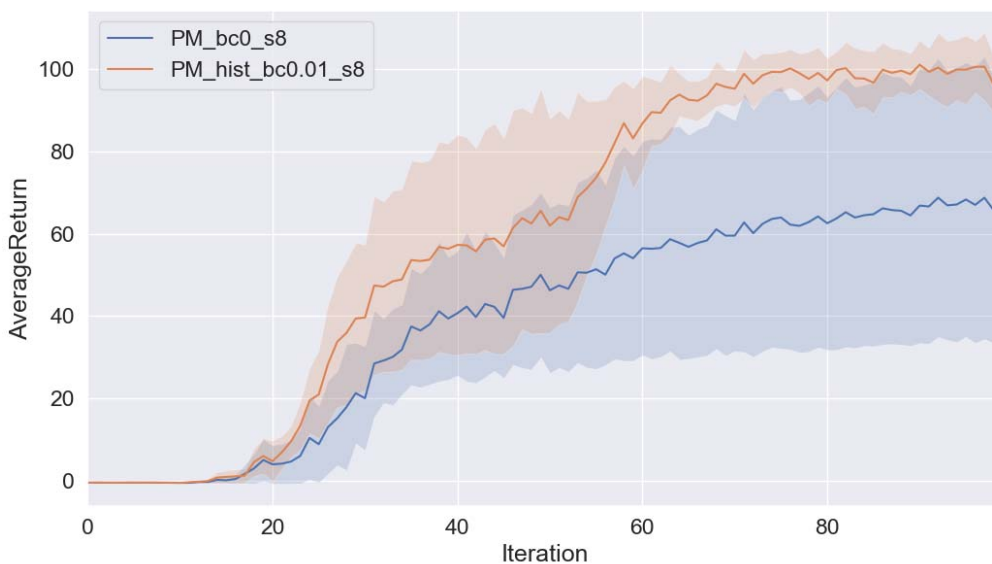


Problem 1 - Hist Exploration

The reward modification (Eqn. 1), the count-based reward bonus (Eqn. 2), and the histogram density model

- A plot with 2 curves comparing an agent with histogrambased exploration and an agent with no exploration

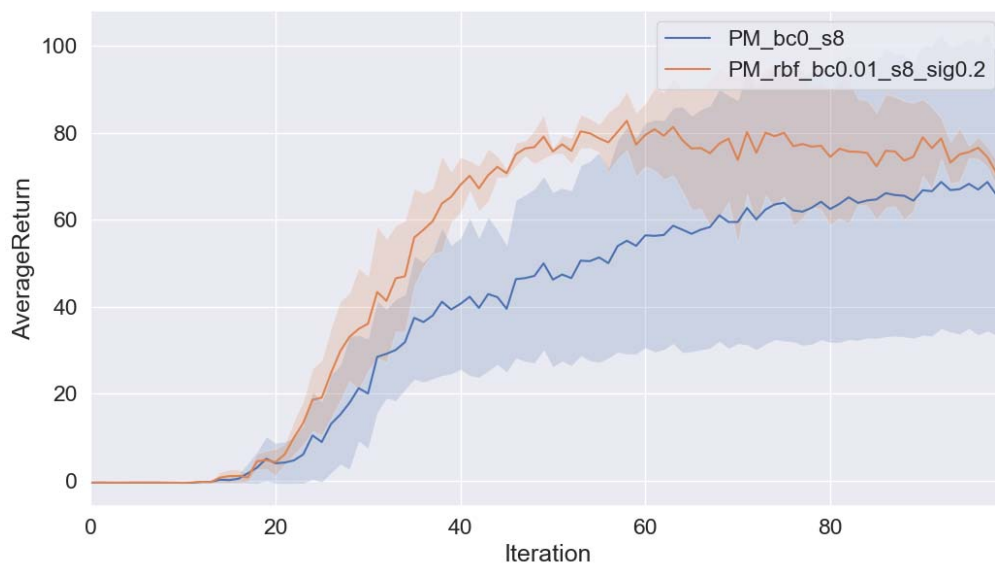


In []:

Problem 2 - RBF Exploration

The heuristic reward bonus (Eqn. 2), and the kernel density estimator with the radial basis function kernel.

