15000 Total Loss: tensor(10.8951, device='cuda:0')
 IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(0.2516, device='cuda:0')
 NS Div Free Loss: tensor(1.0534e-05, device='cuda:0')
 Iteration: 15200 Total Loss: tensor(10.8832, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(0.2546, device='cuda:0')
 NS Div Free Loss: tensor(1.0261e-05, device='cuda:0')
 Iteration: 15400 Total Loss: tensor(10.5067, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(0.2164, device='cuda:0')
 NS Div Free Loss: tensor(9.8311e-06, device='cuda:0')
 Iteration: 15600 Total Loss: tensor(11.0809, device='cuda:0')
 IC Loss: tensor(0.0079, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0216, device='cuda:0') NS PDE Loss: tensor(0.2679, device='cuda:0')
 NS Div Free Loss: tensor(9.7004e-06, device='cuda:0')
 Iteration: 15800 Total Loss: tensor(10.1496, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0774, device='cuda:0') phi BC Loss:

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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0216, device='cuda:0')      NS PDE Loss: tensor(0.1815, device='cuda:0')      NS Div Free Loss: tensor(1.0253e-05, device='cuda:0')
Iteration: 16000      Total Loss: tensor(9.7691, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.0775, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0216, device='cuda:0')      NS PDE Loss: tensor(0.1384, device='cuda:0')      NS Div Free Loss: tensor(1.0825e-05, device='cuda:0')
Iteration: 16200      Total Loss: tensor(11.2618, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.0773, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0227, device='cuda:0')      NS PDE Loss: tensor(0.2891, device='cuda:0')      NS Div Free Loss: tensor(9.2908e-06, device='cuda:0')
Iteration: 16400      Total Loss: tensor(19.5289, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')      u BC Loss: tensor(0.0789, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0229, device='cuda:0')      NS PDE Loss: tensor(1.1035, device='cuda:0')      NS Div Free Loss: tensor(7.4585e-06, device='cuda:0')
Iteration: 16600      Total Loss: tensor(11.2310, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0234, device='cuda:0')      NS PDE Loss: tensor(0.2917, device='cuda:0')      NS Div Free Loss: tensor(8.4267e-06, device='cuda:0')
Iteration: 16800      Total Loss: tensor(10.4807, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0230, device='cuda:0')      NS PDE Loss: tensor(0.2162, device='cuda:0')      NS Div Free Loss: tensor(7.8264e-06, device='cuda:0')
Iteration: 17000      Total Loss: tensor(11.1556, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0774, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0229, device='cuda:0')      NS PDE Loss: tensor(0.2812, device='cuda:0')      NS Div Free Loss: tensor(7.7357e-06, device='cuda:0')
Iteration: 17200      Total Loss: tensor(11.0929, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0227, device='cuda:0')      NS PDE Loss: tensor(0.2762, device='cuda:0')      NS Div Free Loss: tensor(7.0971e-06, device='cuda:0')
Iteration: 17400      Total Loss: tensor(10.2777, device='cuda:0')
IC Loss: tensor(0.0082, device='cuda:0')      u BC Loss: tensor(0.0774, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0230, device='cuda:0')      NS PDE Loss: tensor(0.1569, device='cuda:0')      NS Div Free Loss: tensor(6.8955e-06, device='cuda:0')
Iteration: 17600      Total Loss: tensor(11.7472, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.0769, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0244, device='cuda:0')      NS PDE Loss: tensor(0.3158, device='cuda:0')      NS Div Free Loss: tensor(6.9744e-06, device='cuda:0')
Iteration: 17800      Total Loss: tensor(13.5321, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.0773, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0250, device='cuda:0')      NS PDE Loss: tensor(0.5168, device='cuda:0')      NS Div Free Loss: tensor(7.1021e-06, device='cuda:0')

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Iteration: 18000 Total Loss: tensor(9.9736, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0772, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0250, device='cuda:0') NS PDE Loss: tensor(0.1665, device='cuda:0')
 NS Div Free Loss: tensor(7.2525e-06, device='cuda:0')
 Iteration: 18200 Total Loss: tensor(12.6014, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0772, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0250, device='cuda:0') NS PDE Loss: tensor(0.4294, device='cuda:0')
 NS Div Free Loss: tensor(7.1005e-06, device='cuda:0')
 Iteration: 18400 Total Loss: tensor(10.6388, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0247, device='cuda:0') NS PDE Loss: tensor(0.2346, device='cuda:0')
 NS Div Free Loss: tensor(7.3714e-06, device='cuda:0')
 Iteration: 18600 Total Loss: tensor(10.3730, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0245, device='cuda:0') NS PDE Loss: tensor(0.2073, device='cuda:0')
 NS Div Free Loss: tensor(7.1985e-06, device='cuda:0')
 Iteration: 18800 Total Loss: tensor(10.4701, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0244, device='cuda:0') NS PDE Loss: tensor(0.2176, device='cuda:0')
 NS Div Free Loss: tensor(7.1480e-06, device='cuda:0')
 Iteration: 19000 Total Loss: tensor(10.5354, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0244, device='cuda:0') NS PDE Loss: tensor(0.2217, device='cuda:0')
 NS Div Free Loss: tensor(7.1163e-06, device='cuda:0')
 Iteration: 19200 Total Loss: tensor(10.6419, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0244, device='cuda:0') NS PDE Loss: tensor(0.2316, device='cuda:0')
 NS Div Free Loss: tensor(7.1037e-06, device='cuda:0')
 Iteration: 19400 Total Loss: tensor(10.2797, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0245, device='cuda:0') NS PDE Loss: tensor(0.1954, device='cuda:0')
 NS Div Free Loss: tensor(7.0985e-06, device='cuda:0')
 Iteration: 19600 Total Loss: tensor(10.2380, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0246, device='cuda:0') NS PDE Loss: tensor(0.1940, device='cuda:0')
 NS Div Free Loss: tensor(7.1086e-06, device='cuda:0')
 Iteration: 19800 Total Loss: tensor(10.2072, device='cuda:0')
 IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.0247, device='cuda:0') NS PDE Loss: tensor(0.1913, device='cuda:0')
 NS Div Free Loss: tensor(7.1527e-06, device='cuda:0')
 Iteration: 20000 Total Loss: tensor(11.6138, device='cuda:0')
 IC Loss: tensor(0.0082, device='cuda:0') u BC Loss: tensor(0.0771, device='cuda:0') phi BC Loss:

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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0251, device='cuda:0')      NS PDE Loss: tensor(0.2944, device='cuda:0')      NS Div Free Loss: tensor(7.7662e-06, device='cuda:0')
Iteration: 20200      Total Loss: tensor(10.6354, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0778, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0269, device='cuda:0')      NS PDE Loss: tensor(0.2303, device='cuda:0')      NS Div Free Loss: tensor(7.3385e-06, device='cuda:0')
Iteration: 20400      Total Loss: tensor(11.1606, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0780, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0264, device='cuda:0')      NS PDE Loss: tensor(0.2867, device='cuda:0')      NS Div Free Loss: tensor(7.1716e-06, device='cuda:0')
Iteration: 20600      Total Loss: tensor(11.0790, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0780, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0261, device='cuda:0')      NS PDE Loss: tensor(0.2784, device='cuda:0')      NS Div Free Loss: tensor(7.2080e-06, device='cuda:0')
Iteration: 20800      Total Loss: tensor(15.2819, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0769, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0260, device='cuda:0')      NS PDE Loss: tensor(0.6993, device='cuda:0')      NS Div Free Loss: tensor(7.1656e-06, device='cuda:0')
Iteration: 21000      Total Loss: tensor(12.6069, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0778, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0264, device='cuda:0')      NS PDE Loss: tensor(0.4298, device='cuda:0')      NS Div Free Loss: tensor(7.7494e-06, device='cuda:0')
Iteration: 21200      Total Loss: tensor(9.8743, device='cuda:0')
IC Loss: tensor(0.0083, device='cuda:0')      u BC Loss: tensor(0.0777, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0265, device='cuda:0')      NS PDE Loss: tensor(0.1058, device='cuda:0')      NS Div Free Loss: tensor(8.2205e-06, device='cuda:0')
Iteration: 21400      Total Loss: tensor(10.5855, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0293, device='cuda:0')      NS PDE Loss: tensor(0.2301, device='cuda:0')      NS Div Free Loss: tensor(7.3484e-06, device='cuda:0')
Iteration: 21600      Total Loss: tensor(12.5763, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0774, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0290, device='cuda:0')      NS PDE Loss: tensor(0.4293, device='cuda:0')      NS Div Free Loss: tensor(7.3673e-06, device='cuda:0')
Iteration: 21800      Total Loss: tensor(27.1576, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.0792, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0294, device='cuda:0')      NS PDE Loss: tensor(1.8702, device='cuda:0')      NS Div Free Loss: tensor(9.8799e-06, device='cuda:0')
Iteration: 22000      Total Loss: tensor(38.9271, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')      u BC Loss: tensor(0.0783, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0307, device='cuda:0')      NS PDE Loss: tensor(3.0639, device='cuda:0')      NS Div Free Loss: tensor(7.3968e-06, device='cuda:0')

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Iteration: 22200 Total Loss: tensor(33.4565, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0784, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0314, device='cuda:0') NS PDE Loss: tensor(2.5140, device='cuda:0')
NS Div Free Loss: tensor(8.1152e-06, device='cuda:0')
Iteration: 22400 Total Loss: tensor(10.4916, device='cuda:0')
IC Loss: tensor(0.0086, device='cuda:0') u BC Loss: tensor(0.0775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0313, device='cuda:0') NS PDE Loss: tensor(0.1327, device='cuda:0')
NS Div Free Loss: tensor(8.5493e-06, device='cuda:0')
Iteration: 22600 Total Loss: tensor(11.2492, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0314, device='cuda:0') NS PDE Loss: tensor(0.2955, device='cuda:0')
NS Div Free Loss: tensor(7.3567e-06, device='cuda:0')
Iteration: 22800 Total Loss: tensor(10.1480, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0303, device='cuda:0') NS PDE Loss: tensor(0.1868, device='cuda:0')
NS Div Free Loss: tensor(7.3875e-06, device='cuda:0')
Iteration: 23000 Total Loss: tensor(10.7918, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0') u BC Loss: tensor(0.0779, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0297, device='cuda:0') NS PDE Loss: tensor(0.2518, device='cuda:0')
NS Div Free Loss: tensor(7.5353e-06, device='cuda:0')
Iteration: 23200 Total Loss: tensor(19.9425, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0295, device='cuda:0') NS PDE Loss: tensor(1.1630, device='cuda:0')
NS Div Free Loss: tensor(8.2348e-06, device='cuda:0')
Iteration: 23400 Total Loss: tensor(12.5479, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0293, device='cuda:0') NS PDE Loss: tensor(0.4262, device='cuda:0')
NS Div Free Loss: tensor(1.0096e-05, device='cuda:0')
Iteration: 23600 Total Loss: tensor(10.5357, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0776, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0295, device='cuda:0') NS PDE Loss: tensor(0.2250, device='cuda:0')
NS Div Free Loss: tensor(1.2174e-05, device='cuda:0')
Iteration: 23800 Total Loss: tensor(17.2577, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0298, device='cuda:0') NS PDE Loss: tensor(0.8950, device='cuda:0')
NS Div Free Loss: tensor(1.4690e-05, device='cuda:0')
Iteration: 24000 Total Loss: tensor(11.0723, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0777, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0300, device='cuda:0') NS PDE Loss: tensor(0.2776, device='cuda:0')
NS Div Free Loss: tensor(1.6643e-05, device='cuda:0')
Iteration: 24200 Total Loss: tensor(10.7751, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0') u BC Loss: tensor(0.0770, device='cuda:0') phi BC Loss:


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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.0313, device='cuda:0')      NS PDE Loss: tensor(0.2439, device='cuda:0')
NS Div Free Loss: tensor(1.0381e-05, device='cuda:0')
Iteration: 24400      Total Loss: tensor(11.3541, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0312, device='cuda:0')      NS PDE Loss: tensor(0.2939, device='cuda:0')
NS Div Free Loss: tensor(8.2867e-06, device='cuda:0')
Iteration: 24600      Total Loss: tensor(11.1845, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')      u BC Loss: tensor(0.0776, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0305, device='cuda:0')      NS PDE Loss: tensor(0.2922, device='cuda:0')
NS Div Free Loss: tensor(9.8536e-06, device='cuda:0')
Iteration: 24800      Total Loss: tensor(12.8505, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')      u BC Loss: tensor(0.0777, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0304, device='cuda:0')      NS PDE Loss: tensor(0.4573, device='cuda:0')
NS Div Free Loss: tensor(1.1729e-05, device='cuda:0')
Iteration: 25000      Total Loss: tensor(10.5839, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.0769, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.0316, device='cuda:0')      NS PDE Loss: tensor(0.2276, device='cuda:0')
NS Div Free Loss: tensor(1.0232e-05, device='cuda:0')
Current Final Time: 0.4 Current Learning Rate: 0.001
Iteration: 200      Total Loss: tensor(27.3877, device='cuda:0')
IC Loss: tensor(0.0113, device='cuda:0')      u BC Loss: tensor(0.2605, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.2525, device='cuda:0')      NS PDE Loss: tensor(1.3513, device='cuda:0')
NS Div Free Loss: tensor(0.0005, device='cuda:0')
Iteration: 400      Total Loss: tensor(26.1164, device='cuda:0')
IC Loss: tensor(0.0095, device='cuda:0')      u BC Loss: tensor(0.2689, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.2809, device='cuda:0')      NS PDE Loss: tensor(1.3875, device='cuda:0')
NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 600      Total Loss: tensor(22.0698, device='cuda:0')
IC Loss: tensor(0.0089, device='cuda:0')      u BC Loss: tensor(0.2744, device='cuda:0')      phi BC Loss: tensor(1.8809e-12, device='cuda:0')
mu BC Loss: tensor(0.2905, device='cuda:0')      NS PDE Loss: tensor(1.0363, device='cuda:0')
NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 800      Total Loss: tensor(20.5024, device='cuda:0')
IC Loss: tensor(0.0086, device='cuda:0')      u BC Loss: tensor(0.2790, device='cuda:0')      phi BC Loss: tensor(4.7565e-12, device='cuda:0')
mu BC Loss: tensor(0.2970, device='cuda:0')      NS PDE Loss: tensor(0.9058, device='cuda:0')
NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 1000      Total Loss: tensor(19.5277, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0')      u BC Loss: tensor(0.2825, device='cuda:0')      phi BC Loss: tensor(1.0338e-11, device='cuda:0')
mu BC Loss: tensor(0.3027, device='cuda:0')      NS PDE Loss: tensor(0.8213, device='cuda:0')
NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 1200      Total Loss: tensor(17.8773, device='cuda:0')
IC Loss: tensor(0.0083, device='cuda:0')      u BC Loss: tensor(0.2855, device='cuda:0')      phi BC Loss: tensor(2.6668e-11, device='cuda:0')
mu BC Loss: tensor(0.3081, device='cuda:0')      NS PDE Loss:

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s: tensor(0.6608, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')	
Iteration: 1400	Total Loss: tensor(17.1167, device='cuda:0')	
IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.2881, device='cuda:0')	phi BC Los
s: tensor(4.9379e-11, device='cuda:0')	mu BC Loss: tensor(0.3130, device='cuda:0')	NS PDE Los
s: tensor(0.5909, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 1600	Total Loss: tensor(18.6694, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.2901, device='cuda:0')	phi BC Los
s: tensor(1.1831e-10, device='cuda:0')	mu BC Loss: tensor(0.3163, device='cuda:0')	NS PDE Los
s: tensor(0.7522, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 1800	Total Loss: tensor(24.5077, device='cuda:0')	
IC Loss: tensor(0.0081, device='cuda:0')	u BC Loss: tensor(0.2889, device='cuda:0')	phi BC Los
s: tensor(1.6837e-10, device='cuda:0')	mu BC Loss: tensor(0.3202, device='cuda:0')	NS PDE Los
s: tensor(1.3332, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 2000	Total Loss: tensor(78.5285, device='cuda:0')	
IC Loss: tensor(0.0086, device='cuda:0')	u BC Loss: tensor(0.2917, device='cuda:0')	phi BC Los
s: tensor(2.4540e-10, device='cuda:0')	mu BC Loss: tensor(0.3207, device='cuda:0')	NS PDE Los
s: tensor(6.6861, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 2200	Total Loss: tensor(32.1634, device='cuda:0')	
IC Loss: tensor(0.0080, device='cuda:0')	u BC Loss: tensor(0.2898, device='cuda:0')	phi BC Los
s: tensor(5.3573e-10, device='cuda:0')	mu BC Loss: tensor(0.3210, device='cuda:0')	NS PDE Los
s: tensor(2.1073, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 2400	Total Loss: tensor(16.7299, device='cuda:0')	
IC Loss: tensor(0.0080, device='cuda:0')	u BC Loss: tensor(0.2934, device='cuda:0')	phi BC Los
s: tensor(7.9015e-10, device='cuda:0')	mu BC Loss: tensor(0.3216, device='cuda:0')	NS PDE Los
s: tensor(0.5679, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 2600	Total Loss: tensor(16.8695, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.2946, device='cuda:0')	phi BC Los
s: tensor(1.4263e-09, device='cuda:0')	mu BC Loss: tensor(0.3234, device='cuda:0')	NS PDE Los
s: tensor(0.5841, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 2800	Total Loss: tensor(15.7492, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.2956, device='cuda:0')	phi BC Los
s: tensor(2.6724e-09, device='cuda:0')	mu BC Loss: tensor(0.3248, device='cuda:0')	NS PDE Los
s: tensor(0.4738, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 3000	Total Loss: tensor(15.7283, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.2965, device='cuda:0')	phi BC Los
s: tensor(5.1152e-09, device='cuda:0')	mu BC Loss: tensor(0.3257, device='cuda:0')	NS PDE Los
s: tensor(0.4746, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')	
Iteration: 3200	Total Loss: tensor(14.9876, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.2974, device='cuda:0')	phi BC Los
s: tensor(9.6526e-09, device='cuda:0')	mu BC Loss: tensor(0.3260, device='cuda:0')	NS PDE Los
s: tensor(0.4026, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 3400	Total Loss: tensor(15.0713, device='cuda:0')	

IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.2980, device='cuda:0')	phi BC Loss: tensor(1.9833e-08, device='cuda:0')
s: tensor(1.9833e-08, device='cuda:0')	mu BC Loss: tensor(0.3261, device='cuda:0')	NS PDE Loss: tensor(0.4129, device='cuda:0')
s: tensor(0.4129, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 3600	Total Loss: tensor(15.7986, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.2984, device='cuda:0')	phi BC Loss: tensor(4.0466e-08, device='cuda:0')
s: tensor(4.0466e-08, device='cuda:0')	mu BC Loss: tensor(0.3263, device='cuda:0')	NS PDE Loss: tensor(0.4876, device='cuda:0')
s: tensor(0.4876, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 3800	Total Loss: tensor(14.9275, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.2992, device='cuda:0')	phi BC Loss: tensor(9.7656e-08, device='cuda:0')
s: tensor(9.7656e-08, device='cuda:0')	mu BC Loss: tensor(0.3262, device='cuda:0')	NS PDE Loss: tensor(0.4029, device='cuda:0')
s: tensor(0.4029, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 4000	Total Loss: tensor(15.5397, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.3002, device='cuda:0')	phi BC Loss: tensor(3.3933e-07, device='cuda:0')
s: tensor(3.3933e-07, device='cuda:0')	mu BC Loss: tensor(0.3250, device='cuda:0')	NS PDE Loss: tensor(0.4619, device='cuda:0')
s: tensor(0.4619, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 4200	Total Loss: tensor(16.3388, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.3008, device='cuda:0')	phi BC Loss: tensor(8.6297e-06, device='cuda:0')
s: tensor(8.6297e-06, device='cuda:0')	mu BC Loss: tensor(0.3235, device='cuda:0')	NS PDE Loss: tensor(0.5285, device='cuda:0')
s: tensor(0.5285, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 4400	Total Loss: tensor(14.7506, device='cuda:0')	
IC Loss: tensor(0.0078, device='cuda:0')	u BC Loss: tensor(0.3017, device='cuda:0')	phi BC Loss: tensor(0.0003, device='cuda:0')
s: tensor(0.0003, device='cuda:0')	mu BC Loss: tensor(0.3223, device='cuda:0')	NS PDE Loss: tensor(0.3874, device='cuda:0')
s: tensor(0.3874, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 4600	Total Loss: tensor(14.9714, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.3024, device='cuda:0')	phi BC Loss: tensor(0.0006, device='cuda:0')
s: tensor(0.0006, device='cuda:0')	mu BC Loss: tensor(0.3215, device='cuda:0')	NS PDE Loss: tensor(0.4150, device='cuda:0')
s: tensor(0.4150, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 4800	Total Loss: tensor(14.5518, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.3026, device='cuda:0')	phi BC Loss: tensor(0.0005, device='cuda:0')
s: tensor(0.0005, device='cuda:0')	mu BC Loss: tensor(0.3205, device='cuda:0')	NS PDE Loss: tensor(0.3754, device='cuda:0')
s: tensor(0.3754, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 5000	Total Loss: tensor(14.1706, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.3018, device='cuda:0')	phi BC Loss: tensor(0.0004, device='cuda:0')
s: tensor(0.0004, device='cuda:0')	mu BC Loss: tensor(0.3198, device='cuda:0')	NS PDE Loss: tensor(0.3391, device='cuda:0')
s: tensor(0.3391, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 5200	Total Loss: tensor(17.9123, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.2988, device='cuda:0')	phi BC Loss: tensor(0.0004, device='cuda:0')
s: tensor(0.0004, device='cuda:0')	mu BC Loss: tensor(0.3181, device='cuda:0')	NS PDE Loss: tensor(0.7129, device='cuda:0')
s: tensor(0.7129, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 5400	Total Loss: tensor(16.9517, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.2984, device='cuda:0')	phi BC Loss: tensor(0.0004, device='cuda:0')
s: tensor(0.0004, device='cuda:0')	mu BC Loss: tensor(0.3156, device='cuda:0')	NS PDE Loss: tensor(0.0004, device='cuda:0')
s: tensor(0.0004, device='cuda:0')		

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r(0.6182, device='cuda:0')      NS Div Free Loss:  tensor(0.0003, device='cuda:0')
Iteration: 5600      Total Loss:  tensor(16.4877, device='cuda:0')
IC Loss:  tensor(0.0077, device='cuda:0')      u BC Loss:  tensor(0.2988, device='cuda:0')      phi BC Los
s:  tensor(0.0004, device='cuda:0')      mu BC Loss:  tensor(0.3135, device='cuda:0')      NS PDE Loss:  tenso
r(0.5725, device='cuda:0')      NS Div Free Loss:  tensor(0.0004, device='cuda:0')
Iteration: 5800      Total Loss:  tensor(16.5023, device='cuda:0')
IC Loss:  tensor(0.0077, device='cuda:0')      u BC Loss:  tensor(0.2992, device='cuda:0')      phi BC Los
s:  tensor(0.0004, device='cuda:0')      mu BC Loss:  tensor(0.3117, device='cuda:0')      NS PDE Loss:  tenso
r(0.5762, device='cuda:0')      NS Div Free Loss:  tensor(0.0004, device='cuda:0')
Iteration: 6000      Total Loss:  tensor(32.4379, device='cuda:0')
IC Loss:  tensor(0.0077, device='cuda:0')      u BC Loss:  tensor(0.2992, device='cuda:0')      phi BC Los
s:  tensor(0.0004, device='cuda:0')      mu BC Loss:  tensor(0.3103, device='cuda:0')      NS PDE Loss:  tenso
r(2.1704, device='cuda:0')      NS Div Free Loss:  tensor(0.0004, device='cuda:0')
Iteration: 6200      Total Loss:  tensor(15.2227, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3033, device='cuda:0')      phi BC Los
s:  tensor(0.0007, device='cuda:0')      mu BC Loss:  tensor(0.3102, device='cuda:0')      NS PDE Loss:  tenso
r(0.4512, device='cuda:0')      NS Div Free Loss:  tensor(0.0003, device='cuda:0')
Iteration: 6400      Total Loss:  tensor(15.4831, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3080, device='cuda:0')      phi BC Los
s:  tensor(0.0007, device='cuda:0')      mu BC Loss:  tensor(0.2967, device='cuda:0')      NS PDE Loss:  tenso
r(0.4861, device='cuda:0')      NS Div Free Loss:  tensor(0.0003, device='cuda:0')
Iteration: 6600      Total Loss:  tensor(13.7690, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3069, device='cuda:0')      phi BC Los
s:  tensor(0.0003, device='cuda:0')      mu BC Loss:  tensor(0.2868, device='cuda:0')      NS PDE Loss:  tenso
r(0.3179, device='cuda:0')      NS Div Free Loss:  tensor(0.0002, device='cuda:0')
Iteration: 6800      Total Loss:  tensor(13.6290, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3073, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2764, device='cuda:0')      NS PDE Loss:  tenso
r(0.3073, device='cuda:0')      NS Div Free Loss:  tensor(0.0002, device='cuda:0')
Iteration: 7000      Total Loss:  tensor(12.6587, device='cuda:0')
IC Loss:  tensor(0.0077, device='cuda:0')      u BC Loss:  tensor(0.3055, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2720, device='cuda:0')      NS PDE Loss:  tenso
r(0.2117, device='cuda:0')      NS Div Free Loss:  tensor(0.0002, device='cuda:0')
Iteration: 7200      Total Loss:  tensor(15.6588, device='cuda:0')
IC Loss:  tensor(0.0078, device='cuda:0')      u BC Loss:  tensor(0.3027, device='cuda:0')      phi BC Los
s:  tensor(0.0008, device='cuda:0')      mu BC Loss:  tensor(0.2751, device='cuda:0')      NS PDE Loss:  tenso
r(0.4975, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 7400      Total Loss:  tensor(23.3793, device='cuda:0')
IC Loss:  tensor(0.0077, device='cuda:0')      u BC Loss:  tensor(0.3066, device='cuda:0')      phi BC Los
s:  tensor(0.0005, device='cuda:0')      mu BC Loss:  tensor(0.2734, device='cuda:0')      NS PDE Loss:  tenso
r(1.2822, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 7600      Total Loss:  tensor(26.7206, device='cuda:0')

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IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3063, device='cuda:0') phi BC Loss: tensor(0.0004, device='cuda:0') mu BC Loss: tensor(0.2713, device='cuda:0') NS PDE Loss: tensor(1.6200, device='cuda:0') NS Div Free Loss: tensor(0.0001, device='cuda:0')
 Iteration: 7800 Total Loss: tensor(16.2535, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3061, device='cuda:0') phi BC Loss: tensor(0.0003, device='cuda:0') mu BC Loss: tensor(0.2687, device='cuda:0') NS PDE Loss: tensor(0.5751, device='cuda:0') NS Div Free Loss: tensor(0.0001, device='cuda:0')
 Iteration: 8000 Total Loss: tensor(20.5338, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3067, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.2676, device='cuda:0') NS PDE Loss: tensor(1.0038, device='cuda:0') NS Div Free Loss: tensor(0.0001, device='cuda:0')
 Iteration: 8200 Total Loss: tensor(12.2748, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3055, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.2653, device='cuda:0') NS PDE Loss: tensor(0.1787, device='cuda:0') NS Div Free Loss: tensor(9.4857e-05, device='cuda:0')
 Iteration: 8400 Total Loss: tensor(13.7219, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3048, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.2613, device='cuda:0') NS PDE Loss: tensor(0.3255, device='cuda:0') NS Div Free Loss: tensor(9.4725e-05, device='cuda:0')
 Iteration: 8600 Total Loss: tensor(14.5250, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3050, device='cuda:0') phi BC Loss: tensor(0.0001, device='cuda:0') mu BC Loss: tensor(0.2580, device='cuda:0') NS PDE Loss: tensor(0.4066, device='cuda:0') NS Div Free Loss: tensor(8.9739e-05, device='cuda:0')
 Iteration: 8800 Total Loss: tensor(21.4788, device='cuda:0')
 IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.3045, device='cuda:0') phi BC Loss: tensor(4.0395e-05, device='cuda:0') mu BC Loss: tensor(0.2711, device='cuda:0') NS PDE Loss: tensor(1.0603, device='cuda:0') NS Div Free Loss: tensor(8.7809e-05, device='cuda:0')
 Iteration: 9000 Total Loss: tensor(15.1845, device='cuda:0')
 IC Loss: tensor(0.0076, device='cuda:0') u BC Loss: tensor(0.3056, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.2581, device='cuda:0') NS PDE Loss: tensor(0.4732, device='cuda:0') NS Div Free Loss: tensor(8.2479e-05, device='cuda:0')
 Iteration: 9200 Total Loss: tensor(15.7736, device='cuda:0')
 IC Loss: tensor(0.0077, device='cuda:0') u BC Loss: tensor(0.3012, device='cuda:0') phi BC Loss: tensor(0.0004, device='cuda:0') mu BC Loss: tensor(0.2656, device='cuda:0') NS PDE Loss: tensor(0.5269, device='cuda:0') NS Div Free Loss: tensor(7.3051e-05, device='cuda:0')
 Iteration: 9400 Total Loss: tensor(16.1350, device='cuda:0')
 IC Loss: tensor(0.0077, device='cuda:0') u BC Loss: tensor(0.3016, device='cuda:0') phi BC Loss: tensor(0.0003, device='cuda:0') mu BC Loss: tensor(0.2678, device='cuda:0') NS PDE Loss: tensor(0.5615, device='cuda:0') NS Div Free Loss: tensor(6.6646e-05, device='cuda:0')
 Iteration: 9600 Total Loss: tensor(12.3305, device='cuda:0')
 IC Loss: tensor(0.0080, device='cuda:0') u BC Loss: tensor(0.3017, device='cuda:0') phi BC Loss: tensor(0.0002, device='cuda:0') mu BC Loss: tensor(0.2676, device='cuda:0') NS PDE Loss: tensor(0.0002, device='cuda:0')

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r(0.1460, device='cuda:0')      NS Div Free Loss:  tensor(5.7677e-05, device='cuda:0')
Iteration: 9800      Total Loss:  tensor(12.5585, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3046, device='cuda:0')      phi BC Los
s:  tensor(0.0003, device='cuda:0')      mu BC Loss:  tensor(0.2604, device='cuda:0')      NS PDE Loss:  tenso
r(0.2098, device='cuda:0')      NS Div Free Loss:  tensor(5.9445e-05, device='cuda:0')
Iteration: 10000      Total Loss:  tensor(26.6837, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3029, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2574, device='cuda:0')      NS PDE Loss:  tenso
r(1.6243, device='cuda:0')      NS Div Free Loss:  tensor(5.9046e-05, device='cuda:0')
Iteration: 10200      Total Loss:  tensor(12.6050, device='cuda:0')
IC Loss:  tensor(0.0085, device='cuda:0')      u BC Loss:  tensor(0.3045, device='cuda:0')      phi BC Los
s:  tensor(0.0001, device='cuda:0')      mu BC Loss:  tensor(0.2562, device='cuda:0')      NS PDE Loss:  tenso
r(0.1289, device='cuda:0')      NS Div Free Loss:  tensor(5.7471e-05, device='cuda:0')
Iteration: 10400      Total Loss:  tensor(14.8267, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3041, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2536, device='cuda:0')      NS PDE Loss:  tenso
r(0.4414, device='cuda:0')      NS Div Free Loss:  tensor(5.0259e-05, device='cuda:0')
Iteration: 10600      Total Loss:  tensor(21.5098, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3015, device='cuda:0')      phi BC Los
s:  tensor(0.0004, device='cuda:0')      mu BC Loss:  tensor(0.2691, device='cuda:0')      NS PDE Loss:  tenso
r(1.1018, device='cuda:0')      NS Div Free Loss:  tensor(4.9650e-05, device='cuda:0')
Iteration: 10800      Total Loss:  tensor(21.5967, device='cuda:0')
IC Loss:  tensor(0.0105, device='cuda:0')      u BC Loss:  tensor(0.3064, device='cuda:0')      phi BC Los
s:  tensor(0.0001, device='cuda:0')      mu BC Loss:  tensor(0.2542, device='cuda:0')      NS PDE Loss:  tenso
r(0.8313, device='cuda:0')      NS Div Free Loss:  tensor(5.3992e-05, device='cuda:0')
Iteration: 11000      Total Loss:  tensor(11.5889, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3044, device='cuda:0')      phi BC Los
s:  tensor(0.0004, device='cuda:0')      mu BC Loss:  tensor(0.2538, device='cuda:0')      NS PDE Loss:  tenso
r(0.1177, device='cuda:0')      NS Div Free Loss:  tensor(4.7384e-05, device='cuda:0')
Iteration: 11200      Total Loss:  tensor(21.6309, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3070, device='cuda:0')      phi BC Los
s:  tensor(0.0003, device='cuda:0')      mu BC Loss:  tensor(0.2490, device='cuda:0')      NS PDE Loss:  tenso
r(1.1254, device='cuda:0')      NS Div Free Loss:  tensor(4.6792e-05, device='cuda:0')
Iteration: 11400      Total Loss:  tensor(12.3902, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3059, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2473, device='cuda:0')      NS PDE Loss:  tenso
r(0.2025, device='cuda:0')      NS Div Free Loss:  tensor(4.2354e-05, device='cuda:0')
Iteration: 11600      Total Loss:  tensor(16.8488, device='cuda:0')
IC Loss:  tensor(0.0076, device='cuda:0')      u BC Loss:  tensor(0.3036, device='cuda:0')      phi BC Los
s:  tensor(0.0002, device='cuda:0')      mu BC Loss:  tensor(0.2463, device='cuda:0')      NS PDE Loss:  tenso
r(0.6490, device='cuda:0')      NS Div Free Loss:  tensor(3.7260e-05, device='cuda:0')
Iteration: 11800      Total Loss:  tensor(14.8863, device='cuda:0')

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IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3065, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2440, device='cuda:0')      NS PDE Loss: tenso
r(0.4542, device='cuda:0')      NS Div Free Loss: tensor(3.6971e-05, device='cuda:0')
Iteration: 12000      Total Loss: tensor(22.5233, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3036, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2418, device='cuda:0')      NS PDE Loss: tenso
r(1.2188, device='cuda:0')      NS Div Free Loss: tensor(3.1796e-05, device='cuda:0')
Iteration: 12200      Total Loss: tensor(11.5436, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3054, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2415, device='cuda:0')      NS PDE Loss: tenso
r(0.1210, device='cuda:0')      NS Div Free Loss: tensor(3.2073e-05, device='cuda:0')
Iteration: 12400      Total Loss: tensor(24.4440, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')      u BC Loss: tensor(0.3027, device='cuda:0')      phi BC Los
s: tensor(5.9219e-05, device='cuda:0')      mu BC Loss: tensor(0.2393, device='cuda:0')      NS PDE Los
s: tensor(1.3920, device='cuda:0')      NS Div Free Loss: tensor(2.9561e-05, device='cuda:0')
Iteration: 12600      Total Loss: tensor(15.6814, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3013, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2430, device='cuda:0')      NS PDE Loss: tenso
r(0.5321, device='cuda:0')      NS Div Free Loss: tensor(2.7141e-05, device='cuda:0')
Iteration: 12800      Total Loss: tensor(13.5175, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3019, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2447, device='cuda:0')      NS PDE Loss: tenso
r(0.3160, device='cuda:0')      NS Div Free Loss: tensor(2.4569e-05, device='cuda:0')
Iteration: 13000      Total Loss: tensor(28.9952, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3005, device='cuda:0')      phi BC Los
s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.2456, device='cuda:0')      NS PDE Loss: tenso
r(1.8630, device='cuda:0')      NS Div Free Loss: tensor(2.1100e-05, device='cuda:0')
Iteration: 13200      Total Loss: tensor(14.8084, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3047, device='cuda:0')      phi BC Los
s: tensor(7.3937e-05, device='cuda:0')      mu BC Loss: tensor(0.2402, device='cuda:0')      NS PDE Los
s: tensor(0.4482, device='cuda:0')      NS Div Free Loss: tensor(2.4399e-05, device='cuda:0')
Iteration: 13400      Total Loss: tensor(12.2074, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3053, device='cuda:0')      phi BC Los
s: tensor(4.9711e-05, device='cuda:0')      mu BC Loss: tensor(0.2374, device='cuda:0')      NS PDE Los
s: tensor(0.1896, device='cuda:0')      NS Div Free Loss: tensor(2.4778e-05, device='cuda:0')
Iteration: 13600      Total Loss: tensor(12.2721, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3052, device='cuda:0')      phi BC Los
s: tensor(3.3792e-05, device='cuda:0')      mu BC Loss: tensor(0.2353, device='cuda:0')      NS PDE Los
s: tensor(0.1970, device='cuda:0')      NS Div Free Loss: tensor(2.4086e-05, device='cuda:0')
Iteration: 13800      Total Loss: tensor(12.2575, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3050, device='cuda:0')      phi BC Los
s: tensor(2.3349e-05, device='cuda:0')      mu BC Loss: tensor(0.2338, device='cuda:0')      NS PDE Los

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s: tensor(0.1961, device='cuda:0')    NS Div Free Loss: tensor(2.3167e-05, device='cuda:0')
Iteration: 14000    Total Loss: tensor(12.3222, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')    u BC Loss: tensor(0.3040, device='cuda:0')    phi BC Los
s: tensor(4.2333e-05, device='cuda:0')    mu BC Loss: tensor(0.2351, device='cuda:0')    NS PDE Los
s: tensor(0.1827, device='cuda:0')    NS Div Free Loss: tensor(2.3285e-05, device='cuda:0')
Iteration: 14200    Total Loss: tensor(15.1776, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3043, device='cuda:0')    phi BC Los
s: tensor(2.3570e-05, device='cuda:0')    mu BC Loss: tensor(0.2317, device='cuda:0')    NS PDE Los
s: tensor(0.4896, device='cuda:0')    NS Div Free Loss: tensor(2.6460e-05, device='cuda:0')
Iteration: 14400    Total Loss: tensor(13.0392, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3040, device='cuda:0')    phi BC Los
s: tensor(2.0991e-05, device='cuda:0')    mu BC Loss: tensor(0.2312, device='cuda:0')    NS PDE Los
s: tensor(0.2761, device='cuda:0')    NS Div Free Loss: tensor(2.9410e-05, device='cuda:0')
Iteration: 14600    Total Loss: tensor(22.3720, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3041, device='cuda:0')    phi BC Los
s: tensor(2.0662e-05, device='cuda:0')    mu BC Loss: tensor(0.2306, device='cuda:0')    NS PDE Los
s: tensor(1.2095, device='cuda:0')    NS Div Free Loss: tensor(3.3628e-05, device='cuda:0')
Iteration: 14800    Total Loss: tensor(12.4413, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3042, device='cuda:0')    phi BC Los
s: tensor(1.7726e-05, device='cuda:0')    mu BC Loss: tensor(0.2301, device='cuda:0')    NS PDE Los
s: tensor(0.2167, device='cuda:0')    NS Div Free Loss: tensor(3.4417e-05, device='cuda:0')
Iteration: 15000    Total Loss: tensor(17.9356, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')    u BC Loss: tensor(0.3049, device='cuda:0')    phi BC Los
s: tensor(1.2835e-05, device='cuda:0')    mu BC Loss: tensor(0.2305, device='cuda:0')    NS PDE Los
s: tensor(0.7592, device='cuda:0')    NS Div Free Loss: tensor(3.0347e-05, device='cuda:0')
Iteration: 15200    Total Loss: tensor(13.8213, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3057, device='cuda:0')    phi BC Los
s: tensor(2.1194e-05, device='cuda:0')    mu BC Loss: tensor(0.2290, device='cuda:0')    NS PDE Los
s: tensor(0.3528, device='cuda:0')    NS Div Free Loss: tensor(2.7881e-05, device='cuda:0')
Iteration: 15400    Total Loss: tensor(13.9170, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3048, device='cuda:0')    phi BC Los
s: tensor(3.0361e-05, device='cuda:0')    mu BC Loss: tensor(0.2291, device='cuda:0')    NS PDE Los
s: tensor(0.3647, device='cuda:0')    NS Div Free Loss: tensor(2.7927e-05, device='cuda:0')
Iteration: 15600    Total Loss: tensor(19.4076, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3046, device='cuda:0')    phi BC Los
s: tensor(2.8094e-05, device='cuda:0')    mu BC Loss: tensor(0.2279, device='cuda:0')    NS PDE Los
s: tensor(0.9131, device='cuda:0')    NS Div Free Loss: tensor(2.6764e-05, device='cuda:0')
Iteration: 15800    Total Loss: tensor(22.4217, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')    u BC Loss: tensor(0.3041, device='cuda:0')    phi BC Los
s: tensor(2.0552e-05, device='cuda:0')    mu BC Loss: tensor(0.2275, device='cuda:0')    NS PDE Los
s: tensor(1.2051, device='cuda:0')    NS Div Free Loss: tensor(3.0270e-05, device='cuda:0')
Iteration: 16000    Total Loss: tensor(34.6302, device='cuda:0')

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IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3021, device='cuda:0')	phi BC Los
s: tensor(3.9921e-05, device='cuda:0')	mu BC Loss: tensor(0.2272, device='cuda:0')	NS PDE Los
s: tensor(2.4359, device='cuda:0')	NS Div Free Loss: tensor(3.1032e-05, device='cuda:0')	
Iteration: 16200	Total Loss: tensor(15.5884, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3013, device='cuda:0')	phi BC Los
s: tensor(4.3973e-05, device='cuda:0')	mu BC Loss: tensor(0.2270, device='cuda:0')	NS PDE Los
s: tensor(0.5328, device='cuda:0')	NS Div Free Loss: tensor(3.8648e-05, device='cuda:0')	
Iteration: 16400	Total Loss: tensor(16.2066, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3018, device='cuda:0')	phi BC Los
s: tensor(6.2994e-05, device='cuda:0')	mu BC Loss: tensor(0.2269, device='cuda:0')	NS PDE Los
s: tensor(0.5954, device='cuda:0')	NS Div Free Loss: tensor(4.4294e-05, device='cuda:0')	
Iteration: 16600	Total Loss: tensor(16.0156, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3021, device='cuda:0')	phi BC Los
s: tensor(8.8106e-05, device='cuda:0')	mu BC Loss: tensor(0.2265, device='cuda:0')	NS PDE Los
s: tensor(0.5766, device='cuda:0')	NS Div Free Loss: tensor(4.7783e-05, device='cuda:0')	
Iteration: 16800	Total Loss: tensor(13.3460, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3048, device='cuda:0')	phi BC Los
s: tensor(9.5265e-05, device='cuda:0')	mu BC Loss: tensor(0.2245, device='cuda:0')	NS PDE Los
s: tensor(0.3105, device='cuda:0')	NS Div Free Loss: tensor(4.4338e-05, device='cuda:0')	
Iteration: 17000	Total Loss: tensor(17.7156, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3050, device='cuda:0')	phi BC Los
s: tensor(0.0001, device='cuda:0')	mu BC Loss: tensor(0.2269, device='cuda:0')	NS PDE Loss: tensor(0.7470, device='cuda:0')
s: tensor(0.7470, device='cuda:0')	NS Div Free Loss: tensor(3.5565e-05, device='cuda:0')	
Iteration: 17200	Total Loss: tensor(20.0065, device='cuda:0')	
IC Loss: tensor(0.0082, device='cuda:0')	u BC Loss: tensor(0.2995, device='cuda:0')	phi BC Los
s: tensor(7.1186e-05, device='cuda:0')	mu BC Loss: tensor(0.2278, device='cuda:0')	NS PDE Los
s: tensor(0.9139, device='cuda:0')	NS Div Free Loss: tensor(2.3500e-05, device='cuda:0')	
Iteration: 17400	Total Loss: tensor(40.7205, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3056, device='cuda:0')	phi BC Los
s: tensor(4.3522e-05, device='cuda:0')	mu BC Loss: tensor(0.2223, device='cuda:0')	NS PDE Los
s: tensor(3.0492, device='cuda:0')	NS Div Free Loss: tensor(3.5403e-05, device='cuda:0')	
Iteration: 17600	Total Loss: tensor(37.5598, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3018, device='cuda:0')	phi BC Los
s: tensor(5.3448e-05, device='cuda:0')	mu BC Loss: tensor(0.2243, device='cuda:0')	NS PDE Los
s: tensor(2.7327, device='cuda:0')	NS Div Free Loss: tensor(4.1359e-05, device='cuda:0')	
Iteration: 17800	Total Loss: tensor(36.4179, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3019, device='cuda:0')	phi BC Los
s: tensor(5.7935e-05, device='cuda:0')	mu BC Loss: tensor(0.2245, device='cuda:0')	NS PDE Los
s: tensor(2.6168, device='cuda:0')	NS Div Free Loss: tensor(4.7382e-05, device='cuda:0')	
Iteration: 18000	Total Loss: tensor(20.8058, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3020, device='cuda:0')	phi BC Los
s: tensor(5.8328e-05, device='cuda:0')	mu BC Loss: tensor(0.2244, device='cuda:0')	NS PDE Los

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s: tensor(1.0572, device='cuda:0')    NS Div Free Loss: tensor(5.0881e-05, device='cuda:0')
Iteration: 18200    Total Loss: tensor(13.4545, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3054, device='cuda:0')    phi BC Los
s: tensor(4.5557e-05, device='cuda:0')    mu BC Loss: tensor(0.2226, device='cuda:0')    NS PDE Los
s: tensor(0.3240, device='cuda:0')    NS Div Free Loss: tensor(4.6149e-05, device='cuda:0')
Iteration: 18400    Total Loss: tensor(14.3021, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3035, device='cuda:0')    phi BC Los
s: tensor(3.3226e-05, device='cuda:0')    mu BC Loss: tensor(0.2220, device='cuda:0')    NS PDE Los
s: tensor(0.4081, device='cuda:0')    NS Div Free Loss: tensor(3.7099e-05, device='cuda:0')
Iteration: 18600    Total Loss: tensor(15.1849, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3013, device='cuda:0')    phi BC Los
s: tensor(3.2709e-05, device='cuda:0')    mu BC Loss: tensor(0.2227, device='cuda:0')    NS PDE Los
s: tensor(0.4964, device='cuda:0')    NS Div Free Loss: tensor(4.1294e-05, device='cuda:0')
Iteration: 18800    Total Loss: tensor(12.6181, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3016, device='cuda:0')    phi BC Los
s: tensor(3.5932e-05, device='cuda:0')    mu BC Loss: tensor(0.2231, device='cuda:0')    NS PDE Los
s: tensor(0.2389, device='cuda:0')    NS Div Free Loss: tensor(4.7886e-05, device='cuda:0')
Iteration: 19000    Total Loss: tensor(17.5240, device='cuda:0')
IC Loss: tensor(0.0078, device='cuda:0')    u BC Loss: tensor(0.3034, device='cuda:0')    phi BC Los
s: tensor(4.0116e-05, device='cuda:0')    mu BC Loss: tensor(0.2220, device='cuda:0')    NS PDE Los
s: tensor(0.7116, device='cuda:0')    NS Div Free Loss: tensor(5.1699e-05, device='cuda:0')
Iteration: 19200    Total Loss: tensor(17.3535, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3019, device='cuda:0')    phi BC Los
s: tensor(3.8925e-05, device='cuda:0')    mu BC Loss: tensor(0.2239, device='cuda:0')    NS PDE Los
s: tensor(0.7126, device='cuda:0')    NS Div Free Loss: tensor(3.4812e-05, device='cuda:0')
Iteration: 19400    Total Loss: tensor(13.6097, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3060, device='cuda:0')    phi BC Los
s: tensor(2.2186e-05, device='cuda:0')    mu BC Loss: tensor(0.2224, device='cuda:0')    NS PDE Los
s: tensor(0.3322, device='cuda:0')    NS Div Free Loss: tensor(3.2946e-05, device='cuda:0')
Iteration: 19600    Total Loss: tensor(18.9770, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3053, device='cuda:0')    phi BC Los
s: tensor(0.0002, device='cuda:0')    mu BC Loss: tensor(0.2214, device='cuda:0')    NS PDE Loss: tenso
r(0.8754, device='cuda:0')    NS Div Free Loss: tensor(3.3489e-05, device='cuda:0')
Iteration: 19800    Total Loss: tensor(14.5715, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3043, device='cuda:0')    phi BC Los
s: tensor(9.5191e-05, device='cuda:0')    mu BC Loss: tensor(0.2196, device='cuda:0')    NS PDE Los
s: tensor(0.4380, device='cuda:0')    NS Div Free Loss: tensor(3.4196e-05, device='cuda:0')
Iteration: 20000    Total Loss: tensor(13.8612, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3040, device='cuda:0')    phi BC Los
s: tensor(5.8687e-05, device='cuda:0')    mu BC Loss: tensor(0.2187, device='cuda:0')    NS PDE Los
s: tensor(0.3674, device='cuda:0')    NS Div Free Loss: tensor(3.4384e-05, device='cuda:0')
Iteration: 20200    Total Loss: tensor(15.1123, device='cuda:0')

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IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3043, device='cuda:0')	phi BC Los
s: tensor(4.4571e-05, device='cuda:0')	mu BC Loss: tensor(0.2180, device='cuda:0')	NS PDE Los
s: tensor(0.4932, device='cuda:0')	NS Div Free Loss: tensor(3.7807e-05, device='cuda:0')	
Iteration: 20400	Total Loss: tensor(13.2561, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3044, device='cuda:0')	phi BC Los
s: tensor(3.1411e-05, device='cuda:0')	mu BC Loss: tensor(0.2174, device='cuda:0')	NS PDE Los
s: tensor(0.3077, device='cuda:0')	NS Div Free Loss: tensor(3.9218e-05, device='cuda:0')	
Iteration: 20600	Total Loss: tensor(11.3084, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3038, device='cuda:0')	phi BC Los
s: tensor(2.2996e-05, device='cuda:0')	mu BC Loss: tensor(0.2168, device='cuda:0')	NS PDE Los
s: tensor(0.1137, device='cuda:0')	NS Div Free Loss: tensor(3.6803e-05, device='cuda:0')	
Iteration: 20800	Total Loss: tensor(12.0077, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.3059, device='cuda:0')	phi BC Los
s: tensor(2.5838e-05, device='cuda:0')	mu BC Loss: tensor(0.2184, device='cuda:0')	NS PDE Los
s: tensor(0.1709, device='cuda:0')	NS Div Free Loss: tensor(3.3693e-05, device='cuda:0')	
Iteration: 21000	Total Loss: tensor(15.1996, device='cuda:0')	
IC Loss: tensor(0.0079, device='cuda:0')	u BC Loss: tensor(0.3032, device='cuda:0')	phi BC Los
s: tensor(0.0001, device='cuda:0')	mu BC Loss: tensor(0.2168, device='cuda:0')	NS PDE Loss: tensor(0.4665, device='cuda:0')
s: tensor(0.4665, device='cuda:0')	NS Div Free Loss: tensor(2.7846e-05, device='cuda:0')	
Iteration: 21200	Total Loss: tensor(11.5717, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3058, device='cuda:0')	phi BC Los
s: tensor(4.7854e-05, device='cuda:0')	mu BC Loss: tensor(0.2144, device='cuda:0')	NS PDE Los
s: tensor(0.1417, device='cuda:0')	NS Div Free Loss: tensor(2.8191e-05, device='cuda:0')	
Iteration: 21400	Total Loss: tensor(33.9809, device='cuda:0')	
IC Loss: tensor(0.0077, device='cuda:0')	u BC Loss: tensor(0.3023, device='cuda:0')	phi BC Los
s: tensor(2.1686e-05, device='cuda:0')	mu BC Loss: tensor(0.2152, device='cuda:0')	NS PDE Los
s: tensor(2.3738, device='cuda:0')	NS Div Free Loss: tensor(2.8275e-05, device='cuda:0')	
Iteration: 21600	Total Loss: tensor(11.0913, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3057, device='cuda:0')	phi BC Los
s: tensor(2.3212e-05, device='cuda:0')	mu BC Loss: tensor(0.2132, device='cuda:0')	NS PDE Los
s: tensor(0.0924, device='cuda:0')	NS Div Free Loss: tensor(2.8944e-05, device='cuda:0')	
Iteration: 21800	Total Loss: tensor(35.0141, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3053, device='cuda:0')	phi BC Los
s: tensor(2.0131e-05, device='cuda:0')	mu BC Loss: tensor(0.2133, device='cuda:0')	NS PDE Los
s: tensor(2.4859, device='cuda:0')	NS Div Free Loss: tensor(3.0811e-05, device='cuda:0')	
Iteration: 22000	Total Loss: tensor(15.0201, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3012, device='cuda:0')	phi BC Los
s: tensor(1.9199e-05, device='cuda:0')	mu BC Loss: tensor(0.2143, device='cuda:0')	NS PDE Los
s: tensor(0.4853, device='cuda:0')	NS Div Free Loss: tensor(3.3710e-05, device='cuda:0')	
Iteration: 22200	Total Loss: tensor(13.6142, device='cuda:0')	
IC Loss: tensor(0.0076, device='cuda:0')	u BC Loss: tensor(0.3063, device='cuda:0')	phi BC Los
s: tensor(2.5116e-05, device='cuda:0')	mu BC Loss: tensor(0.2139, device='cuda:0')	NS PDE Los

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s: tensor(0.3460, device='cuda:0')    NS Div Free Loss: tensor(3.1897e-05, device='cuda:0')
Iteration: 22400    Total Loss: tensor(12.5368, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3061, device='cuda:0')    phi BC Los
s: tensor(1.7898e-05, device='cuda:0')    mu BC Loss: tensor(0.2126, device='cuda:0')    NS PDE Los
s: tensor(0.2388, device='cuda:0')    NS Div Free Loss: tensor(2.6903e-05, device='cuda:0')
Iteration: 22600    Total Loss: tensor(12.3876, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3062, device='cuda:0')    phi BC Los
s: tensor(1.2987e-05, device='cuda:0')    mu BC Loss: tensor(0.2111, device='cuda:0')    NS PDE Los
s: tensor(0.2250, device='cuda:0')    NS Div Free Loss: tensor(2.4350e-05, device='cuda:0')
Iteration: 22800    Total Loss: tensor(12.8756, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3064, device='cuda:0')    phi BC Los
s: tensor(9.4087e-06, device='cuda:0')    mu BC Loss: tensor(0.2108, device='cuda:0')    NS PDE Los
s: tensor(0.2731, device='cuda:0')    NS Div Free Loss: tensor(2.1967e-05, device='cuda:0')
Iteration: 23000    Total Loss: tensor(13.2028, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3049, device='cuda:0')    phi BC Los
s: tensor(6.3242e-06, device='cuda:0')    mu BC Loss: tensor(0.2103, device='cuda:0')    NS PDE Los
s: tensor(0.3011, device='cuda:0')    NS Div Free Loss: tensor(1.9328e-05, device='cuda:0')
Iteration: 23200    Total Loss: tensor(18.2023, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3030, device='cuda:0')    phi BC Los
s: tensor(8.1003e-06, device='cuda:0')    mu BC Loss: tensor(0.2115, device='cuda:0')    NS PDE Los
s: tensor(0.7985, device='cuda:0')    NS Div Free Loss: tensor(1.9025e-05, device='cuda:0')
Iteration: 23400    Total Loss: tensor(22.5028, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3025, device='cuda:0')    phi BC Los
s: tensor(8.4840e-06, device='cuda:0')    mu BC Loss: tensor(0.2120, device='cuda:0')    NS PDE Los
s: tensor(1.2356, device='cuda:0')    NS Div Free Loss: tensor(1.6212e-05, device='cuda:0')
Iteration: 23600    Total Loss: tensor(14.4680, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3052, device='cuda:0')    phi BC Los
s: tensor(7.0991e-06, device='cuda:0')    mu BC Loss: tensor(0.2106, device='cuda:0')    NS PDE Los
s: tensor(0.4307, device='cuda:0')    NS Div Free Loss: tensor(1.9576e-05, device='cuda:0')
Iteration: 23800    Total Loss: tensor(13.7906, device='cuda:0')
IC Loss: tensor(0.0087, device='cuda:0')    u BC Loss: tensor(0.3063, device='cuda:0')    phi BC Los
s: tensor(7.8865e-06, device='cuda:0')    mu BC Loss: tensor(0.2122, device='cuda:0')    NS PDE Los
s: tensor(0.2487, device='cuda:0')    NS Div Free Loss: tensor(2.2923e-05, device='cuda:0')
Iteration: 24000    Total Loss: tensor(21.7462, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3060, device='cuda:0')    phi BC Los
s: tensor(1.5336e-05, device='cuda:0')    mu BC Loss: tensor(0.2124, device='cuda:0')    NS PDE Los
s: tensor(1.1596, device='cuda:0')    NS Div Free Loss: tensor(2.0147e-05, device='cuda:0')
Iteration: 24200    Total Loss: tensor(14.8600, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')    u BC Loss: tensor(0.3057, device='cuda:0')    phi BC Los
s: tensor(1.6769e-05, device='cuda:0')    mu BC Loss: tensor(0.2111, device='cuda:0')    NS PDE Los
s: tensor(0.4715, device='cuda:0')    NS Div Free Loss: tensor(1.7750e-05, device='cuda:0')
Iteration: 24400    Total Loss: tensor(12.7641, device='cuda:0')

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IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3062, device='cuda:0')      phi BC Los
s: tensor(1.1347e-05, device='cuda:0')      mu BC Loss: tensor(0.2095, device='cuda:0')      NS PDE Los
s: tensor(0.2628, device='cuda:0')      NS Div Free Loss: tensor(1.6665e-05, device='cuda:0')
Iteration: 24600      Total Loss: tensor(22.4838, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.3069, device='cuda:0')      phi BC Los
s: tensor(7.5510e-06, device='cuda:0')      mu BC Loss: tensor(0.2101, device='cuda:0')      NS PDE Los
s: tensor(1.2358, device='cuda:0')      NS Div Free Loss: tensor(1.6078e-05, device='cuda:0')
Iteration: 24800      Total Loss: tensor(18.6476, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.3021, device='cuda:0')      phi BC Los
s: tensor(5.2619e-06, device='cuda:0')      mu BC Loss: tensor(0.2095, device='cuda:0')      NS PDE Los
s: tensor(0.8502, device='cuda:0')      NS Div Free Loss: tensor(1.6064e-05, device='cuda:0')
Iteration: 25000      Total Loss: tensor(16.3498, device='cuda:0')
IC Loss: tensor(0.0087, device='cuda:0')      u BC Loss: tensor(0.3019, device='cuda:0')      phi BC Los
s: tensor(2.9438e-06, device='cuda:0')      mu BC Loss: tensor(0.2066, device='cuda:0')      NS PDE Los
s: tensor(0.5121, device='cuda:0')      NS Div Free Loss: tensor(1.4188e-05, device='cuda:0')
Current Final Time: 0.6 Current Learning Rate: 0.001
Iteration: 200      Total Loss: tensor(25.9574, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')      u BC Loss: tensor(0.6299, device='cuda:0')      phi BC Los
s: tensor(0.0003, device='cuda:0')      mu BC Loss: tensor(0.4594, device='cuda:0')      NS PDE Loss: tenso
r(1.2605, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 400      Total Loss: tensor(28.8964, device='cuda:0')
IC Loss: tensor(0.0077, device='cuda:0')      u BC Loss: tensor(0.6466, device='cuda:0')      phi BC Los
s: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.4456, device='cuda:0')      NS PDE Loss: tenso
r(1.5735, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 600      Total Loss: tensor(25.9634, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.6483, device='cuda:0')      phi BC Los
s: tensor(0.0007, device='cuda:0')      mu BC Loss: tensor(0.4445, device='cuda:0')      NS PDE Loss: tenso
r(1.2360, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 800      Total Loss: tensor(22.5321, device='cuda:0')
IC Loss: tensor(0.0081, device='cuda:0')      u BC Loss: tensor(0.6495, device='cuda:0')      phi BC Los
s: tensor(0.0003, device='cuda:0')      mu BC Loss: tensor(0.4417, device='cuda:0')      NS PDE Loss: tenso
r(0.8995, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 1000      Total Loss: tensor(22.5158, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6530, device='cuda:0')      phi BC Los
s: tensor(0.0003, device='cuda:0')      mu BC Loss: tensor(0.4463, device='cuda:0')      NS PDE Loss: tenso
r(0.9387, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 1200      Total Loss: tensor(21.0027, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6540, device='cuda:0')      phi BC Los
s: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.4477, device='cuda:0')      NS PDE Loss: tenso
r(0.7884, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 1400      Total Loss: tensor(19.5007, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6526, device='cuda:0')      phi BC Los

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s: tensor(0.0001, device='cuda:0')      mu BC Loss: tensor(0.4490, device='cuda:0')      NS PDE Loss: tensor(0.6375, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 1600      Total Loss: tensor(19.6049, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6566, device='cuda:0')      phi BC Loss: tensor(8.5693e-05, device='cuda:0')
s: tensor(8.5693e-05, device='cuda:0')      mu BC Loss: tensor(0.4497, device='cuda:0')      NS PDE Loss: tensor(0.6494, device='cuda:0')
s: tensor(0.6494, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 1800      Total Loss: tensor(18.4698, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6576, device='cuda:0')      phi BC Loss: tensor(6.3865e-05, device='cuda:0')
s: tensor(6.3865e-05, device='cuda:0')      mu BC Loss: tensor(0.4500, device='cuda:0')      NS PDE Loss: tensor(0.5364, device='cuda:0')
s: tensor(0.5364, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 2000      Total Loss: tensor(19.0859, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6588, device='cuda:0')      phi BC Loss: tensor(5.2481e-05, device='cuda:0')
s: tensor(5.2481e-05, device='cuda:0')      mu BC Loss: tensor(0.4501, device='cuda:0')      NS PDE Loss: tensor(0.5991, device='cuda:0')
s: tensor(0.5991, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 2200      Total Loss: tensor(18.0871, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6590, device='cuda:0')      phi BC Loss: tensor(4.4962e-05, device='cuda:0')
s: tensor(4.4962e-05, device='cuda:0')      mu BC Loss: tensor(0.4501, device='cuda:0')      NS PDE Loss: tensor(0.5003, device='cuda:0')
s: tensor(0.5003, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 2400      Total Loss: tensor(18.7605, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6597, device='cuda:0')      phi BC Loss: tensor(3.9937e-05, device='cuda:0')
s: tensor(3.9937e-05, device='cuda:0')      mu BC Loss: tensor(0.4497, device='cuda:0')      NS PDE Loss: tensor(0.5686, device='cuda:0')
s: tensor(0.5686, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 2600      Total Loss: tensor(18.8697, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6601, device='cuda:0')      phi BC Loss: tensor(3.4616e-05, device='cuda:0')
s: tensor(3.4616e-05, device='cuda:0')      mu BC Loss: tensor(0.4492, device='cuda:0')      NS PDE Loss: tensor(0.5800, device='cuda:0')
s: tensor(0.5800, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 2800      Total Loss: tensor(18.2743, device='cuda:0')
IC Loss: tensor(0.0076, device='cuda:0')      u BC Loss: tensor(0.6603, device='cuda:0')      phi BC Loss: tensor(2.8844e-05, device='cuda:0')
s: tensor(2.8844e-05, device='cuda:0')      mu BC Loss: tensor(0.4484, device='cuda:0')      NS PDE Loss: tensor(0.5178, device='cuda:0')
s: tensor(0.5178, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 3000      Total Loss: tensor(18.6682, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6608, device='cuda:0')      phi BC Loss: tensor(2.9822e-05, device='cuda:0')
s: tensor(2.9822e-05, device='cuda:0')      mu BC Loss: tensor(0.4475, device='cuda:0')      NS PDE Loss: tensor(0.5622, device='cuda:0')
s: tensor(0.5622, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 3200      Total Loss: tensor(17.8709, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6609, device='cuda:0')      phi BC Loss: tensor(3.1737e-05, device='cuda:0')
s: tensor(3.1737e-05, device='cuda:0')      mu BC Loss: tensor(0.4465, device='cuda:0')      NS PDE Loss: tensor(0.4845, device='cuda:0')
s: tensor(0.4845, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 3400      Total Loss: tensor(18.6252, device='cuda:0')
IC Loss: tensor(0.0075, device='cuda:0')      u BC Loss: tensor(0.6614, device='cuda:0')      phi BC Loss: tensor(3.6924e-05, device='cuda:0')
s: tensor(3.6924e-05, device='cuda:0')      mu BC Loss: tensor(0.4453, device='cuda:0')      NS PDE Loss: tensor(0.5607, device='cuda:0')
s: tensor(0.5607, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')

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Iteration: 3600	Total Loss: tensor(17.2039, device='cuda:0')		
IC Loss: tensor(0.0075, device='cuda:0')	u BC Loss: tensor(0.6613, device='cuda:0')	phi BC Los	
s: tensor(5.0730e-05, device='cuda:0')	mu BC Loss: tensor(0.4440, device='cuda:0')	NS PDE Los	
s: tensor(0.4203, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 3800	Total Loss: tensor(18.1534, device='cuda:0')		
IC Loss: tensor(0.0075, device='cuda:0')	u BC Loss: tensor(0.6618, device='cuda:0')	phi BC Los	
s: tensor(7.0614e-05, device='cuda:0')	mu BC Loss: tensor(0.4426, device='cuda:0')	NS PDE Los	
s: tensor(0.5168, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 4000	Total Loss: tensor(17.5925, device='cuda:0')		
IC Loss: tensor(0.0075, device='cuda:0')	u BC Loss: tensor(0.6620, device='cuda:0')	phi BC Los	
s: tensor(5.3715e-05, device='cuda:0')	mu BC Loss: tensor(0.4412, device='cuda:0')	NS PDE Los	
s: tensor(0.4618, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 4200	Total Loss: tensor(18.2496, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6624, device='cuda:0')	phi BC Los	
s: tensor(4.0743e-05, device='cuda:0')	mu BC Loss: tensor(0.4397, device='cuda:0')	NS PDE Los	
s: tensor(0.5295, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 4400	Total Loss: tensor(18.4656, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6627, device='cuda:0')	phi BC Los	
s: tensor(3.5093e-05, device='cuda:0')	mu BC Loss: tensor(0.4383, device='cuda:0')	NS PDE Los	
s: tensor(0.5524, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 4600	Total Loss: tensor(17.5956, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6627, device='cuda:0')	phi BC Los	
s: tensor(2.7771e-05, device='cuda:0')	mu BC Loss: tensor(0.4368, device='cuda:0')	NS PDE Los	
s: tensor(0.4670, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 4800	Total Loss: tensor(17.9166, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6631, device='cuda:0')	phi BC Los	
s: tensor(2.9026e-05, device='cuda:0')	mu BC Loss: tensor(0.4347, device='cuda:0')	NS PDE Los	
s: tensor(0.5014, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 5000	Total Loss: tensor(18.5132, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6657, device='cuda:0')	phi BC Los	
s: tensor(0.0001, device='cuda:0')	mu BC Loss: tensor(0.4245, device='cuda:0')	NS PDE Loss: tenso	
r(0.5665, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 5200	Total Loss: tensor(17.2614, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6653, device='cuda:0')	phi BC Los	
s: tensor(5.3545e-05, device='cuda:0')	mu BC Loss: tensor(0.4207, device='cuda:0')	NS PDE Los	
s: tensor(0.4417, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')		
Iteration: 5400	Total Loss: tensor(17.3219, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6651, device='cuda:0')	phi BC Los	
s: tensor(3.2018e-05, device='cuda:0')	mu BC Loss: tensor(0.4175, device='cuda:0')	NS PDE Los	
s: tensor(0.4497, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')		
Iteration: 5600	Total Loss: tensor(17.5469, device='cuda:0')		
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6650, device='cuda:0')	phi BC Los	

s: tensor(1.8385e-05, device='cuda:0')	mu BC Loss: tensor(0.4146, device='cuda:0')	NS PDE Los
s: tensor(0.4731, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 5800	Total Loss: tensor(17.6083, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6649, device='cuda:0')	phi BC Los
s: tensor(1.0631e-05, device='cuda:0')	mu BC Loss: tensor(0.4120, device='cuda:0')	NS PDE Los
s: tensor(0.4817, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 6000	Total Loss: tensor(17.5817, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6649, device='cuda:0')	phi BC Los
s: tensor(6.3128e-06, device='cuda:0')	mu BC Loss: tensor(0.4096, device='cuda:0')	NS PDE Los
s: tensor(0.4808, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 6200	Total Loss: tensor(16.9793, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6647, device='cuda:0')	phi BC Los
s: tensor(3.3563e-06, device='cuda:0')	mu BC Loss: tensor(0.4074, device='cuda:0')	NS PDE Los
s: tensor(0.4207, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 6400	Total Loss: tensor(17.0856, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6647, device='cuda:0')	phi BC Los
s: tensor(1.5545e-06, device='cuda:0')	mu BC Loss: tensor(0.4051, device='cuda:0')	NS PDE Los
s: tensor(0.4331, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 6600	Total Loss: tensor(17.4572, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6646, device='cuda:0')	phi BC Los
s: tensor(6.1232e-07, device='cuda:0')	mu BC Loss: tensor(0.4031, device='cuda:0')	NS PDE Los
s: tensor(0.4706, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 6800	Total Loss: tensor(16.9396, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6647, device='cuda:0')	phi BC Los
s: tensor(2.0063e-07, device='cuda:0')	mu BC Loss: tensor(0.4011, device='cuda:0')	NS PDE Los
s: tensor(0.4194, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 7000	Total Loss: tensor(17.6200, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6642, device='cuda:0')	phi BC Los
s: tensor(6.0593e-08, device='cuda:0')	mu BC Loss: tensor(0.3992, device='cuda:0')	NS PDE Los
s: tensor(0.4884, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 7200	Total Loss: tensor(17.0581, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6644, device='cuda:0')	phi BC Los
s: tensor(1.6941e-08, device='cuda:0')	mu BC Loss: tensor(0.3975, device='cuda:0')	NS PDE Los
s: tensor(0.4336, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 7400	Total Loss: tensor(16.7900, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6643, device='cuda:0')	phi BC Los
s: tensor(5.5554e-09, device='cuda:0')	mu BC Loss: tensor(0.3958, device='cuda:0')	NS PDE Los
s: tensor(0.4070, device='cuda:0')	NS Div Free Loss: tensor(9.9555e-05, device='cuda:0')	
Iteration: 7600	Total Loss: tensor(16.8824, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6642, device='cuda:0')	phi BC Los
s: tensor(2.3343e-09, device='cuda:0')	mu BC Loss: tensor(0.3942, device='cuda:0')	NS PDE Los
s: tensor(0.4172, device='cuda:0')	NS Div Free Loss: tensor(9.6994e-05, device='cuda:0')	


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Iteration: 7800      Total Loss: tensor(17.1506, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6645, device='cuda:0')      phi BC Los
s:  tensor(1.0393e-09, device='cuda:0')      mu BC Loss:  tensor(0.3928, device='cuda:0')      NS PDE Los
s:  tensor(0.4432, device='cuda:0')      NS Div Free Loss:  tensor(9.4504e-05, device='cuda:0')
Iteration: 8000      Total Loss: tensor(28.5641, device='cuda:0')
IC Loss:  tensor(0.0075, device='cuda:0')      u BC Loss:  tensor(0.6556, device='cuda:0')      phi BC Los
s:  tensor(6.4240e-10, device='cuda:0')      mu BC Loss:  tensor(0.3908, device='cuda:0')      NS PDE Los
s:  tensor(1.5791, device='cuda:0')      NS Div Free Loss:  tensor(8.1805e-05, device='cuda:0')
Iteration: 8200      Total Loss: tensor(16.3573, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6624, device='cuda:0')      phi BC Los
s:  tensor(1.8694e-09, device='cuda:0')      mu BC Loss:  tensor(0.3902, device='cuda:0')      NS PDE Los
s:  tensor(0.3684, device='cuda:0')      NS Div Free Loss:  tensor(8.6795e-05, device='cuda:0')
Iteration: 8400      Total Loss: tensor(15.7261, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6624, device='cuda:0')      phi BC Los
s:  tensor(4.1152e-10, device='cuda:0')      mu BC Loss:  tensor(0.3884, device='cuda:0')      NS PDE Los
s:  tensor(0.3067, device='cuda:0')      NS Div Free Loss:  tensor(8.1407e-05, device='cuda:0')
Iteration: 8600      Total Loss: tensor(18.0914, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6592, device='cuda:0')      phi BC Los
s:  tensor(2.9257e-10, device='cuda:0')      mu BC Loss:  tensor(0.3883, device='cuda:0')      NS PDE Los
s:  tensor(0.5424, device='cuda:0')      NS Div Free Loss:  tensor(8.3349e-05, device='cuda:0')
Iteration: 8800      Total Loss: tensor(19.0613, device='cuda:0')
IC Loss:  tensor(0.0075, device='cuda:0')      u BC Loss:  tensor(0.6661, device='cuda:0')      phi BC Los
s:  tensor(1.5832e-10, device='cuda:0')      mu BC Loss:  tensor(0.3877, device='cuda:0')      NS PDE Los
s:  tensor(0.6280, device='cuda:0')      NS Div Free Loss:  tensor(8.4778e-05, device='cuda:0')
Iteration: 9000      Total Loss: tensor(29.0557, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6665, device='cuda:0')      phi BC Los
s:  tensor(1.4194e-10, device='cuda:0')      mu BC Loss:  tensor(0.3853, device='cuda:0')      NS PDE Los
s:  tensor(1.6380, device='cuda:0')      NS Div Free Loss:  tensor(8.2820e-05, device='cuda:0')
Iteration: 9200      Total Loss: tensor(15.8501, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6626, device='cuda:0')      phi BC Los
s:  tensor(1.0278e-10, device='cuda:0')      mu BC Loss:  tensor(0.3839, device='cuda:0')      NS PDE Los
s:  tensor(0.3211, device='cuda:0')      NS Div Free Loss:  tensor(7.5202e-05, device='cuda:0')
Iteration: 9400      Total Loss: tensor(15.5647, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6629, device='cuda:0')      phi BC Los
s:  tensor(6.3043e-11, device='cuda:0')      mu BC Loss:  tensor(0.3823, device='cuda:0')      NS PDE Los
s:  tensor(0.2938, device='cuda:0')      NS Div Free Loss:  tensor(7.4142e-05, device='cuda:0')
Iteration: 9600      Total Loss: tensor(15.2821, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6627, device='cuda:0')      phi BC Los
s:  tensor(2.4547e-11, device='cuda:0')      mu BC Loss:  tensor(0.3809, device='cuda:0')      NS PDE Los
s:  tensor(0.2666, device='cuda:0')      NS Div Free Loss:  tensor(7.1566e-05, device='cuda:0')
Iteration: 9800      Total Loss: tensor(15.2525, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6628, device='cuda:0')      phi BC Los

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s: tensor(1.2684e-11, device='cuda:0')      mu BC Loss: tensor(0.3796, device='cuda:0')      NS PDE Los
s: tensor(0.2638, device='cuda:0')      NS Div Free Loss: tensor(6.8995e-05, device='cuda:0')
Iteration: 10000      Total Loss: tensor(15.5753, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6629, device='cuda:0')      phi BC Los
s: tensor(7.7018e-12, device='cuda:0')      mu BC Loss: tensor(0.3784, device='cuda:0')      NS PDE Los
s: tensor(0.2972, device='cuda:0')      NS Div Free Loss: tensor(6.6963e-05, device='cuda:0')
Iteration: 10200      Total Loss: tensor(15.1514, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6632, device='cuda:0')      phi BC Los
s: tensor(1.9762e-13, device='cuda:0')      mu BC Loss: tensor(0.3771, device='cuda:0')      NS PDE Los
s: tensor(0.2559, device='cuda:0')      NS Div Free Loss: tensor(6.4941e-05, device='cuda:0')
Iteration: 10400      Total Loss: tensor(15.2961, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6634, device='cuda:0')      phi BC Los
s: tensor(3.2742e-15, device='cuda:0')      mu BC Loss: tensor(0.3758, device='cuda:0')      NS PDE Los
s: tensor(0.2712, device='cuda:0')      NS Div Free Loss: tensor(6.2599e-05, device='cuda:0')
Iteration: 10600      Total Loss: tensor(15.3767, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6636, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3745, device='cuda:0')      NS PDE Loss: tenso
r(0.2801, device='cuda:0')      NS Div Free Loss: tensor(5.9946e-05, device='cuda:0')
Iteration: 10800      Total Loss: tensor(15.4415, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6638, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3732, device='cuda:0')      NS PDE Loss: tenso
r(0.2878, device='cuda:0')      NS Div Free Loss: tensor(5.7045e-05, device='cuda:0')
Iteration: 11000      Total Loss: tensor(15.7529, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6639, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3721, device='cuda:0')      NS PDE Loss: tenso
r(0.3197, device='cuda:0')      NS Div Free Loss: tensor(5.4004e-05, device='cuda:0')
Iteration: 11200      Total Loss: tensor(15.2977, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6641, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3709, device='cuda:0')      NS PDE Loss: tenso
r(0.2753, device='cuda:0')      NS Div Free Loss: tensor(5.1287e-05, device='cuda:0')
Iteration: 11400      Total Loss: tensor(15.1326, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6643, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3699, device='cuda:0')      NS PDE Loss: tenso
r(0.2592, device='cuda:0')      NS Div Free Loss: tensor(4.8773e-05, device='cuda:0')
Iteration: 11600      Total Loss: tensor(15.0249, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6644, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3689, device='cuda:0')      NS PDE Loss: tenso
r(0.2493, device='cuda:0')      NS Div Free Loss: tensor(4.6355e-05, device='cuda:0')
Iteration: 11800      Total Loss: tensor(14.9488, device='cuda:0')
IC Loss: tensor(0.0074, device='cuda:0')      u BC Loss: tensor(0.6644, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3679, device='cuda:0')      NS PDE Loss: tenso
r(0.2425, device='cuda:0')      NS Div Free Loss: tensor(4.4234e-05, device='cuda:0')

