```
Training for 500000 steps ...
   913/500000: episode: 1, duration: 3.370s, episode steps: 913, steps per second: 271, episode reward: -21.000, mean reward: -0.023 [-1.000, 0.000], mean action: 2.413 [0.000, 5.000], mean observation: 105.605 [87.000, 236.000], loss: --, mean_absolute_error: --, mean_q: --, mean_eps: --
  1733/500000: episode: 2, duration: 2.540s, episode steps: 820, steps per second: 323, episode reward: -21.000, mean reward: -0.026 [-1.000, 0.000], mean action: 2.420 [0.000, 5.000], mean observation: 105.615 [87.000, 236.000], loss: --, mean_absolute_error: --, mean_q: --, mean_eps: --
  2755/500000: episode: 3, duration: 3.143s, episode steps: 1022, steps per second: 325, episode reward: -21.000, mean reward: -0.021 [-1.000, 0.000], mean action: 2.391 [0.000, 5.000], mean observation: 105.615 [87.000, 236.000], loss: --, mean_absolute_error: --, mean_q: --, mean_eps: --
```


181269/500000: episode: 214, duration: 7.302s, episode steps: 826, steps per second: 113, episode reward: -21.000, mean reward: -0.025 [-1.000, 0.000], mean action: 2.594 [0.000, 5.000], mean observation: 105.566 [87.000, 236.000], loss: 0.013029, mean_absolute_error: 0.319832, mean_q: -0.368936, mean_eps: 0.100000
182095/500000: episode: 215, duration: 7.263s, episode steps: 826, steps per second: 114, episode reward: -21.000, mean reward: -0.025 [-1.000, 0.000], mean action: 1.253 [0.000, 5.000], mean observation: 105.613 [87.000, 236.000], loss: 0.013310, mean_absolute_error: 0.326555, mean_q: -0.374104, mean_eps: 0.100000
182859/500000: episode: 216, duration: 6.795s, episode steps: 764, steps per second: 112, episode reward: -21.000, mean reward: -0.027 [-1.000, 0.000], mean action: 3.652 [0.000, 5.000], mean observation: 105.566 [87.000, 236.000], loss: 0.011393, mean_absolute_error: 0.319774, mean_q: -0.369002, mean_eps: 0.100000
...
[Reinforcement learning training log continues — dense tabular episode metrics, one line per training step, through episode 428 / 356078/500000]

```
356899/500000: episode: 429, duration: 7.986s, episode steps: 921, steps per second: 115, episode reward: -20.000, mean reward: -0.022 [-1.000, 1.000], mean action: 0.712 [0.000, 5.000], mean observation: 105.404 [87.000, 236.000], loss: 0.013786, mean_absolute_error: 0.596760, mean_q: -0.698799, mean_eps: 0.100000
357823/500000: episode: 430, duration: 7.187s, episode steps: 824, steps per second: 115, episode reward: -21.000, mean reward: -0.025 [-1.000, 0.000], mean action: 1.681 [0.000, 5.000], mean observation: 105.600 [87.000, 236.000], loss: 0.013364, mean_absolute_error: 0.593708, mean_q: -0.699183, mean_eps: 0.100000
```

(... dense training log continues for episodes 429 through 604 ...)

```
done, took 4351.065 seconds
Pesos guardados en: 20200108_1204_dqn_PongDeterministic-v0_weights.h5f
```


Reward Entrenamiento

Episode Steps

```
Testing for 10 episodes ...
Episode 1: reward: -21.000, steps: 764
Episode 2: reward: -21.000, steps: 764
Episode 3: reward: -21.000, steps: 764
Episode 4: reward: -21.000, steps: 764
Episode 5: reward: -21.000, steps: 764
Episode 6: reward: -21.000, steps: 764
Episode 7: reward: -21.000, steps: 764
Episode 8: reward: -21.000, steps: 764
Episode 9: reward: -21.000, steps: 764
Episode 10: reward: -21.000, steps: 764
mean reward: -21.0
mean_steps: 764
(-21.0, 764)
```