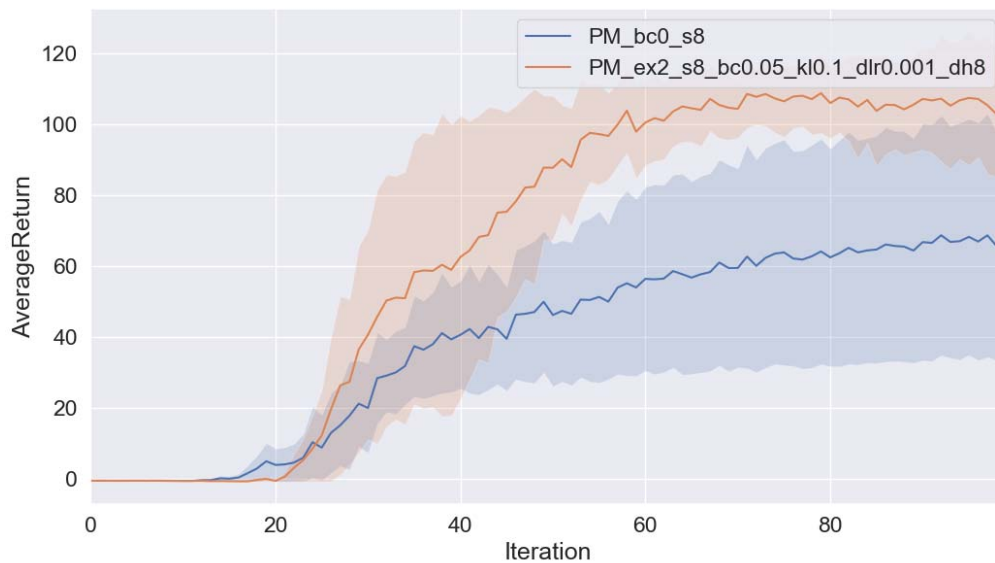
- A plot with 2 curves comparing an agent with KDEbased exploration and an agent with no exploration



In []:

Problem 3 - EX2 Exploration

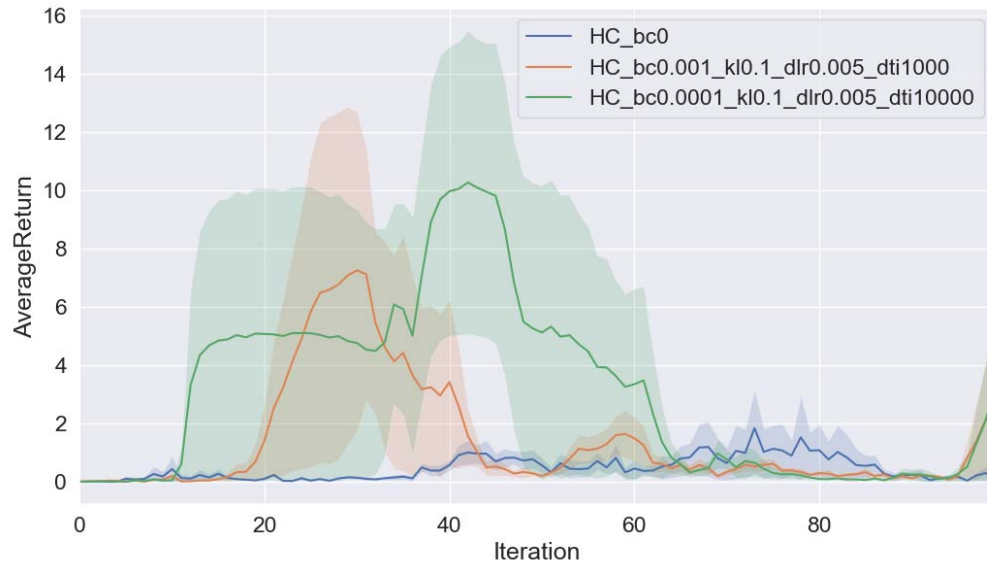
- A plot with 2 curves comparing an agent with EX2-based exploration and an agent with no exploration



In []:

Problem 4 - EX2 Exploration, Hyper-params

- A plot with 3 curves comparing the agents with EX2-based exploration and an agent with no exploration



Short answer:

- The average return peaks at the middle for both EX2 exploration.
- The learning is better with parameter $bc = 0.0001$

In []: