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1 ssh://root@103.254.67.181:10006/usr/bin/python -u /home/
  sunfengzhen/pycharm/interval_pred10_goontrain_predrnnpp/
  interval_pred10_goontrain.py
2 pid memory used = 0.27 Gbytes
3 *****mode: test *****
4 load data... data/radar500_train001
5 data areas 1296
6 gen index
7 len(frames_file_name) : 4536
8 there are 216 sequences
9 there are 4536 pictures
10 *****mode: train *****
11 load data... data/radar500_train001
12 data areas 1296
13 gen index
14 len(frames_file_name) : 22680
15 there are 1080 sequences
16 there are 22680 pictures
17 pid memory used = 4.34 Gbytes
18 Initializing models
19 num_hidden : [128, 64, 64, 64]
20 2019-08-09 13:30:02.449054: I tensorflow/core/platform/
  cpu_feature_guard.cc:141] Your CPU supports instructions that
  this TensorFlow binary was not compiled to use: AVX2 FMA
21 2019-08-09 13:30:03.875800: I tensorflow/core/common_runtime/gpu/
  gpu_device.cc:1432] Found device 0 with properties:
22 name: GeForce GTX 1080 Ti major: 6 minor: 1 memoryClockRate(GHz
  ): 1.582
23 pciBusID: 0000:82:00.0
24 totalMemory: 10.92GiB freeMemory: 10.76GiB
25 2019-08-09 13:30:03.875866: I tensorflow/core/common_runtime/gpu/
  gpu_device.cc:1511] Adding visible gpu devices: 0
26 2019-08-09 13:30:04.269967: I tensorflow/core/common_runtime/gpu/
  gpu_device.cc:982] Device interconnect StreamExecutor with
  strength 1 edge matrix:
27 2019-08-09 13:30:04.270037: I tensorflow/core/common_runtime/gpu/
  gpu_device.cc:988] 0

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28 2019-08-09 13:30:04.270053: I tensorflow/core/common_runtime/gpu/
gpu_device.cc:1001] 0: N
29 2019-08-09 13:30:04.270407: I tensorflow/core/common_runtime/gpu/
gpu_device.cc:1115] Created TensorFlow device (/job:localhost/
replica:0/task:0/device:GPU:0 with 10409 MB memory) -> physical
GPU (device: 0, name: GeForce GTX 1080 Ti, pci bus id: 0000:82:00
.0, compute capability: 6.1)
30 ckpt.model_checkpoint_path checkpoints/radar_predrnn_pp/model.
ckpt-120000
31 global_step restore from checkpoint 120000
32 2019-08-09 13:31:41.187794: W tensorflow/core/common_runtime/
bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
trying to allocate 2.10GiB. The caller indicates that this is not
a failure, but may mean that there could be performance gains if
more memory were available.
33 2019-08-09 13:31:41.201681: W tensorflow/core/common_runtime/
bfc_allocator.cc:211] Allocator (GPU_0_bfc) ran out of memory
trying to allocate 2.07GiB. The caller indicates that this is not
a failure, but may mean that there could be performance gains if
more memory were available.
34 itr: 120010
35 training loss: 5825.3765
36 itr: 120020
37 training loss: 4765.0605
38 itr: 120030
39 training loss: 2394.066
40 itr: 120040
41 training loss: 3983.2607
42 itr: 120050
43 training loss: 2281.8823
44 itr: 120060
45 training loss: 4149.026
46 itr: 120070
47 training loss: 6983.4814
48 itr: 120080
49 training loss: 2444.3901
50 itr: 120090
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51 training loss: 3710.1135
52 itr: 120100
53 training loss: 1490.3353
54 itr: 120110
55 training loss: 5092.988
56 itr: 120120
57 training loss: 3861.279
58 itr: 120130
59 training loss: 2159.011
60 itr: 120140
61 training loss: 3713.095
62 itr: 120150
63 training loss: 5970.6484
64 itr: 120160
65 training loss: 3439.2153
66 itr: 120170
67 training loss: 5362.294
68 itr: 120180
69 training loss: 4773.0454
70 itr: 120190
71 training loss: 3394.6091
72 itr: 120200
73 training loss: 6297.7446
74 itr: 120210
75 training loss: 6244.077
76 itr: 120220
77 training loss: 2124.8528
78 itr: 120230
79 training loss: 4418.067
80 itr: 120240
81 training loss: 5492.8228
82 itr: 120250
83 training loss: 6356.6035
84 itr: 120260
85 training loss: 3907.9797
86 itr: 120270
87 training loss: 2818.4404
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88 itr: 120280
