

nejlepsi_BKN_NCLT_Dataset_validni

December 31, 2025

```
[1]: from pathlib import Path
from scipy.io import loadmat
import sys
import os

notebook_path = os.getcwd()
print (f"Current notebook path: {notebook_path}")
project_root = os.path.dirname(notebook_path)
if project_root not in sys.path:
    sys.path.insert(0, project_root)
print (f"Added {project_root} to sys.path")
```

Current notebook path: /home/luky/skola/KalmanNet-main/navigation NCLT dataset
Added /home/luky/skola/KalmanNet-main to sys.path

```
[2]: import torch
import matplotlib.pyplot as plt
from utils import trainer
from utils import utils
from Systems import DynamicSystem
import Filters
import torch.nn.functional as F
from torch.utils.data import TensorDataset, DataLoader
import numpy as np
from scipy.io import loadmat
from scipy.interpolate import RegularGridInterpolator
import random

torch.manual_seed(42)
np.random.seed(42)
random.seed(42)
if torch.cuda.is_available():
    torch.cuda.manual_seed_all(42)

device = torch.device("cuda" if torch.cuda.is_available() else "cpu")
DEVICE = device # For backward compatibility
print(f"device: {device}")
```

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device: cpu

/home/luky/.local/lib/python3.10/site-packages/torch/cuda/__init__.py:118:
UserWarning: CUDA initialization: CUDA unknown error - this may be due to an
incorrectly set up environment, e.g. changing env variable CUDA_VISIBLE_DEVICES
after program start. Setting the available devices to be zero. (Triggered
internally at ../c10/cuda/CUDAFunctions.cpp:108.)
    return torch._C._cuda_getDeviceCount() > 0

```

[3]:

```

import torch
import torch.nn as nn
import torch.nn.functional as F
from torch.utils.data import TensorDataset, DataLoader
import numpy as np
import matplotlib.pyplot as plt
import os
import Systems

# Parametry sekvencí
TRAIN_SEQ_LEN = 100          # Délka sekvence pro trénink (např. 100 kroků = 100ms)
# sekund při 1Hz)
VAL_SEQ_LEN = 250
TEST_SEQ_LEN = 1000           # Délka sekvence pro testování (delší sekvence pro stabilnější výhodnocení)
STRIDE = 30                   # Posun okna (překryv) pro data augmentation
BATCH_SIZE = 128
DATA_PATH = 'data/processed'
print(f"Běží na zařízení: {device}")

```

Běží na zařízení: cpu

[4]:

```

import torch
from torch.utils.data import TensorDataset, DataLoader
import os

def prepare_sequences(dataset_list, seq_len, stride, mode='train'):
    """
    Zpracuje list trajektorií na sekvence pro trénink dle článku.

    Nový formát dle [Song et al., 2024]:
    - Vstup u (4D): [v_left, v_right, theta_imu, omega_imu]
    - Cíl x (6D): [px, py, vx, vy, theta, omega]
    """
    X_seq_list = [] # Ground Truth (Cíl)
    Y_seq_list = [] # GPS Měření (Vstup do korekce)
    U_seq_list = [] # Control Input (IMU/Údaje)

```

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print(f"Zpracovávám {len(dataset_list)} trajektorií pro {mode}...")

for traj in dataset_list:
    # 1. Extrahuje data
    # GT z preprocessingu je [px, py, theta]
    gt = traj['ground_truth'].float()

    # GPS: [x, y] (obsahuje NaN!)
    gps = traj['filtered_gps'].float()

    # IMU: [ax, ay, theta, omega]
    imu = traj['imu'].float()
    theta_imu = imu[:, 2] # Orientace z IMU
    omega_imu = imu[:, 3] # Úhlová rychlosť z IMU

    # ODO: [v_left, v_right]
    odo = traj['filtered_wheel'].float()

    # Fix NaN v odometrii (nahradíme nulou)
    v_left = torch.nan_to_num(odo[:, 0], nan=0.0)
    v_right = torch.nan_to_num(odo[:, 1], nan=0.0)

    # 2. Sestavení vstupu  $u = [v_l, v_r, \theta_{imu}, \omega_{imu}]$  (4D)
    # Toto odpovídá "State Model" definovanému v článku (sekce II.C.2)
    u = torch.stack((v_left, v_right, theta_imu, omega_imu), dim=1)

    # 3. Sestavení cíle  $x$  (6D) pro state vector [px, py, vx, vy, theta, omega]
    # Vyplníme to, co máme z Ground Truth (px, py, theta).
    # Rychlosti (vx, vy, omega) v GT implicitně nemáme (nebo je složité jemne derivovať priesne),
    # ale pro trénink Loss funkce budeme stejně porovnávat primárně pozici.
    T = gt.shape[0]
    x_target = torch.zeros(T, 6)
    x_target[:, 0] = gt[:, 0] # px
    x_target[:, 1] = gt[:, 1] # py
    x_target[:, 2] = gt[:, 2] # theta
    # Ostatní (vx, vy, omega) zůstávají 0, protože v Loss funkci budeme maskovať nebo brát jen pozici.

    # 4. Sliding Window (Rozsekání na sekvence)
    num_samples = gt.shape[0]
    current_stride = stride if mode == 'train' else seq_len # U testu bez prekryvu
    for i in range(0, num_samples - seq_len + 1, current_stride):
        # Cíl: 6D stav

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x_seq = x_target[i : i+seq_len, :]

# Měření: GPS [px, py]
y_seq = gps[i : i+seq_len, :]

# Vstup: 4D control input
u_seq = u[i : i+seq_len, :]

X_seq_list.append(x_seq)
Y_seq_list.append(y_seq)
U_seq_list.append(u_seq)

# Stack do tenzorů
X_out = torch.stack(X_seq_list)
Y_out = torch.stack(Y_seq_list)
U_out = torch.stack(U_seq_list)

return X_out, Y_out, U_out

# === NAČTENÍ DAT ===
# Ujistíme se, že cesty a konstanty jsou definované (pokud nejsou, doplňte je u
→ nahore)
# if 'DATA_PATH' not in locals(): DATA_PATH = 'data/processed'
# if 'TRAIN_SEQ_LEN' not in locals(): TRAIN_SEQ_LEN = 100
# if 'VAL_SEQ_LEN' not in locals(): VAL_SEQ_LEN = 200
# if 'TEST_SEQ_LEN' not in locals(): TEST_SEQ_LEN = 500
# if 'STRIDE' not in locals(): STRIDE = 20
# if 'BATCH_SIZE' not in locals(): BATCH_SIZE = 256

train_data_raw = torch.load(os.path.join(DATA_PATH, 'train.pt'))
val_data_raw = torch.load(os.path.join(DATA_PATH, 'val.pt'))
test_data_raw = torch.load(os.path.join(DATA_PATH, 'test.pt'))
# Načtení celého balíku
# train_data_full = torch.load(os.path.join(DATA_PATH, 'train.pt'))

# === RYCHLÝ TEST: OŘÍZNUTÍ DAT ===
# Vezmeme jen prvních 5 trajektorií z 22.
# To radikálně zrychlí jednu epochu a umožní rychle otestovat stabilitu u
→ hyperparametrů.
# train_data_raw = train_data_full[:10]

print(f"DEBUG: Pro rychlý test používám jen {len(train_data_raw)} trajektorií.")
# ... zbytek kódu beze změny

# === PŘÍPRAVA SEKVENCÍ ===
print("--- Generuje trénovací data (Paper compatible) ---")

```

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train_X, train_Y, train_U = prepare_sequences(train_data_raw, TRAIN_SEQ_LEN,
    ↪STRIDE, 'train')

print("\n--- Generuje validační data ---")
val_X, val_Y, val_U = prepare_sequences(val_data_raw, VAL_SEQ_LEN, VAL_SEQ_LEN,
    ↪'val')

print("\n--- Generuje testovací data ---")
test_X, test_Y, test_U = prepare_sequences(test_data_raw, TEST_SEQ_LEN,
    ↪TEST_SEQ_LEN, 'test')

# Vytvoření DataLoaderů
train_loader = DataLoader(TensorDataset(train_X, train_Y, train_U),
    ↪batch_size=BATCH_SIZE, shuffle=True)
val_loader = DataLoader(TensorDataset(val_X, val_Y, val_U),
    ↪batch_size=BATCH_SIZE, shuffle=False)
test_loader = DataLoader(TensorDataset(test_X, test_Y, test_U),
    ↪batch_size=BATCH_SIZE, shuffle=False)

print(f"\n Data připravena.")
print(f"Train batches: {len(train_loader)}")
print(f"Shapes -> X: {train_X.shape} (6D State), U: {train_U.shape} (4D Input),"
    ↪Y: {train_Y.shape} (2D Meas)")

```

DEBUG: Pro rychlý test používám jen 22 trajektorií.

--- Generuje trénovací data (Paper compatible) ---

Zpracovávám 22 trajektorií pro train...

--- Generuje validační data ---

Zpracovávám 2 trajektorií pro val...

--- Generuje testovací data ---

Zpracovávám 3 trajektorií pro test...

Data připravena.

Train batches: 29

Shapes -> X: torch.Size([3635, 100, 6]) (6D State), U: torch.Size([3635, 100, 4]) (4D Input), Y: torch.Size([3635, 100, 2]) (2D Meas)

[5]: # === INICIALIZACE DYNAMICKÉHO MODELU (System Instance - Paper Version) ===

```

# 1. Parametry systému podle článku [Song et al., 2024]
# State (6D): [px, py, vx, vy, theta, omega]
# Referenční rovnice (5) v článku.
state_dim = 6
# Meas (2D): [gps_x, gps_y]
# Referenční rovnice (6) v článku.

```

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obs_dim = 2
# Časový krok (z preprocessingu)
dt = 1.0

# 2. Definice Matice Q (Procesní šum / Model Uncertainty)
# Nyní máme 6 stavů. Musíme definovat nejistotu pro každý z nich.
# Hodnoty jsou nastaveny heuristicky (lze ladit):
# - Pozice (idx 0,1): 0.1
# - Rychlosť (idx 2,3): 0.1
# - Úhel/Omega (idx 4,5): 0.01 (IMU je v NCLT docela přesné, ale driftuje)
q_diag = torch.tensor([0.1, 0.1, 0.1, 0.1, 0.01, 0.01])
Q = torch.diag(q_diag)

# 3. Definice Matice R (Šum měření / Sensor Noise)
# GPS měří jen pozici (px, py).
# Nastavujeme 1.0 m^2. To odpovídá standardní odchylce 1m.
# Pokud je GPS v datasetu horší, KalmanNet se naučí "nedůvěrovat" vstupu y
# a spoléhat více na predikci z u (odometrie).
r_diag = torch.tensor([1.0, 1.0])
R = torch.diag(r_diag)

# 4. Počáteční podmínky (Prior)
# Ex0: Nulový vektor 6x1
Ex0 = torch.zeros(state_dim, 1)

# P0: Počáteční kovariance
# Autoři používají P k inicializaci EKF[cite: 700].
# Nastavíme rozumnou počáteční nejistotu.
P0 = torch.eye(state_dim) * 0.5

# 5. Vytvoření instance DynamicSystemNCLT
# Důležité: f=None zajistí, že se použije interní `_f_paper_dynamics` (rovnice ↵5),
# která očekává 4D vstup (v_l, v_r, theta, omega).
sys_model = Systems.DynamicSystemNCLT(
    state_dim=state_dim,
    obs_dim=obs_dim,
    Q=Q,
    R=R,
    Ex0=Ex0,
    P0=P0,
    dt=dt,
    f=None, # None -> Použije se model z článku: px += vc*cos(theta_imu)...
    h=None, # None -> Použije se GPS model: y = [px, py]
    device=DEVICE
)

```

```

print(f" System Model NCLT inicializován (Paper Version).")
print(f" - State Dim: {sys_model.state_dim} [px, py, vx, vy, theta, omega]")
print(f" - Meas Dim: {sys_model.obs_dim} [gps_x, gps_y]")
print(f" - Input Dim: 4 [v_l, v_r, theta_imu, omega_imu]") # Implicitně u modelu
print(f" - Q Diag: {q_diag.tolist()}")

```

```

System Model NCLT inicializován (Paper Version).
- State Dim: 6 [px, py, vx, vy, theta, omega]
- Meas Dim: 2 [gps_x, gps_y]
- Input Dim: 4 [v_l, v_r, theta_imu, omega_imu]
- Q Diag: [0.1000000149011612, 0.1000000149011612, 0.1000000149011612,
0.1000000149011612, 0.009999999776482582, 0.009999999776482582]

```

```

[6]: import torch
import torch.optim as optim
import os
from state_NN_models import NCLT
from utils import trainer

state_knet = NCLT.StateBayesianKalmanNetNCLT_test(
    system_model=sys_model,
    device=DEVICE,
    hidden_size_multiplier=10,          # Větší kapacita pro složitější dynamiku
    output_layer_multiplier=4,
    num_gru_layers=1,                  # 1 vrstva GRU obvykle stačí a je u
    ↪stabilnější
    init_min_dropout=0.4,
    init_max_dropout=0.6
).to(DEVICE)
print(state_knet)

# Počet trénovatelných parametrů
params_count = sum(p.numel() for p in state_knet.parameters() if p.
    ↪requires_grad)
print(f"Model má {params_count} trénovatelných parametrů.")
# === 3. PŘÍPRAVA A SPUŠTĚNÍ TRÉNINKU ===
print("\n Spouštím tréninkovou smyčku (Vektorizovanou)...")

# 1. Zjistíme velikost datasetu (počet batchů v jedné epoše)
num_train_batches = len(train_loader)
print(f"INFO: 1 Epocha = {num_train_batches} iterací (batchů).")

# 2. Nastavení parametrů
EPOCHS = 100
WARMUP_EPOCHS = 15 # Prvních 15 epoch jen MSE, aby se model stabilizoval

# Přepočet na iterace (protože nová funkce počítá v iteracích)

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```

total_iterations = EPOCHS * num_train_batches
total_iterations = 800
warmup_iterations = WARMUP_EPOCHS * num_train_batches
warmup_iterations=150
validation_period = 5 # Chceme validovat jednou za epochu (na konci)

# 3. Volání funkce
trained_knet = trainer.train_BayesianKalmanNet_test(
    model=state_knet,
    train_loader=train_loader,
    val_loader=val_loader,
    device=DEVICE,

    # Parametry iterací
    total_train_iter=total_iterations,
    learning_rate=5e-5,           # Opatrný LR pro BKN
    clip_grad=0.5,               # Stabilizace gradientů
    J_samples=10,                 # Počet MC vzorků (paralelně)

    # Logování a validace
    validation_period=validation_period,
    logging_period=1,             # Výpis loss každých 1 batchu

    # Warmup
    warmup_iterations=warmup_iterations,
    weight_decay_=1e-4,
    optimizer_type=torch.optim.AdamW
)

```

```

INFO: Aplikuji 'Start Zero' inicializaci pro Kalman Gain.
DEBUG: Výstupní vrstva vynulována (Soft Start).
StateBayesianKalmanNetNCLT_test(
    (dnn): DNN_BayesianKalmanNetNCLT_test(
        (input_layer): Sequential(
            (0): Linear(in_features=16, out_features=640, bias=True)
            (1): ReLU()
        )
        (concrete_dropout1): ConcreteDropout()
        (gru): GRU(640, 160)
        (output_layer): Sequential(
            (0): Linear(in_features=160, out_features=48, bias=True)
            (1): ReLU()
            (2): Linear(in_features=48, out_features=12, bias=True)
        )
        (concrete_dropout2): ConcreteDropout()
    )
)

```

Model má 404158 trénovatelných parametrů.

Spouštím tréninkovou smyčku (Vektorizovanou)...
INFO: 1 Epocha = 29 iterací (batchů).

[DIAGNOSTIKA iter 0]
-> Rozdíl (Pred - Target): 2.070566
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.61e-02
--- Iteration [1/800] ---
- Total Loss: 19.4770
- NLL: 35.3258
- Reg: 0.3022
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 1]
-> Rozdíl (Pred - Target): 2.028294
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.14e-02
--- Iteration [2/800] ---
- Total Loss: 19.0607
- NLL: 34.9987
- Reg: 0.3022
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 2]
-> Rozdíl (Pred - Target): 1.933112
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.28e-03
--- Iteration [3/800] ---
- Total Loss: 16.5761
- NLL: 35.6023
- Reg: 0.3022
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 3]
-> Rozdíl (Pred - Target): 1.775779
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.28e-03
--- Iteration [4/800] ---
- Total Loss: 14.1072
- NLL: 36.0484
- Reg: 0.3021
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 4]
-> Rozdíl (Pred - Target): 1.833132
-> Min Variance v batchi: 0.00e+00

```
-> Mean Variance v batchi: 5.89e-03
--- Iteration [5/800] ---
- Total Loss: 13.9115
- NLL: 35.9562
- Reg: 0.3021
- p1=0.569, p2=0.403

--- Validation at iteration 5 ---
Average MSE: 37.2470, Average ANEES: 99236.4531
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 5]
-> Rozdil (Pred - Target): 1.928061
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.58e-03
--- Iteration [6/800] ---
- Total Loss: 15.6868
- NLL: 36.3110
- Reg: 0.3021
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 6]
-> Rozdil (Pred - Target): 1.686187
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.64e-03
--- Iteration [7/800] ---
- Total Loss: 12.2692
- NLL: 35.8433
- Reg: 0.3021
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 7]
-> Rozdil (Pred - Target): 1.817828
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.61e-03
--- Iteration [8/800] ---
- Total Loss: 13.5131
- NLL: 36.5247
- Reg: 0.3021
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 8]
-> Rozdil (Pred - Target): 1.661614
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.54e-03
--- Iteration [9/800] ---
- Total Loss: 11.3971
```

- NLL: 36.4480
- Reg: 0.3021
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 9]

- > Rozdil (Pred - Target): 1.543255
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.95e-03

--- Iteration [10/800] ---

- Total Loss: 9.5821
- NLL: 36.3212
- Reg: 0.3021
- p1=0.569, p2=0.403

--- Validation at iteration 10 ---

Average MSE: 22.7097, Average ANEES: 90950.4062
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 10]

- > Rozdil (Pred - Target): 1.584305
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.40e-03

--- Iteration [11/800] ---

- Total Loss: 10.4576
- NLL: 36.0030
- Reg: 0.3021
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 11]

- > Rozdil (Pred - Target): 1.493135
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.27e-02

--- Iteration [12/800] ---

- Total Loss: 9.4802
- NLL: 35.6559
- Reg: 0.3021
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 12]

- > Rozdil (Pred - Target): 1.496992
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.79e-03

--- Iteration [13/800] ---

- Total Loss: 8.4005
- NLL: 35.6241
- Reg: 0.3021
- p1=0.569, p2=0.403

```

[DIAGNOSTIKA iter 13]
-> Rozdil (Pred - Target): 1.563047
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.27e-02
--- Iteration [14/800] ---
- Total Loss: 12.3175
- NLL: 35.7965
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 14]
-> Rozdil (Pred - Target): 1.374377
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.51e-03
--- Iteration [15/800] ---
- Total Loss: 7.5067
- NLL: 35.2914
- Reg: 0.3020
- p1=0.569, p2=0.403

--- Validation at iteration 15 ---
Average MSE: 19.7559, Average ANEES: 106126.6484
-----

[DIAGNOSTIKA iter 15]
-> Rozdil (Pred - Target): 1.362565
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.90e-03
--- Iteration [16/800] ---
- Total Loss: 6.9845
- NLL: 34.9075
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 16]
-> Rozdil (Pred - Target): 1.346284
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.18e-02
--- Iteration [17/800] ---
- Total Loss: 7.6433
- NLL: 34.8330
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 17]
-> Rozdil (Pred - Target): 1.465894
-> Min Variance v batchi: 0.00e+00

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-> Mean Variance v batchi: 6.86e-03
--- Iteration [18/800] ---
- Total Loss: 8.9362
- NLL: 35.6004
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 18]
-> Rozdil (Pred - Target): 1.296345
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.93e-03
--- Iteration [19/800] ---
- Total Loss: 7.1436
- NLL: 35.3888
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 19]
-> Rozdil (Pred - Target): 1.405191
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.33e-03
--- Iteration [20/800] ---
- Total Loss: 8.1025
- NLL: 34.8863
- Reg: 0.3020
- p1=0.569, p2=0.403

--- Validation at iteration 20 ---
Average MSE: 19.6483, Average ANEES: 94434.7188
-----

[DIAGNOSTIKA iter 20]
-> Rozdil (Pred - Target): 1.379537
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.02e-03
--- Iteration [21/800] ---
- Total Loss: 8.2459
- NLL: 35.3556
- Reg: 0.3020
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 21]
-> Rozdil (Pred - Target): 1.417240
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.27e-02
--- Iteration [22/800] ---
- Total Loss: 9.4404
- NLL: 34.9653

```

- Reg: 0.3019
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 22]

- > Rozdil (Pred - Target): 1.464457
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.98e-02

--- Iteration [23/800] ---

- Total Loss: 20.5610
- NLL: 35.3583
- Reg: 0.3019
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 23]

- > Rozdil (Pred - Target): 1.345221
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.86e-02

--- Iteration [24/800] ---

- Total Loss: 8.1090
- NLL: 35.2254
- Reg: 0.3019
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 24]

- > Rozdil (Pred - Target): 1.436666
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.42e-02

--- Iteration [25/800] ---

- Total Loss: 11.2399
- NLL: 36.0122
- Reg: 0.3019
- p1=0.569, p2=0.403

--- Validation at iteration 25 ---
Average MSE: 19.2784, Average ANEES: 104709.6094

[DIAGNOSTIKA iter 25]

- > Rozdil (Pred - Target): 1.323522
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.43e-02

--- Iteration [26/800] ---

- Total Loss: 8.6466
- NLL: 34.9974
- Reg: 0.3019
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 26]

```
-> Rozdil (Pred - Target): 1.203649
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.23e-03
--- Iteration [27/800] ---
- Total Loss: 5.8977
- NLL: 34.3132
- Reg: 0.3019
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 27]
-> Rozdil (Pred - Target): 1.254152
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.37e-02
--- Iteration [28/800] ---
- Total Loss: 6.9720
- NLL: 34.7817
- Reg: 0.3018
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 28]
-> Rozdil (Pred - Target): 1.312340
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.21e-03
--- Iteration [29/800] ---
- Total Loss: 8.6997
- NLL: 35.4649
- Reg: 0.3018
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 29]
-> Rozdil (Pred - Target): 1.294246
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.20e-02
--- Iteration [30/800] ---
- Total Loss: 7.8088
- NLL: 34.5374
- Reg: 0.3018
- p1=0.569, p2=0.403
```

```
--- Validation at iteration 30 ---
Average MSE: 18.8304, Average ANEES: 155607.6562
```

```
[DIAGNOSTIKA iter 30]
-> Rozdil (Pred - Target): 1.301646
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.52e-02
--- Iteration [31/800] ---
```

```

- Total Loss: 7.4091
- NLL: 34.5561
- Reg: 0.3018
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 31]
-> Rozdil (Pred - Target): 1.332196
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.83e-02
--- Iteration [32/800] ---
- Total Loss: 7.8748
- NLL: 34.7727
- Reg: 0.3018
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 32]
-> Rozdil (Pred - Target): 1.304418
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.35e-03
--- Iteration [33/800] ---
- Total Loss: 7.6263
- NLL: 34.5980
- Reg: 0.3018
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 33]
-> Rozdil (Pred - Target): 1.344098
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.12e-02
--- Iteration [34/800] ---
- Total Loss: 10.5907
- NLL: 34.3137
- Reg: 0.3017
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 34]
-> Rozdil (Pred - Target): 1.282201
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.49e-03
--- Iteration [35/800] ---
- Total Loss: 6.9114
- NLL: 34.9429
- Reg: 0.3017
- p1=0.569, p2=0.403

--- Validation at iteration 35 ---
Average MSE: 17.8689, Average ANEES: 173039.0156
-----
```

```
[DIAGNOSTIKA iter 35]
-> Rozdil (Pred - Target): 1.228220
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.68e-03
--- Iteration [36/800] ---
- Total Loss: 6.1099
- NLL: 34.9826
- Reg: 0.3017
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 36]
-> Rozdil (Pred - Target): 1.245253
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.46e-03
--- Iteration [37/800] ---
- Total Loss: 6.7642
- NLL: 34.6292
- Reg: 0.3017
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 37]
-> Rozdil (Pred - Target): 1.243008
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.42e-03
--- Iteration [38/800] ---
- Total Loss: 6.7841
- NLL: 34.2399
- Reg: 0.3016
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 38]
-> Rozdil (Pred - Target): 1.208528
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.27e-03
--- Iteration [39/800] ---
- Total Loss: 5.8359
- NLL: 34.3173
- Reg: 0.3016
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 39]
-> Rozdil (Pred - Target): 1.286446
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.40e-03
--- Iteration [40/800] ---
- Total Loss: 7.0447
- NLL: 34.4963
```

```

- Reg: 0.3016
- p1=0.569, p2=0.403

--- Validation at iteration 40 ---
Average MSE: 18.2371, Average ANEES: 158066.0469
-----

[DIAGNOSTIKA iter 40]
-> Rozdil (Pred - Target): 1.206981
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.31e-02
--- Iteration [41/800] ---
- Total Loss: 7.5707
- NLL: 33.4439
- Reg: 0.3016
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 41]
-> Rozdil (Pred - Target): 1.225587
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.23e-02
--- Iteration [42/800] ---
- Total Loss: 7.8797
- NLL: 34.0712
- Reg: 0.3015
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 42]
-> Rozdil (Pred - Target): 1.300352
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.28e-02
--- Iteration [43/800] ---
- Total Loss: 11.7104
- NLL: 33.6232
- Reg: 0.3015
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 43]
-> Rozdil (Pred - Target): 1.236544
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.52e-02
--- Iteration [44/800] ---
- Total Loss: 8.9591
- NLL: 33.7130
- Reg: 0.3015
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 44]

```

```
-> Rozdil (Pred - Target): 1.176306
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.01e-03
--- Iteration [45/800] ---
- Total Loss: 5.8283
- NLL: 33.9963
- Reg: 0.3015
- p1=0.569, p2=0.403

--- Validation at iteration 45 ---
Average MSE: 18.3850, Average ANEES: 143179.3906
```

```
[DIAGNOSTIKA iter 45]
-> Rozdil (Pred - Target): 1.439937
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.21e-02
--- Iteration [46/800] ---
- Total Loss: 16.4216
- NLL: 33.6486
- Reg: 0.3015
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 46]
-> Rozdil (Pred - Target): 1.205644
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.40e-02
--- Iteration [47/800] ---
- Total Loss: 7.0342
- NLL: 33.6885
- Reg: 0.3014
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 47]
-> Rozdil (Pred - Target): 1.212099
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.36e-02
--- Iteration [48/800] ---
- Total Loss: 6.9958
- NLL: 33.2809
- Reg: 0.3014
- p1=0.569, p2=0.403
```

```
[DIAGNOSTIKA iter 48]
-> Rozdil (Pred - Target): 1.425741
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.31e-02
--- Iteration [49/800] ---
```

```

- Total Loss: 17.9724
- NLL: 33.7127
- Reg: 0.3014
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 49]
-> Rozdil (Pred - Target): 1.194406
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.69e-03
--- Iteration [50/800] ---
- Total Loss: 5.5619
- NLL: 33.3552
- Reg: 0.3014
- p1=0.569, p2=0.403

--- Validation at iteration 50 ---
Average MSE: 16.9776, Average ANEES: 116067.7422
-----

[DIAGNOSTIKA iter 50]
-> Rozdil (Pred - Target): 1.241775
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.51e-02
--- Iteration [51/800] ---
- Total Loss: 7.0314
- NLL: 33.2419
- Reg: 0.3013
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 51]
-> Rozdil (Pred - Target): 1.126553
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.00e-03
--- Iteration [52/800] ---
- Total Loss: 4.8168
- NLL: 32.7859
- Reg: 0.3013
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 52]
-> Rozdil (Pred - Target): 1.334811
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.62e-02
--- Iteration [53/800] ---
- Total Loss: 10.2348
- NLL: 32.7237
- Reg: 0.3013
- p1=0.569, p2=0.403

```

```

[DIAGNOSTIKA iter 53]
-> Rozdil (Pred - Target): 1.230749
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.03e-02
--- Iteration [54/800] ---
- Total Loss: 6.1559
- NLL: 32.8527
- Reg: 0.3013
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 54]
-> Rozdil (Pred - Target): 1.302649
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.40e-02
--- Iteration [55/800] ---
- Total Loss: 8.5119
- NLL: 32.5970
- Reg: 0.3013
- p1=0.569, p2=0.403

--- Validation at iteration 55 ---
Average MSE: 15.7132, Average ANEES: 104394.2500
-----

[DIAGNOSTIKA iter 55]
-> Rozdil (Pred - Target): 1.313462
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.90e-02
--- Iteration [56/800] ---
- Total Loss: 8.6735
- NLL: 32.3336
- Reg: 0.3012
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 56]
-> Rozdil (Pred - Target): 1.255336
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.57e-02
--- Iteration [57/800] ---
- Total Loss: 6.9341
- NLL: 32.9462
- Reg: 0.3012
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 57]
-> Rozdil (Pred - Target): 1.190524
-> Min Variance v batchi: 0.00e+00

```

```

-> Mean Variance v batchi: 1.14e-02
--- Iteration [58/800] ---
- Total Loss: 6.1732
- NLL: 32.5624
- Reg: 0.3012
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 58]
-> Rozdil (Pred - Target): 1.203010
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.58e-02
--- Iteration [59/800] ---
- Total Loss: 7.3390
- NLL: 31.5811
- Reg: 0.3012
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 59]
-> Rozdil (Pred - Target): 1.228778
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.78e-02
--- Iteration [60/800] ---
- Total Loss: 6.6977
- NLL: 32.1303
- Reg: 0.3011
- p1=0.569, p2=0.403

--- Validation at iteration 60 ---
Average MSE: 16.3624, Average ANEES: 89689.9141
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 60]
-> Rozdil (Pred - Target): 1.163092
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.32e-02
--- Iteration [61/800] ---
- Total Loss: 5.5232
- NLL: 31.9122
- Reg: 0.3011
- p1=0.569, p2=0.403
```

```

[DIAGNOSTIKA iter 61]
-> Rozdil (Pred - Target): 1.330937
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.64e-02
--- Iteration [62/800] ---
- Total Loss: 11.3845
```

- NLL: 32.0905
- Reg: 0.3011
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 62]

- > Rozdil (Pred - Target): 1.264292
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.79e-02

--- Iteration [63/800] ---

- Total Loss: 6.9471
- NLL: 32.2040
- Reg: 0.3011
- p1=0.569, p2=0.403

[DIAGNOSTIKA iter 63]

- > Rozdil (Pred - Target): 1.227967
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.67e-02

--- Iteration [64/800] ---

- Total Loss: 6.8019
- NLL: 31.8475
- Reg: 0.3011
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 64]

- > Rozdil (Pred - Target): 1.287254
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.85e-02

--- Iteration [65/800] ---

- Total Loss: 7.4711
- NLL: 32.2310
- Reg: 0.3010
- p1=0.568, p2=0.403

--- Validation at iteration 65 ---

Average MSE: 17.1186, Average ANEES: 79273.8203

>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 65]

- > Rozdil (Pred - Target): 1.137875
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.35e-02

--- Iteration [66/800] ---

- Total Loss: 5.2466
- NLL: 30.7596
- Reg: 0.3010
- p1=0.568, p2=0.403

```
[DIAGNOSTIKA iter 66]
-> Rozdil (Pred - Target): 1.248554
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.52e-02
--- Iteration [67/800] ---
- Total Loss: 6.8993
- NLL: 31.4806
- Reg: 0.3010
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 67]
-> Rozdil (Pred - Target): 1.235705
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.73e-02
--- Iteration [68/800] ---
- Total Loss: 6.7804
- NLL: 31.5074
- Reg: 0.3010
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 68]
-> Rozdil (Pred - Target): 1.200384
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.25e-02
--- Iteration [69/800] ---
- Total Loss: 6.0373
- NLL: 31.6674
- Reg: 0.3010
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 69]
-> Rozdil (Pred - Target): 1.162252
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.15e-02
--- Iteration [70/800] ---
- Total Loss: 5.9360
- NLL: 30.5903
- Reg: 0.3009
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 70 ---
Average MSE: 16.3361, Average ANEES: 72069.6953
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 70]
-> Rozdil (Pred - Target): 1.146732
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.84e-02
--- Iteration [71/800] ---
- Total Loss: 5.4700
- NLL: 30.4917
- Reg: 0.3009
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 71]
-> Rozdil (Pred - Target): 1.279159
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.00e-02
--- Iteration [72/800] ---
- Total Loss: 10.3964
- NLL: 30.4474
- Reg: 0.3009
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 72]
-> Rozdil (Pred - Target): 1.243384
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.90e-02
--- Iteration [73/800] ---
- Total Loss: 7.2106
- NLL: 31.7742
- Reg: 0.3009
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 73]
-> Rozdil (Pred - Target): 1.152659
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.40e-02
--- Iteration [74/800] ---
- Total Loss: 5.7459
- NLL: 30.2627
- Reg: 0.3009
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 74]
-> Rozdil (Pred - Target): 1.164800
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.87e-02
--- Iteration [75/800] ---
- Total Loss: 5.7177
- NLL: 29.9208
- Reg: 0.3008
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 75 ---
Average MSE: 15.9162, Average ANEES: 65111.5625
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 75]
-> Rozdil (Pred - Target): 1.287610
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.28e-02
--- Iteration [76/800] ---
- Total Loss: 9.0091
- NLL: 30.3006
- Reg: 0.3008
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 76]
-> Rozdil (Pred - Target): 1.373958
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.98e-02
--- Iteration [77/800] ---
- Total Loss: 10.2195
- NLL: 31.0003
- Reg: 0.3008
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 77]
-> Rozdil (Pred - Target): 1.195882
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.77e-02
--- Iteration [78/800] ---
- Total Loss: 6.4602
- NLL: 30.2284
- Reg: 0.3008
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 78]
-> Rozdil (Pred - Target): 1.268258
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.93e-02
--- Iteration [79/800] ---
- Total Loss: 10.0132
- NLL: 30.5307
- Reg: 0.3007
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 79]
-> Rozdil (Pred - Target): 1.215939
-> Min Variance v batchi: 0.00e+00
```

```

-> Mean Variance v batchi: 2.47e-02
--- Iteration [80/800] ---
- Total Loss: 6.1612
- NLL: 29.8987
- Reg: 0.3007
- p1=0.568, p2=0.403

--- Validation at iteration 80 ---
Average MSE: 15.2366, Average ANEES: 58491.6250
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 80]
-> Rozdil (Pred - Target): 1.169384
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.82e-02
--- Iteration [81/800] ---
- Total Loss: 5.0435
- NLL: 29.9526
- Reg: 0.3007
- p1=0.568, p2=0.403
```

```

[DIAGNOSTIKA iter 81]
-> Rozdil (Pred - Target): 1.206029
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.81e-02
--- Iteration [82/800] ---
- Total Loss: 6.0733
- NLL: 29.3241
- Reg: 0.3007
- p1=0.568, p2=0.403
```

```

[DIAGNOSTIKA iter 82]
-> Rozdil (Pred - Target): 1.249404
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e-01
--- Iteration [83/800] ---
- Total Loss: 8.4887
- NLL: 29.1890
- Reg: 0.3007
- p1=0.568, p2=0.403
```

```

[DIAGNOSTIKA iter 83]
-> Rozdil (Pred - Target): 1.132741
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.28e-02
--- Iteration [84/800] ---
- Total Loss: 5.2838
```

- NLL: 29.5609
- Reg: 0.3006
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 84]

- > Rozdil (Pred - Target): 1.291245
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.04e-02

--- Iteration [85/800] ---

- Total Loss: 7.0585
- NLL: 30.1300
- Reg: 0.3006
- p1=0.568, p2=0.403

--- Validation at iteration 85 ---

Average MSE: 15.4786, Average ANEES: 58226.6055
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 85]

- > Rozdil (Pred - Target): 1.201383
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.26e-02

--- Iteration [86/800] ---

- Total Loss: 6.7806
- NLL: 29.3777
- Reg: 0.3006
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 86]

- > Rozdil (Pred - Target): 1.188070
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.39e-02

--- Iteration [87/800] ---

- Total Loss: 6.7006
- NLL: 29.4420
- Reg: 0.3006
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 87]

- > Rozdil (Pred - Target): 1.262937
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.07e-02

--- Iteration [88/800] ---

- Total Loss: 7.8269
- NLL: 29.1197
- Reg: 0.3006
- p1=0.568, p2=0.403

```
[DIAGNOSTIKA iter 88]
-> Rozdil (Pred - Target): 1.185495
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.37e-02
--- Iteration [89/800] ---
- Total Loss: 6.9560
- NLL: 28.9126
- Reg: 0.3005
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 89]
-> Rozdil (Pred - Target): 1.186120
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.29e-02
--- Iteration [90/800] ---
- Total Loss: 5.8072
- NLL: 29.0945
- Reg: 0.3005
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 90 ---
Average MSE: 14.1640, Average ANEES: 62254.6914
```

```
[DIAGNOSTIKA iter 90]
-> Rozdil (Pred - Target): 1.203787
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.85e-02
--- Iteration [91/800] ---
- Total Loss: 6.7734
- NLL: 28.4131
- Reg: 0.3005
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 91]
-> Rozdil (Pred - Target): 1.141662
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.19e-02
--- Iteration [92/800] ---
- Total Loss: 5.7809
- NLL: 29.4504
- Reg: 0.3005
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 92]
-> Rozdil (Pred - Target): 1.261251
-> Min Variance v batchi: 0.00e+00
```

```

-> Mean Variance v batchi: 3.49e-02
--- Iteration [93/800] ---
- Total Loss: 8.1505
- NLL: 29.5134
- Reg: 0.3005
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 93]
-> Rozdil (Pred - Target): 1.177444
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.11e-02
--- Iteration [94/800] ---
- Total Loss: 5.7595
- NLL: 28.0633
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 94]
-> Rozdil (Pred - Target): 1.289471
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.38e-02
--- Iteration [95/800] ---
- Total Loss: 9.0458
- NLL: 28.5342
- Reg: 0.3004
- p1=0.568, p2=0.403

--- Validation at iteration 95 ---
Average MSE: 14.3640, Average ANEES: 57513.1094
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 95]
-> Rozdil (Pred - Target): 1.198499
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.87e-02
--- Iteration [96/800] ---
- Total Loss: 6.4291
- NLL: 28.6490
- Reg: 0.3004
- p1=0.568, p2=0.403
```

```

[DIAGNOSTIKA iter 96]
-> Rozdil (Pred - Target): 1.175894
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.58e-02
--- Iteration [97/800] ---
- Total Loss: 6.6403
```

- NLL: 27.1099
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 97]

- > Rozdil (Pred - Target): 1.256263
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.03e-02

--- Iteration [98/800] ---

- Total Loss: 8.0622
- NLL: 27.8377
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 98]

- > Rozdil (Pred - Target): 1.108840
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.42e-02

--- Iteration [99/800] ---

- Total Loss: 4.6741
- NLL: 28.2055
- Reg: 0.3003
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 99]

- > Rozdil (Pred - Target): 1.216690
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.77e-02

--- Iteration [100/800] ---

- Total Loss: 6.0928
- NLL: 28.5015
- Reg: 0.3003
- p1=0.568, p2=0.403

--- Validation at iteration 100 ---
Average MSE: 14.6811, Average ANEES: 52240.0781
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 100]

- > Rozdil (Pred - Target): 1.117038
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.84e-02

--- Iteration [101/800] ---

- Total Loss: 5.7308
- NLL: 27.2101
- Reg: 0.3003
- p1=0.568, p2=0.403

```
[DIAGNOSTIKA iter 101]
-> Rozdil (Pred - Target): 1.065333
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.38e-02
--- Iteration [102/800] ---
- Total Loss: 4.2327
- NLL: 27.1036
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 102]
-> Rozdil (Pred - Target): 1.224595
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.14e-01
--- Iteration [103/800] ---
- Total Loss: 7.0910
- NLL: 28.0946
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 103]
-> Rozdil (Pred - Target): 1.188147
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.22e-02
--- Iteration [104/800] ---
- Total Loss: 6.9061
- NLL: 27.8471
- Reg: 0.3002
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 104]
-> Rozdil (Pred - Target): 1.056034
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.76e-02
--- Iteration [105/800] ---
- Total Loss: 4.5016
- NLL: 27.6973
- Reg: 0.3002
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 105 ---
Average MSE: 14.3986, Average ANEES: 46858.6562
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 105]
-> Rozdil (Pred - Target): 1.195382
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.98e-02
--- Iteration [106/800] ---
- Total Loss: 6.3110
- NLL: 28.5616
- Reg: 0.3002
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 106]
-> Rozdil (Pred - Target): 1.204679
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.08e-02
--- Iteration [107/800] ---
- Total Loss: 6.0582
- NLL: 27.4190
- Reg: 0.3002
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 107]
-> Rozdil (Pred - Target): 1.112814
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.29e-02
--- Iteration [108/800] ---
- Total Loss: 5.2387
- NLL: 27.0249
- Reg: 0.3002
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 108]
-> Rozdil (Pred - Target): 1.168855
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.28e-02
--- Iteration [109/800] ---
- Total Loss: 6.0746
- NLL: 26.9331
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 109]
-> Rozdil (Pred - Target): 1.226188
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.51e-01
--- Iteration [110/800] ---
- Total Loss: 7.0172
- NLL: 26.9591
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 110 ---
Average MSE: 13.6102, Average ANEES: 42430.7930
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 110]
-> Rozdil (Pred - Target): 1.187802
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.19e-02
--- Iteration [111/800] ---
- Total Loss: 7.2104
- NLL: 27.6771
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 111]
-> Rozdil (Pred - Target): 1.116549
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.83e-02
--- Iteration [112/800] ---
- Total Loss: 4.7966
- NLL: 27.3598
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 112]
-> Rozdil (Pred - Target): 1.145310
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.85e-02
--- Iteration [113/800] ---
- Total Loss: 5.9480
- NLL: 26.0662
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 113]
-> Rozdil (Pred - Target): 1.138299
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.67e-01
--- Iteration [114/800] ---
- Total Loss: 5.6512
- NLL: 26.8413
- Reg: 0.3001
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 114]
-> Rozdil (Pred - Target): 1.105447
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 3.26e-02
--- Iteration [115/800] ---
- Total Loss: 4.4797
- NLL: 27.0735
- Reg: 0.3000
- p1=0.568, p2=0.403

--- Validation at iteration 115 ---
Average MSE: 13.5071, Average ANEES: 36443.8516
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 115]
-> Rozdil (Pred - Target): 1.178407
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.68e-02
--- Iteration [116/800] ---
- Total Loss: 5.4986
- NLL: 27.9246
- Reg: 0.3000
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 116]
-> Rozdil (Pred - Target): 1.131783
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.87e-02
--- Iteration [117/800] ---
- Total Loss: 5.1122
- NLL: 26.7517
- Reg: 0.3000
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 117]
-> Rozdil (Pred - Target): 1.100853
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.22e-02
--- Iteration [118/800] ---
- Total Loss: 5.2173
- NLL: 25.6497
- Reg: 0.3000
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 118]
-> Rozdil (Pred - Target): 1.121263
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.20e-01
--- Iteration [119/800] ---
- Total Loss: 5.7818
```

```
- NLL: 25.7195  
- Reg: 0.3000  
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 119]  
-> Rozdil (Pred - Target): 1.176271  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 8.48e-02  
--- Iteration [120/800] ---  
- Total Loss: 6.0712  
- NLL: 26.8436  
- Reg: 0.3000  
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 120 ---  
Average MSE: 13.2781, Average ANEES: 42168.0117
```

```
[DIAGNOSTIKA iter 120]  
-> Rozdil (Pred - Target): 1.129622  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.20e-01  
--- Iteration [121/800] ---  
- Total Loss: 5.9097  
- NLL: 26.4919  
- Reg: 0.2999  
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 121]  
-> Rozdil (Pred - Target): 1.058579  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.39e-02  
--- Iteration [122/800] ---  
- Total Loss: 4.4761  
- NLL: 25.7330  
- Reg: 0.2999  
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 122]  
-> Rozdil (Pred - Target): 1.130857  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 3.51e-02  
--- Iteration [123/800] ---  
- Total Loss: 5.3692  
- NLL: 26.4908  
- Reg: 0.2999  
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 123]
-> Rozdil (Pred - Target): 1.124666
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.72e-01
--- Iteration [124/800] ---
- Total Loss: 5.4614
- NLL: 26.4096
- Reg: 0.2999
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 124]
-> Rozdil (Pred - Target): 1.164668
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.30e-02
--- Iteration [125/800] ---
- Total Loss: 6.5856
- NLL: 27.1047
- Reg: 0.2999
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 125 ---
Average MSE: 14.4462, Average ANEES: 38721.0781
```

```
[DIAGNOSTIKA iter 125]
-> Rozdil (Pred - Target): 1.230423
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.28e-02
--- Iteration [126/800] ---
- Total Loss: 7.5520
- NLL: 26.6706
- Reg: 0.2998
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 126]
-> Rozdil (Pred - Target): 1.125772
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.10e-02
--- Iteration [127/800] ---
- Total Loss: 5.5834
- NLL: 26.8266
- Reg: 0.2998
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 127]
-> Rozdil (Pred - Target): 1.268766
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.05e-01
```

--- Iteration [128/800] ---

- Total Loss: 8.5823
- NLL: 25.6290
- Reg: 0.2998
- p1=0.568, p2=0.402

[DIAGNOSTIKA iter 128]

- > Rozdil (Pred - Target): 1.111471
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.63e-02

--- Iteration [129/800] ---

- Total Loss: 5.2834
- NLL: 25.1596
- Reg: 0.2998
- p1=0.568, p2=0.402

[DIAGNOSTIKA iter 129]

- > Rozdil (Pred - Target): 1.133041
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.13e-02

--- Iteration [130/800] ---

- Total Loss: 5.0312
- NLL: 25.6402
- Reg: 0.2998
- p1=0.568, p2=0.402

--- Validation at iteration 130 ---

Average MSE: 12.8184, Average ANEES: 29606.3281
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 130]

- > Rozdil (Pred - Target): 1.180574
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.24e-02

--- Iteration [131/800] ---

- Total Loss: 6.8813
- NLL: 25.4235
- Reg: 0.2998
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 131]

- > Rozdil (Pred - Target): 1.098139
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.00e-02

--- Iteration [132/800] ---

- Total Loss: 4.6738
- NLL: 26.0952

- Reg: 0.2997
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 132]

- > Rozdil (Pred - Target): 1.052209
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.09e-02

--- Iteration [133/800] ---

- Total Loss: 4.1642
- NLL: 26.0687
- Reg: 0.2997
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 133]

- > Rozdil (Pred - Target): 1.051061
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.64e-01

--- Iteration [134/800] ---

- Total Loss: 4.6394
- NLL: 24.2102
- Reg: 0.2997
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 134]

- > Rozdil (Pred - Target): 1.128433
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.70e-02

--- Iteration [135/800] ---

- Total Loss: 5.8637
- NLL: 25.0347
- Reg: 0.2997
- p1=0.567, p2=0.402

--- Validation at iteration 135 ---
Average MSE: 14.1180, Average ANEES: 30625.3477

[DIAGNOSTIKA iter 135]

- > Rozdil (Pred - Target): 1.062129
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.14e-01

--- Iteration [136/800] ---

- Total Loss: 4.3688
- NLL: 24.3628
- Reg: 0.2997
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 136]

```
-> Rozdil (Pred - Target): 1.213851
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.95e-02
--- Iteration [137/800] ---
- Total Loss: 7.4688
- NLL: 24.9888
- Reg: 0.2996
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 137]
-> Rozdil (Pred - Target): 1.210286
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.38e-01
--- Iteration [138/800] ---
- Total Loss: 6.7280
- NLL: 24.0605
- Reg: 0.2996
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 138]
-> Rozdil (Pred - Target): 1.136145
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.16e-02
--- Iteration [139/800] ---
- Total Loss: 5.7589
- NLL: 25.5005
- Reg: 0.2996
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 139]
-> Rozdil (Pred - Target): 1.132284
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.42e-02
--- Iteration [140/800] ---
- Total Loss: 5.0925
- NLL: 24.8261
- Reg: 0.2996
- p1=0.567, p2=0.402
```

```
--- Validation at iteration 140 ---
Average MSE: 13.2210, Average ANEES: 25785.8945
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 140]
-> Rozdil (Pred - Target): 1.094427
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.34e-02
```

--- Iteration [141/800] ---

- Total Loss: 5.3508
- NLL: 24.1645
- Reg: 0.2996
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 141]

- > Rozdil (Pred - Target): 1.139128
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.65e-01

--- Iteration [142/800] ---

- Total Loss: 6.0973
- NLL: 24.9897
- Reg: 0.2995
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 142]

- > Rozdil (Pred - Target): 1.105073
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.56e-02

--- Iteration [143/800] ---

- Total Loss: 4.7250
- NLL: 25.1653
- Reg: 0.2995
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 143]

- > Rozdil (Pred - Target): 1.047349
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.37e-02

--- Iteration [144/800] ---

- Total Loss: 4.7719
- NLL: 23.2464
- Reg: 0.2995
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 144]

- > Rozdil (Pred - Target): 1.065942
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.04e-01

--- Iteration [145/800] ---

- Total Loss: 6.2279
- NLL: 22.5712
- Reg: 0.2995
- p1=0.567, p2=0.402

--- Validation at iteration 145 ---

Average MSE: 11.4960, Average ANEES: 21521.4883

```
>>> New best VALIDATION ANEES! Saving model. <<<
```

```
[DIAGNOSTIKA iter 145]
-> Rozdil (Pred - Target): 1.013425
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.74e-02
--- Iteration [146/800] ---
- Total Loss: 4.2349
- NLL: 23.6010
- Reg: 0.2995
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 146]
-> Rozdil (Pred - Target): 1.153778
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.62e-01
--- Iteration [147/800] ---
- Total Loss: 6.0912
- NLL: 24.2013
- Reg: 0.2994
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 147]
-> Rozdil (Pred - Target): 1.052734
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.76e-02
--- Iteration [148/800] ---
- Total Loss: 4.2908
- NLL: 23.5760
- Reg: 0.2994
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 148]
-> Rozdil (Pred - Target): 1.020589
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.57e-02
--- Iteration [149/800] ---
- Total Loss: 4.1642
- NLL: 22.5776
- Reg: 0.2994
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 149]
-> Rozdil (Pred - Target): 1.097828
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.89e-02
--- Iteration [150/800] ---
```

```
- Total Loss: 5.8671
- NLL: 23.1726
- Reg: 0.2994
- p1=0.567, p2=0.402

--- Validation at iteration 150 ---
Average MSE: 13.2141, Average ANEES: 20906.4648
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 150]
-> Rozdil (Pred - Target): 1.137888
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.40e-01
--- Iteration [151/800] ---
- Total Loss: 22.8704
- NLL: 22.5710
- Reg: 0.2994
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 151]
-> Rozdil (Pred - Target): 1.084809
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.35e-02
--- Iteration [152/800] ---
- Total Loss: 23.3464
- NLL: 23.0470
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 152]
-> Rozdil (Pred - Target): 1.053147
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.64e-02
--- Iteration [153/800] ---
- Total Loss: 24.0328
- NLL: 23.7335
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 153]
-> Rozdil (Pred - Target): 1.092754
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.54e-01
--- Iteration [154/800] ---
- Total Loss: 22.9201
- NLL: 22.6208
- Reg: 0.2993
```

```

- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 154]
-> Rozdil (Pred - Target): 1.097571
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.56e-02
--- Iteration [155/800] ---
- Total Loss: 22.3335
- NLL: 22.0342
- Reg: 0.2993
- p1=0.567, p2=0.402

--- Validation at iteration 155 ---
Average MSE: 14.2845, Average ANEES: 15063.4238
>>> New best VALIDATION ANEES! Saving model. <<<
-----

[DIAGNOSTIKA iter 155]
-> Rozdil (Pred - Target): 1.155883
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.12e-01
--- Iteration [156/800] ---
- Total Loss: 21.2818
- NLL: 20.9825
- Reg: 0.2993
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 156]
-> Rozdil (Pred - Target): 1.252151
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.55e-01
--- Iteration [157/800] ---
- Total Loss: 21.2446
- NLL: 20.9453
- Reg: 0.2993
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 157]
-> Rozdil (Pred - Target): 1.259144
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.84e-02
--- Iteration [158/800] ---
- Total Loss: 21.9292
- NLL: 21.6299
- Reg: 0.2993
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 158]

```

```
-> Rozdil (Pred - Target): 1.292021
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.14e-01
--- Iteration [159/800] ---
- Total Loss: 20.1610
- NLL: 19.8617
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 159]
-> Rozdil (Pred - Target): 1.333015
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.94e-01
--- Iteration [160/800] ---
- Total Loss: 19.0258
- NLL: 18.7265
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
--- Validation at iteration 160 ---
Average MSE: 297.4095, Average ANEES: 5623.3687
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 160]
-> Rozdil (Pred - Target): 1.307444
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.80e-01
--- Iteration [161/800] ---
- Total Loss: 17.5412
- NLL: 17.2419
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 161]
-> Rozdil (Pred - Target): 1.510997
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.70e-01
--- Iteration [162/800] ---
- Total Loss: 17.5622
- NLL: 17.2629
- Reg: 0.2993
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 162]
-> Rozdil (Pred - Target): 1.697298
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.63e-01
```

--- Iteration [163/800] ---

- Total Loss: 16.1898
- NLL: 15.8904
- Reg: 0.2994
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 163]

- > Rozdil (Pred - Target): 1.844246
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.24e-01

--- Iteration [164/800] ---

- Total Loss: 17.3582
- NLL: 17.0588
- Reg: 0.2994
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 164]

- > Rozdil (Pred - Target): 2.049773
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.10e+00

--- Iteration [165/800] ---

- Total Loss: 16.0537
- NLL: 15.7543
- Reg: 0.2994
- p1=0.567, p2=0.402

--- Validation at iteration 165 ---

Average MSE: 78036.1172, Average ANEES: 2419.7834
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 165]

- > Rozdil (Pred - Target): 2.450978
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.84e+00

--- Iteration [166/800] ---

- Total Loss: 15.2919
- NLL: 14.9925
- Reg: 0.2994
- p1=0.567, p2=0.402

[DIAGNOSTIKA iter 166]

- > Rozdil (Pred - Target): 2.965236
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.79e+00

--- Iteration [167/800] ---

- Total Loss: 15.8257
- NLL: 15.5263

```
- Reg: 0.2994  
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 167]  
-> Rozdil (Pred - Target): 3.570141  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.74e+00  
--- Iteration [168/800] ---  
- Total Loss: 14.4003  
- NLL: 14.1008  
- Reg: 0.2994  
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 168]  
-> Rozdil (Pred - Target): 4.653903  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.53e+01  
--- Iteration [169/800] ---  
- Total Loss: 13.9114  
- NLL: 13.6119  
- Reg: 0.2994  
- p1=0.567, p2=0.402
```

```
[DIAGNOSTIKA iter 169]  
-> Rozdil (Pred - Target): 5.440989  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.88e+01  
--- Iteration [170/800] ---  
- Total Loss: 13.3375  
- NLL: 13.0380  
- Reg: 0.2995  
- p1=0.567, p2=0.402
```

```
--- Validation at iteration 170 ---  
Average MSE: 33201482.0000, Average ANEES: 1774.2408  
>>> New best VALIDATION ANEES! Saving model. <<<  
-----
```

```
[DIAGNOSTIKA iter 170]  
-> Rozdil (Pred - Target): 6.064826  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 2.68e+01  
--- Iteration [171/800] ---  
- Total Loss: 12.2631  
- NLL: 11.9636  
- Reg: 0.2995  
- p1=0.567, p2=0.403
```

```

[DIAGNOSTIKA iter 171]
-> Rozdil (Pred - Target): 6.675125
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.32e+01
--- Iteration [172/800] ---
- Total Loss: 13.3379
- NLL: 13.0384
- Reg: 0.2995
- p1=0.567, p2=0.403

[DIAGNOSTIKA iter 172]
-> Rozdil (Pred - Target): 7.499436
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.18e+01
--- Iteration [173/800] ---
- Total Loss: 12.4432
- NLL: 12.1437
- Reg: 0.2995
- p1=0.567, p2=0.403

[DIAGNOSTIKA iter 173]
-> Rozdil (Pred - Target): 8.173927
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.02e+01
--- Iteration [174/800] ---
- Total Loss: 12.2807
- NLL: 11.9812
- Reg: 0.2995
- p1=0.567, p2=0.403

[DIAGNOSTIKA iter 174]
-> Rozdil (Pred - Target): 11.732234
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.42e+02
--- Iteration [175/800] ---
- Total Loss: 12.3684
- NLL: 12.0688
- Reg: 0.2996
- p1=0.567, p2=0.403

--- Validation at iteration 175 ---
Average MSE: 2809381120.0000, Average ANEES: 1240.0271
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 175]
-> Rozdil (Pred - Target): 10.181731
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 1.57e+02
--- Iteration [176/800] ---
- Total Loss: 12.6483
- NLL: 12.3487
- Reg: 0.2996
- p1=0.567, p2=0.403
```

```
[DIAGNOSTIKA iter 176]
-> Rozdil (Pred - Target): 10.176395
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.76e+02
--- Iteration [177/800] ---
- Total Loss: 11.0342
- NLL: 10.7346
- Reg: 0.2996
- p1=0.567, p2=0.403
```

```
[DIAGNOSTIKA iter 177]
-> Rozdil (Pred - Target): 10.160451
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.29e+02
--- Iteration [178/800] ---
- Total Loss: 12.7186
- NLL: 12.4190
- Reg: 0.2996
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 178]
-> Rozdil (Pred - Target): 11.173754
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.49e+02
--- Iteration [179/800] ---
- Total Loss: 11.2557
- NLL: 10.9560
- Reg: 0.2997
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 179]
-> Rozdil (Pred - Target): 11.901755
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.79e+02
--- Iteration [180/800] ---
- Total Loss: 10.7098
- NLL: 10.4101
- Reg: 0.2997
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 180 ---
```

Average MSE: 16364936192.0000, Average ANEES: 1133.7661
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 180]
-> Rozdil (Pred - Target): 11.534182
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.10e+02
--- Iteration [181/800] ---
- Total Loss: 10.8551
- NLL: 10.5554
- Reg: 0.2997
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 181]
-> Rozdil (Pred - Target): 12.019974
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.93e+02
--- Iteration [182/800] ---
- Total Loss: 8.7133
- NLL: 8.4135
- Reg: 0.2997
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 182]
-> Rozdil (Pred - Target): 20.724159
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.90e+03
--- Iteration [183/800] ---
- Total Loss: 10.4175
- NLL: 10.1178
- Reg: 0.2997
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 183]
-> Rozdil (Pred - Target): 13.302734
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.89e+02
--- Iteration [184/800] ---
- Total Loss: 10.2474
- NLL: 9.9476
- Reg: 0.2998
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 184]
-> Rozdil (Pred - Target): 13.957058
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.50e+02

```
--- Iteration [185/800] ---
- Total Loss: 8.8579
- NLL: 8.5581
- Reg: 0.2998
- p1=0.568, p2=0.403

--- Validation at iteration 185 ---
Average MSE: 58062749696.0000, Average ANEES: 680.8477
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 185]
-> Rozdil (Pred - Target): 13.507747
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.93e+02
--- Iteration [186/800] ---
- Total Loss: 9.5056
- NLL: 9.2058
- Reg: 0.2998
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 186]
-> Rozdil (Pred - Target): 13.906102
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.81e+02
--- Iteration [187/800] ---
- Total Loss: 8.3022
- NLL: 8.0024
- Reg: 0.2998
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 187]
-> Rozdil (Pred - Target): 12.939243
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.18e+03
--- Iteration [188/800] ---
- Total Loss: 9.0001
- NLL: 8.7002
- Reg: 0.2999
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 188]
-> Rozdil (Pred - Target): 11.052434
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.01e+03
--- Iteration [189/800] ---
- Total Loss: 7.4538
- NLL: 7.1539
```

- Reg: 0.2999
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 189]

- > Rozdil (Pred - Target): 10.632011
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 7.08e+02

--- Iteration [190/800] ---

- Total Loss: 7.6973
- NLL: 7.3974
- Reg: 0.2999
- p1=0.568, p2=0.403

--- Validation at iteration 190 ---
Average MSE: 5447212544.0000, Average ANEES: 724.7359

[DIAGNOSTIKA iter 190]

- > Rozdil (Pred - Target): 9.363833
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.66e+02

--- Iteration [191/800] ---

- Total Loss: 7.9431
- NLL: 7.6432
- Reg: 0.2999
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 191]

- > Rozdil (Pred - Target): 6.700459
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.73e+02

--- Iteration [192/800] ---

- Total Loss: 10.7430
- NLL: 10.4431
- Reg: 0.2999
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 192]

- > Rozdil (Pred - Target): 5.891169
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.00e+02

--- Iteration [193/800] ---

- Total Loss: 7.7378
- NLL: 7.4378
- Reg: 0.3000
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 193]

```

-> Rozdil (Pred - Target): 5.623459
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.80e+02
--- Iteration [194/800] ---
- Total Loss: 7.9334
- NLL: 7.6335
- Reg: 0.3000
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 194]
-> Rozdil (Pred - Target): 7.843723
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.90e+02
--- Iteration [195/800] ---
- Total Loss: 8.0719
- NLL: 7.7719
- Reg: 0.3000
- p1=0.568, p2=0.403

--- Validation at iteration 195 ---
Average MSE: 580387264.0000, Average ANEES: 780.2586
-----

[DIAGNOSTIKA iter 195]
-> Rozdil (Pred - Target): 7.415442
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.54e+02
--- Iteration [196/800] ---
- Total Loss: 7.4955
- NLL: 7.1955
- Reg: 0.3000
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 196]
-> Rozdil (Pred - Target): 5.283500
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.49e+02
--- Iteration [197/800] ---
- Total Loss: 9.0622
- NLL: 8.7621
- Reg: 0.3001
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 197]
-> Rozdil (Pred - Target): 5.909551
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.79e+02
--- Iteration [198/800] ---

```

- Total Loss: 8.9894
- NLL: 8.6894
- Reg: 0.3001
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 198]

- > Rozdil (Pred - Target): 5.282106
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.21e+02

--- Iteration [199/800] ---

- Total Loss: 7.8263
- NLL: 7.5262
- Reg: 0.3001
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 199]

- > Rozdil (Pred - Target): 4.680240
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.41e+02

--- Iteration [200/800] ---

- Total Loss: 8.2537
- NLL: 7.9536
- Reg: 0.3001
- p1=0.568, p2=0.403

--- Validation at iteration 200 ---

Average MSE: 486364512.0000, Average ANEES: 542.5911
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 200]

- > Rozdil (Pred - Target): 6.469187
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.27e+02

--- Iteration [201/800] ---

- Total Loss: 7.9622
- NLL: 7.6620
- Reg: 0.3001
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 201]

- > Rozdil (Pred - Target): 7.404576
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.07e+03

--- Iteration [202/800] ---

- Total Loss: 6.6603
- NLL: 6.3601
- Reg: 0.3002

```

- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 202]
-> Rozdil (Pred - Target): 5.540726
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.12e+02
--- Iteration [203/800] ---
- Total Loss: 8.1273
- NLL: 7.8271
- Reg: 0.3002
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 203]
-> Rozdil (Pred - Target): 6.370971
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.14e+02
--- Iteration [204/800] ---
- Total Loss: 8.9868
- NLL: 8.6866
- Reg: 0.3002
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 204]
-> Rozdil (Pred - Target): 7.640319
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.67e+02
--- Iteration [205/800] ---
- Total Loss: 5.3718
- NLL: 5.0715
- Reg: 0.3002
- p1=0.568, p2=0.403

--- Validation at iteration 205 ---
Average MSE: 186615136.0000, Average ANEES: 305.3848
>>> New best VALIDATION ANEES! Saving model. <<<
-----

[DIAGNOSTIKA iter 205]
-> Rozdil (Pred - Target): 5.977068
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.89e+02
--- Iteration [206/800] ---
- Total Loss: 7.6994
- NLL: 7.3992
- Reg: 0.3003
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 206]

```

```
-> Rozdil (Pred - Target): 5.550422
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.43e+02
--- Iteration [207/800] ---
- Total Loss: 7.1042
- NLL: 6.8039
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 207]
-> Rozdil (Pred - Target): 8.097858
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.35e+03
--- Iteration [208/800] ---
- Total Loss: 7.8822
- NLL: 7.5819
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 208]
-> Rozdil (Pred - Target): 5.216318
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.63e+02
--- Iteration [209/800] ---
- Total Loss: 6.5896
- NLL: 6.2893
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
[DIAGNOSTIKA iter 209]
-> Rozdil (Pred - Target): 3.790007
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.98e+01
--- Iteration [210/800] ---
- Total Loss: 6.2623
- NLL: 5.9620
- Reg: 0.3003
- p1=0.568, p2=0.403
```

```
--- Validation at iteration 210 ---
Average MSE: 21296288.0000, Average ANEES: 431.7616
```

```
[DIAGNOSTIKA iter 210]
-> Rozdil (Pred - Target): 2.865743
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.32e+01
--- Iteration [211/800] ---
```

```

- Total Loss: 6.6599
- NLL: 6.3596
- Reg: 0.3003
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 211]
-> Rozdil (Pred - Target): 3.477337
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.44e+02
--- Iteration [212/800] ---
- Total Loss: 8.2232
- NLL: 7.9228
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 212]
-> Rozdil (Pred - Target): 3.681634
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e+02
--- Iteration [213/800] ---
- Total Loss: 7.3805
- NLL: 7.0801
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 213]
-> Rozdil (Pred - Target): 2.872134
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.71e+01
--- Iteration [214/800] ---
- Total Loss: 7.3622
- NLL: 7.0618
- Reg: 0.3004
- p1=0.568, p2=0.403

[DIAGNOSTIKA iter 214]
-> Rozdil (Pred - Target): 2.579608
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.51e+01
--- Iteration [215/800] ---
- Total Loss: 7.4328
- NLL: 7.1324
- Reg: 0.3004
- p1=0.568, p2=0.403

--- Validation at iteration 215 ---
Average MSE: 4068106.0000, Average ANEES: 335.9527
-----
```

```
[DIAGNOSTIKA iter 215]
-> Rozdil (Pred - Target): 3.089690
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.32e+02
--- Iteration [216/800] ---
- Total Loss: 6.1242
- NLL: 5.8238
- Reg: 0.3004
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 216]
-> Rozdil (Pred - Target): 2.781172
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+02
--- Iteration [217/800] ---
- Total Loss: 5.9600
- NLL: 5.6596
- Reg: 0.3004
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 217]
-> Rozdil (Pred - Target): 3.627229
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.25e+02
--- Iteration [218/800] ---
- Total Loss: 6.1581
- NLL: 5.8577
- Reg: 0.3004
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 218]
-> Rozdil (Pred - Target): 2.744448
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.24e+02
--- Iteration [219/800] ---
- Total Loss: 8.4596
- NLL: 8.1592
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 219]
-> Rozdil (Pred - Target): 4.072309
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.86e+02
--- Iteration [220/800] ---
- Total Loss: 7.2999
- NLL: 6.9994
```

```
- Reg: 0.3005  
- p1=0.569, p2=0.404  
  
--- Validation at iteration 220 ---  
Average MSE: 5476796.0000, Average ANEES: 377.8797
```

```
-----  
  
[DIAGNOSTIKA iter 220]  
-> Rozdil (Pred - Target): 3.421595  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 3.39e+02  
--- Iteration [221/800] ---  
- Total Loss: 8.4452  
- NLL: 8.1448  
- Reg: 0.3005  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 221]  
-> Rozdil (Pred - Target): 2.965834  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 8.20e+01  
--- Iteration [222/800] ---  
- Total Loss: 5.5444  
- NLL: 5.2439  
- Reg: 0.3005  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 222]  
-> Rozdil (Pred - Target): 3.043877  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 2.07e+02  
--- Iteration [223/800] ---  
- Total Loss: 6.1699  
- NLL: 5.8694  
- Reg: 0.3005  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 223]  
-> Rozdil (Pred - Target): 2.882808  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.15e+02  
--- Iteration [224/800] ---  
- Total Loss: 7.7249  
- NLL: 7.4244  
- Reg: 0.3005  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 224]
```

```
-> Rozdil (Pred - Target): 4.749551
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.83e+04
--- Iteration [225/800] ---
- Total Loss: 6.1516
- NLL: 5.8511
- Reg: 0.3005
- p1=0.569, p2=0.404

--- Validation at iteration 225 ---
Average MSE: 648112.2500, Average ANEES: 325.6427
```

```
[DIAGNOSTIKA iter 225]
-> Rozdil (Pred - Target): 3.553183
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.23e+02
--- Iteration [226/800] ---
- Total Loss: 5.2080
- NLL: 4.9075
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 226]
-> Rozdil (Pred - Target): 4.637610
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.13e+03
--- Iteration [227/800] ---
- Total Loss: 7.0282
- NLL: 6.7276
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 227]
-> Rozdil (Pred - Target): 2.949773
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.77e+02
--- Iteration [228/800] ---
- Total Loss: 5.8240
- NLL: 5.5235
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 228]
-> Rozdil (Pred - Target): 3.081101
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.31e+02
--- Iteration [229/800] ---
```

- Total Loss: 6.5865
- NLL: 6.2860
- Reg: 0.3005
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 229]

- > Rozdil (Pred - Target): 4.263392
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.06e+03

--- Iteration [230/800] ---

- Total Loss: 5.8185
- NLL: 5.5180
- Reg: 0.3005
- p1=0.569, p2=0.404

--- Validation at iteration 230 ---
Average MSE: 129925328.0000, Average ANEES: 316.6973

[DIAGNOSTIKA iter 230]

- > Rozdil (Pred - Target): 3.126092
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.32e+02

--- Iteration [231/800] ---

- Total Loss: 6.6504
- NLL: 6.3498
- Reg: 0.3005
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 231]

- > Rozdil (Pred - Target): 2.555768
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.21e+02

--- Iteration [232/800] ---

- Total Loss: 5.9973
- NLL: 5.6968
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 232]

- > Rozdil (Pred - Target): 5.191677
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.96e+04

--- Iteration [233/800] ---

- Total Loss: 5.7621
- NLL: 5.4615
- Reg: 0.3006
- p1=0.569, p2=0.404

```

[DIAGNOSTIKA iter 233]
-> Rozdil (Pred - Target): 3.957922
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.96e+03
--- Iteration [234/800] ---
- Total Loss: 4.7944
- NLL: 4.4938
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 234]
-> Rozdil (Pred - Target): 2.876877
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.06e+02
--- Iteration [235/800] ---
- Total Loss: 7.1450
- NLL: 6.8444
- Reg: 0.3006
- p1=0.569, p2=0.404

--- Validation at iteration 235 ---
Average MSE: 123380808.0000, Average ANEES: 355.9536
-----

[DIAGNOSTIKA iter 235]
-> Rozdil (Pred - Target): 2.390012
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.04e+01
--- Iteration [236/800] ---
- Total Loss: 7.5339
- NLL: 7.2333
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 236]
-> Rozdil (Pred - Target): 2.591059
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.05e+02
--- Iteration [237/800] ---
- Total Loss: 6.1807
- NLL: 5.8801
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 237]
-> Rozdil (Pred - Target): 3.820626
-> Min Variance v batchi: 0.00e+00

```

```

-> Mean Variance v batchi: 2.30e+03
--- Iteration [238/800] ---
- Total Loss: 6.2512
- NLL: 5.9506
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 238]
-> Rozdil (Pred - Target): 2.244637
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.61e+02
--- Iteration [239/800] ---
- Total Loss: 6.3019
- NLL: 6.0013
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 239]
-> Rozdil (Pred - Target): 2.149858
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.39e+01
--- Iteration [240/800] ---
- Total Loss: 5.7354
- NLL: 5.4348
- Reg: 0.3006
- p1=0.569, p2=0.404

--- Validation at iteration 240 ---
Average MSE: 21365652.0000, Average ANEES: 231.0644
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

[DIAGNOSTIKA iter 240]

- > Rozdil (Pred - Target): 1.766460
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.97e+01

--- Iteration [241/800] ---

- Total Loss: 5.5455
- NLL: 5.2449
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 241]

- > Rozdil (Pred - Target): 2.864719
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.06e+02

--- Iteration [242/800] ---

- Total Loss: 5.7747

```
- NLL: 5.4741
- Reg: 0.3006
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 242]

```
-> Rozdil (Pred - Target): 3.495998
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.44e+03
--- Iteration [243/800] ---
- Total Loss: 4.9026
- NLL: 4.6020
- Reg: 0.3006
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 243]

```
-> Rozdil (Pred - Target): 4.122408
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.87e+03
--- Iteration [244/800] ---
- Total Loss: 5.6479
- NLL: 5.3472
- Reg: 0.3006
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 244]

```
-> Rozdil (Pred - Target): 1.897818
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.74e+01
--- Iteration [245/800] ---
- Total Loss: 6.5512
- NLL: 6.2506
- Reg: 0.3006
- p1=0.569, p2=0.404
```

--- Validation at iteration 245 ---

Average MSE: 1277762176.0000, Average ANEES: 326.5856

[DIAGNOSTIKA iter 245]

```
-> Rozdil (Pred - Target): 2.286896
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.49e+02
--- Iteration [246/800] ---
- Total Loss: 7.7573
- NLL: 7.4566
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 246]
-> Rozdil (Pred - Target): 2.422955
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.39e+03
--- Iteration [247/800] ---
- Total Loss: 5.8663
- NLL: 5.5656
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 247]
-> Rozdil (Pred - Target): 2.392391
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.37e+02
--- Iteration [248/800] ---
- Total Loss: 5.9356
- NLL: 5.6350
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 248]
-> Rozdil (Pred - Target): 4.300929
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.60e+03
--- Iteration [249/800] ---
- Total Loss: 7.5546
- NLL: 7.2540
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 249]
-> Rozdil (Pred - Target): 2.273020
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.17e+03
--- Iteration [250/800] ---
- Total Loss: 8.3763
- NLL: 8.0757
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 250 ---
Average MSE: 71428432.0000, Average ANEES: 238.9600
```

```
[DIAGNOSTIKA iter 250]
-> Rozdil (Pred - Target): 2.241860
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.93e+02
```

--- Iteration [251/800] ---

- Total Loss: 6.0426
- NLL: 5.7420
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 251]

- > Rozdil (Pred - Target): 1.929897
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.73e+02

--- Iteration [252/800] ---

- Total Loss: 6.8621
- NLL: 6.5614
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 252]

- > Rozdil (Pred - Target): 1.780003
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.24e+01

--- Iteration [253/800] ---

- Total Loss: 7.5042
- NLL: 7.2036
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 253]

- > Rozdil (Pred - Target): 1.699081
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.60e+01

--- Iteration [254/800] ---

- Total Loss: 5.5288
- NLL: 5.2281
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 254]

- > Rozdil (Pred - Target): 2.401116
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.35e+02

--- Iteration [255/800] ---

- Total Loss: 6.3886
- NLL: 6.0879
- Reg: 0.3007
- p1=0.569, p2=0.404

--- Validation at iteration 255 ---

Average MSE: 419643904.0000, Average ANEES: 211.0395

```
>>> New best VALIDATION ANEES! Saving model. <<<
```

```
[DIAGNOSTIKA iter 255]
-> Rozdil (Pred - Target): 1.689295
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.48e+01
--- Iteration [256/800] ---
- Total Loss: 6.3689
- NLL: 6.0682
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 256]
-> Rozdil (Pred - Target): 1.812896
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.12e+01
--- Iteration [257/800] ---
- Total Loss: 5.6083
- NLL: 5.3076
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 257]
-> Rozdil (Pred - Target): 1.863944
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.39e+02
--- Iteration [258/800] ---
- Total Loss: 5.9702
- NLL: 5.6695
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 258]
-> Rozdil (Pred - Target): 2.741502
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.44e+03
--- Iteration [259/800] ---
- Total Loss: 4.6950
- NLL: 4.3943
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 259]
-> Rozdil (Pred - Target): 1.777638
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.34e+02
--- Iteration [260/800] ---
```

```
- Total Loss: 5.4963
- NLL: 5.1956
- Reg: 0.3007
- p1=0.569, p2=0.404

--- Validation at iteration 260 ---
Average MSE: 126006752.0000, Average ANEES: 281.0246
```

```
[DIAGNOSTIKA iter 260]
-> Rozdil (Pred - Target): 2.088576
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.13e+03
--- Iteration [261/800] ---
- Total Loss: 5.7310
- NLL: 5.4304
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 261]
-> Rozdil (Pred - Target): 2.973423
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.00e+03
--- Iteration [262/800] ---
- Total Loss: 5.9207
- NLL: 5.6201
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 262]
-> Rozdil (Pred - Target): 1.901568
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.05e+01
--- Iteration [263/800] ---
- Total Loss: 6.6704
- NLL: 6.3698
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 263]
-> Rozdil (Pred - Target): 2.044499
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.44e+01
--- Iteration [264/800] ---
- Total Loss: 5.0679
- NLL: 4.7672
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 264]
-> Rozdil (Pred - Target): 3.004261
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.71e+03
--- Iteration [265/800] ---
- Total Loss: 5.9912
- NLL: 5.6905
- Reg: 0.3007
- p1=0.569, p2=0.404

--- Validation at iteration 265 ---
Average MSE: 335704.4062, Average ANEES: 314.9384
```

```
-----  
[DIAGNOSTIKA iter 265]
-> Rozdil (Pred - Target): 1.822981
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.32e+02
--- Iteration [266/800] ---
- Total Loss: 6.4282
- NLL: 6.1276
- Reg: 0.3007
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 266]
-> Rozdil (Pred - Target): 1.946691
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.39e+02
--- Iteration [267/800] ---
- Total Loss: 6.5241
- NLL: 6.2235
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 267]
-> Rozdil (Pred - Target): 1.502006
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.74e+01
--- Iteration [268/800] ---
- Total Loss: 5.3059
- NLL: 5.0052
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 268]
-> Rozdil (Pred - Target): 1.800396
-> Min Variance v batchi: 0.00e+00
```

```

-> Mean Variance v batchi: 3.18e+02
--- Iteration [269/800] ---
- Total Loss: 6.1970
- NLL: 5.8963
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 269]
-> Rozdil (Pred - Target): 2.095705
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.38e+02
--- Iteration [270/800] ---
- Total Loss: 6.5086
- NLL: 6.2079
- Reg: 0.3006
- p1=0.569, p2=0.404

--- Validation at iteration 270 ---
Average MSE: 748070.8125, Average ANEES: 204.3827
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 270]
-> Rozdil (Pred - Target): 1.744543
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.73e+01
--- Iteration [271/800] ---
- Total Loss: 5.0072
- NLL: 4.7066
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 271]
-> Rozdil (Pred - Target): 4.176189
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.42e+03
--- Iteration [272/800] ---
- Total Loss: 5.2119
- NLL: 4.9113
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 272]
-> Rozdil (Pred - Target): 2.424951
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.63e+02
--- Iteration [273/800] ---
- Total Loss: 6.6418
```

```
- NLL: 6.3411  
- Reg: 0.3006  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 273]

```
-> Rozdil (Pred - Target): 2.390118  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.08e+03  
--- Iteration [274/800] ---  
- Total Loss: 5.6119  
- NLL: 5.3113  
- Reg: 0.3006  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 274]

```
-> Rozdil (Pred - Target): 2.064268  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.37e+01  
--- Iteration [275/800] ---  
- Total Loss: 5.5300  
- NLL: 5.2294  
- Reg: 0.3006  
- p1=0.569, p2=0.404
```

--- Validation at iteration 275 ---

```
Average MSE: 765926.4375, Average ANEES: 180.3466  
>>> New best VALIDATION ANEES! Saving model. <<<
```

[DIAGNOSTIKA iter 275]

```
-> Rozdil (Pred - Target): 2.380103  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.34e+02  
--- Iteration [276/800] ---  
- Total Loss: 7.7447  
- NLL: 7.4441  
- Reg: 0.3006  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 276]

```
-> Rozdil (Pred - Target): 2.115573  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 2.39e+03  
--- Iteration [277/800] ---  
- Total Loss: 6.7465  
- NLL: 6.4459  
- Reg: 0.3006  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 277]
-> Rozdil (Pred - Target): 1.820808
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.57e+01
--- Iteration [278/800] ---
- Total Loss: 6.5231
- NLL: 6.2225
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 278]
-> Rozdil (Pred - Target): 1.393023
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.71e+01
--- Iteration [279/800] ---
- Total Loss: 6.3686
- NLL: 6.0680
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 279]
-> Rozdil (Pred - Target): 1.470836
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.81e+01
--- Iteration [280/800] ---
- Total Loss: 7.0540
- NLL: 6.7534
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 280 ---
Average MSE: 78456.7656, Average ANEES: 270.3191
-----
```

```
[DIAGNOSTIKA iter 280]
-> Rozdil (Pred - Target): 1.396055
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.00e+02
--- Iteration [281/800] ---
- Total Loss: 5.1467
- NLL: 4.8461
- Reg: 0.3006
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 281]
-> Rozdil (Pred - Target): 2.689339
-> Min Variance v batchi: 0.00e+00
```

```

-> Mean Variance v batchi: 4.65e+03
--- Iteration [282/800] ---
- Total Loss: 5.3236
- NLL: 5.0230
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 282]
-> Rozdil (Pred - Target): 1.694494
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.73e+02
--- Iteration [283/800] ---
- Total Loss: 4.8739
- NLL: 4.5734
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 283]
-> Rozdil (Pred - Target): 1.357778
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.53e+01
--- Iteration [284/800] ---
- Total Loss: 5.2587
- NLL: 4.9581
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 284]
-> Rozdil (Pred - Target): 1.572605
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.32e+01
--- Iteration [285/800] ---
- Total Loss: 6.4962
- NLL: 6.1956
- Reg: 0.3006
- p1=0.569, p2=0.404

--- Validation at iteration 285 ---
Average MSE: 1342.6945, Average ANEES: 232.2516
-----
```

```

[DIAGNOSTIKA iter 285]
-> Rozdil (Pred - Target): 1.490196
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.44e+01
--- Iteration [286/800] ---
- Total Loss: 6.5715
- NLL: 6.2709
```

- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 286]

- > Rozdil (Pred - Target): 1.561213
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.18e+01

--- Iteration [287/800] ---

- Total Loss: 4.4610
- NLL: 4.1604
- Reg: 0.3006
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 287]

- > Rozdil (Pred - Target): 1.879842
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.83e+02

--- Iteration [288/800] ---

- Total Loss: 4.8970
- NLL: 4.5964
- Reg: 0.3005
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 288]

- > Rozdil (Pred - Target): 1.589262
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.39e+01

--- Iteration [289/800] ---

- Total Loss: 5.9927
- NLL: 5.6922
- Reg: 0.3005
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 289]

- > Rozdil (Pred - Target): 1.408439
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.15e+01

--- Iteration [290/800] ---

- Total Loss: 5.1844
- NLL: 4.8839
- Reg: 0.3005
- p1=0.569, p2=0.404

--- Validation at iteration 290 ---

Average MSE: 128.7351, Average ANEES: 218.6053

[DIAGNOSTIKA iter 290]

```
-> Rozdil (Pred - Target): 1.354975
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.79e+00
--- Iteration [291/800] ---
- Total Loss: 5.6535
- NLL: 5.3530
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 291]
-> Rozdil (Pred - Target): 1.371368
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.41e+01
--- Iteration [292/800] ---
- Total Loss: 6.4422
- NLL: 6.1416
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 292]
-> Rozdil (Pred - Target): 1.581792
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.75e+01
--- Iteration [293/800] ---
- Total Loss: 6.0942
- NLL: 5.7937
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 293]
-> Rozdil (Pred - Target): 1.821896
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.46e+01
--- Iteration [294/800] ---
- Total Loss: 4.5795
- NLL: 4.2790
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 294]
-> Rozdil (Pred - Target): 1.466867
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e+01
--- Iteration [295/800] ---
- Total Loss: 5.7274
- NLL: 5.4269
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 295 ---
  Average MSE: 4121.5933, Average ANEES: 212.6690
```

```
-----  
[DIAGNOSTIKA iter 295]
  -> Rozdil (Pred - Target): 1.508753
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 2.19e+01
--- Iteration [296/800] ---
  - Total Loss: 4.8495
  - NLL: 4.5490
  - Reg: 0.3005
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 296]
  -> Rozdil (Pred - Target): 1.503970
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 5.45e+01
--- Iteration [297/800] ---
  - Total Loss: 6.8743
  - NLL: 6.5738
  - Reg: 0.3005
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 297]
  -> Rozdil (Pred - Target): 2.280730
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 1.26e+03
--- Iteration [298/800] ---
  - Total Loss: 4.7034
  - NLL: 4.4030
  - Reg: 0.3005
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 298]
  -> Rozdil (Pred - Target): 1.528918
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 2.89e+01
--- Iteration [299/800] ---
  - Total Loss: 6.0166
  - NLL: 5.7161
  - Reg: 0.3005
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 299]
  -> Rozdil (Pred - Target): 1.833099
  -> Min Variance v batchi: 0.00e+00
```

```

-> Mean Variance v batchi: 9.31e+02
--- Iteration [300/800] ---
- Total Loss: 5.6287
- NLL: 5.3282
- Reg: 0.3005
- p1=0.569, p2=0.404

--- Validation at iteration 300 ---
Average MSE: 16109.5312, Average ANEES: 225.2670
-----
```

```

[DIAGNOSTIKA iter 300]
-> Rozdil (Pred - Target): 1.335776
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.61e+00
--- Iteration [301/800] ---
- Total Loss: 6.5160
- NLL: 6.2155
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 301]
-> Rozdil (Pred - Target): 1.539268
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.74e+01
--- Iteration [302/800] ---
- Total Loss: 6.9534
- NLL: 6.6530
- Reg: 0.3005
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 302]
-> Rozdil (Pred - Target): 1.443875
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.52e+01
--- Iteration [303/800] ---
- Total Loss: 6.4790
- NLL: 6.1786
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 303]
-> Rozdil (Pred - Target): 1.487830
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+01
--- Iteration [304/800] ---
- Total Loss: 4.2419
- NLL: 3.9415
```

```

- Reg: 0.3004
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 304]
-> Rozdil (Pred - Target): 1.406068
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.82e+01
--- Iteration [305/800] ---
- Total Loss: 6.1560
- NLL: 5.8556
- Reg: 0.3004
- p1=0.569, p2=0.404

--- Validation at iteration 305 ---
Average MSE: 65.0697, Average ANEES: 218.2499
-----

[DIAGNOSTIKA iter 305]
-> Rozdil (Pred - Target): 1.418665
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.36e+01
--- Iteration [306/800] ---
- Total Loss: 5.2490
- NLL: 4.9486
- Reg: 0.3004
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 306]
-> Rozdil (Pred - Target): 1.447981
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.10e+01
--- Iteration [307/800] ---
- Total Loss: 6.1355
- NLL: 5.8351
- Reg: 0.3004
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 307]
-> Rozdil (Pred - Target): 1.374479
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.79e+01
--- Iteration [308/800] ---
- Total Loss: 6.2618
- NLL: 5.9614
- Reg: 0.3004
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 308]

```

```
-> Rozdil (Pred - Target): 1.681275
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.55e+01
--- Iteration [309/800] ---
- Total Loss: 6.2029
- NLL: 5.9025
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 309]
-> Rozdil (Pred - Target): 1.330118
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.10e+01
--- Iteration [310/800] ---
- Total Loss: 4.5514
- NLL: 4.2510
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 310 ---
Average MSE: 338.1059, Average ANEES: 216.9914
```

```
[DIAGNOSTIKA iter 310]
-> Rozdil (Pred - Target): 1.494080
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.03e+01
--- Iteration [311/800] ---
- Total Loss: 4.3638
- NLL: 4.0635
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 311]
-> Rozdil (Pred - Target): 2.066812
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.15e+02
--- Iteration [312/800] ---
- Total Loss: 6.1492
- NLL: 5.8488
- Reg: 0.3004
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 312]
-> Rozdil (Pred - Target): 2.608774
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.87e+03
--- Iteration [313/800] ---
```

```

- Total Loss: 6.3810
- NLL: 6.0806
- Reg: 0.3004
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 313]
-> Rozdil (Pred - Target): 1.394344
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.38e+01
--- Iteration [314/800] ---
- Total Loss: 7.2531
- NLL: 6.9528
- Reg: 0.3003
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 314]
-> Rozdil (Pred - Target): 1.452112
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.13e+01
--- Iteration [315/800] ---
- Total Loss: 5.8444
- NLL: 5.5441
- Reg: 0.3003
- p1=0.570, p2=0.404

--- Validation at iteration 315 ---
Average MSE: 784.4957, Average ANEES: 196.8498
-----
```

```

[DIAGNOSTIKA iter 315]
-> Rozdil (Pred - Target): 1.564503
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.09e+01
--- Iteration [316/800] ---
- Total Loss: 6.3027
- NLL: 6.0024
- Reg: 0.3003
- p1=0.570, p2=0.404
```

```

[DIAGNOSTIKA iter 316]
-> Rozdil (Pred - Target): 1.609946
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.28e+01
--- Iteration [317/800] ---
- Total Loss: 5.0606
- NLL: 4.7603
- Reg: 0.3003
- p1=0.570, p2=0.404
```

```

[DIAGNOSTIKA iter 317]
-> Rozdil (Pred - Target): 1.635119
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.74e+01
--- Iteration [318/800] ---
- Total Loss: 4.1781
- NLL: 3.8778
- Reg: 0.3003
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 318]
-> Rozdil (Pred - Target): 1.505039
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.57e+01
--- Iteration [319/800] ---
- Total Loss: 8.0658
- NLL: 7.7655
- Reg: 0.3003
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 319]
-> Rozdil (Pred - Target): 1.579761
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.21e+01
--- Iteration [320/800] ---
- Total Loss: 6.4925
- NLL: 6.1922
- Reg: 0.3003
- p1=0.570, p2=0.404

--- Validation at iteration 320 ---
Average MSE: 52920.0547, Average ANEES: 166.0686
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

[DIAGNOSTIKA iter 320]

- > Rozdil (Pred - Target): 1.562358
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.75e+01

--- Iteration [321/800] ---

- Total Loss: 5.5535
- NLL: 5.2532
- Reg: 0.3003
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 321]

- > Rozdil (Pred - Target): 1.739740

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.98e+01
--- Iteration [322/800] ---
- Total Loss: 7.0424
- NLL: 6.7422
- Reg: 0.3003
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 322]
-> Rozdil (Pred - Target): 1.459374
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.16e+01
--- Iteration [323/800] ---
- Total Loss: 7.3532
- NLL: 7.0529
- Reg: 0.3003
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 323]
-> Rozdil (Pred - Target): 1.421436
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.64e+01
--- Iteration [324/800] ---
- Total Loss: 4.9388
- NLL: 4.6385
- Reg: 0.3002
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 324]
-> Rozdil (Pred - Target): 1.312910
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.57e+01
--- Iteration [325/800] ---
- Total Loss: 5.9383
- NLL: 5.6381
- Reg: 0.3002
- p1=0.570, p2=0.404
```

```
--- Validation at iteration 325 ---
Average MSE: 1312.4304, Average ANEES: 188.9648
```

```
[DIAGNOSTIKA iter 325]
-> Rozdil (Pred - Target): 1.376819
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.06e+01
--- Iteration [326/800] ---
- Total Loss: 4.8305
```

- NLL: 4.5303
- Reg: 0.3002
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 326]

- > Rozdil (Pred - Target): 1.420785
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.77e+01

--- Iteration [327/800] ---

- Total Loss: 5.3151
- NLL: 5.0149
- Reg: 0.3002
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 327]

- > Rozdil (Pred - Target): 1.684899
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.55e+02

--- Iteration [328/800] ---

- Total Loss: 5.5729
- NLL: 5.2727
- Reg: 0.3002
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 328]

- > Rozdil (Pred - Target): 1.453218
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.73e+00

--- Iteration [329/800] ---

- Total Loss: 6.1033
- NLL: 5.8031
- Reg: 0.3002
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 329]

- > Rozdil (Pred - Target): 1.541609
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.64e+01

--- Iteration [330/800] ---

- Total Loss: 4.8011
- NLL: 4.5009
- Reg: 0.3002
- p1=0.570, p2=0.404

--- Validation at iteration 330 ---

Average MSE: 72.9610, Average ANEES: 140.7271
>>> New best VALIDATION ANEES! Saving model. <<<

```
[DIAGNOSTIKA iter 330]
-> Rozdil (Pred - Target): 1.430958
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.46e+01
--- Iteration [331/800] ---
- Total Loss: 5.5727
- NLL: 5.2725
- Reg: 0.3002
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 331]
-> Rozdil (Pred - Target): 1.432102
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.82e+01
--- Iteration [332/800] ---
- Total Loss: 4.1592
- NLL: 3.8590
- Reg: 0.3002
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 332]
-> Rozdil (Pred - Target): 1.537955
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.96e+01
--- Iteration [333/800] ---
- Total Loss: 6.4480
- NLL: 6.1478
- Reg: 0.3002
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 333]
-> Rozdil (Pred - Target): 1.320965
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.12e+01
--- Iteration [334/800] ---
- Total Loss: 6.2186
- NLL: 5.9184
- Reg: 0.3001
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 334]
-> Rozdil (Pred - Target): 1.619222
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.58e+01
--- Iteration [335/800] ---
- Total Loss: 5.4836
- NLL: 5.1835
```

```
- Reg: 0.3001  
- p1=0.570, p2=0.404  
  
--- Validation at iteration 335 ---  
Average MSE: 67.0550, Average ANEES: 167.5350
```

```
[DIAGNOSTIKA iter 335]  
-> Rozdil (Pred - Target): 1.594119  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 3.07e+01  
--- Iteration [336/800] ---  
- Total Loss: 6.5015  
- NLL: 6.2013  
- Reg: 0.3001  
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 336]  
-> Rozdil (Pred - Target): 1.783221  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.27e+01  
--- Iteration [337/800] ---  
- Total Loss: 4.9097  
- NLL: 4.6096  
- Reg: 0.3001  
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 337]  
-> Rozdil (Pred - Target): 1.216056  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 9.16e+00  
--- Iteration [338/800] ---  
- Total Loss: 5.2144  
- NLL: 4.9143  
- Reg: 0.3001  
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 338]  
-> Rozdil (Pred - Target): 1.410342  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.11e+01  
--- Iteration [339/800] ---  
- Total Loss: 5.7094  
- NLL: 5.4093  
- Reg: 0.3001  
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 339]
```

```
-> Rozdil (Pred - Target): 1.475758
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.76e+01
--- Iteration [340/800] ---
- Total Loss: 6.2458
- NLL: 5.9458
- Reg: 0.3001
- p1=0.570, p2=0.404

--- Validation at iteration 340 ---
Average MSE: 73.0698, Average ANEES: 144.7394
```

```
[DIAGNOSTIKA iter 340]
-> Rozdil (Pred - Target): 1.659265
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.51e+01
--- Iteration [341/800] ---
- Total Loss: 6.2829
- NLL: 5.9828
- Reg: 0.3001
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 341]
-> Rozdil (Pred - Target): 1.258116
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.48e+00
--- Iteration [342/800] ---
- Total Loss: 5.4007
- NLL: 5.1006
- Reg: 0.3001
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 342]
-> Rozdil (Pred - Target): 1.701906
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.01e+01
--- Iteration [343/800] ---
- Total Loss: 5.3551
- NLL: 5.0551
- Reg: 0.3001
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 343]
-> Rozdil (Pred - Target): 1.418347
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.44e+01
--- Iteration [344/800] ---
```

- Total Loss: 4.9618
- NLL: 4.6617
- Reg: 0.3000
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 344]

- > Rozdil (Pred - Target): 1.559253
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.08e+01

--- Iteration [345/800] ---

- Total Loss: 6.4563
- NLL: 6.1563
- Reg: 0.3000
- p1=0.570, p2=0.404

--- Validation at iteration 345 ---

Average MSE: 109.5902, Average ANEES: 147.9190

[DIAGNOSTIKA iter 345]

- > Rozdil (Pred - Target): 1.542022
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.82e+01

--- Iteration [346/800] ---

- Total Loss: 6.4984
- NLL: 6.1984
- Reg: 0.3000
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 346]

- > Rozdil (Pred - Target): 1.217754
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.27e+00

--- Iteration [347/800] ---

- Total Loss: 4.6462
- NLL: 4.3462
- Reg: 0.3000
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 347]

- > Rozdil (Pred - Target): 1.285092
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.54e+01

--- Iteration [348/800] ---

- Total Loss: 3.7803
- NLL: 3.4804
- Reg: 0.3000
- p1=0.570, p2=0.404

```
[DIAGNOSTIKA iter 348]
-> Rozdil (Pred - Target): 1.347293
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.51e+01
--- Iteration [349/800] ---
- Total Loss: 4.5971
- NLL: 4.2971
- Reg: 0.3000
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 349]
-> Rozdil (Pred - Target): 1.215129
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.74e+00
--- Iteration [350/800] ---
- Total Loss: 4.9184
- NLL: 4.6184
- Reg: 0.3000
- p1=0.570, p2=0.404
```

```
--- Validation at iteration 350 ---
Average MSE: 111.6239, Average ANEES: 157.1517
```

```
[DIAGNOSTIKA iter 350]
-> Rozdil (Pred - Target): 1.392397
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.70e+00
--- Iteration [351/800] ---
- Total Loss: 7.1613
- NLL: 6.8613
- Reg: 0.3000
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 351]
-> Rozdil (Pred - Target): 1.816319
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.59e+02
--- Iteration [352/800] ---
- Total Loss: 6.1578
- NLL: 5.8578
- Reg: 0.3000
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 352]
-> Rozdil (Pred - Target): 1.883199
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 5.45e+01
--- Iteration [353/800] ---
- Total Loss: 7.1968
- NLL: 6.8969
- Reg: 0.2999
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 353]
-> Rozdil (Pred - Target): 1.519899
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.32e+01
--- Iteration [354/800] ---
- Total Loss: 4.8010
- NLL: 4.5011
- Reg: 0.2999
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 354]
-> Rozdil (Pred - Target): 1.384334
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.46e+00
--- Iteration [355/800] ---
- Total Loss: 6.2350
- NLL: 5.9351
- Reg: 0.2999
- p1=0.570, p2=0.404
```

```
--- Validation at iteration 355 ---
Average MSE: 82.7069, Average ANEES: 161.3811
```

```
[DIAGNOSTIKA iter 355]
-> Rozdil (Pred - Target): 1.733429
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.45e+01
--- Iteration [356/800] ---
- Total Loss: 6.6800
- NLL: 6.3801
- Reg: 0.2999
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 356]
-> Rozdil (Pred - Target): 1.318784
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.43e+01
--- Iteration [357/800] ---
- Total Loss: 6.2394
- NLL: 5.9395
```

- Reg: 0.2999
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 357]

- > Rozdil (Pred - Target): 1.484772
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.11e+01

--- Iteration [358/800] ---

- Total Loss: 5.9909
- NLL: 5.6910
- Reg: 0.2999
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 358]

- > Rozdil (Pred - Target): 1.442689
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.93e+01

--- Iteration [359/800] ---

- Total Loss: 5.6818
- NLL: 5.3819
- Reg: 0.2999
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 359]

- > Rozdil (Pred - Target): 1.266577
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.22e+00

--- Iteration [360/800] ---

- Total Loss: 5.1899
- NLL: 4.8900
- Reg: 0.2999
- p1=0.570, p2=0.404

--- Validation at iteration 360 ---
Average MSE: 987.0341, Average ANEES: 160.4737

[DIAGNOSTIKA iter 360]

- > Rozdil (Pred - Target): 1.319597
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.37e+01

--- Iteration [361/800] ---

- Total Loss: 6.3063
- NLL: 6.0064
- Reg: 0.2999
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 361]

```
-> Rozdil (Pred - Target): 1.346265
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.63e+00
--- Iteration [362/800] ---
- Total Loss: 5.5213
- NLL: 5.2214
- Reg: 0.2999
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 362]
-> Rozdil (Pred - Target): 1.405582
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.17e+01
--- Iteration [363/800] ---
- Total Loss: 3.7435
- NLL: 3.4436
- Reg: 0.2998
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 363]
-> Rozdil (Pred - Target): 1.798447
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.43e+01
--- Iteration [364/800] ---
- Total Loss: 5.9515
- NLL: 5.6517
- Reg: 0.2998
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 364]
-> Rozdil (Pred - Target): 1.573898
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.21e+01
--- Iteration [365/800] ---
- Total Loss: 7.0179
- NLL: 6.7181
- Reg: 0.2998
- p1=0.570, p2=0.404
```

```
--- Validation at iteration 365 ---
Average MSE: 95.8485, Average ANEES: 133.9009
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 365]
-> Rozdil (Pred - Target): 1.456139
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.79e+01
```

--- Iteration [366/800] ---

- Total Loss: 4.4635
- NLL: 4.1637
- Reg: 0.2998
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 366]

- > Rozdil (Pred - Target): 1.435659
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.19e+01

--- Iteration [367/800] ---

- Total Loss: 4.1883
- NLL: 3.8885
- Reg: 0.2998
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 367]

- > Rozdil (Pred - Target): 1.562032
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.93e+01

--- Iteration [368/800] ---

- Total Loss: 4.2626
- NLL: 3.9628
- Reg: 0.2998
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 368]

- > Rozdil (Pred - Target): 1.291100
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.97e+00

--- Iteration [369/800] ---

- Total Loss: 5.5500
- NLL: 5.2502
- Reg: 0.2998
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 369]

- > Rozdil (Pred - Target): 1.364438
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.79e+01

--- Iteration [370/800] ---

- Total Loss: 5.5956
- NLL: 5.2958
- Reg: 0.2998
- p1=0.570, p2=0.404

--- Validation at iteration 370 ---

Average MSE: 31.2820, Average ANEES: 168.0252

```
-----  
[DIAGNOSTIKA iter 370]  
    -> Rozdil (Pred - Target): 1.229247  
    -> Min Variance v batchi: 0.00e+00  
    -> Mean Variance v batchi: 5.59e+00  
--- Iteration [371/800] ---  
    - Total Loss: 4.4878  
    - NLL: 4.1880  
    - Reg: 0.2998  
    - p1=0.570, p2=0.404  
  
[DIAGNOSTIKA iter 371]  
    -> Rozdil (Pred - Target): 1.252982  
    -> Min Variance v batchi: 0.00e+00  
    -> Mean Variance v batchi: 8.20e+00  
--- Iteration [372/800] ---  
    - Total Loss: 4.5128  
    - NLL: 4.2131  
    - Reg: 0.2998  
    - p1=0.570, p2=0.404  
  
[DIAGNOSTIKA iter 372]  
    -> Rozdil (Pred - Target): 1.683928  
    -> Min Variance v batchi: 0.00e+00  
    -> Mean Variance v batchi: 4.32e+01  
--- Iteration [373/800] ---  
    - Total Loss: 5.6593  
    - NLL: 5.3596  
    - Reg: 0.2998  
    - p1=0.570, p2=0.404  
  
[DIAGNOSTIKA iter 373]  
    -> Rozdil (Pred - Target): 1.305124  
    -> Min Variance v batchi: 0.00e+00  
    -> Mean Variance v batchi: 1.15e+01  
--- Iteration [374/800] ---  
    - Total Loss: 6.2708  
    - NLL: 5.9711  
    - Reg: 0.2997  
    - p1=0.570, p2=0.404  
  
[DIAGNOSTIKA iter 374]  
    -> Rozdil (Pred - Target): 1.458565  
    -> Min Variance v batchi: 0.00e+00  
    -> Mean Variance v batchi: 1.03e+01  
--- Iteration [375/800] ---  
    - Total Loss: 7.2521
```

```

- NLL: 6.9523
- Reg: 0.2997
- p1=0.570, p2=0.404

--- Validation at iteration 375 ---
Average MSE: 42.5416, Average ANEES: 126.4855
>>> New best VALIDATION ANEES! Saving model. <<<
-----

[DIAGNOSTIKA iter 375]
-> Rozdil (Pred - Target): 1.302027
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.47e+01
--- Iteration [376/800] ---
- Total Loss: 4.9484
- NLL: 4.6487
- Reg: 0.2997
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 376]
-> Rozdil (Pred - Target): 1.519638
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.66e+01
--- Iteration [377/800] ---
- Total Loss: 7.2515
- NLL: 6.9517
- Reg: 0.2997
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 377]
-> Rozdil (Pred - Target): 1.391626
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.15e+01
--- Iteration [378/800] ---
- Total Loss: 6.0634
- NLL: 5.7637
- Reg: 0.2997
- p1=0.570, p2=0.404

[DIAGNOSTIKA iter 378]
-> Rozdil (Pred - Target): 1.342025
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.14e+01
--- Iteration [379/800] ---
- Total Loss: 5.3908
- NLL: 5.0911
- Reg: 0.2997
- p1=0.570, p2=0.404

```

```
[DIAGNOSTIKA iter 379]
    -> Rozdil (Pred - Target): 1.421093
    -> Min Variance v batchi:  0.00e+00
    -> Mean Variance v batchi: 1.08e+01
--- Iteration [380/800] ---
    - Total Loss: 5.2186
    - NLL: 4.9189
    - Reg: 0.2997
    - p1=0.569, p2=0.404

--- Validation at iteration 380 ---
    Average MSE: 21.5872, Average ANEES: 145.7507
-----

[DIAGNOSTIKA iter 380]
    -> Rozdil (Pred - Target): 1.243584
    -> Min Variance v batchi:  0.00e+00
    -> Mean Variance v batchi: 5.16e+00
--- Iteration [381/800] ---
    - Total Loss: 5.3497
    - NLL: 5.0500
    - Reg: 0.2997
    - p1=0.569, p2=0.404

[DIAGNOSTIKA iter 381]
    -> Rozdil (Pred - Target): 1.241422
    -> Min Variance v batchi:  0.00e+00
    -> Mean Variance v batchi: 9.00e+00
--- Iteration [382/800] ---
    - Total Loss: 4.2934
    - NLL: 3.9937
    - Reg: 0.2997
    - p1=0.569, p2=0.404

[DIAGNOSTIKA iter 382]
    -> Rozdil (Pred - Target): 1.539339
    -> Min Variance v batchi:  0.00e+00
    -> Mean Variance v batchi: 1.52e+01
--- Iteration [383/800] ---
    - Total Loss: 5.1095
    - NLL: 4.8099
    - Reg: 0.2997
    - p1=0.569, p2=0.404

[DIAGNOSTIKA iter 383]
    -> Rozdil (Pred - Target): 1.404945
    -> Min Variance v batchi:  0.00e+00
```

```
-> Mean Variance v batchi: 2.03e+01
--- Iteration [384/800] ---
- Total Loss: 6.7624
- NLL: 6.4628
- Reg: 0.2996
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 384]
-> Rozdil (Pred - Target): 1.348146
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.69e+01
--- Iteration [385/800] ---
- Total Loss: 5.0078
- NLL: 4.7082
- Reg: 0.2996
- p1=0.570, p2=0.404

--- Validation at iteration 385 ---
Average MSE: 46.3367, Average ANEES: 135.5412
```

```
[DIAGNOSTIKA iter 385]
-> Rozdil (Pred - Target): 1.316251
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.33e+00
--- Iteration [386/800] ---
- Total Loss: 6.6668
- NLL: 6.3672
- Reg: 0.2996
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 386]
-> Rozdil (Pred - Target): 1.487366
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.96e+01
--- Iteration [387/800] ---
- Total Loss: 4.6480
- NLL: 4.3483
- Reg: 0.2996
- p1=0.570, p2=0.404
```

```
[DIAGNOSTIKA iter 387]
-> Rozdil (Pred - Target): 1.874245
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.37e+01
--- Iteration [388/800] ---
- Total Loss: 6.0578
- NLL: 5.7582
```

- Reg: 0.2996
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 388]

- > Rozdil (Pred - Target): 1.314719
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 7.25e+00

--- Iteration [389/800] ---

- Total Loss: 5.5865
- NLL: 5.2869
- Reg: 0.2996
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 389]

- > Rozdil (Pred - Target): 1.387662
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.37e+01

--- Iteration [390/800] ---

- Total Loss: 5.2558
- NLL: 4.9562
- Reg: 0.2996
- p1=0.569, p2=0.404

--- Validation at iteration 390 ---
Average MSE: 38.0168, Average ANEES: 135.6305

[DIAGNOSTIKA iter 390]

- > Rozdil (Pred - Target): 1.435471
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.79e+01

--- Iteration [391/800] ---

- Total Loss: 4.8935
- NLL: 4.5939
- Reg: 0.2996
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 391]

- > Rozdil (Pred - Target): 1.603174
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.77e+02

--- Iteration [392/800] ---

- Total Loss: 5.1916
- NLL: 4.8920
- Reg: 0.2996
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 392]

```
-> Rozdil (Pred - Target): 1.372790
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.01e+00
--- Iteration [393/800] ---
- Total Loss: 6.0029
- NLL: 5.7034
- Reg: 0.2996
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 393]
-> Rozdil (Pred - Target): 1.383815
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.93e+01
--- Iteration [394/800] ---
- Total Loss: 5.2601
- NLL: 4.9606
- Reg: 0.2995
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 394]
-> Rozdil (Pred - Target): 1.485248
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.73e+01
--- Iteration [395/800] ---
- Total Loss: 6.3082
- NLL: 6.0087
- Reg: 0.2995
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 395 ---
Average MSE: 55.9556, Average ANEES: 123.2703
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 395]
-> Rozdil (Pred - Target): 1.658895
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.20e+01
--- Iteration [396/800] ---
- Total Loss: 7.6930
- NLL: 7.3935
- Reg: 0.2995
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 396]
-> Rozdil (Pred - Target): 1.270101
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.96e+00
```

--- Iteration [397/800] ---

- Total Loss: 5.6869
- NLL: 5.3874
- Reg: 0.2995
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 397]

- > Rozdil (Pred - Target): 1.408972
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.74e+01

--- Iteration [398/800] ---

- Total Loss: 5.7735
- NLL: 5.4740
- Reg: 0.2995
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 398]

- > Rozdil (Pred - Target): 1.219076
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.39e+01

--- Iteration [399/800] ---

- Total Loss: 3.9184
- NLL: 3.6189
- Reg: 0.2995
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 399]

- > Rozdil (Pred - Target): 1.228176
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.42e+00

--- Iteration [400/800] ---

- Total Loss: 5.4186
- NLL: 5.1191
- Reg: 0.2995
- p1=0.569, p2=0.404

--- Validation at iteration 400 ---

Average MSE: 26.1512, Average ANEES: 139.9214

[DIAGNOSTIKA iter 400]

- > Rozdil (Pred - Target): 1.363463
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.81e+01

--- Iteration [401/800] ---

- Total Loss: 6.6412
- NLL: 6.3417
- Reg: 0.2995