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Iteration: 12000      Total Loss: tensor(15.3250, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6644, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3669, device='cuda:0')      NS PDE Loss:  tenso
r(0.2804, device='cuda:0')      NS Div Free Loss:  tensor(4.2226e-05, device='cuda:0')
Iteration: 12200      Total Loss: tensor(15.0398, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6646, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3661, device='cuda:0')      NS PDE Loss:  tenso
r(0.2529, device='cuda:0')      NS Div Free Loss:  tensor(4.1019e-05, device='cuda:0')
Iteration: 12400      Total Loss: tensor(14.9691, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6644, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3652, device='cuda:0')      NS PDE Loss:  tenso
r(0.2463, device='cuda:0')      NS Div Free Loss:  tensor(3.9182e-05, device='cuda:0')
Iteration: 12600      Total Loss: tensor(15.3792, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3644, device='cuda:0')      NS PDE Loss:  tenso
r(0.2879, device='cuda:0')      NS Div Free Loss:  tensor(3.7598e-05, device='cuda:0')
Iteration: 12800      Total Loss: tensor(15.0892, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6645, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3635, device='cuda:0')      NS PDE Loss:  tenso
r(0.2591, device='cuda:0')      NS Div Free Loss:  tensor(3.6946e-05, device='cuda:0')
Iteration: 13000      Total Loss: tensor(15.3397, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6644, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3627, device='cuda:0')      NS PDE Loss:  tenso
r(0.2856, device='cuda:0')      NS Div Free Loss:  tensor(3.5843e-05, device='cuda:0')
Iteration: 13200      Total Loss: tensor(14.8879, device='cuda:0')
IC Loss:  tensor(0.0074, device='cuda:0')      u BC Loss:  tensor(0.6645, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3618, device='cuda:0')      NS PDE Loss:  tenso
r(0.2399, device='cuda:0')      NS Div Free Loss:  tensor(3.4932e-05, device='cuda:0')
Iteration: 13400      Total Loss: tensor(14.8121, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6645, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3610, device='cuda:0')      NS PDE Loss:  tenso
r(0.2338, device='cuda:0')      NS Div Free Loss:  tensor(3.4122e-05, device='cuda:0')
Iteration: 13600      Total Loss: tensor(14.7850, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6644, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3603, device='cuda:0')      NS PDE Loss:  tenso
r(0.2319, device='cuda:0')      NS Div Free Loss:  tensor(3.3295e-05, device='cuda:0')
Iteration: 13800      Total Loss: tensor(14.9552, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6642, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3595, device='cuda:0')      NS PDE Loss:  tenso
r(0.2495, device='cuda:0')      NS Div Free Loss:  tensor(3.2295e-05, device='cuda:0')
Iteration: 14000      Total Loss: tensor(15.2644, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6643, device='cuda:0')      phi BC Los

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s: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3587, device='cuda:0') NS PDE Loss: tensor(0.2812, device='cuda:0') NS Div Free Loss: tensor(3.1848e-05, device='cuda:0')

Iteration: 14200 Total Loss: tensor(14.9112, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6644, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3580, device='cuda:0') NS PDE Loss: tensor(0.2467, device='cuda:0') NS Div Free Loss: tensor(3.1162e-05, device='cuda:0')

Iteration: 14400 Total Loss: tensor(14.8887, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6643, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3573, device='cuda:0') NS PDE Loss: tensor(0.2449, device='cuda:0') NS Div Free Loss: tensor(3.0514e-05, device='cuda:0')

Iteration: 14600 Total Loss: tensor(14.8661, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6643, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3567, device='cuda:0') NS PDE Loss: tensor(0.2433, device='cuda:0') NS Div Free Loss: tensor(2.9897e-05, device='cuda:0')

Iteration: 14800 Total Loss: tensor(14.8949, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6643, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3560, device='cuda:0') NS PDE Loss: tensor(0.2468, device='cuda:0') NS Div Free Loss: tensor(2.9295e-05, device='cuda:0')

Iteration: 15000 Total Loss: tensor(15.3107, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6641, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3553, device='cuda:0') NS PDE Loss: tensor(0.2894, device='cuda:0') NS Div Free Loss: tensor(2.8578e-05, device='cuda:0')

Iteration: 15200 Total Loss: tensor(14.9107, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6642, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3547, device='cuda:0') NS PDE Loss: tensor(0.2494, device='cuda:0') NS Div Free Loss: tensor(2.8035e-05, device='cuda:0')

Iteration: 15400 Total Loss: tensor(14.9396, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6642, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3541, device='cuda:0') NS PDE Loss: tensor(0.2531, device='cuda:0') NS Div Free Loss: tensor(2.7534e-05, device='cuda:0')

Iteration: 15600 Total Loss: tensor(14.9826, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6641, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3535, device='cuda:0') NS PDE Loss: tensor(0.2581, device='cuda:0') NS Div Free Loss: tensor(2.6937e-05, device='cuda:0')

Iteration: 15800 Total Loss: tensor(14.9553, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6641, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3529, device='cuda:0') NS PDE Loss: tensor(0.2561, device='cuda:0') NS Div Free Loss: tensor(2.6404e-05, device='cuda:0')

Iteration: 16000 Total Loss: tensor(15.3328, device='cuda:0')

IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(0.6640, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.3524, device='cuda:0') NS PDE Loss: tensor(0.2943, device='cuda:0') NS Div Free Loss: tensor(2.5795e-05, device='cuda:0')

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Iteration: 16200      Total Loss: tensor(14.9012, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6641, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3518, device='cuda:0')      NS PDE Loss:  tenso
r(0.2514, device='cuda:0')      NS Div Free Loss:  tensor(2.5378e-05, device='cuda:0')
Iteration: 16400      Total Loss: tensor(14.8651, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6641, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3513, device='cuda:0')      NS PDE Loss:  tenso
r(0.2491, device='cuda:0')      NS Div Free Loss:  tensor(2.4889e-05, device='cuda:0')
Iteration: 16600      Total Loss: tensor(14.9117, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6641, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3507, device='cuda:0')      NS PDE Loss:  tenso
r(0.2546, device='cuda:0')      NS Div Free Loss:  tensor(2.4396e-05, device='cuda:0')
Iteration: 16800      Total Loss: tensor(14.8849, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3502, device='cuda:0')      NS PDE Loss:  tenso
r(0.2524, device='cuda:0')      NS Div Free Loss:  tensor(2.3907e-05, device='cuda:0')
Iteration: 17000      Total Loss: tensor(15.2543, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6639, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3497, device='cuda:0')      NS PDE Loss:  tenso
r(0.2898, device='cuda:0')      NS Div Free Loss:  tensor(2.3388e-05, device='cuda:0')
Iteration: 17200      Total Loss: tensor(14.7904, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3492, device='cuda:0')      NS PDE Loss:  tenso
r(0.2437, device='cuda:0')      NS Div Free Loss:  tensor(2.3012e-05, device='cuda:0')
Iteration: 17400      Total Loss: tensor(14.7868, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3487, device='cuda:0')      NS PDE Loss:  tenso
r(0.2441, device='cuda:0')      NS Div Free Loss:  tensor(2.2562e-05, device='cuda:0')
Iteration: 17600      Total Loss: tensor(14.7201, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3482, device='cuda:0')      NS PDE Loss:  tenso
r(0.2380, device='cuda:0')      NS Div Free Loss:  tensor(2.2137e-05, device='cuda:0')
Iteration: 17800      Total Loss: tensor(14.6284, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3477, device='cuda:0')      NS PDE Loss:  tenso
r(0.2292, device='cuda:0')      NS Div Free Loss:  tensor(2.1722e-05, device='cuda:0')
Iteration: 18000      Total Loss: tensor(14.8925, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6640, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.3472, device='cuda:0')      NS PDE Loss:  tenso
r(0.2566, device='cuda:0')      NS Div Free Loss:  tensor(2.1256e-05, device='cuda:0')
Iteration: 18200      Total Loss: tensor(14.5110, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(0.6642, device='cuda:0')      phi BC Los

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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3467, device='cuda:0')      NS PDE Loss: tensor(0.2192, device='cuda:0')      NS Div Free Loss: tensor(2.1025e-05, device='cuda:0')
Iteration: 18400      Total Loss: tensor(15.3090, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6634, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3462, device='cuda:0')      NS PDE Loss: tensor(0.2989, device='cuda:0')      NS Div Free Loss: tensor(2.0394e-05, device='cuda:0')
Iteration: 18600      Total Loss: tensor(14.5304, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6640, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3457, device='cuda:0')      NS PDE Loss: tensor(0.2217, device='cuda:0')      NS Div Free Loss: tensor(2.0018e-05, device='cuda:0')
Iteration: 18800      Total Loss: tensor(14.4360, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6642, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3453, device='cuda:0')      NS PDE Loss: tensor(0.2133, device='cuda:0')      NS Div Free Loss: tensor(1.9774e-05, device='cuda:0')
Iteration: 19000      Total Loss: tensor(17.0597, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6623, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3447, device='cuda:0')      NS PDE Loss: tensor(0.4735, device='cuda:0')      NS Div Free Loss: tensor(2.2175e-05, device='cuda:0')
Iteration: 19200      Total Loss: tensor(20.5066, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6620, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.3445, device='cuda:0')      NS PDE Loss: tensor(0.8193, device='cuda:0')      NS Div Free Loss: tensor(2.3562e-05, device='cuda:0')
Iteration: 19400      Total Loss: tensor(15.9938, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6619, device='cuda:0')      phi BC Loss: tensor(5.5473e-12, device='cuda:0')      mu BC Loss: tensor(0.3443, device='cuda:0')      NS PDE Loss: tensor(0.3700, device='cuda:0')      NS Div Free Loss: tensor(2.5474e-05, device='cuda:0')
Iteration: 19600      Total Loss: tensor(26.1437, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6628, device='cuda:0')      phi BC Loss: tensor(5.5540e-12, device='cuda:0')      mu BC Loss: tensor(0.3447, device='cuda:0')      NS PDE Loss: tensor(1.3836, device='cuda:0')      NS Div Free Loss: tensor(2.8940e-05, device='cuda:0')
Iteration: 19800      Total Loss: tensor(15.7971, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6625, device='cuda:0')      phi BC Loss: tensor(5.6441e-12, device='cuda:0')      mu BC Loss: tensor(0.3436, device='cuda:0')      NS PDE Loss: tensor(0.3507, device='cuda:0')      NS Div Free Loss: tensor(2.8166e-05, device='cuda:0')
Iteration: 20000      Total Loss: tensor(18.3856, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6651, device='cuda:0')      phi BC Loss: tensor(1.0646e-11, device='cuda:0')      mu BC Loss: tensor(0.3437, device='cuda:0')      NS PDE Loss: tensor(0.6078, device='cuda:0')      NS Div Free Loss: tensor(2.7013e-05, device='cuda:0')
Iteration: 20200      Total Loss: tensor(15.2524, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')      u BC Loss: tensor(0.6629, device='cuda:0')      phi BC Loss: tensor(1.0622e-11, device='cuda:0')      mu BC Loss: tensor(0.3434, device='cuda:0')      NS PDE Loss: tensor(0.2965, device='cuda:0')      NS Div Free Loss: tensor(2.1853e-05, device='cuda:0')

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Iteration: 20400      Total Loss: tensor(14.4894, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6636, device='cuda:0')      phi BC Los
s:  tensor(1.5691e-11, device='cuda:0')      mu BC Loss:  tensor(0.3430, device='cuda:0')      NS PDE Los
s:  tensor(0.2210, device='cuda:0')      NS Div Free Loss:  tensor(2.0240e-05, device='cuda:0')
Iteration: 20600      Total Loss: tensor(14.1585, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6638, device='cuda:0')      phi BC Los
s:  tensor(2.0060e-11, device='cuda:0')      mu BC Loss:  tensor(0.3425, device='cuda:0')      NS PDE Los
s:  tensor(0.1890, device='cuda:0')      NS Div Free Loss:  tensor(1.9213e-05, device='cuda:0')
Iteration: 20800      Total Loss: tensor(14.1493, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6641, device='cuda:0')      phi BC Los
s:  tensor(2.6515e-11, device='cuda:0')      mu BC Loss:  tensor(0.3420, device='cuda:0')      NS PDE Los
s:  tensor(0.1884, device='cuda:0')      NS Div Free Loss:  tensor(1.8731e-05, device='cuda:0')
Iteration: 21000      Total Loss: tensor(15.7865, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6641, device='cuda:0')      phi BC Los
s:  tensor(2.7559e-11, device='cuda:0')      mu BC Loss:  tensor(0.3413, device='cuda:0')      NS PDE Los
s:  tensor(0.3530, device='cuda:0')      NS Div Free Loss:  tensor(1.9217e-05, device='cuda:0')
Iteration: 21200      Total Loss: tensor(15.7512, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6643, device='cuda:0')      phi BC Los
s:  tensor(2.7386e-11, device='cuda:0')      mu BC Loss:  tensor(0.3409, device='cuda:0')      NS PDE Los
s:  tensor(0.3500, device='cuda:0')      NS Div Free Loss:  tensor(1.9945e-05, device='cuda:0')
Iteration: 21400      Total Loss: tensor(14.9864, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6643, device='cuda:0')      phi BC Los
s:  tensor(4.1307e-11, device='cuda:0')      mu BC Loss:  tensor(0.3403, device='cuda:0')      NS PDE Los
s:  tensor(0.2742, device='cuda:0')      NS Div Free Loss:  tensor(2.0635e-05, device='cuda:0')
Iteration: 21600      Total Loss: tensor(14.5579, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6643, device='cuda:0')      phi BC Los
s:  tensor(5.3729e-11, device='cuda:0')      mu BC Loss:  tensor(0.3397, device='cuda:0')      NS PDE Los
s:  tensor(0.2321, device='cuda:0')      NS Div Free Loss:  tensor(2.1286e-05, device='cuda:0')
Iteration: 21800      Total Loss: tensor(15.8976, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6658, device='cuda:0')      phi BC Los
s:  tensor(7.7764e-11, device='cuda:0')      mu BC Loss:  tensor(0.3395, device='cuda:0')      NS PDE Los
s:  tensor(0.3642, device='cuda:0')      NS Div Free Loss:  tensor(2.1326e-05, device='cuda:0')
Iteration: 22000      Total Loss: tensor(14.7982, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6630, device='cuda:0')      phi BC Los
s:  tensor(9.0914e-11, device='cuda:0')      mu BC Loss:  tensor(0.3389, device='cuda:0')      NS PDE Los
s:  tensor(0.2573, device='cuda:0')      NS Div Free Loss:  tensor(1.7601e-05, device='cuda:0')
Iteration: 22200      Total Loss: tensor(20.8383, device='cuda:0')
IC Loss:  tensor(0.0075, device='cuda:0')      u BC Loss:  tensor(0.6648, device='cuda:0')      phi BC Los
s:  tensor(8.3957e-11, device='cuda:0')      mu BC Loss:  tensor(0.3464, device='cuda:0')      NS PDE Los
s:  tensor(0.8257, device='cuda:0')      NS Div Free Loss:  tensor(2.1910e-05, device='cuda:0')
Iteration: 22400      Total Loss: tensor(21.3456, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6586, device='cuda:0')      phi BC Los

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s: tensor(8.1227e-11, device='cuda:0')	mu BC Loss: tensor(0.3473, device='cuda:0')	NS PDE Los
s: tensor(0.9073, device='cuda:0')	NS Div Free Loss: tensor(2.6093e-05, device='cuda:0')	
Iteration: 22600	Total Loss: tensor(17.5113, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6593, device='cuda:0')	phi BC Los
s: tensor(3.9282e-10, device='cuda:0')	mu BC Loss: tensor(0.3451, device='cuda:0')	NS PDE Los
s: tensor(0.5254, device='cuda:0')	NS Div Free Loss: tensor(3.0479e-05, device='cuda:0')	
Iteration: 22800	Total Loss: tensor(23.8629, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6631, device='cuda:0')	phi BC Los
s: tensor(2.6670e-09, device='cuda:0')	mu BC Loss: tensor(0.3351, device='cuda:0')	NS PDE Los
s: tensor(1.1663, device='cuda:0')	NS Div Free Loss: tensor(3.1061e-05, device='cuda:0')	
Iteration: 23000	Total Loss: tensor(15.5062, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6629, device='cuda:0')	phi BC Los
s: tensor(5.5936e-10, device='cuda:0')	mu BC Loss: tensor(0.3363, device='cuda:0')	NS PDE Los
s: tensor(0.3306, device='cuda:0')	NS Div Free Loss: tensor(3.0343e-05, device='cuda:0')	
Iteration: 23200	Total Loss: tensor(13.5231, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6632, device='cuda:0')	phi BC Los
s: tensor(4.3063e-10, device='cuda:0')	mu BC Loss: tensor(0.3372, device='cuda:0')	NS PDE Los
s: tensor(0.1321, device='cuda:0')	NS Div Free Loss: tensor(2.8042e-05, device='cuda:0')	
Iteration: 23400	Total Loss: tensor(21.4507, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(0.6618, device='cuda:0')	phi BC Los
s: tensor(1.3019e-09, device='cuda:0')	mu BC Loss: tensor(0.3355, device='cuda:0')	NS PDE Los
s: tensor(0.9138, device='cuda:0')	NS Div Free Loss: tensor(2.5899e-05, device='cuda:0')	
Iteration: 23600	Total Loss: tensor(24.5671, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6676, device='cuda:0')	phi BC Los
s: tensor(9.7907e-10, device='cuda:0')	mu BC Loss: tensor(0.3372, device='cuda:0')	NS PDE Los
s: tensor(1.2345, device='cuda:0')	NS Div Free Loss: tensor(2.4664e-05, device='cuda:0')	
Iteration: 23800	Total Loss: tensor(21.2431, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(0.6656, device='cuda:0')	phi BC Los
s: tensor(1.2229e-09, device='cuda:0')	mu BC Loss: tensor(0.3372, device='cuda:0')	NS PDE Los
s: tensor(0.8952, device='cuda:0')	NS Div Free Loss: tensor(2.3145e-05, device='cuda:0')	
Iteration: 24000	Total Loss: tensor(14.3862, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6636, device='cuda:0')	phi BC Los
s: tensor(2.3472e-09, device='cuda:0')	mu BC Loss: tensor(0.3363, device='cuda:0')	NS PDE Los
s: tensor(0.2206, device='cuda:0')	NS Div Free Loss: tensor(2.0045e-05, device='cuda:0')	
Iteration: 24200	Total Loss: tensor(14.1404, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.6637, device='cuda:0')	phi BC Los
s: tensor(2.7234e-09, device='cuda:0')	mu BC Loss: tensor(0.3361, device='cuda:0')	NS PDE Los
s: tensor(0.1963, device='cuda:0')	NS Div Free Loss: tensor(1.8173e-05, device='cuda:0')	
Iteration: 24400	Total Loss: tensor(14.0075, device='cuda:0')	
IC Loss: tensor(0.0074, device='cuda:0')	u BC Loss: tensor(0.6620, device='cuda:0')	phi BC Los
s: tensor(5.1233e-09, device='cuda:0')	mu BC Loss: tensor(0.3355, device='cuda:0')	NS PDE Los
s: tensor(0.1587, device='cuda:0')	NS Div Free Loss: tensor(1.7082e-05, device='cuda:0')	


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Iteration: 24600      Total Loss: tensor(26.2729, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6672, device='cuda:0')      phi BC Los
s:  tensor(6.8225e-09, device='cuda:0')      mu BC Loss:  tensor(0.3361, device='cuda:0')      NS PDE Los
s:  tensor(1.4092, device='cuda:0')      NS Div Free Loss:  tensor(1.7471e-05, device='cuda:0')
Iteration: 24800      Total Loss: tensor(17.1938, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6612, device='cuda:0')      phi BC Los
s:  tensor(7.6918e-09, device='cuda:0')      mu BC Loss:  tensor(0.3357, device='cuda:0')      NS PDE Los
s:  tensor(0.5021, device='cuda:0')      NS Div Free Loss:  tensor(1.3484e-05, device='cuda:0')
Iteration: 25000      Total Loss: tensor(21.8614, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(0.6606, device='cuda:0')      phi BC Los
s:  tensor(1.0590e-08, device='cuda:0')      mu BC Loss:  tensor(0.3356, device='cuda:0')      NS PDE Los
s:  tensor(0.9669, device='cuda:0')      NS Div Free Loss:  tensor(1.2002e-05, device='cuda:0')
Current Final Time: 0.8 Current Learning Rate: 0.001
Iteration: 200 Total Loss: tensor(22.4808, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1601, device='cuda:0')      phi BC Los
s:  tensor(1.1288e-07, device='cuda:0')      mu BC Loss:  tensor(0.6298, device='cuda:0')      NS PDE Los
s:  tensor(0.6218, device='cuda:0')      NS Div Free Loss:  tensor(6.5151e-05, device='cuda:0')
Iteration: 400 Total Loss: tensor(21.5336, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1671, device='cuda:0')      phi BC Los
s:  tensor(1.2523e-07, device='cuda:0')      mu BC Loss:  tensor(0.6111, device='cuda:0')      NS PDE Los
s:  tensor(0.5369, device='cuda:0')      NS Div Free Loss:  tensor(8.3958e-05, device='cuda:0')
Iteration: 600 Total Loss: tensor(21.3315, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1705, device='cuda:0')      phi BC Los
s:  tensor(1.6738e-07, device='cuda:0')      mu BC Loss:  tensor(0.6015, device='cuda:0')      NS PDE Los
s:  tensor(0.5202, device='cuda:0')      NS Div Free Loss:  tensor(9.6126e-05, device='cuda:0')
Iteration: 800 Total Loss: tensor(21.2174, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1722, device='cuda:0')      phi BC Los
s:  tensor(2.6153e-07, device='cuda:0')      mu BC Loss:  tensor(0.5951, device='cuda:0')      NS PDE Los
s:  tensor(0.5117, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1000      Total Loss: tensor(20.6392, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1731, device='cuda:0')      phi BC Los
s:  tensor(3.2166e-07, device='cuda:0')      mu BC Loss:  tensor(0.5905, device='cuda:0')      NS PDE Los
s:  tensor(0.4555, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1200      Total Loss: tensor(20.0974, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1737, device='cuda:0')      phi BC Los
s:  tensor(3.3262e-07, device='cuda:0')      mu BC Loss:  tensor(0.5868, device='cuda:0')      NS PDE Los
s:  tensor(0.4034, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1400      Total Loss: tensor(20.0975, device='cuda:0')
IC Loss:  tensor(0.0073, device='cuda:0')      u BC Loss:  tensor(1.1745, device='cuda:0')      phi BC Los
s:  tensor(2.8771e-07, device='cuda:0')      mu BC Loss:  tensor(0.5839, device='cuda:0')      NS PDE Los
s:  tensor(0.4043, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1600      Total Loss: tensor(20.1228, device='cuda:0')

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IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1752, device='cuda:0')	phi BC Los
s: tensor(2.1654e-07, device='cuda:0')	mu BC Loss: tensor(0.5813, device='cuda:0')	NS PDE Los
s: tensor(0.4080, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 1800	Total Loss: tensor(20.1407, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1758, device='cuda:0')	phi BC Los
s: tensor(1.6159e-07, device='cuda:0')	mu BC Loss: tensor(0.5792, device='cuda:0')	NS PDE Los
s: tensor(0.4109, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 2000	Total Loss: tensor(20.6009, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1766, device='cuda:0')	phi BC Los
s: tensor(1.1369e-07, device='cuda:0')	mu BC Loss: tensor(0.5773, device='cuda:0')	NS PDE Los
s: tensor(0.4575, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 2200	Total Loss: tensor(20.3001, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1770, device='cuda:0')	phi BC Los
s: tensor(7.9665e-08, device='cuda:0')	mu BC Loss: tensor(0.5755, device='cuda:0')	NS PDE Los
s: tensor(0.4284, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 2400	Total Loss: tensor(20.4024, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1774, device='cuda:0')	phi BC Los
s: tensor(5.4658e-08, device='cuda:0')	mu BC Loss: tensor(0.5739, device='cuda:0')	NS PDE Los
s: tensor(0.4384, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 2600	Total Loss: tensor(20.5323, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1779, device='cuda:0')	phi BC Los
s: tensor(3.9552e-08, device='cuda:0')	mu BC Loss: tensor(0.5724, device='cuda:0')	NS PDE Los
s: tensor(0.4530, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 2800	Total Loss: tensor(20.5704, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1783, device='cuda:0')	phi BC Los
s: tensor(2.8266e-08, device='cuda:0')	mu BC Loss: tensor(0.5709, device='cuda:0')	NS PDE Los
s: tensor(0.4573, device='cuda:0')	NS Div Free Loss: tensor(9.9229e-05, device='cuda:0')	
Iteration: 3000	Total Loss: tensor(21.0906, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1788, device='cuda:0')	phi BC Los
s: tensor(2.0547e-08, device='cuda:0')	mu BC Loss: tensor(0.5696, device='cuda:0')	NS PDE Los
s: tensor(0.5100, device='cuda:0')	NS Div Free Loss: tensor(9.7875e-05, device='cuda:0')	
Iteration: 3200	Total Loss: tensor(20.6892, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1790, device='cuda:0')	phi BC Los
s: tensor(1.4776e-08, device='cuda:0')	mu BC Loss: tensor(0.5682, device='cuda:0')	NS PDE Los
s: tensor(0.4704, device='cuda:0')	NS Div Free Loss: tensor(9.6048e-05, device='cuda:0')	
Iteration: 3400	Total Loss: tensor(20.8641, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1793, device='cuda:0')	phi BC Los
s: tensor(1.1703e-08, device='cuda:0')	mu BC Loss: tensor(0.5669, device='cuda:0')	NS PDE Los
s: tensor(0.4886, device='cuda:0')	NS Div Free Loss: tensor(9.4220e-05, device='cuda:0')	
Iteration: 3600	Total Loss: tensor(21.0341, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1796, device='cuda:0')	phi BC Los
s: tensor(8.9679e-09, device='cuda:0')	mu BC Loss: tensor(0.5656, device='cuda:0')	NS PDE Los

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s: tensor(0.5053, device='cuda:0')    NS Div Free Loss: tensor(9.2547e-05, device='cuda:0')
Iteration: 3800    Total Loss: tensor(21.2209, device='cuda:0')
IC Loss: tensor(0.0072, device='cuda:0')    u BC Loss: tensor(1.1799, device='cuda:0')    phi BC Los
s: tensor(7.4463e-09, device='cuda:0')    mu BC Loss: tensor(0.5644, device='cuda:0')    NS PDE Los
s: tensor(0.5256, device='cuda:0')    NS Div Free Loss: tensor(9.1169e-05, device='cuda:0')
Iteration: 4000    Total Loss: tensor(21.8414, device='cuda:0')
IC Loss: tensor(0.0072, device='cuda:0')    u BC Loss: tensor(1.1803, device='cuda:0')    phi BC Los
s: tensor(5.6352e-09, device='cuda:0')    mu BC Loss: tensor(0.5631, device='cuda:0')    NS PDE Los
s: tensor(0.5880, device='cuda:0')    NS Div Free Loss: tensor(8.9828e-05, device='cuda:0')
Iteration: 4200    Total Loss: tensor(21.3107, device='cuda:0')
IC Loss: tensor(0.0072, device='cuda:0')    u BC Loss: tensor(1.1804, device='cuda:0')    phi BC Los
s: tensor(4.6758e-09, device='cuda:0')    mu BC Loss: tensor(0.5619, device='cuda:0')    NS PDE Los
s: tensor(0.5350, device='cuda:0')    NS Div Free Loss: tensor(8.8276e-05, device='cuda:0')
Iteration: 4400    Total Loss: tensor(21.4153, device='cuda:0')
IC Loss: tensor(0.0072, device='cuda:0')    u BC Loss: tensor(1.1806, device='cuda:0')    phi BC Los
s: tensor(3.7247e-09, device='cuda:0')    mu BC Loss: tensor(0.5606, device='cuda:0')    NS PDE Los
s: tensor(0.5473, device='cuda:0')    NS Div Free Loss: tensor(8.6789e-05, device='cuda:0')
Iteration: 4600    Total Loss: tensor(20.2885, device='cuda:0')
IC Loss: tensor(0.0072, device='cuda:0')    u BC Loss: tensor(1.1804, device='cuda:0')    phi BC Los
s: tensor(3.1044e-09, device='cuda:0')    mu BC Loss: tensor(0.5593, device='cuda:0')    NS PDE Los
s: tensor(0.4343, device='cuda:0')    NS Div Free Loss: tensor(8.4237e-05, device='cuda:0')
Iteration: 4800    Total Loss: tensor(49.2583, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')    u BC Loss: tensor(1.1650, device='cuda:0')    phi BC Los
s: tensor(3.2954e-09, device='cuda:0')    mu BC Loss: tensor(0.5571, device='cuda:0')    NS PDE Los
s: tensor(3.3335, device='cuda:0')    NS Div Free Loss: tensor(7.7360e-05, device='cuda:0')
Iteration: 5000    Total Loss: tensor(51.7023, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')    u BC Loss: tensor(1.1651, device='cuda:0')    phi BC Los
s: tensor(2.8906e-09, device='cuda:0')    mu BC Loss: tensor(0.5581, device='cuda:0')    NS PDE Los
s: tensor(3.5764, device='cuda:0')    NS Div Free Loss: tensor(6.9523e-05, device='cuda:0')
Iteration: 5200    Total Loss: tensor(40.6745, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')    u BC Loss: tensor(1.1669, device='cuda:0')    phi BC Los
s: tensor(3.5004e-09, device='cuda:0')    mu BC Loss: tensor(0.5584, device='cuda:0')    NS PDE Los
s: tensor(2.4731, device='cuda:0')    NS Div Free Loss: tensor(6.5001e-05, device='cuda:0')
Iteration: 5400    Total Loss: tensor(35.1802, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')    u BC Loss: tensor(1.1689, device='cuda:0')    phi BC Los
s: tensor(4.1209e-09, device='cuda:0')    mu BC Loss: tensor(0.5584, device='cuda:0')    NS PDE Los
s: tensor(1.9238, device='cuda:0')    NS Div Free Loss: tensor(6.0813e-05, device='cuda:0')
Iteration: 5600    Total Loss: tensor(19.9068, device='cuda:0')
IC Loss: tensor(0.0073, device='cuda:0')    u BC Loss: tensor(1.1764, device='cuda:0')    phi BC Los
s: tensor(3.9651e-09, device='cuda:0')    mu BC Loss: tensor(0.5633, device='cuda:0')    NS PDE Los
s: tensor(0.3870, device='cuda:0')    NS Div Free Loss: tensor(6.6554e-05, device='cuda:0')
Iteration: 5800    Total Loss: tensor(19.3596, device='cuda:0')

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IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1794, device='cuda:0')	phi BC Los
s: tensor(3.6948e-09, device='cuda:0')	mu BC Loss: tensor(0.5560, device='cuda:0')	NS PDE Los
s: tensor(0.3446, device='cuda:0')	NS Div Free Loss: tensor(6.4460e-05, device='cuda:0')	
Iteration: 6000	Total Loss: tensor(19.3398, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1791, device='cuda:0')	phi BC Los
s: tensor(2.3717e-09, device='cuda:0')	mu BC Loss: tensor(0.5549, device='cuda:0')	NS PDE Los
s: tensor(0.3438, device='cuda:0')	NS Div Free Loss: tensor(6.3061e-05, device='cuda:0')	
Iteration: 6200	Total Loss: tensor(18.9987, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1794, device='cuda:0')	phi BC Los
s: tensor(1.5645e-09, device='cuda:0')	mu BC Loss: tensor(0.5538, device='cuda:0')	NS PDE Los
s: tensor(0.3108, device='cuda:0')	NS Div Free Loss: tensor(6.2093e-05, device='cuda:0')	
Iteration: 6400	Total Loss: tensor(19.0260, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1793, device='cuda:0')	phi BC Los
s: tensor(1.0025e-09, device='cuda:0')	mu BC Loss: tensor(0.5526, device='cuda:0')	NS PDE Los
s: tensor(0.3141, device='cuda:0')	NS Div Free Loss: tensor(6.0770e-05, device='cuda:0')	
Iteration: 6600	Total Loss: tensor(19.0036, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1793, device='cuda:0')	phi BC Los
s: tensor(6.3330e-10, device='cuda:0')	mu BC Loss: tensor(0.5514, device='cuda:0')	NS PDE Los
s: tensor(0.3131, device='cuda:0')	NS Div Free Loss: tensor(5.9429e-05, device='cuda:0')	
Iteration: 6800	Total Loss: tensor(19.0349, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1794, device='cuda:0')	phi BC Los
s: tensor(3.9004e-10, device='cuda:0')	mu BC Loss: tensor(0.5503, device='cuda:0')	NS PDE Los
s: tensor(0.3169, device='cuda:0')	NS Div Free Loss: tensor(5.8349e-05, device='cuda:0')	
Iteration: 7000	Total Loss: tensor(19.2516, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1794, device='cuda:0')	phi BC Los
s: tensor(2.5313e-10, device='cuda:0')	mu BC Loss: tensor(0.5491, device='cuda:0')	NS PDE Los
s: tensor(0.3392, device='cuda:0')	NS Div Free Loss: tensor(5.7322e-05, device='cuda:0')	
Iteration: 7200	Total Loss: tensor(18.5429, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1805, device='cuda:0')	phi BC Los
s: tensor(2.1900e-10, device='cuda:0')	mu BC Loss: tensor(0.5482, device='cuda:0')	NS PDE Los
s: tensor(0.2691, device='cuda:0')	NS Div Free Loss: tensor(5.7900e-05, device='cuda:0')	
Iteration: 7400	Total Loss: tensor(19.3419, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1796, device='cuda:0')	phi BC Los
s: tensor(4.3686e-11, device='cuda:0')	mu BC Loss: tensor(0.5467, device='cuda:0')	NS PDE Los
s: tensor(0.3501, device='cuda:0')	NS Div Free Loss: tensor(5.5118e-05, device='cuda:0')	
Iteration: 7600	Total Loss: tensor(18.9496, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.1797, device='cuda:0')	phi BC Los
s: tensor(4.9626e-11, device='cuda:0')	mu BC Loss: tensor(0.5453, device='cuda:0')	NS PDE Los
s: tensor(0.3115, device='cuda:0')	NS Div Free Loss: tensor(5.2926e-05, device='cuda:0')	
Iteration: 7800	Total Loss: tensor(21.8384, device='cuda:0')	
IC Loss: tensor(0.0073, device='cuda:0')	u BC Loss: tensor(1.1765, device='cuda:0')	phi BC Los
s: tensor(0., device='cuda:0')	mu BC Loss: tensor(0.5450, device='cuda:0')	NS PDE Loss: tenso

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r(0.5952, device='cuda:0')      NS Div Free Loss:  tensor(5.5698e-05, device='cuda:0')
Iteration: 8000      Total Loss:  tensor(22.7844, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1762, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5428, device='cuda:0')      NS PDE Loss:  tenso
r(0.6970, device='cuda:0')      NS Div Free Loss:  tensor(5.1630e-05, device='cuda:0')
Iteration: 8200      Total Loss:  tensor(24.9200, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1831, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5438, device='cuda:0')      NS PDE Loss:  tenso
r(0.9097, device='cuda:0')      NS Div Free Loss:  tensor(5.2893e-05, device='cuda:0')
Iteration: 8400      Total Loss:  tensor(25.8207, device='cuda:0')
IC Loss:  tensor(0.0075, device='cuda:0')      u BC Loss:  tensor(1.1830, device='cuda:0')      phi BC Los
s:  tensor(3.8834e-11, device='cuda:0')      mu BC Loss:  tensor(0.5436, device='cuda:0')      NS PDE Los
s:  tensor(0.9689, device='cuda:0')      NS Div Free Loss:  tensor(4.7352e-05, device='cuda:0')
Iteration: 8600      Total Loss:  tensor(18.5300, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1799, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5401, device='cuda:0')      NS PDE Loss:  tenso
r(0.2733, device='cuda:0')      NS Div Free Loss:  tensor(5.3705e-05, device='cuda:0')
Iteration: 8800      Total Loss:  tensor(19.9113, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1796, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5388, device='cuda:0')      NS PDE Loss:  tenso
r(0.4124, device='cuda:0')      NS Div Free Loss:  tensor(5.0426e-05, device='cuda:0')
Iteration: 9000      Total Loss:  tensor(20.1365, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1823, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5386, device='cuda:0')      NS PDE Loss:  tenso
r(0.4350, device='cuda:0')      NS Div Free Loss:  tensor(5.2750e-05, device='cuda:0')
Iteration: 9200      Total Loss:  tensor(22.0188, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1733, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5384, device='cuda:0')      NS PDE Loss:  tenso
r(0.6237, device='cuda:0')      NS Div Free Loss:  tensor(4.8777e-05, device='cuda:0')
Iteration: 9400      Total Loss:  tensor(21.2334, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1727, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5389, device='cuda:0')      NS PDE Loss:  tenso
r(0.5451, device='cuda:0')      NS Div Free Loss:  tensor(4.5089e-05, device='cuda:0')
Iteration: 9600      Total Loss:  tensor(20.2933, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1728, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5391, device='cuda:0')      NS PDE Loss:  tenso
r(0.4500, device='cuda:0')      NS Div Free Loss:  tensor(4.1787e-05, device='cuda:0')
Iteration: 9800      Total Loss:  tensor(19.9465, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1734, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5389, device='cuda:0')      NS PDE Loss:  tenso
r(0.4155, device='cuda:0')      NS Div Free Loss:  tensor(3.8845e-05, device='cuda:0')
Iteration: 10000      Total Loss:  tensor(37.6376, device='cuda:0')

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IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1696, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5377, device='cuda:0') NS PDE Loss: tensor(2.1856, device='cuda:0') NS Div Free Loss: tensor(3.4072e-05, device='cuda:0')
 Iteration: 10200 Total Loss: tensor(32.6903, device='cuda:0')
 IC Loss: tensor(0.0073, device='cuda:0') u BC Loss: tensor(1.1806, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5495, device='cuda:0') NS PDE Loss: tensor(1.6746, device='cuda:0') NS Div Free Loss: tensor(3.8102e-05, device='cuda:0')
 Iteration: 10400 Total Loss: tensor(47.6084, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1843, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5366, device='cuda:0') NS PDE Loss: tensor(3.1804, device='cuda:0') NS Div Free Loss: tensor(4.2242e-05, device='cuda:0')
 Iteration: 10600 Total Loss: tensor(25.9409, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5363, device='cuda:0') NS PDE Loss: tensor(1.0171, device='cuda:0') NS Div Free Loss: tensor(4.0243e-05, device='cuda:0')
 Iteration: 10800 Total Loss: tensor(33.5927, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1790, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5371, device='cuda:0') NS PDE Loss: tensor(1.7807, device='cuda:0') NS Div Free Loss: tensor(3.9200e-05, device='cuda:0')
 Iteration: 11000 Total Loss: tensor(18.9856, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1833, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5347, device='cuda:0') NS PDE Loss: tensor(0.3228, device='cuda:0') NS Div Free Loss: tensor(4.6405e-05, device='cuda:0')
 Iteration: 11200 Total Loss: tensor(33.6219, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1759, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5300, device='cuda:0') NS PDE Loss: tensor(1.7896, device='cuda:0') NS Div Free Loss: tensor(3.9685e-05, device='cuda:0')
 Iteration: 11400 Total Loss: tensor(20.7258, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1827, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5315, device='cuda:0') NS PDE Loss: tensor(0.4991, device='cuda:0') NS Div Free Loss: tensor(3.9312e-05, device='cuda:0')
 Iteration: 11600 Total Loss: tensor(20.7928, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1828, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5315, device='cuda:0') NS PDE Loss: tensor(0.5059, device='cuda:0') NS Div Free Loss: tensor(3.6388e-05, device='cuda:0')
 Iteration: 11800 Total Loss: tensor(19.4023, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1823, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5308, device='cuda:0') NS PDE Loss: tensor(0.3678, device='cuda:0') NS Div Free Loss: tensor(3.5360e-05, device='cuda:0')
 Iteration: 12000 Total Loss: tensor(23.8521, device='cuda:0')
 IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1846, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5299, device='cuda:0') NS PDE Loss: tensor(0.5299, device='cuda:0') NS Div Free Loss: tensor(3.5360e-05, device='cuda:0')

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r(0.8129, device='cuda:0')      NS Div Free Loss:  tensor(3.5258e-05, device='cuda:0')
Iteration: 12200      Total Loss:  tensor(21.0390, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1830, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5297, device='cuda:0')      NS PDE Loss:  tenso
r(0.5326, device='cuda:0')      NS Div Free Loss:  tensor(3.2423e-05, device='cuda:0')
Iteration: 12400      Total Loss:  tensor(22.9116, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1804, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5283, device='cuda:0')      NS PDE Loss:  tenso
r(0.7205, device='cuda:0')      NS Div Free Loss:  tensor(2.8796e-05, device='cuda:0')
Iteration: 12600      Total Loss:  tensor(21.6907, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1825, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5277, device='cuda:0')      NS PDE Loss:  tenso
r(0.5991, device='cuda:0')      NS Div Free Loss:  tensor(3.1267e-05, device='cuda:0')
Iteration: 12800      Total Loss:  tensor(20.3797, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1832, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5264, device='cuda:0')      NS PDE Loss:  tenso
r(0.4691, device='cuda:0')      NS Div Free Loss:  tensor(3.0864e-05, device='cuda:0')
Iteration: 13000      Total Loss:  tensor(18.3541, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1811, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5247, device='cuda:0')      NS PDE Loss:  tenso
r(0.2674, device='cuda:0')      NS Div Free Loss:  tensor(2.8296e-05, device='cuda:0')
Iteration: 13200      Total Loss:  tensor(21.1440, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1790, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5255, device='cuda:0')      NS PDE Loss:  tenso
r(0.5460, device='cuda:0')      NS Div Free Loss:  tensor(2.9221e-05, device='cuda:0')
Iteration: 13400      Total Loss:  tensor(21.4373, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1788, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5260, device='cuda:0')      NS PDE Loss:  tenso
r(0.5754, device='cuda:0')      NS Div Free Loss:  tensor(2.7681e-05, device='cuda:0')
Iteration: 13600      Total Loss:  tensor(22.0714, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1790, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5265, device='cuda:0')      NS PDE Loss:  tenso
r(0.6377, device='cuda:0')      NS Div Free Loss:  tensor(2.5857e-05, device='cuda:0')
Iteration: 13800      Total Loss:  tensor(22.6898, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.1797, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5267, device='cuda:0')      NS PDE Loss:  tenso
r(0.6993, device='cuda:0')      NS Div Free Loss:  tensor(2.4134e-05, device='cuda:0')
Iteration: 14000      Total Loss:  tensor(42.8016, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1843, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.5273, device='cuda:0')      NS PDE Loss:  tenso
r(2.7104, device='cuda:0')      NS Div Free Loss:  tensor(2.4159e-05, device='cuda:0')
Iteration: 14200      Total Loss:  tensor(22.9673, device='cuda:0')

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IC Loss: tensor(0.0072, device='cuda:0') u BC Loss: tensor(1.1802, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5256, device='cuda:0') NS PDE Loss: tensor(0.7231, device='cuda:0')
 NS Div Free Loss: tensor(1.9854e-05, device='cuda:0')
 Iteration: 14400 Total Loss: tensor(23.0744, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1843, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5240, device='cuda:0') NS PDE Loss: tensor(0.7391, device='cuda:0')
 NS Div Free Loss: tensor(2.1093e-05, device='cuda:0')
 Iteration: 14600 Total Loss: tensor(23.2544, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1833, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5233, device='cuda:0') NS PDE Loss: tensor(0.7598, device='cuda:0')
 NS Div Free Loss: tensor(2.0788e-05, device='cuda:0')
 Iteration: 14800 Total Loss: tensor(20.2832, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1835, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5221, device='cuda:0') NS PDE Loss: tensor(0.4643, device='cuda:0')
 NS Div Free Loss: tensor(2.0244e-05, device='cuda:0')
 Iteration: 15000 Total Loss: tensor(18.3387, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1814, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5204, device='cuda:0') NS PDE Loss: tensor(0.2715, device='cuda:0')
 NS Div Free Loss: tensor(1.8507e-05, device='cuda:0')
 Iteration: 15200 Total Loss: tensor(18.8472, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1841, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5196, device='cuda:0') NS PDE Loss: tensor(0.3227, device='cuda:0')
 NS Div Free Loss: tensor(1.8685e-05, device='cuda:0')
 Iteration: 15400 Total Loss: tensor(19.2290, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1845, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5187, device='cuda:0') NS PDE Loss: tensor(0.3614, device='cuda:0')
 NS Div Free Loss: tensor(1.8160e-05, device='cuda:0')
 Iteration: 15600 Total Loss: tensor(19.5924, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1850, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5176, device='cuda:0') NS PDE Loss: tensor(0.3991, device='cuda:0')
 NS Div Free Loss: tensor(1.7550e-05, device='cuda:0')
 Iteration: 15800 Total Loss: tensor(22.4899, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1775, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5143, device='cuda:0') NS PDE Loss: tensor(0.6900, device='cuda:0')
 NS Div Free Loss: tensor(2.1426e-05, device='cuda:0')
 Iteration: 16000 Total Loss: tensor(44.0963, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1867, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5152, device='cuda:0') NS PDE Loss: tensor(2.8502, device='cuda:0')
 NS Div Free Loss: tensor(2.0279e-05, device='cuda:0')
 Iteration: 16200 Total Loss: tensor(25.1162, device='cuda:0')

IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1858, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
 mu BC Loss: tensor(0.5147, device='cuda:0') NS PDE Loss: tensor(0., device='cuda:0')


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r(0.9507, device='cuda:0')      NS Div Free Loss: tensor(2.0777e-05, device='cuda:0')
Iteration: 16400      Total Loss: tensor(20.0381, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1831, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5142, device='cuda:0')      NS PDE Loss: tenso
r(0.4460, device='cuda:0')      NS Div Free Loss: tensor(1.8417e-05, device='cuda:0')
Iteration: 16600      Total Loss: tensor(26.6240, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1767, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5130, device='cuda:0')      NS PDE Loss: tenso
r(1.1064, device='cuda:0')      NS Div Free Loss: tensor(1.5341e-05, device='cuda:0')
Iteration: 16800      Total Loss: tensor(22.8477, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1846, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5140, device='cuda:0')      NS PDE Loss: tenso
r(0.7277, device='cuda:0')      NS Div Free Loss: tensor(1.6361e-05, device='cuda:0')
Iteration: 17000      Total Loss: tensor(28.8372, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1865, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5138, device='cuda:0')      NS PDE Loss: tenso
r(1.3269, device='cuda:0')      NS Div Free Loss: tensor(1.5872e-05, device='cuda:0')
Iteration: 17200      Total Loss: tensor(19.5260, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1806, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5116, device='cuda:0')      NS PDE Loss: tenso
r(0.3979, device='cuda:0')      NS Div Free Loss: tensor(1.4384e-05, device='cuda:0')
Iteration: 17400      Total Loss: tensor(18.5519, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1813, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5106, device='cuda:0')      NS PDE Loss: tenso
r(0.3014, device='cuda:0')      NS Div Free Loss: tensor(1.4513e-05, device='cuda:0')
Iteration: 17600      Total Loss: tensor(18.1121, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1815, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5096, device='cuda:0')      NS PDE Loss: tenso
r(0.2586, device='cuda:0')      NS Div Free Loss: tensor(1.4433e-05, device='cuda:0')
Iteration: 17800      Total Loss: tensor(17.9681, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1816, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5086, device='cuda:0')      NS PDE Loss: tenso
r(0.2439, device='cuda:0')      NS Div Free Loss: tensor(1.4245e-05, device='cuda:0')
Iteration: 18000      Total Loss: tensor(18.2347, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1814, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5076, device='cuda:0')      NS PDE Loss: tenso
r(0.2729, device='cuda:0')      NS Div Free Loss: tensor(1.4007e-05, device='cuda:0')
Iteration: 18200      Total Loss: tensor(18.1790, device='cuda:0')
IC Loss: tensor(0.0071, device='cuda:0')      u BC Loss: tensor(1.1814, device='cuda:0')      phi BC Los
s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5066, device='cuda:0')      NS PDE Loss: tenso
r(0.2677, device='cuda:0')      NS Div Free Loss: tensor(1.3838e-05, device='cuda:0')
Iteration: 18400      Total Loss: tensor(18.0343, device='cuda:0')

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IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1815, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5057, device='cuda:0') NS PDE Loss: tensor(0.2540, device='cuda:0') NS Div Free Loss: tensor(1.3721e-05, device='cuda:0')
 Iteration: 18600 Total Loss: tensor(18.0007, device='cuda:0')
 IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1815, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5047, device='cuda:0') NS PDE Loss: tensor(0.2519, device='cuda:0') NS Div Free Loss: tensor(1.3621e-05, device='cuda:0')
 Iteration: 18800 Total Loss: tensor(18.0571, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1815, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5038, device='cuda:0') NS PDE Loss: tensor(0.2581, device='cuda:0') NS Div Free Loss: tensor(1.3516e-05, device='cuda:0')
 Iteration: 19000 Total Loss: tensor(18.4284, device='cuda:0')
 IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1814, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5029, device='cuda:0') NS PDE Loss: tensor(0.2951, device='cuda:0') NS Div Free Loss: tensor(1.3419e-05, device='cuda:0')
 Iteration: 19200 Total Loss: tensor(18.0564, device='cuda:0')
 IC Loss: tensor(0.0071, device='cuda:0') u BC Loss: tensor(1.1815, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5020, device='cuda:0') NS PDE Loss: tensor(0.2589, device='cuda:0') NS Div Free Loss: tensor(1.3408e-05, device='cuda:0')
 Iteration: 19400 Total Loss: tensor(17.8434, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1817, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5011, device='cuda:0') NS PDE Loss: tensor(0.2401, device='cuda:0') NS Div Free Loss: tensor(1.3433e-05, device='cuda:0')
 Iteration: 19600 Total Loss: tensor(28.2042, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1786, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5006, device='cuda:0') NS PDE Loss: tensor(1.2771, device='cuda:0') NS Div Free Loss: tensor(1.4321e-05, device='cuda:0')
 Iteration: 19800 Total Loss: tensor(22.6032, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1808, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5002, device='cuda:0') NS PDE Loss: tensor(0.7172, device='cuda:0') NS Div Free Loss: tensor(1.4764e-05, device='cuda:0')
 Iteration: 20000 Total Loss: tensor(29.0989, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1788, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.4995, device='cuda:0') NS PDE Loss: tensor(1.3677, device='cuda:0') NS Div Free Loss: tensor(1.5159e-05, device='cuda:0')
 Iteration: 20200 Total Loss: tensor(30.9864, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1795, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.5004, device='cuda:0') NS PDE Loss: tensor(1.5563, device='cuda:0') NS Div Free Loss: tensor(1.7950e-05, device='cuda:0')
 Iteration: 20400 Total Loss: tensor(20.9168, device='cuda:0')
 IC Loss: tensor(0.0070, device='cuda:0') u BC Loss: tensor(1.1780, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0') mu BC Loss: tensor(0.4983, device='cuda:0') NS PDE Loss: tensor(

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r(0.5503, device='cuda:0')      NS Div Free Loss:  tensor(1.7250e-05, device='cuda:0')
Iteration: 20600      Total Loss:  tensor(26.1734, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1806, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4994, device='cuda:0')      NS PDE Loss:  tenso
r(1.0755, device='cuda:0')      NS Div Free Loss:  tensor(1.9381e-05, device='cuda:0')
Iteration: 20800      Total Loss:  tensor(20.4082, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1788, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4974, device='cuda:0')      NS PDE Loss:  tenso
r(0.5018, device='cuda:0')      NS Div Free Loss:  tensor(1.6174e-05, device='cuda:0')
Iteration: 21000      Total Loss:  tensor(19.3765, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1843, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4976, device='cuda:0')      NS PDE Loss:  tenso
r(0.3976, device='cuda:0')      NS Div Free Loss:  tensor(1.6704e-05, device='cuda:0')
Iteration: 21200      Total Loss:  tensor(20.6130, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1762, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4976, device='cuda:0')      NS PDE Loss:  tenso
r(0.5207, device='cuda:0')      NS Div Free Loss:  tensor(1.6497e-05, device='cuda:0')
Iteration: 21400      Total Loss:  tensor(21.3165, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1739, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4976, device='cuda:0')      NS PDE Loss:  tenso
r(0.5909, device='cuda:0')      NS Div Free Loss:  tensor(1.8013e-05, device='cuda:0')
Iteration: 21600      Total Loss:  tensor(19.2286, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1729, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4979, device='cuda:0')      NS PDE Loss:  tenso
r(0.3829, device='cuda:0')      NS Div Free Loss:  tensor(2.0043e-05, device='cuda:0')
Iteration: 21800      Total Loss:  tensor(19.9489, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1724, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4978, device='cuda:0')      NS PDE Loss:  tenso
r(0.4556, device='cuda:0')      NS Div Free Loss:  tensor(2.1861e-05, device='cuda:0')
Iteration: 22000      Total Loss:  tensor(37.5829, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1710, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4964, device='cuda:0')      NS PDE Loss:  tenso
r(2.2143, device='cuda:0')      NS Div Free Loss:  tensor(2.1998e-05, device='cuda:0')
Iteration: 22200      Total Loss:  tensor(19.6199, device='cuda:0')
IC Loss:  tensor(0.0070, device='cuda:0')      u BC Loss:  tensor(1.1721, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4962, device='cuda:0')      NS PDE Loss:  tenso
r(0.4241, device='cuda:0')      NS Div Free Loss:  tensor(2.4508e-05, device='cuda:0')
Iteration: 22400      Total Loss:  tensor(21.0600, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.1749, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4956, device='cuda:0')      NS PDE Loss:  tenso
r(0.5657, device='cuda:0')      NS Div Free Loss:  tensor(2.4266e-05, device='cuda:0')
Iteration: 22600      Total Loss:  tensor(19.7632, device='cuda:0')

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IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1782, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4947, device='cuda:0')      NS PDE Loss: tensor(0.4408, device='cuda:0')
NS Div Free Loss: tensor(2.1100e-05, device='cuda:0')
Iteration: 22800      Total Loss: tensor(18.1270, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1798, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4943, device='cuda:0')      NS PDE Loss: tensor(0.2777, device='cuda:0')
NS Div Free Loss: tensor(1.9510e-05, device='cuda:0')
Iteration: 23000      Total Loss: tensor(18.2143, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1802, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4936, device='cuda:0')      NS PDE Loss: tensor(0.2873, device='cuda:0')
NS Div Free Loss: tensor(1.8519e-05, device='cuda:0')
Iteration: 23200      Total Loss: tensor(17.9872, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1805, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4926, device='cuda:0')      NS PDE Loss: tensor(0.2653, device='cuda:0')
NS Div Free Loss: tensor(1.7992e-05, device='cuda:0')
Iteration: 23400      Total Loss: tensor(17.9851, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1807, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4916, device='cuda:0')      NS PDE Loss: tensor(0.2654, device='cuda:0')
NS Div Free Loss: tensor(1.7647e-05, device='cuda:0')
Iteration: 23600      Total Loss: tensor(17.7867, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1808, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4908, device='cuda:0')      NS PDE Loss: tensor(0.2453, device='cuda:0')
NS Div Free Loss: tensor(1.7323e-05, device='cuda:0')
Iteration: 23800      Total Loss: tensor(17.6816, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1808, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4899, device='cuda:0')      NS PDE Loss: tensor(0.2374, device='cuda:0')
NS Div Free Loss: tensor(1.7044e-05, device='cuda:0')
Iteration: 24000      Total Loss: tensor(18.4582, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1805, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4888, device='cuda:0')      NS PDE Loss: tensor(0.3157, device='cuda:0')
NS Div Free Loss: tensor(1.6675e-05, device='cuda:0')
Iteration: 24200      Total Loss: tensor(18.0044, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1808, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4880, device='cuda:0')      NS PDE Loss: tensor(0.2631, device='cuda:0')
NS Div Free Loss: tensor(1.6608e-05, device='cuda:0')
Iteration: 24400      Total Loss: tensor(18.1720, device='cuda:0')
IC Loss: tensor(0.0070, device='cuda:0')      u BC Loss: tensor(1.1807, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4872, device='cuda:0')      NS PDE Loss: tensor(0.2881, device='cuda:0')
NS Div Free Loss: tensor(1.6397e-05, device='cuda:0')
Iteration: 24600      Total Loss: tensor(17.4381, device='cuda:0')
IC Loss: tensor(0.0069, device='cuda:0')      u BC Loss: tensor(1.1811, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.4864, device='cuda:0')      NS PDE Loss: tensor(0.2881, device='cuda:0')
NS Div Free Loss: tensor(1.6397e-05, device='cuda:0')

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r(0.2163, device='cuda:0')      NS Div Free Loss:  tensor(1.6427e-05, device='cuda:0')
Iteration: 24800      Total Loss:  tensor(18.1795, device='cuda:0')
IC Loss:  tensor(0.0069, device='cuda:0')      u BC Loss:  tensor(1.1806, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4853, device='cuda:0')      NS PDE Loss:  tenso
r(0.2917, device='cuda:0')      NS Div Free Loss:  tensor(1.6388e-05, device='cuda:0')
Iteration: 25000      Total Loss:  tensor(17.7919, device='cuda:0')
IC Loss:  tensor(0.0069, device='cuda:0')      u BC Loss:  tensor(1.1809, device='cuda:0')      phi BC Los
s:  tensor(0., device='cuda:0')      mu BC Loss:  tensor(0.4846, device='cuda:0')      NS PDE Loss:  tenso
r(0.2548, device='cuda:0')      NS Div Free Loss:  tensor(1.6134e-05, device='cuda:0')
Current Final Time: 1.0 Current Learning Rate:  0.001
Iteration: 200  Total Loss:  tensor(34.6942, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.7833, device='cuda:0')      phi BC Los
s:  tensor(1.0090e-12, device='cuda:0')      mu BC Loss:  tensor(0.7717, device='cuda:0')      NS PDE Los
s:  tensor(1.4735, device='cuda:0')      NS Div Free Loss:  tensor(6.3817e-05, device='cuda:0')
Iteration: 400  Total Loss:  tensor(34.8953, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.7893, device='cuda:0')      phi BC Los
s:  tensor(5.2403e-13, device='cuda:0')      mu BC Loss:  tensor(0.7419, device='cuda:0')      NS PDE Los
s:  tensor(1.5075, device='cuda:0')      NS Div Free Loss:  tensor(8.0245e-05, device='cuda:0')
Iteration: 600  Total Loss:  tensor(30.1016, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.7991, device='cuda:0')      phi BC Los
s:  tensor(4.2646e-13, device='cuda:0')      mu BC Loss:  tensor(0.7279, device='cuda:0')      NS PDE Los
s:  tensor(1.0332, device='cuda:0')      NS Div Free Loss:  tensor(9.5951e-05, device='cuda:0')
Iteration: 800  Total Loss:  tensor(29.2102, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.8008, device='cuda:0')      phi BC Los
s:  tensor(3.8997e-13, device='cuda:0')      mu BC Loss:  tensor(0.7174, device='cuda:0')      NS PDE Los
s:  tensor(0.9472, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1000      Total Loss:  tensor(28.4035, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.7957, device='cuda:0')      phi BC Los
s:  tensor(3.4258e-13, device='cuda:0')      mu BC Loss:  tensor(0.7074, device='cuda:0')      NS PDE Los
s:  tensor(0.8700, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1200      Total Loss:  tensor(29.0253, device='cuda:0')
IC Loss:  tensor(0.0072, device='cuda:0')      u BC Loss:  tensor(1.8036, device='cuda:0')      phi BC Los
s:  tensor(2.9557e-13, device='cuda:0')      mu BC Loss:  tensor(0.7022, device='cuda:0')      NS PDE Los
s:  tensor(0.9326, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1400      Total Loss:  tensor(27.1875, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.8042, device='cuda:0')      phi BC Los
s:  tensor(3.4219e-13, device='cuda:0')      mu BC Loss:  tensor(0.6956, device='cuda:0')      NS PDE Los
s:  tensor(0.7538, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')
Iteration: 1600      Total Loss:  tensor(25.3218, device='cuda:0')
IC Loss:  tensor(0.0071, device='cuda:0')      u BC Loss:  tensor(1.8051, device='cuda:0')      phi BC Los
s:  tensor(2.9932e-13, device='cuda:0')      mu BC Loss:  tensor(0.6907, device='cuda:0')      NS PDE Los
s:  tensor(0.5695, device='cuda:0')      NS Div Free Loss:  tensor(0.0001, device='cuda:0')

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Iteration: 1800	Total Loss: tensor(24.7591, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8062, device='cuda:0')	phi BC Los
s: tensor(2.2483e-13, device='cuda:0')	mu BC Loss: tensor(0.6861, device='cuda:0')	NS PDE Los
s: tensor(0.5151, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 2000	Total Loss: tensor(25.0851, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8074, device='cuda:0')	phi BC Los
s: tensor(1.9671e-13, device='cuda:0')	mu BC Loss: tensor(0.6826, device='cuda:0')	NS PDE Los
s: tensor(0.5498, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 2200	Total Loss: tensor(24.5393, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8080, device='cuda:0')	phi BC Los
s: tensor(1.4471e-13, device='cuda:0')	mu BC Loss: tensor(0.6790, device='cuda:0')	NS PDE Los
s: tensor(0.4968, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 2400	Total Loss: tensor(25.0913, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8091, device='cuda:0')	phi BC Los
s: tensor(1.3871e-13, device='cuda:0')	mu BC Loss: tensor(0.6759, device='cuda:0')	NS PDE Los
s: tensor(0.5531, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 2600	Total Loss: tensor(25.1329, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8099, device='cuda:0')	phi BC Los
s: tensor(1.5872e-13, device='cuda:0')	mu BC Loss: tensor(0.6731, device='cuda:0')	NS PDE Los
s: tensor(0.5592, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 2800	Total Loss: tensor(25.6485, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8110, device='cuda:0')	phi BC Los
s: tensor(1.8345e-13, device='cuda:0')	mu BC Loss: tensor(0.6704, device='cuda:0')	NS PDE Los
s: tensor(0.6123, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 3000	Total Loss: tensor(26.2691, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8120, device='cuda:0')	phi BC Los
s: tensor(1.7714e-13, device='cuda:0')	mu BC Loss: tensor(0.6679, device='cuda:0')	NS PDE Los
s: tensor(0.6757, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 3200	Total Loss: tensor(26.0510, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8127, device='cuda:0')	phi BC Los
s: tensor(1.8445e-13, device='cuda:0')	mu BC Loss: tensor(0.6653, device='cuda:0')	NS PDE Los
s: tensor(0.6553, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 3400	Total Loss: tensor(26.6742, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8138, device='cuda:0')	phi BC Los
s: tensor(1.9161e-13, device='cuda:0')	mu BC Loss: tensor(0.6628, device='cuda:0')	NS PDE Los
s: tensor(0.7190, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 3600	Total Loss: tensor(25.5781, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8139, device='cuda:0')	phi BC Los
s: tensor(1.9857e-13, device='cuda:0')	mu BC Loss: tensor(0.6603, device='cuda:0')	NS PDE Los
s: tensor(0.6110, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 3800	Total Loss: tensor(25.8894, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8147, device='cuda:0')	phi BC Los

s: tensor(1.9335e-13, device='cuda:0')	mu BC Loss: tensor(0.6581, device='cuda:0')	NS PDE Los
s: tensor(0.6437, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 4000	Total Loss: tensor(24.3022, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8113, device='cuda:0')	phi BC Los
s: tensor(1.8914e-13, device='cuda:0')	mu BC Loss: tensor(0.6550, device='cuda:0')	NS PDE Los
s: tensor(0.4874, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 4200	Total Loss: tensor(38.2974, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8100, device='cuda:0')	phi BC Los
s: tensor(2.6067e-13, device='cuda:0')	mu BC Loss: tensor(0.6499, device='cuda:0')	NS PDE Los
s: tensor(1.8887, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 4400	Total Loss: tensor(29.6964, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8133, device='cuda:0')	phi BC Los
s: tensor(2.2447e-13, device='cuda:0')	mu BC Loss: tensor(0.6502, device='cuda:0')	NS PDE Los
s: tensor(1.0285, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 4600	Total Loss: tensor(26.2428, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8120, device='cuda:0')	phi BC Los
s: tensor(2.2230e-13, device='cuda:0')	mu BC Loss: tensor(0.6500, device='cuda:0')	NS PDE Los
s: tensor(0.6837, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 4800	Total Loss: tensor(35.5520, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8109, device='cuda:0')	phi BC Los
s: tensor(2.2099e-13, device='cuda:0')	mu BC Loss: tensor(0.6503, device='cuda:0')	NS PDE Los
s: tensor(1.6140, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 5000	Total Loss: tensor(26.8408, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8112, device='cuda:0')	phi BC Los
s: tensor(2.1928e-13, device='cuda:0')	mu BC Loss: tensor(0.6487, device='cuda:0')	NS PDE Los
s: tensor(0.7443, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 5200	Total Loss: tensor(27.9440, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8193, device='cuda:0')	phi BC Los
s: tensor(5.3978e-13, device='cuda:0')	mu BC Loss: tensor(0.6403, device='cuda:0')	NS PDE Los
s: tensor(0.8575, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 5400	Total Loss: tensor(25.5905, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8066, device='cuda:0')	phi BC Los
s: tensor(5.1831e-13, device='cuda:0')	mu BC Loss: tensor(0.6411, device='cuda:0')	NS PDE Los
s: tensor(0.6215, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 5600	Total Loss: tensor(27.7844, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8051, device='cuda:0')	phi BC Los
s: tensor(5.8728e-13, device='cuda:0')	mu BC Loss: tensor(0.6432, device='cuda:0')	NS PDE Los
s: tensor(0.8402, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 5800	Total Loss: tensor(27.4496, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(1.8047, device='cuda:0')	phi BC Los
s: tensor(9.2082e-13, device='cuda:0')	mu BC Loss: tensor(0.6431, device='cuda:0')	NS PDE Los
s: tensor(0.8054, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	

Iteration: 6000				Total Loss: tensor(48.3804, device='cuda:0')	
IC Loss:	tensor(0.0072, device='cuda:0')	u BC Loss:	tensor(1.8026, device='cuda:0')		phi BC Los
s:	tensor(9.2785e-13, device='cuda:0')	mu BC Loss:	tensor(0.6414, device='cuda:0')		NS PDE Los
s:	tensor(2.9005, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 6200				Total Loss: tensor(52.7782, device='cuda:0')	
IC Loss:	tensor(0.0071, device='cuda:0')	u BC Loss:	tensor(1.8177, device='cuda:0')		phi BC Los
s:	tensor(1.6661e-12, device='cuda:0')	mu BC Loss:	tensor(0.6444, device='cuda:0')		NS PDE Los
s:	tensor(3.3373, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 6400				Total Loss: tensor(23.3657, device='cuda:0')	
IC Loss:	tensor(0.0071, device='cuda:0')	u BC Loss:	tensor(1.8182, device='cuda:0')		phi BC Los
s:	tensor(1.1276e-12, device='cuda:0')	mu BC Loss:	tensor(0.6386, device='cuda:0')		NS PDE Los
s:	tensor(0.4023, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 6600				Total Loss: tensor(31.7983, device='cuda:0')	
IC Loss:	tensor(0.0071, device='cuda:0')	u BC Loss:	tensor(1.8137, device='cuda:0')		phi BC Los
s:	tensor(6.4020e-13, device='cuda:0')	mu BC Loss:	tensor(0.6385, device='cuda:0')		NS PDE Los
s:	tensor(1.2436, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 6800				Total Loss: tensor(24.7944, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8213, device='cuda:0')		phi BC Los
s:	tensor(5.6888e-13, device='cuda:0')	mu BC Loss:	tensor(0.6374, device='cuda:0')		NS PDE Los
s:	tensor(0.5473, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 7000				Total Loss: tensor(23.4435, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8172, device='cuda:0')		phi BC Los
s:	tensor(4.8924e-13, device='cuda:0')	mu BC Loss:	tensor(0.6351, device='cuda:0')		NS PDE Los
s:	tensor(0.4142, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 7200				Total Loss: tensor(24.4932, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8187, device='cuda:0')		phi BC Los
s:	tensor(4.8686e-13, device='cuda:0')	mu BC Loss:	tensor(0.6347, device='cuda:0')		NS PDE Los
s:	tensor(0.5193, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 7400				Total Loss: tensor(33.6061, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8145, device='cuda:0')		phi BC Los
s:	tensor(4.4220e-13, device='cuda:0')	mu BC Loss:	tensor(0.6338, device='cuda:0')		NS PDE Los
s:	tensor(1.4315, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 7600				Total Loss: tensor(27.0898, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8194, device='cuda:0')		phi BC Los
s:	tensor(4.2030e-13, device='cuda:0')	mu BC Loss:	tensor(0.6331, device='cuda:0')		NS PDE Los
s:	tensor(0.7801, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 7800				Total Loss: tensor(25.4552, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8192, device='cuda:0')		phi BC Los
s:	tensor(3.7841e-13, device='cuda:0')	mu BC Loss:	tensor(0.6322, device='cuda:0')		NS PDE Los
s:	tensor(0.6174, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 8000				Total Loss: tensor(27.8206, device='cuda:0')	
IC Loss:	tensor(0.0070, device='cuda:0')	u BC Loss:	tensor(1.8152, device='cuda:0')		phi BC Los

s: tensor(4.2747e-13, device='cuda:0')	mu BC Loss: tensor(0.6309, device='cuda:0')	NS PDE Los
s: tensor(0.8543, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 8200	Total Loss: tensor(28.0894, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8204, device='cuda:0')	phi BC Los
s: tensor(4.7865e-13, device='cuda:0')	mu BC Loss: tensor(0.6303, device='cuda:0')	NS PDE Los
s: tensor(0.8822, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 8400	Total Loss: tensor(25.0552, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8201, device='cuda:0')	phi BC Los
s: tensor(3.7070e-13, device='cuda:0')	mu BC Loss: tensor(0.6295, device='cuda:0')	NS PDE Los
s: tensor(0.5779, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 8600	Total Loss: tensor(33.7368, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8130, device='cuda:0')	phi BC Los
s: tensor(4.4654e-13, device='cuda:0')	mu BC Loss: tensor(0.6280, device='cuda:0')	NS PDE Los
s: tensor(1.4484, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 8800	Total Loss: tensor(28.0301, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8220, device='cuda:0')	phi BC Los
s: tensor(5.3624e-13, device='cuda:0')	mu BC Loss: tensor(0.6290, device='cuda:0')	NS PDE Los
s: tensor(0.8778, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 9000	Total Loss: tensor(35.3317, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8245, device='cuda:0')	phi BC Los
s: tensor(4.6530e-13, device='cuda:0')	mu BC Loss: tensor(0.6283, device='cuda:0')	NS PDE Los
s: tensor(1.6075, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 9200	Total Loss: tensor(51.2360, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8084, device='cuda:0')	phi BC Los
s: tensor(6.1105e-13, device='cuda:0')	mu BC Loss: tensor(0.6279, device='cuda:0')	NS PDE Los
s: tensor(3.2005, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 9400	Total Loss: tensor(48.3981, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8033, device='cuda:0')	phi BC Los
s: tensor(7.6995e-13, device='cuda:0')	mu BC Loss: tensor(0.6243, device='cuda:0')	NS PDE Los
s: tensor(2.9175, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 9600	Total Loss: tensor(47.4157, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(1.8044, device='cuda:0')	phi BC Los
s: tensor(8.8347e-13, device='cuda:0')	mu BC Loss: tensor(0.6244, device='cuda:0')	NS PDE Los
s: tensor(2.8193, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 9800	Total Loss: tensor(29.8492, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8193, device='cuda:0')	phi BC Los
s: tensor(9.8203e-13, device='cuda:0')	mu BC Loss: tensor(0.6237, device='cuda:0')	NS PDE Los
s: tensor(1.0632, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 10000	Total Loss: tensor(25.5169, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8184, device='cuda:0')	phi BC Los
s: tensor(6.5786e-13, device='cuda:0')	mu BC Loss: tensor(0.6221, device='cuda:0')	NS PDE Los
s: tensor(0.6320, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	

Iteration: 10200	Total Loss: tensor(23.7259, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8197, device='cuda:0')	phi BC Los
s: tensor(5.1390e-13, device='cuda:0')	mu BC Loss: tensor(0.6208, device='cuda:0')	NS PDE Los
s: tensor(0.4543, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 10400	Total Loss: tensor(23.3203, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8203, device='cuda:0')	phi BC Los
s: tensor(4.7954e-13, device='cuda:0')	mu BC Loss: tensor(0.6193, device='cuda:0')	NS PDE Los
s: tensor(0.4152, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 10600	Total Loss: tensor(23.0105, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8207, device='cuda:0')	phi BC Los
s: tensor(4.7191e-13, device='cuda:0')	mu BC Loss: tensor(0.6178, device='cuda:0')	NS PDE Los
s: tensor(0.3855, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 10800	Total Loss: tensor(23.0756, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8209, device='cuda:0')	phi BC Los
s: tensor(3.8915e-13, device='cuda:0')	mu BC Loss: tensor(0.6162, device='cuda:0')	NS PDE Los
s: tensor(0.3898, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 11000	Total Loss: tensor(23.3716, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(1.8209, device='cuda:0')	phi BC Los
s: tensor(3.7284e-13, device='cuda:0')	mu BC Loss: tensor(0.6148, device='cuda:0')	NS PDE Los
s: tensor(0.4236, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 11200	Total Loss: tensor(23.0333, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8213, device='cuda:0')	phi BC Los
s: tensor(3.3159e-13, device='cuda:0')	mu BC Loss: tensor(0.6133, device='cuda:0')	NS PDE Los
s: tensor(0.3914, device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 11400	Total Loss: tensor(23.1630, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8213, device='cuda:0')	phi BC Los
s: tensor(2.7089e-13, device='cuda:0')	mu BC Loss: tensor(0.6118, device='cuda:0')	NS PDE Los
s: tensor(0.4053, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 11600	Total Loss: tensor(23.0597, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8215, device='cuda:0')	phi BC Los
s: tensor(2.0243e-13, device='cuda:0')	mu BC Loss: tensor(0.6103, device='cuda:0')	NS PDE Los
s: tensor(0.3952, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 11800	Total Loss: tensor(22.9252, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8217, device='cuda:0')	phi BC Los
s: tensor(2.0204e-13, device='cuda:0')	mu BC Loss: tensor(0.6088, device='cuda:0')	NS PDE Los
s: tensor(0.3849, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 12000	Total Loss: tensor(23.2954, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8216, device='cuda:0')	phi BC Los
s: tensor(1.2142e-13, device='cuda:0')	mu BC Loss: tensor(0.6074, device='cuda:0')	NS PDE Los
s: tensor(0.4227, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 12200	Total Loss: tensor(22.6629, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8221, device='cuda:0')	phi BC Los

s: tensor(9.8490e-14, device='cuda:0')	mu BC Loss: tensor(0.6059, device='cuda:0')	NS PDE Los
s: tensor(0.3611, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 12400	Total Loss: tensor(22.7451, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8221, device='cuda:0')	phi BC Los
s: tensor(8.7454e-14, device='cuda:0')	mu BC Loss: tensor(0.6045, device='cuda:0')	NS PDE Los
s: tensor(0.3701, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 12600	Total Loss: tensor(22.8951, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8220, device='cuda:0')	phi BC Los
s: tensor(7.7469e-14, device='cuda:0')	mu BC Loss: tensor(0.6031, device='cuda:0')	NS PDE Los
s: tensor(0.3868, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 12800	Total Loss: tensor(22.8736, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8221, device='cuda:0')	phi BC Los
s: tensor(7.6056e-14, device='cuda:0')	mu BC Loss: tensor(0.6017, device='cuda:0')	NS PDE Los
s: tensor(0.3858, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 13000	Total Loss: tensor(23.2910, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8220, device='cuda:0')	phi BC Los
s: tensor(7.4504e-14, device='cuda:0')	mu BC Loss: tensor(0.6002, device='cuda:0')	NS PDE Los
s: tensor(0.4293, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 13200	Total Loss: tensor(22.8343, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8223, device='cuda:0')	phi BC Los
s: tensor(5.8835e-14, device='cuda:0')	mu BC Loss: tensor(0.5989, device='cuda:0')	NS PDE Los
s: tensor(0.3846, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 13400	Total Loss: tensor(22.6517, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8224, device='cuda:0')	phi BC Los
s: tensor(4.5848e-14, device='cuda:0')	mu BC Loss: tensor(0.5976, device='cuda:0')	NS PDE Los
s: tensor(0.3677, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 13600	Total Loss: tensor(22.5318, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8225, device='cuda:0')	phi BC Los
s: tensor(4.4646e-14, device='cuda:0')	mu BC Loss: tensor(0.5962, device='cuda:0')	NS PDE Los
s: tensor(0.3562, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 13800	Total Loss: tensor(22.6444, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8225, device='cuda:0')	phi BC Los
s: tensor(4.3595e-14, device='cuda:0')	mu BC Loss: tensor(0.5948, device='cuda:0')	NS PDE Los
s: tensor(0.3696, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14000	Total Loss: tensor(22.6381, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8226, device='cuda:0')	phi BC Los
s: tensor(4.2343e-14, device='cuda:0')	mu BC Loss: tensor(0.5935, device='cuda:0')	NS PDE Los
s: tensor(0.3703, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14200	Total Loss: tensor(22.5135, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8227, device='cuda:0')	phi BC Los
s: tensor(3.6441e-14, device='cuda:0')	mu BC Loss: tensor(0.5921, device='cuda:0')	NS PDE Los
s: tensor(0.3593, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	