89 training loss: 5265.9033
90 itr: 120290
91 training loss: 5909.1665
92 itr: 120300
93 training loss: 2871.233
94 itr: 120310
95 training loss: 4785.828
96 itr: 120320
97 training loss: 5978.455
98 itr: 120330
99 training loss: 2662.1663
100 itr: 120340
101 training loss: 2907.361
102 itr: 120350
103 training loss: 4811.2466
104 itr: 120360
105 training loss: 7442.952
106 itr: 120370
107 training loss: 4363.2085
108 itr: 120380
109 training loss: 3674.856
110 itr: 120390
111 training loss: 4346.234
112 itr: 120400
113 training loss: 837.6546
114 itr: 120410
115 training loss: 3684.189
116 itr: 120420
117 training loss: 4495.138
118 itr: 120430
119 training loss: 6018.088
120 itr: 120440
121 training loss: 3870.6301
122 itr: 120450
123 training loss: 2675.6052
124 itr: 120460
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125 training loss: 4659.151
126 itr: 120470
127 training loss: 4179.0117
128 itr: 120480
129 training loss: 5749.544
130 itr: 120490
131 training loss: 4944.509
132 itr: 120500
133 training loss: 1791.2639
134 itr: 120510
135 training loss: 2821.295
136 itr: 120520
137 training loss: 4001.67
138 itr: 120530
139 training loss: 3527.8264
140 itr: 120540
141 training loss: 4770.693
142 itr: 120550
143 training loss: 7034.367
144 itr: 120560
145 training loss: 3482.0994
146 itr: 120570
147 training loss: 6571.2573
148 itr: 120580
149 training loss: 5971.9653
150 itr: 120590
151 training loss: 4529.9604
152 itr: 120600
153 training loss: 2893.641
154 itr: 120610
155 training loss: 2444.1365
156 itr: 120620
157 training loss: 4340.561
158 itr: 120630
159 training loss: 879.3671
160 itr: 120640
161 training loss: 6146.303
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162 itr: 120650
163 training loss: 4997.739
164 itr: 120660
165 training loss: 5486.406
166 itr: 120670
167 training loss: 5554.855
168 itr: 120680
169 training loss: 5591.93
170 itr: 120690
171 training loss: 4513.491
172 itr: 120700
173 training loss: 3334.9685
174 itr: 120710
175 training loss: 3137.5117
176 itr: 120720
177 training loss: 3307.751
178 itr: 120730
179 training loss: 5517.7544
180 itr: 120740
181 training loss: 4739.4146
182 itr: 120750
183 training loss: 5125.1353
184 itr: 120760
185 training loss: 6154.6533
186 itr: 120770
187 training loss: 6646.012
188 itr: 120780
189 training loss: 3869.823
190 itr: 120790
191 training loss: 5952.2695
192 itr: 120800
193 training loss: 1938.7308
194 itr: 120810
195 training loss: 3452.3506
196 itr: 120820
197 training loss: 6063.5537
198 itr: 120830
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199 training loss: 4839.192
200 itr: 120840
201 training loss: 5495.134
202 itr: 120850
203 training loss: 4492.9614
204 itr: 120860
205 training loss: 5069.457
206 itr: 120870
207 training loss: 2626.6362
208 itr: 120880
209 training loss: 4577.475
210 itr: 120890
211 training loss: 4386.409
212 itr: 120900
213 training loss: 3081.6865
214 itr: 120910
215 training loss: 5280.2046
216 itr: 120920
217 training loss: 6874.461
218 itr: 120930
219 training loss: 3962.9912
220 itr: 120940
221 training loss: 7253.274
222 itr: 120950
223 training loss: 5750.799
224 itr: 120960
225 training loss: 4845.4683
226 itr: 120970
227 training loss: 2042.4624
228 itr: 120980
229 training loss: 2844.6782
230 itr: 120990
231 training loss: 4602.8066
232 itr: 121000
233 training loss: 3004.1167
234 itr: 121010
235 training loss: 3738.8638
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236 itr: 121020
237 training loss: 6487.09
238 itr: 121030
239 training loss: 6106.3545
240 itr: 121040
241 training loss: 2418.6467
242 itr: 121050
243 training loss: 1609.7886
244 itr: 121060
245 training loss: 6632.7627
246 itr: 121070
247 training loss: 5046.1724
248 itr: 121080
249 training loss: 4316.664
250 itr: 121090
251 training loss: 2915.957
252 itr: 121100
253 training loss: 3283.3945
254 itr: 121110
255 training loss: 5958.0938
256 itr: 121120
257 training loss: 3269.8582
258 itr: 121130
259 training loss: 4897.1084
260 itr: 121140
261 training loss: 4381.9634
262 itr: 121150
263 training loss: 5132.32
264 itr: 121160
265 training loss: 4886.9863
266 itr: 121170
267 training loss: 5415.5312
268 itr: 121180
269 training loss: 5026.063
270 itr: 121190
271 training loss: 7298.283
272 itr: 121200
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273 training loss: 2331.1057
274 itr: 121210
275 training loss: 5752.362
276 itr: 121220
277 training loss: 4081.6257
278 itr: 121230
279 training loss: 4368.511
280 itr: 121240
281 training loss: 4939.172
282 itr: 121250
283 training loss: 4822.8965
284 itr: 121260
285 training loss: 5970.036
286 itr: 121270
287 training loss: 5233.5186
288 itr: 121280
289 training loss: 2793.1921
290 itr: 121290
291 training loss: 4944.454
292 itr: 121300
293 training loss: 6463.5186
294 itr: 121310
295 training loss: 1432.4324
296 itr: 121320
297 training loss: 4359.455
298 itr: 121330
299 training loss: 2554.6274
300 itr: 121340
301 training loss: 5746.3965
302 itr: 121350
303 training loss: 5219.8735
304 itr: 121360
305 training loss: 5041.331
306 itr: 121370
307 training loss: 1244.1031
308 itr: 121380
309 training loss: 5875.67
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310 itr: 121390
311 training loss: 2079.639
312 itr: 121400
313 training loss: 5431.542
314 itr: 121410
315 training loss: 3281.306
316 itr: 121420
317 training loss: 7727.4517
318 itr: 121430
319 training loss: 3803.5647
320 itr: 121440
321 training loss: 3109.1309
322 itr: 121450
323 training loss: 4585.8633
324 itr: 121460
325 training loss: 2781.048
326 itr: 121470
327 training loss: 5337.3037
328 itr: 121480
329 training loss: 1779.6665
330 itr: 121490
331 training loss: 5047.443
332 itr: 121500
333 training loss: 4286.471
334 itr: 121510
335 training loss: 2986.5964
336 itr: 121520
337 training loss: 2058.2754
338 itr: 121530
339 training loss: 3280.9622
340 itr: 121540
341 training loss: 3904.4553
342 itr: 121550
343 training loss: 5049.7285
344 itr: 121560
345 training loss: 4105.8066
346 itr: 121570
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347 training loss: 3370.818
348 itr: 121580
349 training loss: 6788.9863
350 itr: 121590
351 training loss: 2226.1565
352 itr: 121600
353 training loss: 4278.813
354 itr: 121610
355 training loss: 3587.212
356 itr: 121620
357 training loss: 3919.0054
358 itr: 121630
359 training loss: 5034.68
360 itr: 121640
361 training loss: 2683.5977
362 itr: 121650
363 training loss: 5829.7065
364 itr: 121660
365 training loss: 1776.8099
366 itr: 121670
367 training loss: 4857.7886
368 itr: 121680
369 training loss: 5370.5522
370 itr: 121690
371 training loss: 3266.3645
372 itr: 121700
373 training loss: 2740.3633
374 itr: 121710
375 training loss: 3765.8242
376 itr: 121720
377 training loss: 3718.1218
378 itr: 121730
379 training loss: 4738.9927
380 itr: 121740
381 training loss: 2542.4124
382 itr: 121750
383 training loss: 3907.8276
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384 itr: 121760
385 training loss: 1987.4355
386 itr: 121770
387 training loss: 4334.196
388 itr: 121780
389 training loss: 3800.7244
390 itr: 121790
391 training loss: 3925.2612
392 itr: 121800
393 training loss: 2783.1904
394 itr: 121810
395 training loss: 6702.8613
396 itr: 121820
397 training loss: 886.6645
398 itr: 121830
399 training loss: 4816.435
400 itr: 121840
401 training loss: 3634.0452
402 itr: 121850
403 training loss: 2227.0447
404 itr: 121860
405 training loss: 3022.7996
406 itr: 121870
407 training loss: 2944.7065
408 itr: 121880
409 training loss: 4224.783
410 itr: 121890
411 training loss: 5433.2793
412 itr: 121900
413 training loss: 5355.724
414 itr: 121910
415 training loss: 3636.7803
416 itr: 121920
417 training loss: 2521.0237
418 itr: 121930
419 training loss: 2589.5483
420 itr: 121940
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421 training loss: 5506.283
422 itr: 121950
423 training loss: 6908.031
424 itr: 121960
425 training loss: 3371.6604
426 itr: 121970
427 training loss: 5177.8267
428 itr: 121980
429 training loss: 5947.485
430 itr: 121990
431 training loss: 2995.6604
432 itr: 122000
433 training loss: 2065.434
434 itr: 122010
435 training loss: 6744.792
436 itr: 122020
437 training loss: 5397.582
438 itr: 122030
439 training loss: 1594.982
440 itr: 122040
441 training loss: 1829.3508
442 itr: 122050
443 training loss: 3220.8506
444 itr: 122060
445 training loss: 4536.648
446 itr: 122070
447 training loss: 5073.416
448 itr: 122080
449 training loss: 2661.1238
450 itr: 122090
451 training loss: 4593.694
452 itr: 122100
453 training loss: 4025.2642
454 itr: 122110
455 training loss: 3219.796
456 itr: 122120
457 training loss: 5891.3345
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458 itr: 122130
459 training loss: 5516.5737
460 itr: 122140
461 training loss: 4757.892
462 itr: 122150
463 training loss: 4421.4565
464 itr: 122160
465 training loss: 2834.0078
466 itr: 122170
467 training loss: 3912.6104
468 itr: 122180
469 training loss: 2808.4973
470 itr: 122190
471 training loss: 3912.235
472 itr: 122200
473 training loss: 2268.3687
474 itr: 122210
475 training loss: 1587.3146
476 itr: 122220
477 training loss: 3216.833
478 itr: 122230
479 training loss: 2608.924
480 itr: 122240
481 training loss: 3200.613
482 itr: 122250
483 training loss: 2620.3804
484 itr: 122260
485 training loss: 3370.499
486 itr: 122270
487 training loss: 4919.988
488 itr: 122280
489 training loss: 4035.338
490 itr: 122290
491 training loss: 5404.0596
492 itr: 122300
493 training loss: 3666.447
494 itr: 122310
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495 training loss: 6472.0312
496 itr: 122320
497 training loss: 7361.6343
498 itr: 122330
499 training loss: 3199.9583
500 itr: 122340
501 training loss: 2429.3542
502 itr: 122350
503 training loss: 5765.7173
504 itr: 122360
505 training loss: 4204.7314
506 itr: 122370
507 training loss: 2760.4453
508 itr: 122380
509 training loss: 1336.4388
510 itr: 122390
511 training loss: 4820.1455
512 itr: 122400
513 training loss: 4870.3247
514 itr: 122410
515 training loss: 5929.324
516 itr: 122420
517 training loss: 2921.3472
518 itr: 122430
519 training loss: 3299.9207
520 itr: 122440
521 training loss: 3208.7915
522 itr: 122450
523 training loss: 5723.9766
524 itr: 122460
525 training loss: 5857.4424
526 itr: 122470
527 training loss: 3115.2136
528 itr: 122480
529 training loss: 2473.2937
530 itr: 122490
531 training loss: 5264.2974
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532 itr: 122500
533 training loss: 3914.71
534 itr: 122510
535 training loss: 2890.1965
536 itr: 122520
537 training loss: 3888.5347
538 itr: 122530
539 training loss: 4339.7856
540 itr: 122540
541 training loss: 3653.1387
542 itr: 122550
543 training loss: 4008.9946
544 itr: 122560
545 training loss: 2927.6255
546 itr: 122570
547 training loss: 6328.856
548 itr: 122580
549 training loss: 5264.657
550 itr: 122590
551 training loss: 3654.116
552 itr: 122600
553 training loss: 6130.87
554 itr: 122610
555 training loss: 1749.4597
556 itr: 122620
557 training loss: 3132.09
558 itr: 122630
559 training loss: 5987.548
560 itr: 122640
561 training loss: 3749.422
562 itr: 122650
563 training loss: 5411.9546
564 itr: 122660
565 training loss: 5115.5474
566 itr: 122670
567 training loss: 4164.2104
568 itr: 122680
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569 training loss: 6049.708
570 itr: 122690
571 training loss: 5384.5264
572 itr: 122700
573 training loss: 5882.3022
574 itr: 122710
575 training loss: 3029.5828
576 itr: 122720
577 training loss: 3573.23
578 itr: 122730
579 training loss: 3752.5474
580 itr: 122740
581 training loss: 3780.8438
582 itr: 122750
583 training loss: 4139.537
584 itr: 122760
585 training loss: 5820.397
586 itr: 122770
587 training loss: 2763.458
588 itr: 122780
589 training loss: 2341.7373
590 itr: 122790
591 training loss: 1803.5645
592 itr: 122800
593 training loss: 5898.7583
594 itr: 122810
595 training loss: 2879.8772
596 itr: 122820
597 training loss: 4438.6777
598 itr: 122830
599 training loss: 5226.2056
600 itr: 122840
601 training loss: 2786.9211
602 itr: 122850
603 training loss: 4177.2417
604 itr: 122860
605 training loss: 4238.122
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606 itr: 122870
607 training loss: 3972.2905
608 itr: 122880
609 training loss: 4356.931
610 itr: 122890
611 training loss: 5776.3657
612 itr: 122900
613 training loss: 4343.767
614 itr: 122910
615 training loss: 2704.903
616 itr: 122920
617 training loss: 2311.2007
618 itr: 122930
619 training loss: 4229.835
620 itr: 122940
621 training loss: 6939.762
622 itr: 122950
623 training loss: 4041.0325
624 itr: 122960
625 training loss: 4274.899
626 itr: 122970
627 training loss: 5399.842
628 itr: 122980
629 training loss: 1996.3109
630 itr: 122990
631 training loss: 3203.1687
632 itr: 123000
633 training loss: 5882.074
634 itr: 123010
635 training loss: 6283.1846
636 itr: 123020
637 training loss: 3132.3345
638 itr: 123030
639 training loss: 3712.4688
640 itr: 123040
641 training loss: 4062.0117
642 itr: 123050
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643 training loss: 4586.501
644 itr: 123060
645 training loss: 6581.0854
646 itr: 123070
647 training loss: 4428.1274
648 itr: 123080
649 training loss: 5711.79
650 itr: 123090
651 training loss: 3287.7554
652 itr: 123100
653 training loss: 4657.6553
654 itr: 123110
655 training loss: 3652.2656
656 itr: 123120
657 training loss: 5996.55
658 itr: 123130
659 training loss: 3200.6416
660 itr: 123140
661 training loss: 2851.4778
662 itr: 123150
663 training loss: 4920.8467
664 itr: 123160
665 training loss: 5280.3247
666 itr: 123170
667 training loss: 3503.4639
668 itr: 123180
669 training loss: 1974.394
670 itr: 123190
671 training loss: 4969.594
672 itr: 123200
673 training loss: 6046.251
674 itr: 123210
675 training loss: 2922.003
676 itr: 123220
677 training loss: 5296.474
678 itr: 123230
679 training loss: 2546.4675
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680 itr: 123240
681 training loss: 4339.769
682 itr: 123250
683 training loss: 5606.307
684 itr: 123260
685 training loss: 4637.05
686 itr: 123270
687 training loss: 6654.2812
688 itr: 123280
689 training loss: 2524.925
690 itr: 123290
691 training loss: 6767.67
692 itr: 123300
693 training loss: 3823.384
694 itr: 123310
695 training loss: 3614.0664
696 itr: 123320
697 training loss: 2644.8274
698 itr: 123330
699 training loss: 6281.009
700 itr: 123340
701 training loss: 7539.061
702 itr: 123350
703 training loss: 5114.7427
704 itr: 123360
705 training loss: 3543.4712
706 itr: 123370
707 training loss: 5513.232
708 itr: 123380
709 training loss: 5754.6343
710 itr: 123390
711 training loss: 3201.03
712 itr: 123400
713 training loss: 4597.3535
714 itr: 123410
715 training loss: 5805.4536
716 itr: 123420
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717 training loss: 3345.584
718 itr: 123430
719 training loss: 2323.118
720 itr: 123440
721 training loss: 3176.8638
722 itr: 123450
723 training loss: 4129.7236
724 itr: 123460
725 training loss: 5018.1284
726 itr: 123470
727 training loss: 6220.383
728 itr: 123480
729 training loss: 5114.3896
730 itr: 123490
731 training loss: 5482.192
732 itr: 123500
733 training loss: 2398.6794
734 itr: 123510
735 training loss: 2555.645
736 itr: 123520
737 training loss: 3803.9985
738 itr: 123530
739 training loss: 1800.8169
740 itr: 123540
741 training loss: 2466.7217
742 itr: 123550
743 training loss: 3231.8906
744 itr: 123560
745 training loss: 2980.7869
746 itr: 123570
747 training loss: 3336.5332
748 itr: 123580
749 training loss: 3723.9883