```

- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 401]
-> Rozdil (Pred - Target): 1.484764
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.76e+01
--- Iteration [402/800] ---
- Total Loss: 7.0717
- NLL: 6.7723
- Reg: 0.2995
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 402]
-> Rozdil (Pred - Target): 1.352325
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.41e+01
--- Iteration [403/800] ---
- Total Loss: 5.0820
- NLL: 4.7825
- Reg: 0.2994
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 403]
-> Rozdil (Pred - Target): 1.334512
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.95e+00
--- Iteration [404/800] ---
- Total Loss: 5.2202
- NLL: 4.9208
- Reg: 0.2994
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 404]
-> Rozdil (Pred - Target): 1.520200
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.11e+01
--- Iteration [405/800] ---
- Total Loss: 4.5932
- NLL: 4.2938
- Reg: 0.2994
- p1=0.569, p2=0.404

--- Validation at iteration 405 ---
Average MSE: 52.7452, Average ANEES: 118.3381
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

[DIAGNOSTIKA iter 405]

```
-> Rozdil (Pred - Target): 1.430214
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+01
--- Iteration [406/800] ---
- Total Loss: 5.1089
- NLL: 4.8095
- Reg: 0.2994
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 406]
-> Rozdil (Pred - Target): 1.314288
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.04e+00
--- Iteration [407/800] ---
- Total Loss: 5.9438
- NLL: 5.6444
- Reg: 0.2994
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 407]
-> Rozdil (Pred - Target): 1.345318
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.65e+01
--- Iteration [408/800] ---
- Total Loss: 6.3446
- NLL: 6.0453
- Reg: 0.2994
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 408]
-> Rozdil (Pred - Target): 1.544935
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.03e+01
--- Iteration [409/800] ---
- Total Loss: 3.9408
- NLL: 3.6415
- Reg: 0.2993
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 409]
-> Rozdil (Pred - Target): 1.273660
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.45e+00
--- Iteration [410/800] ---
- Total Loss: 5.6268
- NLL: 5.3274
- Reg: 0.2993
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 410 ---
  Average MSE: 20.9520, Average ANEES: 152.9871
```

```
[DIAGNOSTIKA iter 410]
  -> Rozdil (Pred - Target): 1.536774
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 2.10e+01
--- Iteration [411/800] ---
  - Total Loss: 5.4191
  - NLL: 5.1198
  - Reg: 0.2993
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 411]
  -> Rozdil (Pred - Target): 1.282610
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 1.37e+01
--- Iteration [412/800] ---
  - Total Loss: 6.7449
  - NLL: 6.4456
  - Reg: 0.2993
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 412]
  -> Rozdil (Pred - Target): 1.160459
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 7.72e+00
--- Iteration [413/800] ---
  - Total Loss: 4.6509
  - NLL: 4.3516
  - Reg: 0.2993
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 413]
  -> Rozdil (Pred - Target): 1.268413
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 8.00e+00
--- Iteration [414/800] ---
  - Total Loss: 5.5199
  - NLL: 5.2206
  - Reg: 0.2993
  - p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 414]
  -> Rozdil (Pred - Target): 1.308347
  -> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 1.24e+01
--- Iteration [415/800] ---
- Total Loss: 4.3763
- NLL: 4.0770
- Reg: 0.2993
- p1=0.569, p2=0.404

--- Validation at iteration 415 ---
Average MSE: 34.1029, Average ANEES: 149.9147
```

```
[DIAGNOSTIKA iter 415]
-> Rozdil (Pred - Target): 1.493976
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.31e+01
--- Iteration [416/800] ---
- Total Loss: 5.1206
- NLL: 4.8213
- Reg: 0.2993
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 416]
-> Rozdil (Pred - Target): 1.382956
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.81e+01
--- Iteration [417/800] ---
- Total Loss: 4.1426
- NLL: 3.8433
- Reg: 0.2993
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 417]
-> Rozdil (Pred - Target): 1.356378
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.37e+01
--- Iteration [418/800] ---
- Total Loss: 5.9525
- NLL: 5.6532
- Reg: 0.2993
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 418]
-> Rozdil (Pred - Target): 1.429341
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.86e+01
--- Iteration [419/800] ---
- Total Loss: 6.9562
- NLL: 6.6570
```

- Reg: 0.2992
- p1=0.569, p2=0.404

```
[DIAGNOSTIKA iter 419]
-> Rozdil (Pred - Target): 1.406646
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.04e+01
--- Iteration [420/800] ---
- Total Loss: 6.0507
- NLL: 5.7515
- Reg: 0.2992
- p1=0.569, p2=0.404

--- Validation at iteration 420 ---
Average MSE: 68.5985, Average ANEES: 116.6997
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 420]
-> Rozdil (Pred - Target): 1.475106
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.97e+01
--- Iteration [421/800] ---
- Total Loss: 4.4153
- NLL: 4.1161
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 421]
-> Rozdil (Pred - Target): 1.358984
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.83e+00
--- Iteration [422/800] ---
- Total Loss: 6.2138
- NLL: 5.9146
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 422]
-> Rozdil (Pred - Target): 1.272720
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.89e+00
--- Iteration [423/800] ---
- Total Loss: 4.7493
- NLL: 4.4501
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 423]
-> Rozdil (Pred - Target): 1.749193
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.60e+01
--- Iteration [424/800] ---
- Total Loss: 4.3398
- NLL: 4.0406
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 424]
-> Rozdil (Pred - Target): 1.317622
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.71e+00
--- Iteration [425/800] ---
- Total Loss: 5.8105
- NLL: 5.5113
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 425 ---
Average MSE: 73.3347, Average ANEES: 117.9417
```

```
[DIAGNOSTIKA iter 425]
-> Rozdil (Pred - Target): 1.596616
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.03e+01
--- Iteration [426/800] ---
- Total Loss: 6.6627
- NLL: 6.3636
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 426]
-> Rozdil (Pred - Target): 1.521941
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.94e+01
--- Iteration [427/800] ---
- Total Loss: 6.3165
- NLL: 6.0173
- Reg: 0.2992
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 427]
-> Rozdil (Pred - Target): 1.381015
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.65e+01
```

--- Iteration [428/800] ---

- Total Loss: 4.9941
- NLL: 4.6949
- Reg: 0.2992
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 428]

- > Rozdil (Pred - Target): 1.328209
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.91e+00

--- Iteration [429/800] ---

- Total Loss: 4.8537
- NLL: 4.5545
- Reg: 0.2992
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 429]

- > Rozdil (Pred - Target): 1.789931
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.49e+01

--- Iteration [430/800] ---

- Total Loss: 6.7502
- NLL: 6.4511
- Reg: 0.2991
- p1=0.569, p2=0.404

--- Validation at iteration 430 ---

Average MSE: 29.6963, Average ANEES: 114.8925
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 430]

- > Rozdil (Pred - Target): 1.316734
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.60e+01

--- Iteration [431/800] ---

- Total Loss: 4.9148
- NLL: 4.6156
- Reg: 0.2991
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 431]

- > Rozdil (Pred - Target): 1.796625
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.37e+01

--- Iteration [432/800] ---

- Total Loss: 6.2153
- NLL: 5.9161

- Reg: 0.2991
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 432]

- > Rozdil (Pred - Target): 1.369877
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.14e+01

--- Iteration [433/800] ---

- Total Loss: 5.5213
- NLL: 5.2222
- Reg: 0.2991
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 433]

- > Rozdil (Pred - Target): 1.473478
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.11e+01

--- Iteration [434/800] ---

- Total Loss: 6.8910
- NLL: 6.5919
- Reg: 0.2991
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 434]

- > Rozdil (Pred - Target): 1.423052
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.45e+01

--- Iteration [435/800] ---

- Total Loss: 4.8987
- NLL: 4.5996
- Reg: 0.2991
- p1=0.569, p2=0.404

--- Validation at iteration 435 ---
Average MSE: 35.3378, Average ANEES: 111.9091
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 435]

- > Rozdil (Pred - Target): 1.372257
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.17e+01

--- Iteration [436/800] ---

- Total Loss: 3.5508
- NLL: 3.2517
- Reg: 0.2991
- p1=0.569, p2=0.404

```
[DIAGNOSTIKA iter 436]
-> Rozdil (Pred - Target): 1.316120
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.31e+00
--- Iteration [437/800] ---
- Total Loss: 6.2005
- NLL: 5.9014
- Reg: 0.2991
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 437]
-> Rozdil (Pred - Target): 1.663001
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.92e+01
--- Iteration [438/800] ---
- Total Loss: 6.4122
- NLL: 6.1131
- Reg: 0.2991
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 438]
-> Rozdil (Pred - Target): 1.348259
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.28e+00
--- Iteration [439/800] ---
- Total Loss: 5.6647
- NLL: 5.3656
- Reg: 0.2991
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 439]
-> Rozdil (Pred - Target): 1.455055
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.44e+01
--- Iteration [440/800] ---
- Total Loss: 6.0049
- NLL: 5.7058
- Reg: 0.2990
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 440 ---
Average MSE: 23.4410, Average ANEES: 149.7046
```

```
[DIAGNOSTIKA iter 440]
-> Rozdil (Pred - Target): 1.487175
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.50e+01
```

--- Iteration [441/800] ---

- Total Loss: 5.2983
- NLL: 4.9993
- Reg: 0.2990
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 441]

- > Rozdil (Pred - Target): 1.181246
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.73e+00

--- Iteration [442/800] ---

- Total Loss: 4.1079
- NLL: 3.8089
- Reg: 0.2990
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 442]

- > Rozdil (Pred - Target): 1.349412
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.25e+01

--- Iteration [443/800] ---

- Total Loss: 7.4177
- NLL: 7.1187
- Reg: 0.2990
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 443]

- > Rozdil (Pred - Target): 1.338510
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.50e+01

--- Iteration [444/800] ---

- Total Loss: 4.7734
- NLL: 4.4744
- Reg: 0.2990
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 444]

- > Rozdil (Pred - Target): 1.338932
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.57e+00

--- Iteration [445/800] ---

- Total Loss: 5.8556
- NLL: 5.5566
- Reg: 0.2990
- p1=0.569, p2=0.404

--- Validation at iteration 445 ---

Average MSE: 33.6057, Average ANEES: 103.8432

```
>>> New best VALIDATION ANEES! Saving model. <<<
```

```
[DIAGNOSTIKA iter 445]
-> Rozdil (Pred - Target): 1.499092
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.51e+01
--- Iteration [446/800] ---
- Total Loss: 5.3263
- NLL: 5.0273
- Reg: 0.2990
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 446]
-> Rozdil (Pred - Target): 1.413782
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.67e+01
--- Iteration [447/800] ---
- Total Loss: 4.6455
- NLL: 4.3465
- Reg: 0.2990
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 447]
-> Rozdil (Pred - Target): 1.296921
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.10e+01
--- Iteration [448/800] ---
- Total Loss: 4.2350
- NLL: 3.9360
- Reg: 0.2990
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 448]
-> Rozdil (Pred - Target): 1.261121
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+01
--- Iteration [449/800] ---
- Total Loss: 4.3547
- NLL: 4.0557
- Reg: 0.2990
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 449]
-> Rozdil (Pred - Target): 1.495859
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.50e+01
--- Iteration [450/800] ---
```

```
- Total Loss: 4.6361
- NLL: 4.3372
- Reg: 0.2990
- p1=0.569, p2=0.404

--- Validation at iteration 450 ---
Average MSE: 19.4562, Average ANEES: 101.1763
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 450]
-> Rozdil (Pred - Target): 1.324402
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.18e+00
--- Iteration [451/800] ---
- Total Loss: 4.9626
- NLL: 4.6636
- Reg: 0.2989
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 451]
-> Rozdil (Pred - Target): 1.534742
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.84e+01
--- Iteration [452/800] ---
- Total Loss: 3.1806
- NLL: 2.8817
- Reg: 0.2989
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 452]
-> Rozdil (Pred - Target): 1.329072
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.22e+00
--- Iteration [453/800] ---
- Total Loss: 6.7865
- NLL: 6.4876
- Reg: 0.2989
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 453]
-> Rozdil (Pred - Target): 1.277489
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.23e+00
--- Iteration [454/800] ---
- Total Loss: 6.9220
- NLL: 6.6231
- Reg: 0.2989
```

```

- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 454]
-> Rozdil (Pred - Target): 1.375056
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.95e+00
--- Iteration [455/800] ---
- Total Loss: 5.3527
- NLL: 5.0538
- Reg: 0.2989
- p1=0.569, p2=0.404

--- Validation at iteration 455 ---
Average MSE: 25.3562, Average ANEES: 134.5273
-----

[DIAGNOSTIKA iter 455]
-> Rozdil (Pred - Target): 1.438398
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.03e+01
--- Iteration [456/800] ---
- Total Loss: 6.4995
- NLL: 6.2006
- Reg: 0.2989
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 456]
-> Rozdil (Pred - Target): 1.284382
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.99e+00
--- Iteration [457/800] ---
- Total Loss: 4.6332
- NLL: 4.3343
- Reg: 0.2989
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 457]
-> Rozdil (Pred - Target): 1.459478
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.21e+01
--- Iteration [458/800] ---
- Total Loss: 5.8140
- NLL: 5.5151
- Reg: 0.2989
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 458]
-> Rozdil (Pred - Target): 1.546683

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.48e+01
--- Iteration [459/800] ---
- Total Loss: 7.9214
- NLL: 7.6225
- Reg: 0.2989
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 459]
-> Rozdil (Pred - Target): 1.220887
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.36e+01
--- Iteration [460/800] ---
- Total Loss: 5.8508
- NLL: 5.5519
- Reg: 0.2989
- p1=0.569, p2=0.404

--- Validation at iteration 460 ---
Average MSE: 29.7325, Average ANEES: 117.8962
```

```
[DIAGNOSTIKA iter 460]
-> Rozdil (Pred - Target): 1.411149
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.70e+01
--- Iteration [461/800] ---
- Total Loss: 4.4191
- NLL: 4.1202
- Reg: 0.2989
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 461]
-> Rozdil (Pred - Target): 1.235528
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.64e+00
--- Iteration [462/800] ---
- Total Loss: 6.4539
- NLL: 6.1550
- Reg: 0.2988
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 462]
-> Rozdil (Pred - Target): 1.510507
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.86e+01
--- Iteration [463/800] ---
- Total Loss: 6.9870
```

```
- NLL: 6.6881  
- Reg: 0.2988  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 463]

```
-> Rozdil (Pred - Target): 1.633926  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 4.36e+01  
--- Iteration [464/800] ---  
- Total Loss: 5.8659  
- NLL: 5.5671  
- Reg: 0.2988  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 464]

```
-> Rozdil (Pred - Target): 1.326437  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.54e+01  
--- Iteration [465/800] ---  
- Total Loss: 5.5467  
- NLL: 5.2478  
- Reg: 0.2988  
- p1=0.569, p2=0.404
```

--- Validation at iteration 465 ---

Average MSE: 18.5253, Average ANEES: 119.0776

[DIAGNOSTIKA iter 465]

```
-> Rozdil (Pred - Target): 1.365260  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.05e+01  
--- Iteration [466/800] ---  
- Total Loss: 4.7977  
- NLL: 4.4989  
- Reg: 0.2988  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 466]

```
-> Rozdil (Pred - Target): 1.556856  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 4.33e+01  
--- Iteration [467/800] ---  
- Total Loss: 6.3103  
- NLL: 6.0115  
- Reg: 0.2988  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 467]
-> Rozdil (Pred - Target): 1.240011
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.30e+00
--- Iteration [468/800] ---
- Total Loss: 5.5984
- NLL: 5.2996
- Reg: 0.2988
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 468]
-> Rozdil (Pred - Target): 1.365186
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.35e+00
--- Iteration [469/800] ---
- Total Loss: 5.4268
- NLL: 5.1280
- Reg: 0.2988
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 469]
-> Rozdil (Pred - Target): 1.544967
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.58e+01
--- Iteration [470/800] ---
- Total Loss: 4.9509
- NLL: 4.6521
- Reg: 0.2988
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 470 ---
Average MSE: 21.0031, Average ANEES: 125.8275
```

```
[DIAGNOSTIKA iter 470]
-> Rozdil (Pred - Target): 1.467374
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.12e+01
--- Iteration [471/800] ---
- Total Loss: 5.4863
- NLL: 5.1876
- Reg: 0.2988
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 471]
-> Rozdil (Pred - Target): 1.249127
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.11e+01
```

--- Iteration [472/800] ---

- Total Loss: 4.0270
- NLL: 3.7283
- Reg: 0.2988
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 472]

- > Rozdil (Pred - Target): 1.520980
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.91e+01

--- Iteration [473/800] ---

- Total Loss: 4.7444
- NLL: 4.4457
- Reg: 0.2987
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 473]

- > Rozdil (Pred - Target): 1.326607
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.99e+00

--- Iteration [474/800] ---

- Total Loss: 7.0057
- NLL: 6.7070
- Reg: 0.2987
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 474]

- > Rozdil (Pred - Target): 1.497362
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.05e+01

--- Iteration [475/800] ---

- Total Loss: 5.1258
- NLL: 4.8271
- Reg: 0.2987
- p1=0.569, p2=0.404

--- Validation at iteration 475 ---

Average MSE: 16.8608, Average ANEES: 113.8694

[DIAGNOSTIKA iter 475]

- > Rozdil (Pred - Target): 1.503956
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.16e+01

--- Iteration [476/800] ---

- Total Loss: 5.8417
- NLL: 5.5430
- Reg: 0.2987

```

- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 476]
-> Rozdil (Pred - Target): 1.277499
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.06e+01
--- Iteration [477/800] ---
- Total Loss: 6.3648
- NLL: 6.0661
- Reg: 0.2987
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 477]
-> Rozdil (Pred - Target): 1.417985
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.03e+01
--- Iteration [478/800] ---
- Total Loss: 4.1246
- NLL: 3.8259
- Reg: 0.2987
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 478]
-> Rozdil (Pred - Target): 1.432795
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.35e+01
--- Iteration [479/800] ---
- Total Loss: 6.2245
- NLL: 5.9258
- Reg: 0.2987
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 479]
-> Rozdil (Pred - Target): 1.363578
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.68e+01
--- Iteration [480/800] ---
- Total Loss: 6.4533
- NLL: 6.1546
- Reg: 0.2987
- p1=0.569, p2=0.404

--- Validation at iteration 480 ---
Average MSE: 16.9695, Average ANEES: 101.0929
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

[DIAGNOSTIKA iter 480]

```
-> Rozdil (Pred - Target): 1.350963
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.11e+00
--- Iteration [481/800] ---
- Total Loss: 6.1212
- NLL: 5.8225
- Reg: 0.2987
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 481]
-> Rozdil (Pred - Target): 1.395402
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.52e+01
--- Iteration [482/800] ---
- Total Loss: 5.5624
- NLL: 5.2637
- Reg: 0.2987
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 482]
-> Rozdil (Pred - Target): 1.383137
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.69e+01
--- Iteration [483/800] ---
- Total Loss: 4.5929
- NLL: 4.2942
- Reg: 0.2987
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 483]
-> Rozdil (Pred - Target): 1.216144
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.57e+00
--- Iteration [484/800] ---
- Total Loss: 4.8297
- NLL: 4.5310
- Reg: 0.2987
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 484]
-> Rozdil (Pred - Target): 1.202696
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.07e+00
--- Iteration [485/800] ---
- Total Loss: 5.9860
- NLL: 5.6873
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 485 ---
Average MSE: 33.4221, Average ANEES: 91.8763
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```
[DIAGNOSTIKA iter 485]
-> Rozdil (Pred - Target): 1.364310
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.10e+01
--- Iteration [486/800] ---
- Total Loss: 5.2410
- NLL: 4.9424
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 486]
-> Rozdil (Pred - Target): 1.526332
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.61e+02
--- Iteration [487/800] ---
- Total Loss: 6.1851
- NLL: 5.8864
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 487]
-> Rozdil (Pred - Target): 1.390968
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.46e+01
--- Iteration [488/800] ---
- Total Loss: 5.9270
- NLL: 5.6284
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 488]
-> Rozdil (Pred - Target): 1.329861
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.23e+01
--- Iteration [489/800] ---
- Total Loss: 5.9978
- NLL: 5.6992
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 489]
-> Rozdil (Pred - Target): 1.580468
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.14e+02
--- Iteration [490/800] ---
- Total Loss: 3.3224
- NLL: 3.0238
- Reg: 0.2986
- p1=0.569, p2=0.404

--- Validation at iteration 490 ---
Average MSE: 30.2291, Average ANEES: 92.8496
```

```
[DIAGNOSTIKA iter 490]
-> Rozdil (Pred - Target): 1.464222
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.80e+01
--- Iteration [491/800] ---
- Total Loss: 6.3032
- NLL: 6.0046
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 491]
-> Rozdil (Pred - Target): 1.321937
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.01e+01
--- Iteration [492/800] ---
- Total Loss: 4.9837
- NLL: 4.6851
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 492]
-> Rozdil (Pred - Target): 1.452688
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.02e+01
--- Iteration [493/800] ---
- Total Loss: 7.8435
- NLL: 7.5449
- Reg: 0.2986
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 493]
-> Rozdil (Pred - Target): 1.804173
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.02e+02
--- Iteration [494/800] ---
- Total Loss: 5.5104
```

```
- NLL: 5.2119  
- Reg: 0.2986  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 494]

```
-> Rozdil (Pred - Target): 1.273842  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 7.71e+00  
--- Iteration [495/800] ---  
- Total Loss: 5.2051  
- NLL: 4.9065  
- Reg: 0.2986  
- p1=0.569, p2=0.404
```

--- Validation at iteration 495 ---

Average MSE: 17.6223, Average ANEES: 134.3901

[DIAGNOSTIKA iter 495]

```
-> Rozdil (Pred - Target): 1.230822  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.62e+00  
--- Iteration [496/800] ---  
- Total Loss: 5.4981  
- NLL: 5.1995  
- Reg: 0.2986  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 496]

```
-> Rozdil (Pred - Target): 1.353361  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.82e+01  
--- Iteration [497/800] ---  
- Total Loss: 6.0784  
- NLL: 5.7798  
- Reg: 0.2985  
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 497]

```
-> Rozdil (Pred - Target): 1.317547  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.99e+01  
--- Iteration [498/800] ---  
- Total Loss: 6.1765  
- NLL: 5.8779  
- Reg: 0.2985  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 498]
-> Rozdil (Pred - Target): 1.682768
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.58e+01
--- Iteration [499/800] ---
- Total Loss: 4.9840
- NLL: 4.6854
- Reg: 0.2985
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 499]
-> Rozdil (Pred - Target): 1.188222
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.72e+00
--- Iteration [500/800] ---
- Total Loss: 4.7645
- NLL: 4.4660
- Reg: 0.2985
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 500 ---
Average MSE: 20.4318, Average ANEES: 97.0417
```

```
[DIAGNOSTIKA iter 500]
-> Rozdil (Pred - Target): 1.326079
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.38e+01
--- Iteration [501/800] ---
- Total Loss: 4.7797
- NLL: 4.4812
- Reg: 0.2985
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 501]
-> Rozdil (Pred - Target): 1.455696
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.50e+01
--- Iteration [502/800] ---
- Total Loss: 6.1283
- NLL: 5.8297
- Reg: 0.2985
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 502]
-> Rozdil (Pred - Target): 1.684082
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.17e+01
```

--- Iteration [503/800] ---

- Total Loss: 5.6534
- NLL: 5.3549
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 503]

- > Rozdil (Pred - Target): 1.582885
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.76e+01

--- Iteration [504/800] ---

- Total Loss: 5.5605
- NLL: 5.2619
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 504]

- > Rozdil (Pred - Target): 1.611168
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.27e+01

--- Iteration [505/800] ---

- Total Loss: 5.3280
- NLL: 5.0295
- Reg: 0.2985
- p1=0.569, p2=0.404

--- Validation at iteration 505 ---

Average MSE: 25.9010, Average ANEES: 86.8403
>>> New best VALIDATION ANEES! Saving model. <<<

[DIAGNOSTIKA iter 505]

- > Rozdil (Pred - Target): 1.313875
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.24e+01

--- Iteration [506/800] ---

- Total Loss: 6.6117
- NLL: 6.3132
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 506]

- > Rozdil (Pred - Target): 1.320233
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.10e+01

--- Iteration [507/800] ---

- Total Loss: 5.4601
- NLL: 5.1616

- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 507]

- > Rozdil (Pred - Target): 1.445827
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.49e+01

--- Iteration [508/800] ---

- Total Loss: 4.9001
- NLL: 4.6016
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 508]

- > Rozdil (Pred - Target): 1.407003
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.58e+01

--- Iteration [509/800] ---

- Total Loss: 4.4999
- NLL: 4.2014
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 509]

- > Rozdil (Pred - Target): 1.292646
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.15e+01

--- Iteration [510/800] ---

- Total Loss: 4.2756
- NLL: 3.9771
- Reg: 0.2985
- p1=0.569, p2=0.404

--- Validation at iteration 510 ---
Average MSE: 21.3285, Average ANEES: 102.7245

[DIAGNOSTIKA iter 510]

- > Rozdil (Pred - Target): 1.492208
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 4.21e+01

--- Iteration [511/800] ---

- Total Loss: 4.3100
- NLL: 4.0115
- Reg: 0.2985
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 511]

```
-> Rozdil (Pred - Target): 1.379017  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.84e+01  
--- Iteration [512/800] ---  
- Total Loss: 4.5221  
- NLL: 4.2236  
- Reg: 0.2985  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 512]  
-> Rozdil (Pred - Target): 1.308755  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 8.99e+00  
--- Iteration [513/800] ---  
- Total Loss: 6.6801  
- NLL: 6.3816  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 513]  
-> Rozdil (Pred - Target): 1.257030  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 4.46e+00  
--- Iteration [514/800] ---  
- Total Loss: 6.8049  
- NLL: 6.5064  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 514]  
-> Rozdil (Pred - Target): 1.225196  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.78e+00  
--- Iteration [515/800] ---  
- Total Loss: 5.5753  
- NLL: 5.2769  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 515 ---  
Average MSE: 17.1957, Average ANEES: 115.2993
```

```
[DIAGNOSTIKA iter 515]  
-> Rozdil (Pred - Target): 1.323212  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 7.42e+00  
--- Iteration [516/800] ---
```

```

- Total Loss: 4.6224
- NLL: 4.3240
- Reg: 0.2984
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 516]
-> Rozdil (Pred - Target): 1.292037
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.62e+00
--- Iteration [517/800] ---
- Total Loss: 5.7146
- NLL: 5.4162
- Reg: 0.2984
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 517]
-> Rozdil (Pred - Target): 1.378084
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.31e+00
--- Iteration [518/800] ---
- Total Loss: 7.2287
- NLL: 6.9303
- Reg: 0.2984
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 518]
-> Rozdil (Pred - Target): 1.407307
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.11e+01
--- Iteration [519/800] ---
- Total Loss: 6.1591
- NLL: 5.8607
- Reg: 0.2984
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 519]
-> Rozdil (Pred - Target): 1.258309
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.12e+00
--- Iteration [520/800] ---
- Total Loss: 5.7318
- NLL: 5.4334
- Reg: 0.2984
- p1=0.569, p2=0.404

--- Validation at iteration 520 ---
Average MSE: 17.8256, Average ANEES: 106.9803
-----
```