Iteration: 14400	Total Loss: tensor(22.4245, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8228, device='cuda:0')	phi BC Los
s: tensor(3.1297e-14, device='cuda:0')	mu BC Loss: tensor(0.5908, device='cuda:0')	NS PDE Los
s: tensor(0.3506, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14600	Total Loss: tensor(22.6104, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8227, device='cuda:0')	phi BC Los
s: tensor(3.0524e-14, device='cuda:0')	mu BC Loss: tensor(0.5894, device='cuda:0')	NS PDE Los
s: tensor(0.3724, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 14800	Total Loss: tensor(22.5445, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8227, device='cuda:0')	phi BC Los
s: tensor(2.9936e-14, device='cuda:0')	mu BC Loss: tensor(0.5882, device='cuda:0')	NS PDE Los
s: tensor(0.3672, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15000	Total Loss: tensor(23.2466, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8224, device='cuda:0')	phi BC Los
s: tensor(2.9025e-14, device='cuda:0')	mu BC Loss: tensor(0.5868, device='cuda:0')	NS PDE Los
s: tensor(0.4390, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15200	Total Loss: tensor(22.7556, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8227, device='cuda:0')	phi BC Los
s: tensor(2.8322e-14, device='cuda:0')	mu BC Loss: tensor(0.5856, device='cuda:0')	NS PDE Los
s: tensor(0.3910, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15400	Total Loss: tensor(22.5048, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8228, device='cuda:0')	phi BC Los
s: tensor(2.7680e-14, device='cuda:0')	mu BC Loss: tensor(0.5844, device='cuda:0')	NS PDE Los
s: tensor(0.3678, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15600	Total Loss: tensor(22.2884, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8230, device='cuda:0')	phi BC Los
s: tensor(2.6861e-14, device='cuda:0')	mu BC Loss: tensor(0.5831, device='cuda:0')	NS PDE Los
s: tensor(0.3477, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 15800	Total Loss: tensor(22.9319, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8227, device='cuda:0')	phi BC Los
s: tensor(2.6381e-14, device='cuda:0')	mu BC Loss: tensor(0.5818, device='cuda:0')	NS PDE Los
s: tensor(0.4128, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 16000	Total Loss: tensor(22.7669, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8229, device='cuda:0')	phi BC Los
s: tensor(2.2691e-14, device='cuda:0')	mu BC Loss: tensor(0.5806, device='cuda:0')	NS PDE Los
s: tensor(0.3973, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 16200	Total Loss: tensor(22.4175, device='cuda:0')	
IC Loss: tensor(0.0068, device='cuda:0')	u BC Loss: tensor(1.8230, device='cuda:0')	phi BC Los
s: tensor(2.2667e-14, device='cuda:0')	mu BC Loss: tensor(0.5794, device='cuda:0')	NS PDE Los
s: tensor(0.3646, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 16400	Total Loss: tensor(22.6330, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8230, device='cuda:0')	phi BC Los

s: tensor(1.6138e-14, device='cuda:0')	mu BC Loss: tensor(0.5782, device='cuda:0')	NS PDE Los
s: tensor(0.3880, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 16600	Total Loss: tensor(22.0460, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8233, device='cuda:0')	phi BC Los
s: tensor(1.6065e-14, device='cuda:0')	mu BC Loss: tensor(0.5771, device='cuda:0')	NS PDE Los
s: tensor(0.3311, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 16800	Total Loss: tensor(22.5217, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8231, device='cuda:0')	phi BC Los
s: tensor(1.0094e-10, device='cuda:0')	mu BC Loss: tensor(0.5758, device='cuda:0')	NS PDE Los
s: tensor(0.3800, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 17000	Total Loss: tensor(22.4423, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8232, device='cuda:0')	phi BC Los
s: tensor(1.4179e-09, device='cuda:0')	mu BC Loss: tensor(0.5746, device='cuda:0')	NS PDE Los
s: tensor(0.3738, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 17200	Total Loss: tensor(22.2385, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8234, device='cuda:0')	phi BC Los
s: tensor(1.5839e-08, device='cuda:0')	mu BC Loss: tensor(0.5734, device='cuda:0')	NS PDE Los
s: tensor(0.3550, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 17400	Total Loss: tensor(21.7833, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8237, device='cuda:0')	phi BC Los
s: tensor(1.1197e-07, device='cuda:0')	mu BC Loss: tensor(0.5722, device='cuda:0')	NS PDE Los
s: tensor(0.3102, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 17600	Total Loss: tensor(22.3373, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8233, device='cuda:0')	phi BC Los
s: tensor(7.7056e-07, device='cuda:0')	mu BC Loss: tensor(0.5710, device='cuda:0')	NS PDE Los
s: tensor(0.3677, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 17800	Total Loss: tensor(21.9245, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8236, device='cuda:0')	phi BC Los
s: tensor(2.7556e-06, device='cuda:0')	mu BC Loss: tensor(0.5697, device='cuda:0')	NS PDE Los
s: tensor(0.3282, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 18000	Total Loss: tensor(21.9978, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8237, device='cuda:0')	phi BC Los
s: tensor(6.2338e-06, device='cuda:0')	mu BC Loss: tensor(0.5684, device='cuda:0')	NS PDE Los
s: tensor(0.3368, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 18200	Total Loss: tensor(22.1719, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(1.8237, device='cuda:0')	phi BC Los
s: tensor(7.4765e-06, device='cuda:0')	mu BC Loss: tensor(0.5672, device='cuda:0')	NS PDE Los
s: tensor(0.3558, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 18400	Total Loss: tensor(22.1641, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8236, device='cuda:0')	phi BC Los
s: tensor(8.3095e-06, device='cuda:0')	mu BC Loss: tensor(0.5660, device='cuda:0')	NS PDE Los
s: tensor(0.3566, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	

Iteration: 18600	Total Loss: tensor(21.9316, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8238, device='cuda:0')	phi BC Los
s: tensor(8.3171e-06, device='cuda:0')	mu BC Loss: tensor(0.5648, device='cuda:0')	NS PDE Los
s: tensor(0.3351, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 18800	Total Loss: tensor(21.7758, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8240, device='cuda:0')	phi BC Los
s: tensor(8.2708e-06, device='cuda:0')	mu BC Loss: tensor(0.5636, device='cuda:0')	NS PDE Los
s: tensor(0.3211, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 19000	Total Loss: tensor(22.3715, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8238, device='cuda:0')	phi BC Los
s: tensor(6.6325e-06, device='cuda:0')	mu BC Loss: tensor(0.5624, device='cuda:0')	NS PDE Los
s: tensor(0.3819, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 19200	Total Loss: tensor(21.7746, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8242, device='cuda:0')	phi BC Los
s: tensor(6.9000e-06, device='cuda:0')	mu BC Loss: tensor(0.5613, device='cuda:0')	NS PDE Los
s: tensor(0.3238, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 19400	Total Loss: tensor(21.5349, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8244, device='cuda:0')	phi BC Los
s: tensor(6.2506e-06, device='cuda:0')	mu BC Loss: tensor(0.5601, device='cuda:0')	NS PDE Los
s: tensor(0.3014, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 19600	Total Loss: tensor(21.7437, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8244, device='cuda:0')	phi BC Los
s: tensor(5.0808e-06, device='cuda:0')	mu BC Loss: tensor(0.5588, device='cuda:0')	NS PDE Los
s: tensor(0.3240, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 19800	Total Loss: tensor(21.8338, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8245, device='cuda:0')	phi BC Los
s: tensor(3.2360e-06, device='cuda:0')	mu BC Loss: tensor(0.5577, device='cuda:0')	NS PDE Los
s: tensor(0.3347, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 20000	Total Loss: tensor(22.8253, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8242, device='cuda:0')	phi BC Los
s: tensor(1.2463e-06, device='cuda:0')	mu BC Loss: tensor(0.5565, device='cuda:0')	NS PDE Los
s: tensor(0.4353, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 20200	Total Loss: tensor(22.6165, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8245, device='cuda:0')	phi BC Los
s: tensor(4.1924e-07, device='cuda:0')	mu BC Loss: tensor(0.5553, device='cuda:0')	NS PDE Los
s: tensor(0.4162, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 20400	Total Loss: tensor(22.9771, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8245, device='cuda:0')	phi BC Los
s: tensor(1.4840e-07, device='cuda:0')	mu BC Loss: tensor(0.5542, device='cuda:0')	NS PDE Los
s: tensor(0.4542, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 20600	Total Loss: tensor(22.4430, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8248, device='cuda:0')	phi BC Los

s: tensor(5.9645e-08, device='cuda:0')	mu BC Loss: tensor(0.5530, device='cuda:0')	NS PDE Los
s: tensor(0.4022, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 20800	Total Loss: tensor(22.1645, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8250, device='cuda:0')	phi BC Los
s: tensor(2.1636e-08, device='cuda:0')	mu BC Loss: tensor(0.5519, device='cuda:0')	NS PDE Los
s: tensor(0.3766, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 21000	Total Loss: tensor(22.7190, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8247, device='cuda:0')	phi BC Los
s: tensor(7.4745e-09, device='cuda:0')	mu BC Loss: tensor(0.5507, device='cuda:0')	NS PDE Los
s: tensor(0.4343, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 21200	Total Loss: tensor(22.0255, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8294, device='cuda:0')	phi BC Los
s: tensor(6.2799e-13, device='cuda:0')	mu BC Loss: tensor(0.5467, device='cuda:0')	NS PDE Los
s: tensor(0.3641, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 21400	Total Loss: tensor(21.9424, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8280, device='cuda:0')	phi BC Los
s: tensor(3.5561e-13, device='cuda:0')	mu BC Loss: tensor(0.5457, device='cuda:0')	NS PDE Los
s: tensor(0.3575, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 21600	Total Loss: tensor(22.1073, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8271, device='cuda:0')	phi BC Los
s: tensor(2.4744e-13, device='cuda:0')	mu BC Loss: tensor(0.5446, device='cuda:0')	NS PDE Los
s: tensor(0.3754, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 21800	Total Loss: tensor(21.7419, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8270, device='cuda:0')	phi BC Los
s: tensor(6.1320e-14, device='cuda:0')	mu BC Loss: tensor(0.5434, device='cuda:0')	NS PDE Los
s: tensor(0.3403, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 22000	Total Loss: tensor(34.8280, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(1.8264, device='cuda:0')	phi BC Los
s: tensor(1.1055e-13, device='cuda:0')	mu BC Loss: tensor(0.5469, device='cuda:0')	NS PDE Los
s: tensor(1.6459, device='cuda:0')	NS Div Free Loss: tensor(0.0001, device='cuda:0')	
Iteration: 22200	Total Loss: tensor(33.0917, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(1.8069, device='cuda:0')	phi BC Los
s: tensor(0., device='cuda:0')	mu BC Loss: tensor(0.5495, device='cuda:0')	NS PDE Loss: tensor(1.4420, device='cuda:0')
s: tensor(0., device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 22400	Total Loss: tensor(27.5858, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8205, device='cuda:0')	phi BC Los
s: tensor(0., device='cuda:0')	mu BC Loss: tensor(0.5419, device='cuda:0')	NS PDE Loss: tensor(0.9141, device='cuda:0')
s: tensor(0., device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	
Iteration: 22600	Total Loss: tensor(25.8385, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(1.8188, device='cuda:0')	phi BC Los
s: tensor(0., device='cuda:0')	mu BC Loss: tensor(0.5378, device='cuda:0')	NS PDE Loss: tensor(0.7424, device='cuda:0')
s: tensor(0., device='cuda:0')	NS Div Free Loss: tensor(0.0002, device='cuda:0')	

Iteration: 22800 Total Loss: tensor(32.5106, device='cuda:0')
IC Loss: tensor(0.0066, device='cuda:0') u BC Loss: tensor(1.8144, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5352, device='cuda:0') NS PDE Loss: tensor(1.4133, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 23000 Total Loss: tensor(25.6790, device='cuda:0')
IC Loss: tensor(0.0066, device='cuda:0') u BC Loss: tensor(1.8170, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5334, device='cuda:0') NS PDE Loss: tensor(0.7319, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 23200 Total Loss: tensor(26.3019, device='cuda:0')
IC Loss: tensor(0.0067, device='cuda:0') u BC Loss: tensor(1.8022, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5350, device='cuda:0') NS PDE Loss: tensor(0.7897, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 23400 Total Loss: tensor(33.3806, device='cuda:0')
IC Loss: tensor(0.0068, device='cuda:0') u BC Loss: tensor(1.8212, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5332, device='cuda:0') NS PDE Loss: tensor(1.4801, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 23600 Total Loss: tensor(27.4406, device='cuda:0')
IC Loss: tensor(0.0066, device='cuda:0') u BC Loss: tensor(1.8232, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5302, device='cuda:0') NS PDE Loss: tensor(0.9118, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 23800 Total Loss: tensor(25.1126, device='cuda:0')
IC Loss: tensor(0.0065, device='cuda:0') u BC Loss: tensor(1.8247, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5278, device='cuda:0') NS PDE Loss: tensor(0.6817, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 24000 Total Loss: tensor(24.5389, device='cuda:0')
IC Loss: tensor(0.0065, device='cuda:0') u BC Loss: tensor(1.8222, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5253, device='cuda:0') NS PDE Loss: tensor(0.6275, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 24200 Total Loss: tensor(22.4653, device='cuda:0')
IC Loss: tensor(0.0065, device='cuda:0') u BC Loss: tensor(1.8256, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5227, device='cuda:0') NS PDE Loss: tensor(0.4229, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 24400 Total Loss: tensor(22.5537, device='cuda:0')
IC Loss: tensor(0.0065, device='cuda:0') u BC Loss: tensor(1.8261, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5188, device='cuda:0') NS PDE Loss: tensor(0.4358, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 24600 Total Loss: tensor(22.2571, device='cuda:0')
IC Loss: tensor(0.0064, device='cuda:0') u BC Loss: tensor(1.8270, device='cuda:0') phi BC Loss: tensor(0., device='cuda:0')
mu BC Loss: tensor(0.5150, device='cuda:0') NS PDE Loss: tensor(0.4099, device='cuda:0')
NS Div Free Loss: tensor(0.0002, device='cuda:0')

Iteration: 24800 Total Loss: tensor(21.7856, device='cuda:0')
IC Loss: tensor(0.0064, device='cuda:0') u BC Loss: tensor(1.8276, device='cuda:0') phi BC Loss:


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s: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5116, device='cuda:0')      NS PDE Loss: tensor(0.3654, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Iteration: 25000      Total Loss: tensor(63.0103, device='cuda:0')
IC Loss: tensor(0.0143, device='cuda:0')      u BC Loss: tensor(1.8314, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(0.5089, device='cuda:0')      NS PDE Loss: tensor(3.6980, device='cuda:0')      NS Div Free Loss: tensor(0.0002, device='cuda:0')
Executing Pass 2
Current Final Time: 0.05 Current Learning Rate: 0.0001
Iteration: 200      Total Loss: tensor(1086.5087, device='cuda:0')
IC Loss: tensor(1.0397, device='cuda:0')      u BC Loss: tensor(0.0025, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(1.5296, device='cuda:0')      NS PDE Loss: tensor(3.9194, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 400      Total Loss: tensor(529.0016, device='cuda:0')
IC Loss: tensor(0.4849, device='cuda:0')      u BC Loss: tensor(0.0019, device='cuda:0')      phi BC Loss: tensor(0., device='cuda:0')      mu BC Loss: tensor(1.2322, device='cuda:0')      NS PDE Loss: tensor(3.7888, device='cuda:0')      NS Div Free Loss: tensor(0.0001, device='cuda:0')
Iteration: 600      Total Loss: tensor(103.2403, device='cuda:0')
IC Loss: tensor(0.0812, device='cuda:0')      u BC Loss: tensor(0.0020, device='cuda:0')      phi BC Loss: tensor(6.2840e-07, device='cuda:0')      mu BC Loss: tensor(0.9603, device='cuda:0')      NS PDE Loss: tensor(1.7261, device='cuda:0')      NS Div Free Loss: tensor(6.9381e-05, device='cuda:0')
Iteration: 800      Total Loss: tensor(29.5010, device='cuda:0')
IC Loss: tensor(0.0204, device='cuda:0')      u BC Loss: tensor(0.0020, device='cuda:0')      phi BC Loss: tensor(0.0010, device='cuda:0')      mu BC Loss: tensor(0.7540, device='cuda:0')      NS PDE Loss: tensor(0.5335, device='cuda:0')      NS Div Free Loss: tensor(0.0003, device='cuda:0')
Iteration: 1000      Total Loss: tensor(20.6420, device='cuda:0')
IC Loss: tensor(0.0144, device='cuda:0')      u BC Loss: tensor(0.0023, device='cuda:0')      phi BC Loss: tensor(0.0004, device='cuda:0')      mu BC Loss: tensor(0.6213, device='cuda:0')      NS PDE Loss: tensor(0.3076, device='cuda:0')      NS Div Free Loss: tensor(0.0005, device='cuda:0')
Iteration: 1200      Total Loss: tensor(19.1845, device='cuda:0')
IC Loss: tensor(0.0134, device='cuda:0')      u BC Loss: tensor(0.0025, device='cuda:0')      phi BC Loss: tensor(0.0003, device='cuda:0')      mu BC Loss: tensor(0.5742, device='cuda:0')      NS PDE Loss: tensor(0.2882, device='cuda:0')      NS Div Free Loss: tensor(0.0006, device='cuda:0')
Iteration: 1400      Total Loss: tensor(17.5696, device='cuda:0')
IC Loss: tensor(0.0125, device='cuda:0')      u BC Loss: tensor(0.0028, device='cuda:0')      phi BC Loss: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.5238, device='cuda:0')      NS PDE Loss: tensor(0.2422, device='cuda:0')      NS Div Free Loss: tensor(0.0007, device='cuda:0')
Iteration: 1600      Total Loss: tensor(16.3522, device='cuda:0')
IC Loss: tensor(0.0117, device='cuda:0')      u BC Loss: tensor(0.0032, device='cuda:0')      phi BC Loss: tensor(0.0002, device='cuda:0')      mu BC Loss: tensor(0.4701, device='cuda:0')      NS PDE Loss: tensor(0.2276, device='cuda:0')      NS Div Free Loss: tensor(0.0009, device='cuda:0')
Iteration: 1800      Total Loss: tensor(15.1376, device='cuda:0')
IC Loss: tensor(0.0111, device='cuda:0')      u BC Loss: tensor(0.0036, device='cuda:0')      phi BC Loss:

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s: tensor(0.0001, device='cuda:0')    mu BC Loss: tensor(0.4231, device='cuda:0')    NS PDE Loss: tensor(0.1908, device='cuda:0')    NS Div Free Loss: tensor(0.0010, device='cuda:0')
Iteration: 2000    Total Loss: tensor(13.9733, device='cuda:0')
IC Loss: tensor(0.0104, device='cuda:0')    u BC Loss: tensor(0.0043, device='cuda:0')    phi BC Loss: tensor(0.0001, device='cuda:0')    mu BC Loss: tensor(0.3653, device='cuda:0')    NS PDE Loss: tensor(0.1703, device='cuda:0')    NS Div Free Loss: tensor(0.0011, device='cuda:0')
Iteration: 2200    Total Loss: tensor(12.8789, device='cuda:0')
IC Loss: tensor(0.0098, device='cuda:0')    u BC Loss: tensor(0.0051, device='cuda:0')    phi BC Loss: tensor(9.7940e-05, device='cuda:0')    mu BC Loss: tensor(0.3080, device='cuda:0')    NS PDE Loss: tensor(0.1470, device='cuda:0')    NS Div Free Loss: tensor(0.0013, device='cuda:0')
Iteration: 2400    Total Loss: tensor(11.9141, device='cuda:0')
IC Loss: tensor(0.0093, device='cuda:0')    u BC Loss: tensor(0.0059, device='cuda:0')    phi BC Loss: tensor(6.7216e-05, device='cuda:0')    mu BC Loss: tensor(0.2535, device='cuda:0')    NS PDE Loss: tensor(0.1264, device='cuda:0')    NS Div Free Loss: tensor(0.0015, device='cuda:0')
Iteration: 2600    Total Loss: tensor(11.0963, device='cuda:0')
IC Loss: tensor(0.0089, device='cuda:0')    u BC Loss: tensor(0.0066, device='cuda:0')    phi BC Loss: tensor(2.9931e-05, device='cuda:0')    mu BC Loss: tensor(0.2057, device='cuda:0')    NS PDE Loss: tensor(0.1082, device='cuda:0')    NS Div Free Loss: tensor(0.0016, device='cuda:0')
Iteration: 2800    Total Loss: tensor(10.5667, device='cuda:0')
IC Loss: tensor(0.0087, device='cuda:0')    u BC Loss: tensor(0.0071, device='cuda:0')    phi BC Loss: tensor(1.4318e-05, device='cuda:0')    mu BC Loss: tensor(0.1713, device='cuda:0')    NS PDE Loss: tensor(0.1003, device='cuda:0')    NS Div Free Loss: tensor(0.0017, device='cuda:0')
Iteration: 3000    Total Loss: tensor(10.2307, device='cuda:0')
IC Loss: tensor(0.0085, device='cuda:0')    u BC Loss: tensor(0.0073, device='cuda:0')    phi BC Loss: tensor(8.7662e-05, device='cuda:0')    mu BC Loss: tensor(0.1539, device='cuda:0')    NS PDE Loss: tensor(0.0896, device='cuda:0')    NS Div Free Loss: tensor(0.0018, device='cuda:0')
Iteration: 3200    Total Loss: tensor(9.9035, device='cuda:0')
IC Loss: tensor(0.0084, device='cuda:0')    u BC Loss: tensor(0.0076, device='cuda:0')    phi BC Loss: tensor(6.3149e-05, device='cuda:0')    mu BC Loss: tensor(0.1349, device='cuda:0')    NS PDE Loss: tensor(0.0821, device='cuda:0')    NS Div Free Loss: tensor(0.0018, device='cuda:0')
Iteration: 3400    Total Loss: tensor(9.5605, device='cuda:0')
IC Loss: tensor(0.0082, device='cuda:0')    u BC Loss: tensor(0.0079, device='cuda:0')    phi BC Loss: tensor(4.2275e-05, device='cuda:0')    mu BC Loss: tensor(0.1157, device='cuda:0')    NS PDE Loss: tensor(0.0740, device='cuda:0')    NS Div Free Loss: tensor(0.0019, device='cuda:0')
Iteration: 3600    Total Loss: tensor(9.2440, device='cuda:0')
IC Loss: tensor(0.0080, device='cuda:0')    u BC Loss: tensor(0.0082, device='cuda:0')    phi BC Loss: tensor(2.7257e-05, device='cuda:0')    mu BC Loss: tensor(0.0983, device='cuda:0')    NS PDE Loss: tensor(0.0671, device='cuda:0')    NS Div Free Loss: tensor(0.0020, device='cuda:0')
Iteration: 3800    Total Loss: tensor(9.1006, device='cuda:0')
IC Loss: tensor(0.0079, device='cuda:0')    u BC Loss: tensor(0.0085, device='cuda:0')    phi BC Loss: tensor(1.1918e-05, device='cuda:0')    mu BC Loss: tensor(0.0837, device='cuda:0')    NS PDE Loss: tensor(0.0712, device='cuda:0')    NS Div Free Loss: tensor(0.0020, device='cuda:0')