750 itr: 123590
751 training loss: 3625.1807
752 itr: 123600
753 training loss: 5102.8916
```

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754 itr: 123610
755 training loss: 2137.29
756 itr: 123620
757 training loss: 2928.07
758 itr: 123630
759 training loss: 6106.55
760 itr: 123640
761 training loss: 4016.8594
762 itr: 123650
763 training loss: 4774.0723
764 itr: 123660
765 training loss: 2005.326
766 itr: 123670
767 training loss: 6210.822
768 itr: 123680
769 training loss: 3664.7493
770 itr: 123690
771 training loss: 5399.3833
772 itr: 123700
773 training loss: 6162.53
774 itr: 123710
775 training loss: 4940.3584
776 itr: 123720
777 training loss: 7144.2114
778 itr: 123730
779 training loss: 3411.1868
780 itr: 123740
781 training loss: 4583.923
782 itr: 123750
783 training loss: 1983.3225
784 itr: 123760
785 training loss: 4899.1045
786 itr: 123770
787 training loss: 1539.2161
788 itr: 123780
789 training loss: 5036.9766
790 itr: 123790
```

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791 training loss: 5421.0947
792 itr: 123800
793 training loss: 5012.7275
794 itr: 123810
795 training loss: 3340.0242
796 itr: 123820
797 training loss: 1803.6636
798 itr: 123830
799 training loss: 3445.3713
800 itr: 123840
801 training loss: 1700.9751
802 itr: 123850
803 training loss: 2390.7893
804 itr: 123860
805 training loss: 2267.9963
806 itr: 123870
807 training loss: 3100.3801
808 itr: 123880
809 training loss: 4541.9053
810 itr: 123890
811 training loss: 6119.413
812 itr: 123900
813 training loss: 3338.6523
814 itr: 123910
815 training loss: 3778.7073
816 itr: 123920
817 training loss: 5324.004
818 itr: 123930
819 training loss: 3221.9302
820 itr: 123940
821 training loss: 1875.1776
822 itr: 123950
823 training loss: 4504.4365
824 itr: 123960
825 training loss: 3950.7017
826 itr: 123970
827 training loss: 3775.8625
```

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828 itr: 123980
829 training loss: 2109.717
830 itr: 123990
831 training loss: 6085.1787
832 itr: 124000
833 training loss: 5309.2837
834 itr: 124010
835 training loss: 5374.7
836 itr: 124020
837 training loss: 2549.4695
838 itr: 124030
839 training loss: 4495.5317
840 itr: 124040
841 training loss: 4040.2273
842 itr: 124050
843 training loss: 2373.9988
844 itr: 124060
845 training loss: 3970.026
846 itr: 124070
847 training loss: 3437.8865
848 itr: 124080
849 training loss: 5541.111
850 itr: 124090
851 training loss: 4930.1113
852 itr: 124100
853 training loss: 2552.9226
854 itr: 124110
855 training loss: 4322.8022
856 itr: 124120
857 training loss: 6033.1934
858 itr: 124130
859 training loss: 5001.408
860 itr: 124140
861 training loss: 2268.459
862 itr: 124150
863 training loss: 5792.758
864 itr: 124160
```



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865 training loss: 5014.1577
866 itr: 124170
867 training loss: 3801.6406
868 itr: 124180
869 training loss: 4359.171
870 itr: 124190
871 training loss: 4257.512
872 itr: 124200
873 training loss: 2352.7998
874 itr: 124210
875 training loss: 6645.216
876 itr: 124220
877 training loss: 4091.8657
878 itr: 124230
879 training loss: 4642.438
880 itr: 124240
881 training loss: 5398.9062
882 itr: 124250
883 training loss: 4256.698
884 itr: 124260
885 training loss: 4569.2915
886 itr: 124270
887 training loss: 2867.1301
888 itr: 124280
889 training loss: 3334.7256
890 itr: 124290
891 training loss: 3909.0303
892 itr: 124300
893 training loss: 3082.1128
894 itr: 124310
895 training loss: 3884.1406
896 itr: 124320
897 training loss: 5635.481
898 itr: 124330
899 training loss: 4030.6282
900 itr: 124340
901 training loss: 3187.3008
```

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902 itr: 124350
903 training loss: 4777.9067
904 itr: 124360
905 training loss: 1129.7372
906 itr: 124370
907 training loss: 3307.0383
908 itr: 124380
909 training loss: 2222.9856
910 itr: 124390
911 training loss: 5005.6304