```
[DIAGNOSTIKA iter 520]
-> Rozdil (Pred - Target): 1.266267
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.73e+00
--- Iteration [521/800] ---
- Total Loss: 4.8747
- NLL: 4.5763
- Reg: 0.2984
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 521]
-> Rozdil (Pred - Target): 1.551022
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.67e+00
--- Iteration [522/800] ---
- Total Loss: 5.8633
- NLL: 5.5649
- Reg: 0.2984
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 522]
-> Rozdil (Pred - Target): 1.510184
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.11e+01
--- Iteration [523/800] ---
- Total Loss: 5.7315
- NLL: 5.4331
- Reg: 0.2984
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 523]
-> Rozdil (Pred - Target): 1.438705
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.23e+01
--- Iteration [524/800] ---
- Total Loss: 6.1814
- NLL: 5.8830
- Reg: 0.2984
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 524]
-> Rozdil (Pred - Target): 1.305713
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.11e+01
--- Iteration [525/800] ---
- Total Loss: 4.5924
- NLL: 4.2940
```

```
- Reg: 0.2984  
- p1=0.569, p2=0.404  
  
--- Validation at iteration 525 ---  
Average MSE: 34.6153, Average ANEES: 94.1163
```

```
[DIAGNOSTIKA iter 525]  
-> Rozdil (Pred - Target): 1.257382  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 7.78e+01  
--- Iteration [526/800] ---  
- Total Loss: 4.7016  
- NLL: 4.4032  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 526]  
-> Rozdil (Pred - Target): 1.227488  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.68e+00  
--- Iteration [527/800] ---  
- Total Loss: 4.9205  
- NLL: 4.6221  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 527]  
-> Rozdil (Pred - Target): 1.293134  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 8.59e+00  
--- Iteration [528/800] ---  
- Total Loss: 4.0770  
- NLL: 3.7786  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 528]  
-> Rozdil (Pred - Target): 1.436112  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 2.41e+01  
--- Iteration [529/800] ---  
- Total Loss: 5.2437  
- NLL: 4.9453  
- Reg: 0.2984  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 529]
```

```
-> Rozdil (Pred - Target): 1.592994
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.80e+01
--- Iteration [530/800] ---
- Total Loss: 6.0114
- NLL: 5.7130
- Reg: 0.2983
- p1=0.569, p2=0.404

--- Validation at iteration 530 ---
Average MSE: 41.1864, Average ANEES: 95.6714
```

```
[DIAGNOSTIKA iter 530]
-> Rozdil (Pred - Target): 1.157823
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.93e+00
--- Iteration [531/800] ---
- Total Loss: 4.6411
- NLL: 4.3427
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 531]
-> Rozdil (Pred - Target): 1.484563
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.18e+01
--- Iteration [532/800] ---
- Total Loss: 5.7229
- NLL: 5.4246
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 532]
-> Rozdil (Pred - Target): 1.162956
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.48e+00
--- Iteration [533/800] ---
- Total Loss: 5.5628
- NLL: 5.2645
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 533]
-> Rozdil (Pred - Target): 1.290067
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.55e+00
--- Iteration [534/800] ---
```

- Total Loss: 6.2953
- NLL: 5.9969
- Reg: 0.2983
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 534]

- > Rozdil (Pred - Target): 1.334411
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.36e+01

--- Iteration [535/800] ---

- Total Loss: 5.9294
- NLL: 5.6311
- Reg: 0.2983
- p1=0.569, p2=0.404

--- Validation at iteration 535 ---

Average MSE: 21.6644, Average ANEES: 103.4489

[DIAGNOSTIKA iter 535]

- > Rozdil (Pred - Target): 1.283509
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.74e+01

--- Iteration [536/800] ---

- Total Loss: 4.5874
- NLL: 4.2891
- Reg: 0.2983
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 536]

- > Rozdil (Pred - Target): 1.399349
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.89e+01

--- Iteration [537/800] ---

- Total Loss: 6.6592
- NLL: 6.3609
- Reg: 0.2983
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 537]

- > Rozdil (Pred - Target): 1.214641
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.11e+01

--- Iteration [538/800] ---

- Total Loss: 5.6360
- NLL: 5.3377
- Reg: 0.2983
- p1=0.569, p2=0.404

```
[DIAGNOSTIKA iter 538]
-> Rozdil (Pred - Target): 1.161692
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.08e+00
--- Iteration [539/800] ---
- Total Loss: 5.4262
- NLL: 5.1279
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 539]
-> Rozdil (Pred - Target): 1.481494
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.51e+01
--- Iteration [540/800] ---
- Total Loss: 5.4369
- NLL: 5.1387
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 540 ---
Average MSE: 28.8988, Average ANEES: 113.4286
```

```
[DIAGNOSTIKA iter 540]
-> Rozdil (Pred - Target): 1.296173
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.41e+00
--- Iteration [541/800] ---
- Total Loss: 7.4620
- NLL: 7.1638
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 541]
-> Rozdil (Pred - Target): 1.277466
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.29e+01
--- Iteration [542/800] ---
- Total Loss: 5.5841
- NLL: 5.2859
- Reg: 0.2983
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 542]
-> Rozdil (Pred - Target): 1.415775
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 1.18e+01
--- Iteration [543/800] ---
- Total Loss: 6.6912
- NLL: 6.3930
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 543]
-> Rozdil (Pred - Target): 1.414550
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.06e+01
--- Iteration [544/800] ---
- Total Loss: 5.7764
- NLL: 5.4782
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 544]
-> Rozdil (Pred - Target): 1.322776
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.17e+01
--- Iteration [545/800] ---
- Total Loss: 5.1695
- NLL: 4.8712
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 545 ---
Average MSE: 33.6895, Average ANEES: 111.6690
```

```
[DIAGNOSTIKA iter 545]
-> Rozdil (Pred - Target): 1.224281
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.22e+00
--- Iteration [546/800] ---
- Total Loss: 3.8473
- NLL: 3.5490
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 546]
-> Rozdil (Pred - Target): 1.252047
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.53e+00
--- Iteration [547/800] ---
- Total Loss: 6.1878
- NLL: 5.8896
```

- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 547]

- > Rozdil (Pred - Target): 1.535169
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.57e+01

--- Iteration [548/800] ---

- Total Loss: 5.1936
- NLL: 4.8953
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 548]

- > Rozdil (Pred - Target): 1.608123
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.50e+01

--- Iteration [549/800] ---

- Total Loss: 6.5594
- NLL: 6.2612
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 549]

- > Rozdil (Pred - Target): 1.403020
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.18e+01

--- Iteration [550/800] ---

- Total Loss: 4.4425
- NLL: 4.1443
- Reg: 0.2982
- p1=0.569, p2=0.404

--- Validation at iteration 550 ---
Average MSE: 27.7924, Average ANEES: 95.5203

[DIAGNOSTIKA iter 550]

- > Rozdil (Pred - Target): 1.380779
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.92e+01

--- Iteration [551/800] ---

- Total Loss: 2.8552
- NLL: 2.5570
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 551]

```
-> Rozdil (Pred - Target): 1.315634
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.27e+00
--- Iteration [552/800] ---
- Total Loss: 3.7864
- NLL: 3.4882
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 552]
-> Rozdil (Pred - Target): 1.295132
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.21e+00
--- Iteration [553/800] ---
- Total Loss: 4.7511
- NLL: 4.4529
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 553]
-> Rozdil (Pred - Target): 1.544361
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.19e+01
--- Iteration [554/800] ---
- Total Loss: 6.8201
- NLL: 6.5219
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 554]
-> Rozdil (Pred - Target): 1.366320
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.28e+01
--- Iteration [555/800] ---
- Total Loss: 5.4140
- NLL: 5.1158
- Reg: 0.2982
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 555 ---
Average MSE: 16.5171, Average ANEES: 88.6283
```

```
[DIAGNOSTIKA iter 555]
-> Rozdil (Pred - Target): 1.767298
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.14e+01
--- Iteration [556/800] ---
```

```

- Total Loss: 5.4920
- NLL: 5.1938
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 556]
-> Rozdil (Pred - Target): 1.281840
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.18e+01
--- Iteration [557/800] ---
- Total Loss: 4.8036
- NLL: 4.5054
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 557]
-> Rozdil (Pred - Target): 1.135278
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.14e+00
--- Iteration [558/800] ---
- Total Loss: 4.9204
- NLL: 4.6222
- Reg: 0.2982
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 558]
-> Rozdil (Pred - Target): 1.291752
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.77e+01
--- Iteration [559/800] ---
- Total Loss: 5.1776
- NLL: 4.8795
- Reg: 0.2981
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 559]
-> Rozdil (Pred - Target): 1.300865
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.96e+00
--- Iteration [560/800] ---
- Total Loss: 4.8613
- NLL: 4.5632
- Reg: 0.2981
- p1=0.569, p2=0.404

--- Validation at iteration 560 ---
Average MSE: 31.5826, Average ANEES: 92.7982
-----
```

```
[DIAGNOSTIKA iter 560]
-> Rozdil (Pred - Target): 1.249085
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.68e+00
--- Iteration [561/800] ---
- Total Loss: 6.5301
- NLL: 6.2320
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 561]
-> Rozdil (Pred - Target): 1.271512
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.54e+00
--- Iteration [562/800] ---
- Total Loss: 6.6959
- NLL: 6.3977
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 562]
-> Rozdil (Pred - Target): 1.315287
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.73e+00
--- Iteration [563/800] ---
- Total Loss: 6.3883
- NLL: 6.0902
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 563]
-> Rozdil (Pred - Target): 1.328162
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.24e+01
--- Iteration [564/800] ---
- Total Loss: 7.7522
- NLL: 7.4540
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 564]
-> Rozdil (Pred - Target): 1.323414
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.89e+01
--- Iteration [565/800] ---
- Total Loss: 4.7321
- NLL: 4.4340
```

```
- Reg: 0.2981  
- p1=0.569, p2=0.404  
  
--- Validation at iteration 565 ---  
Average MSE: 16.9053, Average ANEES: 111.5069
```

```
-----  
[DIAGNOSTIKA iter 565]  
-> Rozdil (Pred - Target): 1.488690  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 2.90e+01  
--- Iteration [566/800] ---  
- Total Loss: 5.0098  
- NLL: 4.7117  
- Reg: 0.2981  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 566]  
-> Rozdil (Pred - Target): 1.270845  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 7.67e+00  
--- Iteration [567/800] ---  
- Total Loss: 6.3853  
- NLL: 6.0872  
- Reg: 0.2981  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 567]  
-> Rozdil (Pred - Target): 1.384160  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.94e+01  
--- Iteration [568/800] ---  
- Total Loss: 5.5737  
- NLL: 5.2756  
- Reg: 0.2981  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 568]  
-> Rozdil (Pred - Target): 1.378173  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.18e+01  
--- Iteration [569/800] ---  
- Total Loss: 4.8524  
- NLL: 4.5543  
- Reg: 0.2981  
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 569]
```

```
-> Rozdil (Pred - Target): 1.323855
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.35e+01
--- Iteration [570/800] ---
- Total Loss: 4.4235
- NLL: 4.1254
- Reg: 0.2981
- p1=0.569, p2=0.404

--- Validation at iteration 570 ---
Average MSE: 17.7594, Average ANEES: 96.8615
```

```
[DIAGNOSTIKA iter 570]
-> Rozdil (Pred - Target): 1.347960
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.09e+00
--- Iteration [571/800] ---
- Total Loss: 6.1014
- NLL: 5.8034
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 571]
-> Rozdil (Pred - Target): 1.436683
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.90e+01
--- Iteration [572/800] ---
- Total Loss: 5.7494
- NLL: 5.4514
- Reg: 0.2981
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 572]
-> Rozdil (Pred - Target): 1.167984
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.12e+00
--- Iteration [573/800] ---
- Total Loss: 3.4032
- NLL: 3.1052
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 573]
-> Rozdil (Pred - Target): 1.237202
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.69e+01
--- Iteration [574/800] ---
```

- Total Loss: 4.3119
- NLL: 4.0139
- Reg: 0.2980
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 574]

- > Rozdil (Pred - Target): 1.228841
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.12e+00

--- Iteration [575/800] ---

- Total Loss: 5.4625
- NLL: 5.1644
- Reg: 0.2980
- p1=0.569, p2=0.404

--- Validation at iteration 575 ---

Average MSE: 25.9786, Average ANEES: 134.0483

[DIAGNOSTIKA iter 575]

- > Rozdil (Pred - Target): 1.534921
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.97e+01

--- Iteration [576/800] ---

- Total Loss: 6.2296
- NLL: 5.9316
- Reg: 0.2980
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 576]

- > Rozdil (Pred - Target): 1.375584
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.82e+00

--- Iteration [577/800] ---

- Total Loss: 4.6101
- NLL: 4.3121
- Reg: 0.2980
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 577]

- > Rozdil (Pred - Target): 1.334599
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.34e+01

--- Iteration [578/800] ---

- Total Loss: 4.8651
- NLL: 4.5671
- Reg: 0.2980
- p1=0.569, p2=0.404

```
[DIAGNOSTIKA iter 578]
-> Rozdil (Pred - Target): 1.484785
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.76e+01
--- Iteration [579/800] ---
- Total Loss: 8.0583
- NLL: 7.7603
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 579]
-> Rozdil (Pred - Target): 1.286095
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.05e+00
--- Iteration [580/800] ---
- Total Loss: 4.5589
- NLL: 4.2609
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 580 ---
Average MSE: 19.8867, Average ANEES: 105.9198
```

```
[DIAGNOSTIKA iter 580]
-> Rozdil (Pred - Target): 1.365350
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.30e+01
--- Iteration [581/800] ---
- Total Loss: 5.3008
- NLL: 5.0028
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 581]
-> Rozdil (Pred - Target): 1.603830
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.36e+01
--- Iteration [582/800] ---
- Total Loss: 5.8667
- NLL: 5.5688
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 582]
-> Rozdil (Pred - Target): 1.404383
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 2.00e+01
--- Iteration [583/800] ---
- Total Loss: 5.3783
- NLL: 5.0804
- Reg: 0.2980
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 583]
-> Rozdil (Pred - Target): 1.158519
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.24e+00
--- Iteration [584/800] ---
- Total Loss: 3.6731
- NLL: 3.3751
- Reg: 0.2979
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 584]
-> Rozdil (Pred - Target): 1.282624
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.64e+00
--- Iteration [585/800] ---
- Total Loss: 6.6529
- NLL: 6.3550
- Reg: 0.2979
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 585 ---
Average MSE: 30.3117, Average ANEES: 96.1851
```

```
[DIAGNOSTIKA iter 585]
-> Rozdil (Pred - Target): 1.114044
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.74e+00
--- Iteration [586/800] ---
- Total Loss: 5.0325
- NLL: 4.7346
- Reg: 0.2979
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 586]
-> Rozdil (Pred - Target): 1.520264
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.99e+01
--- Iteration [587/800] ---
- Total Loss: 6.3930
- NLL: 6.0950
```

- Reg: 0.2979
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 587]

- > Rozdil (Pred - Target): 1.426617
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.13e+01

--- Iteration [588/800] ---

- Total Loss: 5.8470
- NLL: 5.5491
- Reg: 0.2979
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 588]

- > Rozdil (Pred - Target): 1.261609
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 7.90e+00

--- Iteration [589/800] ---

- Total Loss: 5.6136
- NLL: 5.3157
- Reg: 0.2979
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 589]

- > Rozdil (Pred - Target): 1.562134
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.00e+01

--- Iteration [590/800] ---

- Total Loss: 7.5707
- NLL: 7.2728
- Reg: 0.2979
- p1=0.569, p2=0.404

--- Validation at iteration 590 ---
Average MSE: 17.2132, Average ANEES: 97.0589

[DIAGNOSTIKA iter 590]

- > Rozdil (Pred - Target): 1.360232
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.15e+00

--- Iteration [591/800] ---

- Total Loss: 6.2765
- NLL: 5.9786
- Reg: 0.2979
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 591]

```
-> Rozdil (Pred - Target): 1.452703
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.74e+01
--- Iteration [592/800] ---
- Total Loss: 5.4003
- NLL: 5.1024
- Reg: 0.2979
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 592]
-> Rozdil (Pred - Target): 1.477892
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e+01
--- Iteration [593/800] ---
- Total Loss: 5.8015
- NLL: 5.5036
- Reg: 0.2979
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 593]
-> Rozdil (Pred - Target): 1.262475
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.67e+00
--- Iteration [594/800] ---
- Total Loss: 4.5631
- NLL: 4.2653
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 594]
-> Rozdil (Pred - Target): 1.296611
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.79e+01
--- Iteration [595/800] ---
- Total Loss: 6.2158
- NLL: 5.9179
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 595 ---
Average MSE: 18.8190, Average ANEES: 94.9942
```

```
[DIAGNOSTIKA iter 595]
-> Rozdil (Pred - Target): 1.661193
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.17e+01
--- Iteration [596/800] ---
```

```

- Total Loss: 4.9921
- NLL: 4.6943
- Reg: 0.2978
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 596]
-> Rozdil (Pred - Target): 1.327114
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.19e+01
--- Iteration [597/800] ---
- Total Loss: 5.3463
- NLL: 5.0484
- Reg: 0.2978
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 597]
-> Rozdil (Pred - Target): 1.264730
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.59e+00
--- Iteration [598/800] ---
- Total Loss: 4.2557
- NLL: 3.9579
- Reg: 0.2978
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 598]
-> Rozdil (Pred - Target): 1.283320
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.78e+00
--- Iteration [599/800] ---
- Total Loss: 5.8806
- NLL: 5.5828
- Reg: 0.2978
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 599]
-> Rozdil (Pred - Target): 1.344628
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.12e+01
--- Iteration [600/800] ---
- Total Loss: 4.9771
- NLL: 4.6794
- Reg: 0.2978
- p1=0.569, p2=0.404

--- Validation at iteration 600 ---
Average MSE: 17.2095, Average ANEES: 87.9749
-----
```

```
[DIAGNOSTIKA iter 600]
-> Rozdil (Pred - Target): 1.242333
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.92e+00
--- Iteration [601/800] ---
- Total Loss: 5.4462
- NLL: 5.1484
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 601]
-> Rozdil (Pred - Target): 1.375911
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.35e+00
--- Iteration [602/800] ---
- Total Loss: 5.9136
- NLL: 5.6158
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 602]
-> Rozdil (Pred - Target): 1.188192
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.56e+00
--- Iteration [603/800] ---
- Total Loss: 4.6223
- NLL: 4.3245
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 603]
-> Rozdil (Pred - Target): 1.320819
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.49e+01
--- Iteration [604/800] ---
- Total Loss: 4.9386
- NLL: 4.6408
- Reg: 0.2978
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 604]
-> Rozdil (Pred - Target): 1.564258
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.08e+01
--- Iteration [605/800] ---
- Total Loss: 5.7460
- NLL: 5.4482
```

```

- Reg: 0.2978
- p1=0.569, p2=0.404

--- Validation at iteration 605 ---
Average MSE: 19.5330, Average ANEES: 85.4014
>>> New best VALIDATION ANEES! Saving model. <<<
-----

[DIAGNOSTIKA iter 605]
-> Rozdil (Pred - Target): 1.229280
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.02e+01
--- Iteration [606/800] ---
- Total Loss: 4.7736
- NLL: 4.4758
- Reg: 0.2978
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 606]
-> Rozdil (Pred - Target): 1.299813
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.35e+01
--- Iteration [607/800] ---
- Total Loss: 4.0491
- NLL: 3.7513
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 607]
-> Rozdil (Pred - Target): 1.545470
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.46e+01
--- Iteration [608/800] ---
- Total Loss: 6.4396
- NLL: 6.1419
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 608]
-> Rozdil (Pred - Target): 2.013595
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.92e+01
--- Iteration [609/800] ---
- Total Loss: 4.7121
- NLL: 4.4144
- Reg: 0.2977
- p1=0.569, p2=0.404

```

```
[DIAGNOSTIKA iter 609]
-> Rozdil (Pred - Target): 1.656615
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.16e+01
--- Iteration [610/800] ---
- Total Loss: 3.6575
- NLL: 3.3598
- Reg: 0.2977
- p1=0.569, p2=0.404

--- Validation at iteration 610 ---
Average MSE: 17.3823, Average ANEES: 98.1776
```

```
[DIAGNOSTIKA iter 610]
-> Rozdil (Pred - Target): 1.281782
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.96e+00
--- Iteration [611/800] ---
- Total Loss: 4.7407
- NLL: 4.4430
- Reg: 0.2977
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 611]
-> Rozdil (Pred - Target): 1.316738
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.28e+00
--- Iteration [612/800] ---
- Total Loss: 5.8819
- NLL: 5.5841
- Reg: 0.2977
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 612]
-> Rozdil (Pred - Target): 1.448507
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.49e+01
--- Iteration [613/800] ---
- Total Loss: 4.5602
- NLL: 4.2625
- Reg: 0.2977
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 613]
-> Rozdil (Pred - Target): 1.421898
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.03e+01
```

```

--- Iteration [614/800] ---
- Total Loss: 5.8459
- NLL: 5.5482
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 614]
-> Rozdil (Pred - Target): 1.257483
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.98e+00
--- Iteration [615/800] ---
- Total Loss: 4.4477
- NLL: 4.1500
- Reg: 0.2977
- p1=0.569, p2=0.404

--- Validation at iteration 615 ---
Average MSE: 23.1538, Average ANEES: 94.6346
-----

[DIAGNOSTIKA iter 615]
-> Rozdil (Pred - Target): 1.336082
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.23e+01
--- Iteration [616/800] ---
- Total Loss: 4.4888
- NLL: 4.1911
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 616]
-> Rozdil (Pred - Target): 1.451909
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.35e+01
--- Iteration [617/800] ---
- Total Loss: 6.6179
- NLL: 6.3202
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 617]
-> Rozdil (Pred - Target): 1.369905
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.63e+00
--- Iteration [618/800] ---
- Total Loss: 6.9125
- NLL: 6.6149
- Reg: 0.2977

```

```

- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 618]
-> Rozdil (Pred - Target): 1.366280
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.01e+01
--- Iteration [619/800] ---
- Total Loss: 4.9585
- NLL: 4.6609
- Reg: 0.2977
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 619]
-> Rozdil (Pred - Target): 1.360894
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.90e+00
--- Iteration [620/800] ---
- Total Loss: 7.8330
- NLL: 7.5354
- Reg: 0.2977
- p1=0.569, p2=0.404

--- Validation at iteration 620 ---
Average MSE: 16.9595, Average ANEES: 104.1785
-----

[DIAGNOSTIKA iter 620]
-> Rozdil (Pred - Target): 1.509008
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.08e+01
--- Iteration [621/800] ---
- Total Loss: 3.7082
- NLL: 3.4106
- Reg: 0.2976
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 621]
-> Rozdil (Pred - Target): 1.438959
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.65e+01
--- Iteration [622/800] ---
- Total Loss: 5.4034
- NLL: 5.1057
- Reg: 0.2976
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 622]
-> Rozdil (Pred - Target): 1.393179

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.24e+01
--- Iteration [623/800] ---
- Total Loss: 5.0345
- NLL: 4.7369
- Reg: 0.2976
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 623]
-> Rozdil (Pred - Target): 1.269063
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.61e+00
--- Iteration [624/800] ---
- Total Loss: 4.5594
- NLL: 4.2618
- Reg: 0.2976
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 624]
-> Rozdil (Pred - Target): 1.316946
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.18e+00
--- Iteration [625/800] ---
- Total Loss: 6.6596
- NLL: 6.3619
- Reg: 0.2976
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 625 ---
Average MSE: 16.8589, Average ANEES: 96.6714
```

```
[DIAGNOSTIKA iter 625]
-> Rozdil (Pred - Target): 1.304231
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.08e+00
--- Iteration [626/800] ---
- Total Loss: 7.7312
- NLL: 7.4336
- Reg: 0.2976
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 626]
-> Rozdil (Pred - Target): 1.302705
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.75e+00
--- Iteration [627/800] ---
- Total Loss: 4.6137
```

```
- NLL: 4.3161
- Reg: 0.2976
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 627]

```
-> Rozdil (Pred - Target): 1.143736
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.35e+00
--- Iteration [628/800] ---
- Total Loss: 4.4299
- NLL: 4.1323
- Reg: 0.2976
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 628]

```
-> Rozdil (Pred - Target): 1.436375
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.32e+01
--- Iteration [629/800] ---
- Total Loss: 5.0240
- NLL: 4.7264
- Reg: 0.2976
- p1=0.569, p2=0.404
```

[DIAGNOSTIKA iter 629]

```
-> Rozdil (Pred - Target): 1.212358
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.70e+00
--- Iteration [630/800] ---
- Total Loss: 4.7708
- NLL: 4.4733
- Reg: 0.2976
- p1=0.569, p2=0.404
```

--- Validation at iteration 630 ---

```
Average MSE: 18.4013, Average ANEES: 83.0527
>>> New best VALIDATION ANEES! Saving model. <<<
```

[DIAGNOSTIKA iter 630]

```
-> Rozdil (Pred - Target): 1.358581
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.68e+01
--- Iteration [631/800] ---
- Total Loss: 4.8386
- NLL: 4.5410
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 631]
-> Rozdil (Pred - Target): 1.455984
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.15e+01
--- Iteration [632/800] ---
- Total Loss: 7.2259
- NLL: 6.9284
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 632]
-> Rozdil (Pred - Target): 1.284605
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.14e+00
--- Iteration [633/800] ---
- Total Loss: 5.7138
- NLL: 5.4163
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 633]
-> Rozdil (Pred - Target): 1.332759
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.35e+01
--- Iteration [634/800] ---
- Total Loss: 7.0309
- NLL: 6.7334
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 634]
-> Rozdil (Pred - Target): 2.031826
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.54e+01
--- Iteration [635/800] ---
- Total Loss: 6.4457
- NLL: 6.1482
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 635 ---
Average MSE: 16.2999, Average ANEES: 106.0189
```

```
[DIAGNOSTIKA iter 635]
-> Rozdil (Pred - Target): 1.390452
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 3.23e+01
--- Iteration [636/800] ---
- Total Loss: 4.3693
- NLL: 4.0719
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 636]
-> Rozdil (Pred - Target): 1.330476
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.71e+00
--- Iteration [637/800] ---
- Total Loss: 5.3055
- NLL: 5.0081
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 637]
-> Rozdil (Pred - Target): 1.193979
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.82e+00
--- Iteration [638/800] ---
- Total Loss: 4.4621
- NLL: 4.1646
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 638]
-> Rozdil (Pred - Target): 1.237325
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.00e+00
--- Iteration [639/800] ---
- Total Loss: 6.6777
- NLL: 6.3803
- Reg: 0.2975
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 639]
-> Rozdil (Pred - Target): 1.259974
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.12e+01
--- Iteration [640/800] ---
- Total Loss: 4.9588
- NLL: 4.6613
- Reg: 0.2974
- p1=0.569, p2=0.404
```

```
--- Validation at iteration 640 ---
```

Average MSE: 21.9249, Average ANEES: 119.8372

[DIAGNOSTIKA iter 640]
-> Rozdil (Pred - Target): 1.304155
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.13e+01
--- Iteration [641/800] ---
- Total Loss: 6.7129
- NLL: 6.4155
- Reg: 0.2974
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 641]
-> Rozdil (Pred - Target): 1.261356
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.13e+01
--- Iteration [642/800] ---
- Total Loss: 5.8187
- NLL: 5.5213
- Reg: 0.2974
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 642]
-> Rozdil (Pred - Target): 1.300576
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.51e+00
--- Iteration [643/800] ---
- Total Loss: 4.3888
- NLL: 4.0914
- Reg: 0.2974
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 643]
-> Rozdil (Pred - Target): 1.224460
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.46e+00
--- Iteration [644/800] ---
- Total Loss: 5.1024
- NLL: 4.8049
- Reg: 0.2974
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 644]
-> Rozdil (Pred - Target): 1.478297
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.89e+00
--- Iteration [645/800] ---

```
- Total Loss: 6.6476
- NLL: 6.3502
- Reg: 0.2974
- p1=0.569, p2=0.404

--- Validation at iteration 645 ---
Average MSE: 18.5170, Average ANEES: 104.8443
```

```
[DIAGNOSTIKA iter 645]
-> Rozdil (Pred - Target): 1.778281
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.26e+01
--- Iteration [646/800] ---
- Total Loss: 3.7288
- NLL: 3.4314
- Reg: 0.2974
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 646]
-> Rozdil (Pred - Target): 1.380268
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.41e+01
--- Iteration [647/800] ---
- Total Loss: 6.0967
- NLL: 5.7993
- Reg: 0.2974
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 647]
-> Rozdil (Pred - Target): 1.298526
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.75e+00
--- Iteration [648/800] ---
- Total Loss: 4.4725
- NLL: 4.1751
- Reg: 0.2974
- p1=0.569, p2=0.404
```

```
[DIAGNOSTIKA iter 648]
-> Rozdil (Pred - Target): 1.266419
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.14e+00
--- Iteration [649/800] ---
- Total Loss: 3.9780
- NLL: 3.6806
- Reg: 0.2974
- p1=0.569, p2=0.404
```

```

[DIAGNOSTIKA iter 649]
-> Rozdil (Pred - Target): 1.414058
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e+01
--- Iteration [650/800] ---
- Total Loss: 5.1056
- NLL: 4.8082
- Reg: 0.2974
- p1=0.569, p2=0.404

--- Validation at iteration 650 ---
Average MSE: 21.6277, Average ANEES: 75.0623
>>> New best VALIDATION ANEES! Saving model. <<<
-----
```

```

[DIAGNOSTIKA iter 650]
-> Rozdil (Pred - Target): 1.849660
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.88e+01
--- Iteration [651/800] ---
- Total Loss: 5.1327
- NLL: 4.8353
- Reg: 0.2974
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 651]
-> Rozdil (Pred - Target): 1.483410
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.10e+01
--- Iteration [652/800] ---
- Total Loss: 3.9314
- NLL: 3.6340
- Reg: 0.2973
- p1=0.569, p2=0.404

[DIAGNOSTIKA iter 652]
-> Rozdil (Pred - Target): 1.407168
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.50e+00
--- Iteration [653/800] ---
- Total Loss: 6.8154
- NLL: 6.5180
- Reg: 0.2973
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 653]
-> Rozdil (Pred - Target): 1.408054

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.14e+01
--- Iteration [654/800] ---
- Total Loss: 6.4485
- NLL: 6.1512
- Reg: 0.2973
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 654]
-> Rozdil (Pred - Target): 1.271662
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.30e+00
--- Iteration [655/800] ---
- Total Loss: 6.1908
- NLL: 5.8935
- Reg: 0.2973
- p1=0.568, p2=0.404

--- Validation at iteration 655 ---
Average MSE: 16.8868, Average ANEES: 218.5297
```

```
[DIAGNOSTIKA iter 655]
-> Rozdil (Pred - Target): 1.547947
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.53e+01
--- Iteration [656/800] ---
- Total Loss: 6.7125
- NLL: 6.4152
- Reg: 0.2973
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 656]
-> Rozdil (Pred - Target): 1.589754
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.90e+01
--- Iteration [657/800] ---
- Total Loss: 5.9140
- NLL: 5.6167
- Reg: 0.2973
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 657]
-> Rozdil (Pred - Target): 1.360956
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.33e+01
--- Iteration [658/800] ---
- Total Loss: 4.8827
```

- NLL: 4.5855
- Reg: 0.2973
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 658]

- > Rozdil (Pred - Target): 1.543280
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.77e+01

--- Iteration [659/800] ---

- Total Loss: 5.0229
- NLL: 4.7256
- Reg: 0.2973
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 659]

- > Rozdil (Pred - Target): 1.255818
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 2.51e+01

--- Iteration [660/800] ---

- Total Loss: 5.3740
- NLL: 5.0767
- Reg: 0.2973
- p1=0.568, p2=0.404

--- Validation at iteration 660 ---

Average MSE: 16.1323, Average ANEES: 88.3444

[DIAGNOSTIKA iter 660]

- > Rozdil (Pred - Target): 1.442954
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.40e+01

--- Iteration [661/800] ---

- Total Loss: 5.4101
- NLL: 5.1128
- Reg: 0.2973
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 661]

- > Rozdil (Pred - Target): 1.258205
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.19e+00

--- Iteration [662/800] ---

- Total Loss: 4.4945
- NLL: 4.1973
- Reg: 0.2973
- p1=0.568, p2=0.404

```
[DIAGNOSTIKA iter 662]
-> Rozdil (Pred - Target): 1.029707
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.65e+00
--- Iteration [663/800] ---
- Total Loss: 4.9937
- NLL: 4.6964
- Reg: 0.2973
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 663]
-> Rozdil (Pred - Target): 1.256815
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.53e+01
--- Iteration [664/800] ---
- Total Loss: 4.8230
- NLL: 4.5257
- Reg: 0.2973
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 664]
-> Rozdil (Pred - Target): 1.328009
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.26e+01
--- Iteration [665/800] ---
- Total Loss: 7.7667
- NLL: 7.4695
- Reg: 0.2972
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 665 ---
Average MSE: 21.5293, Average ANEES: 89.4739
```

```
[DIAGNOSTIKA iter 665]
-> Rozdil (Pred - Target): 1.338699
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.82e+01
--- Iteration [666/800] ---
- Total Loss: 4.9651
- NLL: 4.6678
- Reg: 0.2972
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 666]
-> Rozdil (Pred - Target): 1.451268
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.58e+01
```

--- Iteration [667/800] ---

- Total Loss: 4.1050
- NLL: 3.8078
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 667]

- > Rozdil (Pred - Target): 1.420345
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.81e+01

--- Iteration [668/800] ---

- Total Loss: 5.6996
- NLL: 5.4024
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 668]

- > Rozdil (Pred - Target): 1.290192
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.19e+01

--- Iteration [669/800] ---

- Total Loss: 5.7861
- NLL: 5.4888
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 669]

- > Rozdil (Pred - Target): 1.263358
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.77e+00

--- Iteration [670/800] ---

- Total Loss: 4.9966
- NLL: 4.6994
- Reg: 0.2972
- p1=0.568, p2=0.404

--- Validation at iteration 670 ---

Average MSE: 19.6030, Average ANEES: 90.8100

[DIAGNOSTIKA iter 670]

- > Rozdil (Pred - Target): 1.441136
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 6.87e+01

--- Iteration [671/800] ---

- Total Loss: 3.9172
- NLL: 3.6200
- Reg: 0.2972

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 671]
-> Rozdil (Pred - Target): 1.557374
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.43e+01
--- Iteration [672/800] ---
- Total Loss: 5.6565
- NLL: 5.3593
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 672]
-> Rozdil (Pred - Target): 1.481817
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.86e+01
--- Iteration [673/800] ---
- Total Loss: 4.5845
- NLL: 4.2873
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 673]
-> Rozdil (Pred - Target): 1.287152
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.33e+00
--- Iteration [674/800] ---
- Total Loss: 7.2461
- NLL: 6.9489
- Reg: 0.2972
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 674]
-> Rozdil (Pred - Target): 1.465485
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.81e+01
--- Iteration [675/800] ---
- Total Loss: 5.5391
- NLL: 5.2419
- Reg: 0.2972
- p1=0.568, p2=0.404

--- Validation at iteration 675 ---
Average MSE: 43.0029, Average ANEES: 96.6812
-----
```

```
[DIAGNOSTIKA iter 675]
-> Rozdil (Pred - Target): 1.265817
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.31e+00
--- Iteration [676/800] ---
- Total Loss: 4.6273
- NLL: 4.3301
- Reg: 0.2972
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 676]
-> Rozdil (Pred - Target): 1.370427
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.37e+00
--- Iteration [677/800] ---
- Total Loss: 5.9663
- NLL: 5.6691
- Reg: 0.2972
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 677]
-> Rozdil (Pred - Target): 1.339131
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.90e+00
--- Iteration [678/800] ---
- Total Loss: 6.0959
- NLL: 5.7988
- Reg: 0.2972
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 678]
-> Rozdil (Pred - Target): 1.197839
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.74e+00
--- Iteration [679/800] ---
- Total Loss: 4.2241
- NLL: 3.9269
- Reg: 0.2971
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 679]
-> Rozdil (Pred - Target): 1.504432
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.41e+01
--- Iteration [680/800] ---
- Total Loss: 5.3527
- NLL: 5.0555
- Reg: 0.2971
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 680 ---
  Average MSE: 21.7409, Average ANEES: 96.3529
```

```
[DIAGNOSTIKA iter 680]
  -> Rozdil (Pred - Target): 1.396635
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 2.56e+01
--- Iteration [681/800] ---
  - Total Loss: 5.7895
  - NLL: 5.4924
  - Reg: 0.2971
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 681]
  -> Rozdil (Pred - Target): 1.276710
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 6.88e+00
--- Iteration [682/800] ---
  - Total Loss: 4.3629
  - NLL: 4.0658
  - Reg: 0.2971
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 682]
  -> Rozdil (Pred - Target): 1.357542
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 1.01e+01
--- Iteration [683/800] ---
  - Total Loss: 4.9166
  - NLL: 4.6195
  - Reg: 0.2971
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 683]
  -> Rozdil (Pred - Target): 1.361310
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 3.23e+01
--- Iteration [684/800] ---
  - Total Loss: 5.9358
  - NLL: 5.6387
  - Reg: 0.2971
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 684]
  -> Rozdil (Pred - Target): 1.661605
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 3.77e+01
```

```
--- Iteration [685/800] ---
- Total Loss: 5.1618
- NLL: 4.8648
- Reg: 0.2971
- p1=0.568, p2=0.404

--- Validation at iteration 685 ---
Average MSE: 18.0533, Average ANEES: 94.6680
```

```
-----  
[DIAGNOSTIKA iter 685]
-> Rozdil (Pred - Target): 1.280672
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.93e+00
--- Iteration [686/800] ---
- Total Loss: 5.0921
- NLL: 4.7950
- Reg: 0.2971
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 686]
-> Rozdil (Pred - Target): 1.200803
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.83e+01
--- Iteration [687/800] ---
- Total Loss: 4.9713
- NLL: 4.6743
- Reg: 0.2971
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 687]
-> Rozdil (Pred - Target): 1.409121
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.18e+01
--- Iteration [688/800] ---
- Total Loss: 4.8915
- NLL: 4.5945
- Reg: 0.2970
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 688]
-> Rozdil (Pred - Target): 1.404737
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.19e+01
--- Iteration [689/800] ---
- Total Loss: 5.3868
- NLL: 5.0897
- Reg: 0.2970
```

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 689]
-> Rozdil (Pred - Target): 1.249335
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.81e+01
--- Iteration [690/800] ---
- Total Loss: 5.2390
- NLL: 4.9420
- Reg: 0.2970
- p1=0.568, p2=0.404

--- Validation at iteration 690 ---
Average MSE: 23.9062, Average ANEES: 79.0149
-----

[DIAGNOSTIKA iter 690]
-> Rozdil (Pred - Target): 1.296987
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.07e+01
--- Iteration [691/800] ---
- Total Loss: 5.4747
- NLL: 5.1777
- Reg: 0.2970
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 691]
-> Rozdil (Pred - Target): 1.274509
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.95e+00
--- Iteration [692/800] ---
- Total Loss: 6.5650
- NLL: 6.2680
- Reg: 0.2970
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 692]
-> Rozdil (Pred - Target): 1.315038
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+01
--- Iteration [693/800] ---
- Total Loss: 5.8076
- NLL: 5.5106
- Reg: 0.2970
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 693]
-> Rozdil (Pred - Target): 1.289433

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.11e+00
--- Iteration [694/800] ---
- Total Loss: 6.1186
- NLL: 5.8217
- Reg: 0.2970
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 694]
-> Rozdil (Pred - Target): 1.170288
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.54e+00
--- Iteration [695/800] ---
- Total Loss: 5.4612
- NLL: 5.1643
- Reg: 0.2969
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 695 ---
Average MSE: 22.2396, Average ANEES: 79.1776
```

```
[DIAGNOSTIKA iter 695]
-> Rozdil (Pred - Target): 1.479013
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.29e+00
--- Iteration [696/800] ---
- Total Loss: 7.6456
- NLL: 7.3487
- Reg: 0.2969
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 696]
-> Rozdil (Pred - Target): 1.371018
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.67e+01
--- Iteration [697/800] ---
- Total Loss: 6.6382
- NLL: 6.3413
- Reg: 0.2969
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 697]
-> Rozdil (Pred - Target): 1.297944
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.92e+01
--- Iteration [698/800] ---
- Total Loss: 4.5055
```

```
- NLL: 4.2086  
- Reg: 0.2969  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 698]

```
-> Rozdil (Pred - Target): 1.367408  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.43e+01  
--- Iteration [699/800] ---  
- Total Loss: 5.7828  
- NLL: 5.4859  
- Reg: 0.2969  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 699]

```
-> Rozdil (Pred - Target): 1.209399  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.22e+00  
--- Iteration [700/800] ---  
- Total Loss: 4.3261  
- NLL: 4.0292  
- Reg: 0.2969  
- p1=0.568, p2=0.404
```

--- Validation at iteration 700 ---

Average MSE: 21.6936, Average ANEES: 82.7172

[DIAGNOSTIKA iter 700]

```
-> Rozdil (Pred - Target): 1.258956  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.27e+00  
--- Iteration [701/800] ---  
- Total Loss: 4.6222  
- NLL: 4.3253  
- Reg: 0.2969  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 701]

```
-> Rozdil (Pred - Target): 1.235374  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 6.76e+00  
--- Iteration [702/800] ---  
- Total Loss: 4.2225  
- NLL: 3.9257  
- Reg: 0.2969  
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 702]
-> Rozdil (Pred - Target): 1.394393
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.50e+01
--- Iteration [703/800] ---
- Total Loss: 4.5728
- NLL: 4.2759
- Reg: 0.2968
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 703]
-> Rozdil (Pred - Target): 1.235736
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.76e+00
--- Iteration [704/800] ---
- Total Loss: 4.2887
- NLL: 3.9918
- Reg: 0.2968
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 704]
-> Rozdil (Pred - Target): 1.387101
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.35e+00
--- Iteration [705/800] ---
- Total Loss: 5.5707
- NLL: 5.2739
- Reg: 0.2968
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 705 ---
Average MSE: 18.3233, Average ANEES: 92.7109
```

```
[DIAGNOSTIKA iter 705]
-> Rozdil (Pred - Target): 1.385114
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.25e+01
--- Iteration [706/800] ---
- Total Loss: 5.8845
- NLL: 5.5877
- Reg: 0.2968
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 706]
-> Rozdil (Pred - Target): 1.269011
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.97e+01
```

--- Iteration [707/800] ---

- Total Loss: 4.5632
- NLL: 4.2664
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 707]

- > Rozdil (Pred - Target): 1.310393
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.03e+01

--- Iteration [708/800] ---

- Total Loss: 7.6493
- NLL: 7.3525
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 708]

- > Rozdil (Pred - Target): 1.306705
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.36e+01

--- Iteration [709/800] ---

- Total Loss: 4.7494
- NLL: 4.4526
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 709]

- > Rozdil (Pred - Target): 1.260138
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.98e+00

--- Iteration [710/800] ---

- Total Loss: 5.5516
- NLL: 5.2548
- Reg: 0.2968
- p1=0.568, p2=0.404

--- Validation at iteration 710 ---

Average MSE: 14.2843, Average ANEES: 88.3558

[DIAGNOSTIKA iter 710]

- > Rozdil (Pred - Target): 1.245032
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.20e+01

--- Iteration [711/800] ---

- Total Loss: 5.6692
- NLL: 5.3724
- Reg: 0.2968

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 711]
-> Rozdil (Pred - Target): 1.380340
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.58e+01
--- Iteration [712/800] ---
- Total Loss: 7.1784
- NLL: 6.8816
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 712]
-> Rozdil (Pred - Target): 1.563479
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.60e+01
--- Iteration [713/800] ---
- Total Loss: 7.2282
- NLL: 6.9315
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 713]
-> Rozdil (Pred - Target): 1.464442
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.33e+01
--- Iteration [714/800] ---
- Total Loss: 5.6378
- NLL: 5.3410
- Reg: 0.2968
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 714]
-> Rozdil (Pred - Target): 1.461227
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.40e+01
--- Iteration [715/800] ---
- Total Loss: 4.2852
- NLL: 3.9884
- Reg: 0.2968
- p1=0.568, p2=0.404

--- Validation at iteration 715 ---
Average MSE: 14.1191, Average ANEES: 83.6774
-----
```

```
[DIAGNOSTIKA iter 715]
-> Rozdil (Pred - Target): 1.387174
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.17e+00
--- Iteration [716/800] ---
- Total Loss: 6.4996
- NLL: 6.2029
- Reg: 0.2968
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 716]
-> Rozdil (Pred - Target): 1.291969
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.36e+00
--- Iteration [717/800] ---
- Total Loss: 5.4186
- NLL: 5.1218
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 717]
-> Rozdil (Pred - Target): 1.415141
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.56e+00
--- Iteration [718/800] ---
- Total Loss: 5.5717
- NLL: 5.2750
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 718]
-> Rozdil (Pred - Target): 1.404312
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.31e+01
--- Iteration [719/800] ---
- Total Loss: 4.8627
- NLL: 4.5659
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 719]
-> Rozdil (Pred - Target): 1.411353
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.08e+01
--- Iteration [720/800] ---
- Total Loss: 5.1062
- NLL: 4.8095
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 720 ---
  Average MSE: 16.3142, Average ANEES: 94.7626
```

```
[DIAGNOSTIKA iter 720]
  -> Rozdil (Pred - Target): 1.274708
  -> Min Variance v batchi:  0.00e+00
  -> Mean Variance v batchi: 1.14e+01
--- Iteration [721/800] ---
  - Total Loss: 5.8199
  - NLL: 5.5232
  - Reg: 0.2967
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 721]
  -> Rozdil (Pred - Target): 1.463415
  -> Min Variance v batchi:  0.00e+00
  -> Mean Variance v batchi: 2.04e+01
--- Iteration [722/800] ---
  - Total Loss: 4.8261
  - NLL: 4.5294
  - Reg: 0.2967
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 722]
  -> Rozdil (Pred - Target): 1.507355
  -> Min Variance v batchi:  0.00e+00
  -> Mean Variance v batchi: 2.05e+01
--- Iteration [723/800] ---
  - Total Loss: 4.9157
  - NLL: 4.6190
  - Reg: 0.2967
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 723]
  -> Rozdil (Pred - Target): 1.336236
  -> Min Variance v batchi:  0.00e+00
  -> Mean Variance v batchi: 1.77e+01
--- Iteration [724/800] ---
  - Total Loss: 5.4804
  - NLL: 5.1837
  - Reg: 0.2967
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 724]
  -> Rozdil (Pred - Target): 1.172072
  -> Min Variance v batchi:  0.00e+00
  -> Mean Variance v batchi: 6.31e+00
```

```
--- Iteration [725/800] ---
- Total Loss: 5.6502
- NLL: 5.3535
- Reg: 0.2967
- p1=0.568, p2=0.404

--- Validation at iteration 725 ---
Average MSE: 18.3682, Average ANEES: 84.8144
```

```
[DIAGNOSTIKA iter 725]
-> Rozdil (Pred - Target): 1.370575
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.04e+01
--- Iteration [726/800] ---
- Total Loss: 5.2847
- NLL: 4.9881
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 726]
-> Rozdil (Pred - Target): 1.439845
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.76e+01
--- Iteration [727/800] ---
- Total Loss: 5.5238
- NLL: 5.2271
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 727]
-> Rozdil (Pred - Target): 1.550636
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.01e+01
--- Iteration [728/800] ---
- Total Loss: 5.1891
- NLL: 4.8924
- Reg: 0.2967
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 728]
-> Rozdil (Pred - Target): 1.358856
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.36e+01
--- Iteration [729/800] ---
- Total Loss: 7.6767
- NLL: 7.3801
- Reg: 0.2966
```

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 729]
-> Rozdil (Pred - Target): 1.267404
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.67e+00
--- Iteration [730/800] ---
- Total Loss: 6.3825
- NLL: 6.0859
- Reg: 0.2966
- p1=0.568, p2=0.404

--- Validation at iteration 730 ---
Average MSE: 20.8665, Average ANEES: 93.7054
-----

[DIAGNOSTIKA iter 730]
-> Rozdil (Pred - Target): 1.425137
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.86e+01
--- Iteration [731/800] ---
- Total Loss: 4.8518
- NLL: 4.5552
- Reg: 0.2966
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 731]
-> Rozdil (Pred - Target): 1.222463
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.10e+01
--- Iteration [732/800] ---
- Total Loss: 4.6851
- NLL: 4.3885
- Reg: 0.2966
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 732]
-> Rozdil (Pred - Target): 1.270834
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.99e+00
--- Iteration [733/800] ---
- Total Loss: 5.4330
- NLL: 5.1364
- Reg: 0.2966
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 733]
-> Rozdil (Pred - Target): 1.206714

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.05e+01
--- Iteration [734/800] ---
- Total Loss: 3.6161
- NLL: 3.3195
- Reg: 0.2966
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 734]
-> Rozdil (Pred - Target): 1.253953
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.32e+00
--- Iteration [735/800] ---
- Total Loss: 5.0102
- NLL: 4.7136
- Reg: 0.2966
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 735 ---
Average MSE: 18.6638, Average ANEES: 84.6743
```

```
[DIAGNOSTIKA iter 735]
-> Rozdil (Pred - Target): 1.554974
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.24e+01
--- Iteration [736/800] ---
- Total Loss: 6.0557
- NLL: 5.7592
- Reg: 0.2966
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 736]
-> Rozdil (Pred - Target): 1.941397
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.44e+01
--- Iteration [737/800] ---
- Total Loss: 6.9435
- NLL: 6.6469
- Reg: 0.2966
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 737]
-> Rozdil (Pred - Target): 1.182226
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.85e+00
--- Iteration [738/800] ---
- Total Loss: 6.1089
```

```
- NLL: 5.8123  
- Reg: 0.2966  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 738]

```
-> Rozdil (Pred - Target): 1.502007  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.45e+01  
--- Iteration [739/800] ---  
- Total Loss: 6.1057  
- NLL: 5.8091  
- Reg: 0.2966  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 739]

```
-> Rozdil (Pred - Target): 1.337568  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 8.16e+00  
--- Iteration [740/800] ---  
- Total Loss: 6.4291  
- NLL: 6.1325  
- Reg: 0.2966  
- p1=0.568, p2=0.404
```

--- Validation at iteration 740 ---

Average MSE: 24.3749, Average ANEES: 78.6694

[DIAGNOSTIKA iter 740]

```
-> Rozdil (Pred - Target): 1.410047  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 1.25e+01  
--- Iteration [741/800] ---  
- Total Loss: 5.8514  
- NLL: 5.5548  
- Reg: 0.2966  
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 741]

```
-> Rozdil (Pred - Target): 1.216053  
-> Min Variance v batchi: 0.00e+00  
-> Mean Variance v batchi: 5.31e+00  
--- Iteration [742/800] ---  
- Total Loss: 4.5836  
- NLL: 4.2870  
- Reg: 0.2966  
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 742]
-> Rozdil (Pred - Target): 1.579282
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.70e+01
--- Iteration [743/800] ---
- Total Loss: 4.4962
- NLL: 4.1997
- Reg: 0.2966
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 743]
-> Rozdil (Pred - Target): 1.230249
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.03e+00
--- Iteration [744/800] ---
- Total Loss: 3.2440
- NLL: 2.9475
- Reg: 0.2965
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 744]
-> Rozdil (Pred - Target): 1.341988
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.42e+01
--- Iteration [745/800] ---
- Total Loss: 5.9426
- NLL: 5.6461
- Reg: 0.2965
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 745 ---
Average MSE: 18.5143, Average ANEES: 78.6433
```

```
[DIAGNOSTIKA iter 745]
-> Rozdil (Pred - Target): 1.256892
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.37e+00
--- Iteration [746/800] ---
- Total Loss: 5.5535
- NLL: 5.2570
- Reg: 0.2965
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 746]
-> Rozdil (Pred - Target): 1.444424
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.66e+01
```

--- Iteration [747/800] ---

- Total Loss: 5.6010
- NLL: 5.3045
- Reg: 0.2965
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 747]

- > Rozdil (Pred - Target): 1.567611
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.54e+01

--- Iteration [748/800] ---

- Total Loss: 4.5439
- NLL: 4.2474
- Reg: 0.2965
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 748]

- > Rozdil (Pred - Target): 1.342232
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.18e+01

--- Iteration [749/800] ---

- Total Loss: 4.2419
- NLL: 3.9454
- Reg: 0.2965
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 749]

- > Rozdil (Pred - Target): 1.170021
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 9.38e+00

--- Iteration [750/800] ---

- Total Loss: 4.0724
- NLL: 3.7759
- Reg: 0.2965
- p1=0.568, p2=0.404

--- Validation at iteration 750 ---

Average MSE: 16.0796, Average ANEES: 89.7787

[DIAGNOSTIKA iter 750]

- > Rozdil (Pred - Target): 1.290513
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.11e+01

--- Iteration [751/800] ---

- Total Loss: 5.7380
- NLL: 5.4415
- Reg: 0.2965

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 751]
-> Rozdil (Pred - Target): 1.296573
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.82e+00
--- Iteration [752/800] ---
- Total Loss: 5.7856
- NLL: 5.4892
- Reg: 0.2965
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 752]
-> Rozdil (Pred - Target): 1.278875
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.69e+00
--- Iteration [753/800] ---
- Total Loss: 6.3093
- NLL: 6.0128
- Reg: 0.2964
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 753]
-> Rozdil (Pred - Target): 1.063558
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.73e+00
--- Iteration [754/800] ---
- Total Loss: 5.6730
- NLL: 5.3766
- Reg: 0.2964
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 754]
-> Rozdil (Pred - Target): 1.252453
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.21e+01
--- Iteration [755/800] ---
- Total Loss: 5.3768
- NLL: 5.0804
- Reg: 0.2964
- p1=0.568, p2=0.404

--- Validation at iteration 755 ---
Average MSE: 18.9986, Average ANEES: 91.5274
-----
```

```
[DIAGNOSTIKA iter 755]
-> Rozdil (Pred - Target): 1.517075
```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.70e+01
--- Iteration [756/800] ---
- Total Loss: 6.8640
- NLL: 6.5676
- Reg: 0.2964
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 756]
-> Rozdil (Pred - Target): 1.480475
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.13e+01
--- Iteration [757/800] ---
- Total Loss: 6.3408
- NLL: 6.0444
- Reg: 0.2964
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 757]
-> Rozdil (Pred - Target): 1.271480
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.01e+01
--- Iteration [758/800] ---
- Total Loss: 5.1096
- NLL: 4.8132
- Reg: 0.2964
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 758]
-> Rozdil (Pred - Target): 1.290939
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.38e+01
--- Iteration [759/800] ---
- Total Loss: 3.8480
- NLL: 3.5516
- Reg: 0.2964
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 759]
-> Rozdil (Pred - Target): 1.504387
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.28e+01
--- Iteration [760/800] ---
- Total Loss: 5.1471
- NLL: 4.8507
- Reg: 0.2964
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 760 ---
  Average MSE: 18.9950, Average ANEES: 87.6299
```

```
[DIAGNOSTIKA iter 760]
  -> Rozdil (Pred - Target): 1.423153
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 1.56e+01
--- Iteration [761/800] ---
  - Total Loss: 5.1966
  - NLL: 4.9003
  - Reg: 0.2964
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 761]
  -> Rozdil (Pred - Target): 1.343735
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 1.19e+01
--- Iteration [762/800] ---
  - Total Loss: 5.3624
  - NLL: 5.0660
  - Reg: 0.2964
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 762]
  -> Rozdil (Pred - Target): 1.411905
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 3.28e+01
--- Iteration [763/800] ---
  - Total Loss: 4.6174
  - NLL: 4.3210
  - Reg: 0.2963
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 763]
  -> Rozdil (Pred - Target): 1.263057
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 7.14e+00
--- Iteration [764/800] ---
  - Total Loss: 5.8534
  - NLL: 5.5571
  - Reg: 0.2963
  - p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 764]
  -> Rozdil (Pred - Target): 1.262580
  -> Min Variance v batchi: 0.00e+00
  -> Mean Variance v batchi: 7.05e+00
```

```
--- Iteration [765/800] ---
- Total Loss: 5.8086
- NLL: 5.5123
- Reg: 0.2963
- p1=0.568, p2=0.404

--- Validation at iteration 765 ---
Average MSE: 16.5062, Average ANEES: 87.2071
```

```
[DIAGNOSTIKA iter 765]
-> Rozdil (Pred - Target): 1.344197
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.11e+01
--- Iteration [766/800] ---
- Total Loss: 7.1204
- NLL: 6.8241
- Reg: 0.2963
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 766]
-> Rozdil (Pred - Target): 1.224637
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.73e+00
--- Iteration [767/800] ---
- Total Loss: 4.7457
- NLL: 4.4494
- Reg: 0.2963
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 767]
-> Rozdil (Pred - Target): 1.366217
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.20e+01
--- Iteration [768/800] ---
- Total Loss: 4.8843
- NLL: 4.5880
- Reg: 0.2963
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 768]
-> Rozdil (Pred - Target): 1.309821
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.21e+01
--- Iteration [769/800] ---
- Total Loss: 5.3862
- NLL: 5.0899
- Reg: 0.2963
```

```

- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 769]
-> Rozdil (Pred - Target): 1.232980
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.73e+00
--- Iteration [770/800] ---
- Total Loss: 5.3131
- NLL: 5.0168
- Reg: 0.2963
- p1=0.568, p2=0.404

--- Validation at iteration 770 ---
Average MSE: 14.6551, Average ANEES: 88.2860
-----

[DIAGNOSTIKA iter 770]
-> Rozdil (Pred - Target): 1.280890
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.00e+00
--- Iteration [771/800] ---
- Total Loss: 3.9092
- NLL: 3.6129
- Reg: 0.2963
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 771]
-> Rozdil (Pred - Target): 1.256843
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.22e+01
--- Iteration [772/800] ---
- Total Loss: 5.2269
- NLL: 4.9306
- Reg: 0.2963
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 772]
-> Rozdil (Pred - Target): 1.186858
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.41e+00
--- Iteration [773/800] ---
- Total Loss: 5.5871
- NLL: 5.2909
- Reg: 0.2962
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 773]
-> Rozdil (Pred - Target): 1.325949

```

```
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.91e+00
--- Iteration [774/800] ---
- Total Loss: 6.1459
- NLL: 5.8496
- Reg: 0.2962
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 774]
-> Rozdil (Pred - Target): 1.298859
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.71e+01
--- Iteration [775/800] ---
- Total Loss: 5.8289
- NLL: 5.5326
- Reg: 0.2962
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 775 ---
Average MSE: 16.0078, Average ANEES: 80.8114
```

```
[DIAGNOSTIKA iter 775]
-> Rozdil (Pred - Target): 1.263124
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.72e+00
--- Iteration [776/800] ---
- Total Loss: 5.4064
- NLL: 5.1102
- Reg: 0.2962
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 776]
-> Rozdil (Pred - Target): 1.540955
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 9.44e+01
--- Iteration [777/800] ---
- Total Loss: 5.0607
- NLL: 4.7645
- Reg: 0.2962
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 777]
-> Rozdil (Pred - Target): 1.817248
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 5.03e+01
--- Iteration [778/800] ---
- Total Loss: 5.3188
```

```
- NLL: 5.0226
- Reg: 0.2962
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 778]

```
-> Rozdil (Pred - Target): 1.392681
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.23e+01
--- Iteration [779/800] ---
- Total Loss: 5.5348
- NLL: 5.2386
- Reg: 0.2962
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 779]

```
-> Rozdil (Pred - Target): 1.415526
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.17e+01
--- Iteration [780/800] ---
- Total Loss: 4.7692
- NLL: 4.4730
- Reg: 0.2962
- p1=0.568, p2=0.404
```

--- Validation at iteration 780 ---

```
Average MSE: 18.0878, Average ANEES: 70.9104
>>> New best VALIDATION ANEES! Saving model. <<<
```

[DIAGNOSTIKA iter 780]

```
-> Rozdil (Pred - Target): 1.224976
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.13e+01
--- Iteration [781/800] ---
- Total Loss: 5.5306
- NLL: 5.2345
- Reg: 0.2962
- p1=0.568, p2=0.404
```

[DIAGNOSTIKA iter 781]

```
-> Rozdil (Pred - Target): 1.296485
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.92e+00
--- Iteration [782/800] ---
- Total Loss: 5.8206
- NLL: 5.5245
- Reg: 0.2962
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 782]
-> Rozdil (Pred - Target): 1.388046
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.64e+01
--- Iteration [783/800] ---
- Total Loss: 5.0618
- NLL: 4.7656
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 783]
-> Rozdil (Pred - Target): 1.481555
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 3.70e+01
--- Iteration [784/800] ---
- Total Loss: 6.4646
- NLL: 6.1685
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 784]
-> Rozdil (Pred - Target): 1.346165
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.05e+01
--- Iteration [785/800] ---
- Total Loss: 4.7352
- NLL: 4.4391
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 785 ---
Average MSE: 19.2400, Average ANEES: 75.8266
```

```
[DIAGNOSTIKA iter 785]
-> Rozdil (Pred - Target): 1.275289
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.36e+01
--- Iteration [786/800] ---
- Total Loss: 5.0359
- NLL: 4.7398
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 786]
-> Rozdil (Pred - Target): 1.334051
-> Min Variance v batchi: 0.00e+00
```

```
-> Mean Variance v batchi: 5.87e+00
--- Iteration [787/800] ---
- Total Loss: 5.8718
- NLL: 5.5757
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 787]
-> Rozdil (Pred - Target): 1.250761
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 7.30e+00
--- Iteration [788/800] ---
- Total Loss: 4.7184
- NLL: 4.4223
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 788]
-> Rozdil (Pred - Target): 1.378173
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.00e+01
--- Iteration [789/800] ---
- Total Loss: 5.5848
- NLL: 5.2887
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 789]
-> Rozdil (Pred - Target): 1.665375
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.16e+01
--- Iteration [790/800] ---
- Total Loss: 5.0845
- NLL: 4.7884
- Reg: 0.2961
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 790 ---
Average MSE: 14.5513, Average ANEES: 102.4056
```

```
[DIAGNOSTIKA iter 790]
-> Rozdil (Pred - Target): 1.204277
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 6.38e+00
--- Iteration [791/800] ---
- Total Loss: 3.5034
- NLL: 3.2073
```

- Reg: 0.2961
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 791]

- > Rozdil (Pred - Target): 1.540985
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 3.44e+01

--- Iteration [792/800] ---

- Total Loss: 5.6302
- NLL: 5.3342
- Reg: 0.2961
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 792]

- > Rozdil (Pred - Target): 1.156064
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 5.21e+00

--- Iteration [793/800] ---

- Total Loss: 6.1100
- NLL: 5.8140
- Reg: 0.2961
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 793]

- > Rozdil (Pred - Target): 1.405677
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 1.45e+01

--- Iteration [794/800] ---

- Total Loss: 6.4042
- NLL: 6.1081
- Reg: 0.2960
- p1=0.568, p2=0.404

[DIAGNOSTIKA iter 794]

- > Rozdil (Pred - Target): 1.207375
- > Min Variance v batchi: 0.00e+00
- > Mean Variance v batchi: 8.24e+00

--- Iteration [795/800] ---

- Total Loss: 6.8320
- NLL: 6.5360
- Reg: 0.2960
- p1=0.568, p2=0.404

--- Validation at iteration 795 ---

Average MSE: 17.2904, Average ANEES: 85.0315

[DIAGNOSTIKA iter 795]

```
-> Rozdil (Pred - Target): 1.322376
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.10e+01
--- Iteration [796/800] ---
- Total Loss: 5.8453
- NLL: 5.5493
- Reg: 0.2960
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 796]
-> Rozdil (Pred - Target): 1.247109
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 4.05e+01
--- Iteration [797/800] ---
- Total Loss: 3.6422
- NLL: 3.3462
- Reg: 0.2960
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 797]
-> Rozdil (Pred - Target): 1.349090
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 1.22e+01
--- Iteration [798/800] ---
- Total Loss: 5.6276
- NLL: 5.3315
- Reg: 0.2960
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 798]
-> Rozdil (Pred - Target): 1.214164
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 8.72e+00
--- Iteration [799/800] ---
- Total Loss: 4.7803
- NLL: 4.4843
- Reg: 0.2960
- p1=0.568, p2=0.404
```

```
[DIAGNOSTIKA iter 799]
-> Rozdil (Pred - Target): 1.412701
-> Min Variance v batchi: 0.00e+00
-> Mean Variance v batchi: 2.97e+01
--- Iteration [800/800] ---
- Total Loss: 4.1514
- NLL: 3.8554
- Reg: 0.2960
- p1=0.568, p2=0.404
```

```
--- Validation at iteration 800 ---
Average MSE: 20.2923, Average ANEES: 90.2297
```

```
-----  
Training completed.  
Loading best model from iteration 780 with ANEES 70.9104
```

```
[7]: # import gc
# import torch

# # === GPU/CUDA Cleanup Helper (Models Only) ===
# # Frees GPU memory by moving neural nets to CPU, deleting their references,
# # forcing GC, and clearing CUDA cache. Does NOT remove DataLoaders or trainer.

# def _cuda_mem_info():
#     if torch.cuda.is_available():
#         alloc = torch.cuda.memory_allocated() / 1e6
#         reserv = torch.cuda.memory_reserved() / 1e6
#         print(f"CUDA mem -> Allocated: {alloc:.1f} MB | Reserved: {reserv:.
#             \+1f} MB")
#     else:
#         print("CUDA not available.")

# print("Before cleanup:")
# _cuda_mem_info()

# # Release neural network models only
# for name in ["state_knet", "trained_model_bkn"]:
#     if name in globals():
#         obj = globals()[name]
#         try:
#             obj.to("cpu")
#         except Exception:
#             pass
#         # Drop common optimizer/scheduler refs if attached to the model
#         for attr in ["optimizer", "opt", "optim", "scheduler"]:
#             if hasattr(obj, attr):
#                 try:
#                     delattr(obj, attr)
#                 except Exception:
#                     pass
#             del globals()[name]
#         print(f"Released model '{name}' and deleted reference")

# # Force Python GC and clear CUDA cache
# gc.collect()
```

```

# if torch.cuda.is_available():
#     try:
#         torch.cuda.synchronize()
#     except Exception:
#         pass
#     torch.cuda.empty_cache()
#     try:
#         torch.cuda.ipc_collect()
#     except Exception:
#         pass

# print("After cleanup:")
# _cuda_mem_info()

```

```

[8]: if True:
    import torch
    import os

    # Protože jsí trénink přerušil, nemáme slovník s metrikami automaticky.
    # Musíme uložit přímo model 'state_knet'.

    # 1. Definuj cestu (Metriky si do názvu musíš dopsat ručně podle toho, co jsi viděl v logu napsledy,
    # nebo použij obecný název, abys o model nepřišel).
    save_path = 'best_BKN_test_results_legal.pth'
    # Pokud si pamatuješ hodnoty z logu (např. ANEES 23.5), můžeš je tam dopsat ručně:
    # save_path = 'best_kalmanet_nclt_sensor_fusion_ANEES23.57_MSE8.
    # 17_interrupted.pth'

    # 2. Uložení
    # DŮLEŽITÉ: Voláme .state_dict() přímo na objektu state_knet (nebo trained_knet, pokud jsí ho přiřadil)
    # Nepoužíváme závorky ['final_model'], protože state_knet UŽ JE ten model.
    torch.save(state_knet.state_dict(), save_path)

    print(f"\n Záchrana modelu úspěšná! Uloženo do: {save_path}")

if False:
    import os
    trained_knet = state_knet
    # Přístup k metrikám ve slovníku je správně (přes závorky [])
    print(f"    -> Best ANEES: {trained_knet['best_val_anees']:.4f}")
    print(f"    -> Best MSE:   {trained_knet['best_val_mse']:.4f}")
    save_path =
        f'best_kalmanet_nclt_sensor_fusion_ANEES{trained_knet["best_val_anees"]:.4f}_MSE{trained_knet["best_val_mse"]:.4f}_nejlepsi_test_vysledky.pth '

```

```

# OPRAVA: Musíš vytáhnout model ze slovníku pomocí klíče 'final_model'
# A teprve na něm zavolat .state_dict()
torch.save(trained_knet['final_model'].state_dict(), save_path)

print(f"\n Model úspěšně uložen do: {save_path}")

```

Záchrana modelu úspěšná! Uloženo do: best_BKN_test_results_legal.pth

```

[9]: import torch
import torch.nn.functional as F
import numpy as np
import matplotlib.pyplot as plt
import Filters

# -----
# O. KONFIGURACE A MODEL
# -----
DT_SEC = 1.0
J_SAMPLES = 50 # 50 vzorků pro kvalitní odhad distribuce

if hasattr(sys_model, 'dt'):
    sys_model.dt = DT_SEC
    print(f"INFO: Nastaveno sys_model.dt = {DT_SEC} s")

# Načtení Bayesian modelu
try:
    trained_model_bkn = state_knet
    trained_model_bkn.eval()
    print(f"INFO: Používám Bayesian KalmanNet s J={J_SAMPLES} vzorky.")
except NameError:
    raise NameError("Chyba: 'state_knet' (BKN) neexistuje.")

from Filters import NCLT
# Inicializace klasických filtroù
ukf_filter = NCLT.UnscentedKalmanFilterNCLT(sys_model)
ekf_filter = NCLT.ExtendedKalmanFilterNCLT(sys_model)

# --- ROBUSTNÍ FUNKCE PRO ANEES ---
def calculate_anees(x_true, x_est, P_est):
    """
    Vypočítá ANEES. Očekává vstupy už se shodnou dimenzí.
    Používá pinv pro stabilitu.
    """
    T = x_true.shape[0]
    anees_list = []

```

```

error = x_true - x_est

for t in range(T):
    e_t = error[t].unsqueeze(1) # [n, 1]
    P_t = P_est[t]           # [n, n]

    try:
        P_inv = torch.linalg.pinv(P_t, hermitian=True)
    except RuntimeError:
        P_inv = torch.eye(P_t.shape[0], device=P_t.device)

    nees = torch.mm(torch.mm(e_t.t(), P_inv), e_t).item()
    anees_list.append(nees)

return np.mean(anees_list)

# =====
# 1. EVALUACE A VIZUALIZACE
# =====

results = {
    'GPS_Sensor': [],     'GPS_Authors': [],
    'EKF_MSE': [],        'EKF_ANEES': [],
    'UKF_MSE': [],        'UKF_ANEES': [],
    'BKN_MSE': [],        'BKN_ANEES': []
}

print(f"\nSpouštím detailní evaluaci na {len(test_data_raw)} trajektoriích...")

# HLAVIČKA DETAILNÍ TABULKY
print("\n" + "-"*95)
print(f"{'TRAJEKTORIE':<12} | {'BKN MSE':<10} | {'BKN ANEES':<10} | {'EKF MSE':<10} | {'EKF ANEES':<10} | {'GPS MSE':<10}")
print("-" * 95)

for i, traj in enumerate(test_data_raw):
    # --- PRÍPRAVA DAT ---
    gt_raw = traj['ground_truth'].float().to(DEVICE)
    gps_filtered = traj['filtered_gps'].float().to(DEVICE)
    gps_filled = traj['gps'].float().to(DEVICE)
    imu_raw = traj['imu'].float().to(DEVICE)
    odo_raw = traj['filtered_wheel'].float().to(DEVICE)

    T_len = gt_raw.shape[0]

    # Input vector
    u_full = torch.stack((
        torch.nan_to_num(odo_raw[:, 0], nan=0.0),

```

```

    torch.nan_to_num(odo_raw[:, 1], nan=0.0),
    imu_raw[:, 2],
    imu_raw[:, 3]
), dim=1).to(DEVICE)

# Init State (bereme z GT)
# x_true má dimenzi 3 (X, Y, Theta)
x_true = gt_raw[:, :3]

# Init pro filtry (plná dimenze modelu)
m = sys_model.state_dim
x0_vec = torch.zeros(m).to(DEVICE)
x0_vec[0] = x_true[0, 0]; x0_vec[1] = x_true[0, 1]
if m >= 3 and x_true.shape[1] >= 3: x0_vec[4] = x_true[0, 2]

# --- A. BĚH BAYESIAN KALMANNET ---
trained_model_bkn.train() # Nutné pro MC Dropout

batch_x0 = x0_vec.unsqueeze(0).repeat(J_SAMPLES, 1)
trained_model_bkn.reset(batch_size=J_SAMPLES, initial_state=batch_x0)

bkn_samples = []
bkn_samples.append(batch_x0.unsqueeze(1))

with torch.no_grad():
    for t in range(1, T_len):
        y_t = gps_filtered[t].unsqueeze(0).repeat(J_SAMPLES, 1)
        u_t = u_full[t].unsqueeze(0).repeat(J_SAMPLES, 1)
        x_est_j, _ = trained_model_bkn.step(y_t, u_t)
        bkn_samples.append(x_est_j.unsqueeze(1))

trained_model_bkn.eval()
bkn_ensemble = torch.cat(bkn_samples, dim=1) # [J, T, m]

# Statistiky BKN
x_bkn_mean = torch.mean(bkn_ensemble, dim=0)

# Výpočet kovariance BKN
centered = bkn_ensemble - x_bkn_mean.unsqueeze(0)
centered_perm = centered.permute(1, 2, 0)
P_bkn = torch.bmm(centered_perm, centered_perm.transpose(1, 2)) / (J_SAMPLES - 1)
P_bkn = P_bkn + torch.eye(m, device=DEVICE).unsqueeze(0) * 1e-6

# --- B. EKF & UKF ---
def run_filter(flt):
    try:

```

```

        res = flt.process_sequence(gps_filtered, u_seq=u_full, Ex0=x0_vec, u
↪P0=sys_model.P0)
        return res['x_filtered'], res.get('P_filtered', torch.eye(m, u
↪device=DEVICE).repeat(T_len, 1, 1))
    except:
        return torch.zeros(T_len, m).to(DEVICE), torch.eye(m, u
↪device=DEVICE).repeat(T_len, 1, 1)

x_ekf, P_ekf = run_filter(ekf_filter)
x_ukf, P_ukf = run_filter(ukf_filter)

# --- VYHODNOCENÍ (SLICING) ---
eval_dim = x_true.shape[1] # 3 (X, Y, Theta)

def evaluate_metrics(est_x, est_P):
    # MSE (poloha X, Y)
    mse = F.mse_loss(est_x[:, :2], x_true[:, :2]).item()
    # ANEES (Oříznuté na eval_dim)
    est_x_sliced = est_x[:, :eval_dim]
    est_P_sliced = est_P[:, :eval_dim, :eval_dim]
    anees = calculate_anees(x_true, est_x_sliced, est_P_sliced)
    return mse, anees

mse_ekf, anees_ekf = evaluate_metrics(x_ekf, P_ekf)
mse_ukf, anees_ukf = evaluate_metrics(x_ukf, P_ukf)
mse_bkn, anees_bkn = evaluate_metrics(x_bkn_mean, P_bkn)

valid_mask = ~torch.isnan(gps_filtered[:, 0])
mse_gps = F.mse_loss(gps_filtered[valid_mask], x_true[valid_mask, :2]).
↪item() if valid_mask.sum() > 0 else np.nan

# Ukládání
results['GPS_Sensor'].append(mse_gps)
results['EKF_MSE'].append(mse_ekf); results['EKF_ANEES'].append(anees_ekf)
results['UKF_MSE'].append(mse_ukf); results['UKF_ANEES'].append(anees_ukf)
results['BKN_MSE'].append(mse_bkn); results['BKN_ANEES'].append(anees_bkn)

# --- VÝPIS ŘÁDKU TABULKY ---
print(f"{i+1:<12} | {mse_bkn:<10.2f} | {anees_bkn:<10.2f} | {mse_ekf:<10.
↪2f} | {anees_ekf:<10.2f} | {mse_gps:<10.2f}")

# --- VIZUALIZACE ---
gt_np = x_true.cpu().numpy()
bkn_np = x_bkn_mean.cpu().numpy()
std_x_bkn = torch.sqrt(P_bkn[:, 0, 0]).cpu().numpy()
t_axis = np.arange(T_len)

```

```

fig, (ax1, ax2) = plt.subplots(1, 2, figsize=(16, 6))

# Graf 1: 2D Trajektorie
ax1.plot(gt_np[:, 0], gt_np[:, 1], 'k-', lw=2, label='Ground Truth')
ax1.plot(x_ekf.cpu().numpy()[:, 0], x_ekf.cpu().numpy()[:, 1], 'r--', lw=1.5, label='EKF')
ax1.plot(bkn_np[:, 0], bkn_np[:, 1], 'b-.', lw=1.5, label='BKN')
ax1.set_title(f'Traj {i+1}: 2D Position')
ax1.set_xlabel('East [m]'); ax1.set_ylabel('North [m]')
ax1.legend(); ax1.grid(True); ax1.axis('equal')

# Graf 2: Time Series X s Confidence Tube
ax2.plot(t_axis, gt_np[:, 0], 'k-', lw=1, label='GT X')
ax2.plot(t_axis, bkn_np[:, 0], 'b-', lw=1, label='BKN X')
ax2.fill_between(t_axis,
                  bkn_np[:, 0] - 3*std_x_bkn,
                  bkn_np[:, 0] + 3*std_x_bkn,
                  color='blue', alpha=0.2, label='3$\sigma$ Uncertainty')
ax2.set_title(f'X-Coord Uncertainty (ANEES: {anees_bkn:.2f})')
ax2.set_xlabel('Time Step'); ax2.set_ylabel('X Position [m]')
ax2.legend(); ax2.grid(True)

plt.tight_layout()
plt.show()

# =====
# 2. FINÁLNÍ SOUHRN
# =====
print("\n" + "="*80)
print(f"PRŮMĚRNÉ VÝSLEDKY ({len(test_data_raw)} trajektorií)")
print("=". * 80)
print(f"{'Metoda':<10} | {'MSE':<12} | {'RMSE':<12} | {'ANEES':<12}")
print("-" * 80)
print(f"{'BKN':<10} | {np.nanmean(results['BKN_MSE']):<12.2f} | {np.sqrt(np.
    nanmean(results['BKN_MSE'])):<12.2f} | {np.nanmean(results['BKN_ANEES']):<12.
    2f}")
print(f"{'EKF':<10} | {np.nanmean(results['EKF_MSE']):<12.2f} | {np.sqrt(np.
    nanmean(results['EKF_MSE'])):<12.2f} | {np.nanmean(results['EKF_ANEES']):<12.
    2f}")
print("=". * 80)

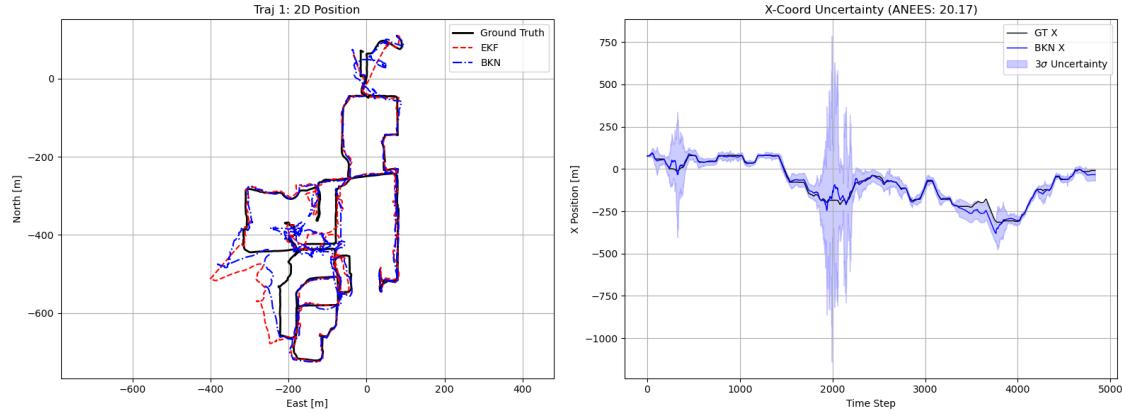
```

INFO: Nastaveno sys_model.dt = 1.0 s
 INFO: Používám Bayesian KalmanNet s J=50 vzorky.

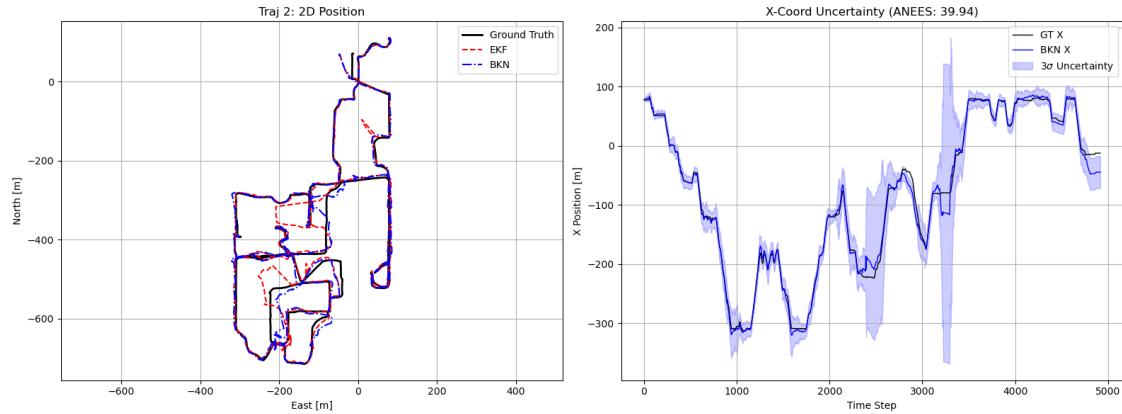
Spouštím detailní evaluaci na 3 trajektoriích..

TRAJEKTORIE	BKN MSE	BKN ANEES	EKF MSE	EKF ANEES	GPS MSE
-------------	---------	-----------	---------	-----------	---------

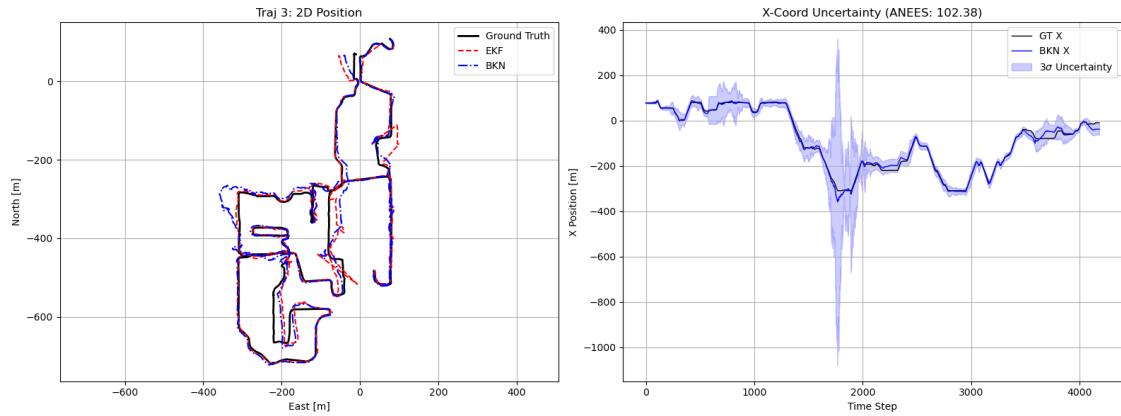
1	264.70	20.17	443.11	1027.02	164.46
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2	72.16	39.94	221.68	445.10	51.13
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3	74.94	102.38	128.44	311.25	39.94
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PRŮMĚRNÉ VÝSLEDKY (3 trajektorií)

Metoda	MSE	RMSE	ANEES
BKN	137.27	11.72	54.16
EKF	264.41	16.26	594.46