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Iteration: 4000				Total Loss: tensor(8.8644, device='cuda:0')	
IC Loss:	tensor(0.0079, device='cuda:0')	u BC Loss:	tensor(0.0086, device='cuda:0')		phi BC Los
s:	tensor(6.9017e-06, device='cuda:0')	mu BC Loss:	tensor(0.0752, device='cuda:0')		NS PDE Los
s:	tensor(0.0573, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 4200				Total Loss: tensor(8.8041, device='cuda:0')	
IC Loss:	tensor(0.0078, device='cuda:0')	u BC Loss:	tensor(0.0088, device='cuda:0')		phi BC Los
s:	tensor(2.7703e-06, device='cuda:0')	mu BC Loss:	tensor(0.0676, device='cuda:0')		NS PDE Los
s:	tensor(0.0606, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 4400				Total Loss: tensor(8.5859, device='cuda:0')	
IC Loss:	tensor(0.0077, device='cuda:0')	u BC Loss:	tensor(0.0090, device='cuda:0')		phi BC Los
s:	tensor(7.0997e-07, device='cuda:0')	mu BC Loss:	tensor(0.0584, device='cuda:0')		NS PDE Los
s:	tensor(0.0498, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 4600				Total Loss: tensor(8.4285, device='cuda:0')	
IC Loss:	tensor(0.0077, device='cuda:0')	u BC Loss:	tensor(0.0091, device='cuda:0')		phi BC Los
s:	tensor(4.7117e-08, device='cuda:0')	mu BC Loss:	tensor(0.0501, device='cuda:0')		NS PDE Los
s:	tensor(0.0450, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 4800				Total Loss: tensor(8.2807, device='cuda:0')	
IC Loss:	tensor(0.0076, device='cuda:0')	u BC Loss:	tensor(0.0093, device='cuda:0')		phi BC Los
s:	tensor(4.1127e-08, device='cuda:0')	mu BC Loss:	tensor(0.0427, device='cuda:0')		NS PDE Los
s:	tensor(0.0410, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 5000				Total Loss: tensor(8.1833, device='cuda:0')	
IC Loss:	tensor(0.0075, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los
s:	tensor(6.1735e-08, device='cuda:0')	mu BC Loss:	tensor(0.0363, device='cuda:0')		NS PDE Los
s:	tensor(0.0405, device='cuda:0')	NS Div Free Loss:	tensor(0.0020, device='cuda:0')		
Iteration: 5200				Total Loss: tensor(8.0847, device='cuda:0')	
IC Loss:	tensor(0.0075, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los
s:	tensor(7.7735e-08, device='cuda:0')	mu BC Loss:	tensor(0.0325, device='cuda:0')		NS PDE Los
s:	tensor(0.0356, device='cuda:0')	NS Div Free Loss:	tensor(0.0019, device='cuda:0')		
Iteration: 5400				Total Loss: tensor(7.9731, device='cuda:0')	
IC Loss:	tensor(0.0074, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los
s:	tensor(1.1047e-07, device='cuda:0')	mu BC Loss:	tensor(0.0280, device='cuda:0')		NS PDE Los
s:	tensor(0.0346, device='cuda:0')	NS Div Free Loss:	tensor(0.0019, device='cuda:0')		
Iteration: 5600				Total Loss: tensor(7.9252, device='cuda:0')	
IC Loss:	tensor(0.0074, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los
s:	tensor(1.4746e-07, device='cuda:0')	mu BC Loss:	tensor(0.0250, device='cuda:0')		NS PDE Los
s:	tensor(0.0353, device='cuda:0')	NS Div Free Loss:	tensor(0.0018, device='cuda:0')		
Iteration: 5800				Total Loss: tensor(7.8739, device='cuda:0')	
IC Loss:	tensor(0.0074, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los
s:	tensor(1.8326e-07, device='cuda:0')	mu BC Loss:	tensor(0.0231, device='cuda:0')		NS PDE Los
s:	tensor(0.0325, device='cuda:0')	NS Div Free Loss:	tensor(0.0018, device='cuda:0')		
Iteration: 6000				Total Loss: tensor(7.7591, device='cuda:0')	
IC Loss:	tensor(0.0073, device='cuda:0')	u BC Loss:	tensor(0.0094, device='cuda:0')		phi BC Los

s: tensor(2.6929e-07, device='cuda:0')	mu BC Loss: tensor(0.0205, device='cuda:0')	NS PDE Los
s: tensor(0.0313, device='cuda:0')	NS Div Free Loss: tensor(0.0017, device='cuda:0')	
Iteration: 6200	Total Loss: tensor(7.6917, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.0093, device='cuda:0')	phi BC Los
s: tensor(3.4768e-07, device='cuda:0')	mu BC Loss: tensor(0.0188, device='cuda:0')	NS PDE Los
s: tensor(0.0297, device='cuda:0')	NS Div Free Loss: tensor(0.0017, device='cuda:0')	
Iteration: 6400	Total Loss: tensor(7.6329, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.0092, device='cuda:0')	phi BC Los
s: tensor(4.5767e-07, device='cuda:0')	mu BC Loss: tensor(0.0171, device='cuda:0')	NS PDE Los
s: tensor(0.0291, device='cuda:0')	NS Div Free Loss: tensor(0.0016, device='cuda:0')	
Iteration: 6600	Total Loss: tensor(7.5376, device='cuda:0')	
IC Loss: tensor(0.0072, device='cuda:0')	u BC Loss: tensor(0.0091, device='cuda:0')	phi BC Los
s: tensor(6.0937e-07, device='cuda:0')	mu BC Loss: tensor(0.0157, device='cuda:0')	NS PDE Los
s: tensor(0.0244, device='cuda:0')	NS Div Free Loss: tensor(0.0016, device='cuda:0')	
Iteration: 6800	Total Loss: tensor(7.5282, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(0.0090, device='cuda:0')	phi BC Los
s: tensor(7.3761e-07, device='cuda:0')	mu BC Loss: tensor(0.0147, device='cuda:0')	NS PDE Los
s: tensor(0.0272, device='cuda:0')	NS Div Free Loss: tensor(0.0015, device='cuda:0')	
Iteration: 7000	Total Loss: tensor(7.5588, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(0.0090, device='cuda:0')	phi BC Los
s: tensor(8.6065e-07, device='cuda:0')	mu BC Loss: tensor(0.0140, device='cuda:0')	NS PDE Los
s: tensor(0.0330, device='cuda:0')	NS Div Free Loss: tensor(0.0015, device='cuda:0')	
Iteration: 7200	Total Loss: tensor(7.5208, device='cuda:0')	
IC Loss: tensor(0.0071, device='cuda:0')	u BC Loss: tensor(0.0089, device='cuda:0')	phi BC Los
s: tensor(1.0548e-06, device='cuda:0')	mu BC Loss: tensor(0.0133, device='cuda:0')	NS PDE Los
s: tensor(0.0325, device='cuda:0')	NS Div Free Loss: tensor(0.0015, device='cuda:0')	
Iteration: 7400	Total Loss: tensor(7.3885, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(0.0088, device='cuda:0')	phi BC Los
s: tensor(1.3352e-06, device='cuda:0')	mu BC Loss: tensor(0.0126, device='cuda:0')	NS PDE Los
s: tensor(0.0231, device='cuda:0')	NS Div Free Loss: tensor(0.0014, device='cuda:0')	
Iteration: 7600	Total Loss: tensor(7.3578, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(0.0087, device='cuda:0')	phi BC Los
s: tensor(1.6220e-06, device='cuda:0')	mu BC Loss: tensor(0.0120, device='cuda:0')	NS PDE Los
s: tensor(0.0232, device='cuda:0')	NS Div Free Loss: tensor(0.0014, device='cuda:0')	
Iteration: 7800	Total Loss: tensor(7.3225, device='cuda:0')	
IC Loss: tensor(0.0070, device='cuda:0')	u BC Loss: tensor(0.0086, device='cuda:0')	phi BC Los
s: tensor(2.0788e-06, device='cuda:0')	mu BC Loss: tensor(0.0113, device='cuda:0')	NS PDE Los
s: tensor(0.0235, device='cuda:0')	NS Div Free Loss: tensor(0.0013, device='cuda:0')	
Iteration: 8000	Total Loss: tensor(7.2428, device='cuda:0')	
IC Loss: tensor(0.0069, device='cuda:0')	u BC Loss: tensor(0.0084, device='cuda:0')	phi BC Los
s: tensor(3.1520e-06, device='cuda:0')	mu BC Loss: tensor(0.0106, device='cuda:0')	NS PDE Los
s: tensor(0.0191, device='cuda:0')	NS Div Free Loss: tensor(0.0013, device='cuda:0')	

Iteration: 8200				Total Loss: tensor(7.3067, device='cuda:0')	
IC Loss:	tensor(0.0069, device='cuda:0')	u BC Loss:	tensor(0.0083, device='cuda:0')	phi BC Los	
s:	tensor(3.1226e-06, device='cuda:0')	mu BC Loss:	tensor(0.0103, device='cuda:0')	NS PDE Los	
s:	tensor(0.0281, device='cuda:0')	NS Div Free Loss:	tensor(0.0012, device='cuda:0')		
Iteration: 8400				Total Loss: tensor(7.2650, device='cuda:0')	
IC Loss:	tensor(0.0069, device='cuda:0')	u BC Loss:	tensor(0.0083, device='cuda:0')	phi BC Los	
s:	tensor(3.3396e-06, device='cuda:0')	mu BC Loss:	tensor(0.0101, device='cuda:0')	NS PDE Los	
s:	tensor(0.0255, device='cuda:0')	NS Div Free Loss:	tensor(0.0012, device='cuda:0')		
Iteration: 8600				Total Loss: tensor(7.2290, device='cuda:0')	
IC Loss:	tensor(0.0069, device='cuda:0')	u BC Loss:	tensor(0.0082, device='cuda:0')	phi BC Los	
s:	tensor(3.6850e-06, device='cuda:0')	mu BC Loss:	tensor(0.0098, device='cuda:0')	NS PDE Los	
s:	tensor(0.0239, device='cuda:0')	NS Div Free Loss:	tensor(0.0012, device='cuda:0')		
Iteration: 8800				Total Loss: tensor(7.1563, device='cuda:0')	
IC Loss:	tensor(0.0069, device='cuda:0')	u BC Loss:	tensor(0.0081, device='cuda:0')	phi BC Los	
s:	tensor(4.3915e-06, device='cuda:0')	mu BC Loss:	tensor(0.0095, device='cuda:0')	NS PDE Los	
s:	tensor(0.0181, device='cuda:0')	NS Div Free Loss:	tensor(0.0012, device='cuda:0')		
Iteration: 9000				Total Loss: tensor(7.1665, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0080, device='cuda:0')	phi BC Los	
s:	tensor(4.8658e-06, device='cuda:0')	mu BC Loss:	tensor(0.0091, device='cuda:0')	NS PDE Los	
s:	tensor(0.0224, device='cuda:0')	NS Div Free Loss:	tensor(0.0011, device='cuda:0')		
Iteration: 9200				Total Loss: tensor(7.0795, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0079, device='cuda:0')	phi BC Los	
s:	tensor(5.5897e-06, device='cuda:0')	mu BC Loss:	tensor(0.0088, device='cuda:0')	NS PDE Los	
s:	tensor(0.0164, device='cuda:0')	NS Div Free Loss:	tensor(0.0011, device='cuda:0')		
Iteration: 9400				Total Loss: tensor(7.0694, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0078, device='cuda:0')	phi BC Los	
s:	tensor(6.3280e-06, device='cuda:0')	mu BC Loss:	tensor(0.0085, device='cuda:0')	NS PDE Los	
s:	tensor(0.0173, device='cuda:0')	NS Div Free Loss:	tensor(0.0011, device='cuda:0')		
Iteration: 9600				Total Loss: tensor(7.1279, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0076, device='cuda:0')	phi BC Los	
s:	tensor(7.0571e-06, device='cuda:0')	mu BC Loss:	tensor(0.0082, device='cuda:0')	NS PDE Los	
s:	tensor(0.0258, device='cuda:0')	NS Div Free Loss:	tensor(0.0010, device='cuda:0')		
Iteration: 9800				Total Loss: tensor(7.2804, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0075, device='cuda:0')	phi BC Los	
s:	tensor(7.8520e-06, device='cuda:0')	mu BC Loss:	tensor(0.0078, device='cuda:0')	NS PDE Los	
s:	tensor(0.0429, device='cuda:0')	NS Div Free Loss:	tensor(0.0010, device='cuda:0')		
Iteration: 10000				Total Loss: tensor(6.9981, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0075, device='cuda:0')	phi BC Los	
s:	tensor(8.0657e-06, device='cuda:0')	mu BC Loss:	tensor(0.0077, device='cuda:0')	NS PDE Los	
s:	tensor(0.0162, device='cuda:0')	NS Div Free Loss:	tensor(0.0010, device='cuda:0')		
Iteration: 10200				Total Loss: tensor(7.0144, device='cuda:0')	
IC Loss:	tensor(0.0068, device='cuda:0')	u BC Loss:	tensor(0.0074, device='cuda:0')	phi BC Los	

s: tensor(8.3410e-06, device='cuda:0')	mu BC Loss: tensor(0.0075, device='cuda:0')	NS PDE Los
s: tensor(0.0174, device='cuda:0')	NS Div Free Loss: tensor(0.0009, device='cuda:0')	
Iteration: 10400	Total Loss: tensor(6.9619, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(0.0072, device='cuda:0')	phi BC Los
s: tensor(9.4022e-06, device='cuda:0')	mu BC Loss: tensor(0.0072, device='cuda:0')	NS PDE Los
s: tensor(0.0171, device='cuda:0')	NS Div Free Loss: tensor(0.0009, device='cuda:0')	
Iteration: 10600	Total Loss: tensor(6.9105, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(0.0071, device='cuda:0')	phi BC Los
s: tensor(9.7806e-06, device='cuda:0')	mu BC Loss: tensor(0.0069, device='cuda:0')	NS PDE Los
s: tensor(0.0134, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 10800	Total Loss: tensor(6.9776, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(0.0070, device='cuda:0')	phi BC Los
s: tensor(1.0339e-05, device='cuda:0')	mu BC Loss: tensor(0.0067, device='cuda:0')	NS PDE Los
s: tensor(0.0222, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 11000	Total Loss: tensor(7.1102, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(0.0070, device='cuda:0')	phi BC Los
s: tensor(1.0474e-05, device='cuda:0')	mu BC Loss: tensor(0.0065, device='cuda:0')	NS PDE Los
s: tensor(0.0366, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 11200	Total Loss: tensor(6.8560, device='cuda:0')	
IC Loss: tensor(0.0067, device='cuda:0')	u BC Loss: tensor(0.0069, device='cuda:0')	phi BC Los
s: tensor(1.0793e-05, device='cuda:0')	mu BC Loss: tensor(0.0064, device='cuda:0')	NS PDE Los
s: tensor(0.0120, device='cuda:0')	NS Div Free Loss: tensor(0.0008, device='cuda:0')	
Iteration: 11400	Total Loss: tensor(6.8429, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0068, device='cuda:0')	phi BC Los
s: tensor(1.1503e-05, device='cuda:0')	mu BC Loss: tensor(0.0061, device='cuda:0')	NS PDE Los
s: tensor(0.0126, device='cuda:0')	NS Div Free Loss: tensor(0.0007, device='cuda:0')	
Iteration: 11600	Total Loss: tensor(6.9490, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0067, device='cuda:0')	phi BC Los
s: tensor(1.2407e-05, device='cuda:0')	mu BC Loss: tensor(0.0059, device='cuda:0')	NS PDE Los
s: tensor(0.0251, device='cuda:0')	NS Div Free Loss: tensor(0.0007, device='cuda:0')	
Iteration: 11800	Total Loss: tensor(6.7973, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0066, device='cuda:0')	phi BC Los
s: tensor(1.6637e-05, device='cuda:0')	mu BC Loss: tensor(0.0057, device='cuda:0')	NS PDE Los
s: tensor(0.0105, device='cuda:0')	NS Div Free Loss: tensor(0.0007, device='cuda:0')	
Iteration: 12000	Total Loss: tensor(6.8073, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0065, device='cuda:0')	phi BC Los
s: tensor(2.2222e-05, device='cuda:0')	mu BC Loss: tensor(0.0055, device='cuda:0')	NS PDE Los
s: tensor(0.0126, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')	
Iteration: 12200	Total Loss: tensor(6.7874, device='cuda:0')	
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0065, device='cuda:0')	phi BC Los
s: tensor(1.5697e-05, device='cuda:0')	mu BC Loss: tensor(0.0053, device='cuda:0')	NS PDE Los
s: tensor(0.0128, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')	

Iteration: 12400 Total Loss: tensor(6.7457, device='cuda:0')			
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0064, device='cuda:0')	phi BC Los	
s: tensor(1.5780e-05, device='cuda:0')	mu BC Loss: tensor(0.0052, device='cuda:0')	NS PDE Los	
s: tensor(0.0100, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')		
Iteration: 12600 Total Loss: tensor(6.7414, device='cuda:0')			
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0063, device='cuda:0')	phi BC Los	
s: tensor(2.0333e-05, device='cuda:0')	mu BC Loss: tensor(0.0050, device='cuda:0')	NS PDE Los	
s: tensor(0.0094, device='cuda:0')	NS Div Free Loss: tensor(0.0006, device='cuda:0')		
Iteration: 12800 Total Loss: tensor(6.8053, device='cuda:0')			
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0063, device='cuda:0')	phi BC Los	
s: tensor(1.5773e-05, device='cuda:0')	mu BC Loss: tensor(0.0049, device='cuda:0')	NS PDE Los	
s: tensor(0.0170, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 13000 Total Loss: tensor(6.7785, device='cuda:0')			
IC Loss: tensor(0.0066, device='cuda:0')	u BC Loss: tensor(0.0062, device='cuda:0')	phi BC Los	
s: tensor(1.6187e-05, device='cuda:0')	mu BC Loss: tensor(0.0047, device='cuda:0')	NS PDE Los	
s: tensor(0.0088, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 13200 Total Loss: tensor(6.8320, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0061, device='cuda:0')	phi BC Los	
s: tensor(1.7462e-05, device='cuda:0')	mu BC Loss: tensor(0.0046, device='cuda:0')	NS PDE Los	
s: tensor(0.0224, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 13400 Total Loss: tensor(6.8984, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0061, device='cuda:0')	phi BC Los	
s: tensor(1.9294e-05, device='cuda:0')	mu BC Loss: tensor(0.0045, device='cuda:0')	NS PDE Los	
s: tensor(0.0299, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 13600 Total Loss: tensor(6.7684, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0060, device='cuda:0')	phi BC Los	
s: tensor(1.7857e-05, device='cuda:0')	mu BC Loss: tensor(0.0044, device='cuda:0')	NS PDE Los	
s: tensor(0.0172, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 13800 Total Loss: tensor(6.6869, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0060, device='cuda:0')	phi BC Los	
s: tensor(1.8736e-05, device='cuda:0')	mu BC Loss: tensor(0.0042, device='cuda:0')	NS PDE Los	
s: tensor(0.0110, device='cuda:0')	NS Div Free Loss: tensor(0.0005, device='cuda:0')		
Iteration: 14000 Total Loss: tensor(6.7054, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0059, device='cuda:0')	phi BC Los	
s: tensor(1.8188e-05, device='cuda:0')	mu BC Loss: tensor(0.0041, device='cuda:0')	NS PDE Los	
s: tensor(0.0131, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')		
Iteration: 14200 Total Loss: tensor(6.7095, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0059, device='cuda:0')	phi BC Los	
s: tensor(1.9186e-05, device='cuda:0')	mu BC Loss: tensor(0.0040, device='cuda:0')	NS PDE Los	
s: tensor(0.0145, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')		
Iteration: 14400 Total Loss: tensor(6.6883, device='cuda:0')			
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0059, device='cuda:0')	phi BC Los	

s: tensor(2.2338e-05, device='cuda:0')	mu BC Loss: tensor(0.0038, device='cuda:0')	NS PDE Los
s: tensor(0.0130, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 14600	Total Loss: tensor(6.6564, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0058, device='cuda:0')	phi BC Los
s: tensor(2.2129e-05, device='cuda:0')	mu BC Loss: tensor(0.0037, device='cuda:0')	NS PDE Los
s: tensor(0.0110, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 14800	Total Loss: tensor(6.6737, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0058, device='cuda:0')	phi BC Los
s: tensor(2.1052e-05, device='cuda:0')	mu BC Loss: tensor(0.0036, device='cuda:0')	NS PDE Los
s: tensor(0.0140, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 15000	Total Loss: tensor(6.6147, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0057, device='cuda:0')	phi BC Los
s: tensor(2.1604e-05, device='cuda:0')	mu BC Loss: tensor(0.0035, device='cuda:0')	NS PDE Los
s: tensor(0.0089, device='cuda:0')	NS Div Free Loss: tensor(0.0004, device='cuda:0')	
Iteration: 15200	Total Loss: tensor(6.6072, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0057, device='cuda:0')	phi BC Los
s: tensor(2.2765e-05, device='cuda:0')	mu BC Loss: tensor(0.0034, device='cuda:0')	NS PDE Los
s: tensor(0.0089, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 15400	Total Loss: tensor(6.5885, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(2.4132e-05, device='cuda:0')	mu BC Loss: tensor(0.0033, device='cuda:0')	NS PDE Los
s: tensor(0.0082, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 15600	Total Loss: tensor(6.5792, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(2.3904e-05, device='cuda:0')	mu BC Loss: tensor(0.0031, device='cuda:0')	NS PDE Los
s: tensor(0.0074, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 15800	Total Loss: tensor(6.6154, device='cuda:0')	
IC Loss: tensor(0.0065, device='cuda:0')	u BC Loss: tensor(0.0056, device='cuda:0')	phi BC Los
s: tensor(4.4911e-05, device='cuda:0')	mu BC Loss: tensor(0.0031, device='cuda:0')	NS PDE Los
s: tensor(0.0075, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 16000	Total Loss: tensor(6.7183, device='cuda:0')	
IC Loss: tensor(0.0064, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(2.5151e-05, device='cuda:0')	mu BC Loss: tensor(0.0030, device='cuda:0')	NS PDE Los
s: tensor(0.0233, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 16200	Total Loss: tensor(6.5713, device='cuda:0')	
IC Loss: tensor(0.0064, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(2.5830e-05, device='cuda:0')	mu BC Loss: tensor(0.0029, device='cuda:0')	NS PDE Los
s: tensor(0.0087, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	
Iteration: 16400	Total Loss: tensor(6.5587, device='cuda:0')	
IC Loss: tensor(0.0064, device='cuda:0')	u BC Loss: tensor(0.0055, device='cuda:0')	phi BC Los
s: tensor(4.2814e-05, device='cuda:0')	mu BC Loss: tensor(0.0028, device='cuda:0')	NS PDE Los
s: tensor(0.0066, device='cuda:0')	NS Div Free Loss: tensor(0.0003, device='cuda:0')	

Iteration: 16600				Total Loss: tensor(6.5890, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0055, device='cuda:0')		phi BC Los
s:	tensor(2.6426e-05, device='cuda:0')	mu BC Loss:	tensor(0.0028, device='cuda:0')		NS PDE Los
s:	tensor(0.0120, device='cuda:0')	NS Div Free Loss:	tensor(0.0003, device='cuda:0')		
Iteration: 16800				Total Loss: tensor(6.5364, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0054, device='cuda:0')		phi BC Los
s:	tensor(2.7115e-05, device='cuda:0')	mu BC Loss:	tensor(0.0027, device='cuda:0')		NS PDE Los
s:	tensor(0.0075, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 17000				Total Loss: tensor(6.5959, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0054, device='cuda:0')		phi BC Los
s:	tensor(2.8053e-05, device='cuda:0')	mu BC Loss:	tensor(0.0026, device='cuda:0')		NS PDE Los
s:	tensor(0.0140, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 17200				Total Loss: tensor(6.6078, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0054, device='cuda:0')		phi BC Los
s:	tensor(2.8357e-05, device='cuda:0')	mu BC Loss:	tensor(0.0025, device='cuda:0')		NS PDE Los
s:	tensor(0.0160, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 17400				Total Loss: tensor(6.5145, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0054, device='cuda:0')		phi BC Los
s:	tensor(2.9440e-05, device='cuda:0')	mu BC Loss:	tensor(0.0025, device='cuda:0')		NS PDE Los
s:	tensor(0.0077, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 17600				Total Loss: tensor(6.5533, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0053, device='cuda:0')		phi BC Los
s:	tensor(2.8792e-05, device='cuda:0')	mu BC Loss:	tensor(0.0024, device='cuda:0')		NS PDE Los
s:	tensor(0.0105, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 17800				Total Loss: tensor(6.6657, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0053, device='cuda:0')		phi BC Los
s:	tensor(2.9726e-05, device='cuda:0')	mu BC Loss:	tensor(0.0024, device='cuda:0')		NS PDE Los
s:	tensor(0.0216, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 18000				Total Loss: tensor(6.5401, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0053, device='cuda:0')		phi BC Los
s:	tensor(2.9804e-05, device='cuda:0')	mu BC Loss:	tensor(0.0023, device='cuda:0')		NS PDE Los
s:	tensor(0.0113, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 18200				Total Loss: tensor(6.5004, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0053, device='cuda:0')		phi BC Los
s:	tensor(3.0148e-05, device='cuda:0')	mu BC Loss:	tensor(0.0022, device='cuda:0')		NS PDE Los
s:	tensor(0.0081, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 18400				Total Loss: tensor(6.5256, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0052, device='cuda:0')		phi BC Los
s:	tensor(3.1273e-05, device='cuda:0')	mu BC Loss:	tensor(0.0022, device='cuda:0')		NS PDE Los
s:	tensor(0.0118, device='cuda:0')	NS Div Free Loss:	tensor(0.0002, device='cuda:0')		
Iteration: 18600				Total Loss: tensor(6.4859, device='cuda:0')	
IC Loss:	tensor(0.0064, device='cuda:0')	u BC Loss:	tensor(0.0052, device='cuda:0')		phi BC Los

```
s:  tensor(3.1204e-05, device='cuda:0')      mu BC Loss:  tensor(0.0021, device='cuda:0')      NS PDE Los
s:  tensor(0.0083, device='cuda:0')      NS Div Free Loss:  tensor(0.0002, device='cuda:0')
Iteration: 18800      Total Loss: tensor(6.4917, device='cuda:0')
IC Loss:  tensor(0.0064, device='cuda:0')      u BC Loss:  tensor(0.0052, device='cuda:0')      phi BC Los
s:  tensor(2.9849e-05, device='cuda:0')      mu BC Loss:  tensor(0.0021, device='cuda:0')      NS PDE Los
s:  tensor(0.0078, device='cuda:0')      NS Div Free Loss:  tensor(0.0002, device='cuda:0')
```

In []:

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