912 itr: 124400
913 training loss: 4266.6914
914 itr: 124410
915 training loss: 1334.4005
916 itr: 124420
917 training loss: 5423.4204
918 itr: 124430
919 training loss: 1264.5208
920 itr: 124440
921 training loss: 4551.4927
922 itr: 124450
923 training loss: 3317.7139
924 itr: 124460
925 training loss: 4287.738
926 itr: 124470
927 training loss: 1882.3215
928 itr: 124480
929 training loss: 3915.1797
930 itr: 124490
931 training loss: 931.26825
932 itr: 124500
933 training loss: 3312.7083
934 itr: 124510
935 training loss: 5219.4756
936 itr: 124520
937 training loss: 4303.8867
938 itr: 124530
```

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939 training loss: 5811.617
940 itr: 124540
941 training loss: 694.8771
942 itr: 124550
943 training loss: 4023.1758
944 itr: 124560
945 training loss: 5045.7188
946 itr: 124570
947 training loss: 4322.0337
948 itr: 124580
949 training loss: 5825.1772
950 itr: 124590
951 training loss: 2896.1855
952 itr: 124600
953 training loss: 4317.7
954 itr: 124610
955 training loss: 1584.8136
956 itr: 124620
957 training loss: 2433.6309
958 itr: 124630
959 training loss: 3828.0996
960 itr: 124640
961 training loss: 2340.264
962 itr: 124650
963 training loss: 2090.4507
964 itr: 124660
965 training loss: 3647.269
966 itr: 124670
967 training loss: 852.54114
968 itr: 124680
969 training loss: 1792.535
970 itr: 124690
971 training loss: 3343.0085
972 itr: 124700
973 training loss: 5176.1597
974 itr: 124710
975 training loss: 5572.509
```

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976 itr: 124720
977 training loss: 5189.1914
978 itr: 124730
979 training loss: 4406.825
980 itr: 124740
981 training loss: 1653.2341
982 itr: 124750
983 training loss: 2976.688
984 itr: 124760
985 training loss: 5740.55
986 itr: 124770
987 training loss: 1190.5
988 itr: 124780
989 training loss: 4016.6973
990 itr: 124790
991 training loss: 3851.9941
992 itr: 124800
993 training loss: 5468.5674
994 itr: 124810
995 training loss: 1666.6313
996 itr: 124820
997 training loss: 4085.6267
998 itr: 124830
999 training loss: 2449.9065
1000 itr: 124840
1001 training loss: 3630.7007
1002 itr: 124850
1003 training loss: 2083.7056
1004 itr: 124860
1005 training loss: 4841.5933
1006 itr: 124870
1007 training loss: 5949.2935
1008 itr: 124880
1009 training loss: 4464.871
1010 itr: 124890
1011 training loss: 3555.656
1012 itr: 124900
```

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1013 training loss: 4857.7603
1014 itr: 124910
1015 training loss: 2916.23
1016 itr: 124920
1017 training loss: 1695.3097
1018 itr: 124930
1019 training loss: 5731.0425
1020 itr: 124940
1021 training loss: 5060.732
1022 itr: 124950
1023 training loss: 4460.3228
1024 itr: 124960
1025 training loss: 6634.692
1026 itr: 124970
1027 training loss: 4240.861
1028 itr: 124980
1029 training loss: 5037.4756
1030 itr: 124990
1031 training loss: 5528.2295
1032 itr: 125000
1033 training loss: 6582.3223
1034 test...
1035 mse per seq: 9159.585203735916
1036 616.7035901104963
1037 709.0413445366753
1038 790.4289882094772
1039 840.2015369556568
1040 907.9169372276024
1041 1004.9826712431731
1042 1030.3472028661656
1043 1055.0363458704066
1044 1083.276143250642
1045 1121.6504434656215
1046 psnr per frame: 17.266235
1047 18.690681
1048 18.118048
1049 17.783903
```

1050	17.54644
1051	17.28975
1052	16.808737
1053	16.712933
1054	16.620552
1055	16.57501
1056	16.516293
1057	fmae per frame: 1951.9652
1058	1559.7212
1059	1691.9928
1060	1807.0923
1061	1875.6685
1062	1961.9484
1063	2077.751
1064	2107.5586
1065	2125.0396
1066	2140.977
1067	2171.9045
1068	ssim per frame: 0.78328574
1069	0.81370497
1070	0.801895
1071	0.79423803
1072	0.78865093
1073	0.7837239
1074	0.7732019
1075	0.7710747
1076	0.76953936
1077	0.7681129
1078	0.76871496
1079	sharpness per frame: 254.03702
1080	254.87962
1081	254.78703
1082	254.35185
1083	254.46297
1084	254.27777
1085	253.75
1086	253.85185

```
1087 253.09723
1088 253.60185
1089 253.31018
1090 saved to checkpoints/radar_predrnn_pp
1091 itr: 125010
1092 training loss: 3533.4658
1093 itr: 125020
1094 training loss: 5134.9126
1095 itr: 125030
1096 training loss: 6680.0005
1097 itr: 125040
1098 training loss: 5083.74
1099 itr: 125050
1100 training loss: 3022.8162
1101 itr: 125060
1102 training loss: 6214.7446
1103 itr: 125070
1104 training loss: 3231.6953
1105 itr: 125080
1106 training loss: 2502.612
1107 itr: 125090
1108 training loss: 2800.4534
1109 itr: 125100
1110 training loss: 2970.5173
1111 itr: 125110
1112 training loss: 6077.7
1113 itr: 125120
1114 training loss: 5265.5186
1115 itr: 125130
1116 training loss: 3578.7522
1117 itr: 125140
1118 training loss: 3363.9502
1119 itr: 125150
1120 training loss: 2406.5134
1121 itr: 125160
1122 training loss: 5323.678
1123 itr: 125170
```

```
1124 training loss: 4292.181
1125 itr: 125180
1126 training loss: 6233.7656
1127 itr: 125190
1128 training loss: 5280.7036
1129 itr: 125200
1130 training loss: 5691.293
1131 itr: 125210
1132 training loss: 5035.689
1133 itr: 125220
1134 training loss: 2287.646
1135 itr: 125230
1136 training loss: 1385.7625
1137 itr: 125240
1138 training loss: 7894.7944
1139 itr: 125250
1140 training loss: 4059.7112
1141 itr: 125260
1142 training loss: 2999.5615
1143 itr: 125270
1144 training loss: 2035.1202
1145 itr: 125280
1146 training loss: 5633.999
1147 itr: 125290
1148 training loss: 3006.225
1149 itr: 125300
1150 training loss: 5672.794
1151 itr: 125310
1152 training loss: 3150.0815
1153 itr: 125320
1154 training loss: 1546.3112
1155 itr: 125330
1156 training loss: 3337.9546
1157 itr: 125340
1158 training loss: 5957.8315
1159 itr: 125350
1160 training loss: 4069.2412
```



```
1161 itr: 125360
1162 training loss: 4536.1323
1163 itr: 125370
1164 training loss: 4342.742
1165 itr: 125380
1166 training loss: 5120.567
1167 itr: 125390
1168 training loss: 5683.2275
1169 itr: 125400
1170 training loss: 4647.3384
1171 itr: 125410
1172 training loss: 4313.9946
1173 itr: 125420
1174 training loss: 2649.2678
1175 itr: 125430
1176 training loss: 2959.0405
1177 itr: 125440
1178 training loss: 4066.4263
1179 itr: 125450
1180 training loss: 4220.31
1181 itr: 125460
1182 training loss: 1977.2073
1183 itr: 125470
1184 training loss: 2098.8137
1185 itr: 125480
1186 training loss: 5702.8325
1187 itr: 125490
1188 training loss: 6515.2925
1189 itr: 125500
1190 training loss: 5782.8906
1191 itr: 125510
1192 training loss: 5166.951
1193 itr: 125520
1194 training loss: 3856.485
1195 itr: 125530
1196 training loss: 3283.082
1197 itr: 125540
```

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1198 training loss: 4510.8467
1199 itr: 125550
1200 training loss: 5484.611
1201 itr: 125560
1202 training loss: 5031.1914
1203 itr: 125570
1204 training loss: 2543.6084
1205 itr: 125580
1206 training loss: 2138.6333
1207 itr: 125590
1208 training loss: 4231.4507
1209 itr: 125600
1210 training loss: 2557.0059
1211 itr: 125610
1212 training loss: 3601.3467
1213 itr: 125620
1214 training loss: 4395.0396
1215 itr: 125630
1216 training loss: 5105.5737
1217 itr: 125640
1218 training loss: 4185.572
1219 itr: 125650
1220 training loss: 1687.9366
1221 itr: 125660
1222 training loss: 4338.3877
1223 itr: 125670
1224 training loss: 5180.6377
1225 itr: 125680
1226 training loss: 2148.0454
1227 itr: 125690
1228 training loss: 2545.2866
1229 itr: 125700
1230 training loss: 2745.1123
1231 itr: 125710
1232 training loss: 4270.712
1233 itr: 125720
1234 training loss: 2429.5027
```

```
1235 itr: 125730
1236 training loss: 3115.4966
1237 itr: 125740
1238 training loss: 5398.961
1239 itr: 125750
1240 training loss: 2548.8313
1241 itr: 125760
1242 training loss: 3937.2913
1243 itr: 125770
1244 training loss: 3623.8994
1245 itr: 125780
1246 training loss: 3507.525
1247 itr: 125790
1248 training loss: 3377.7388
1249 itr: 125800
1250 training loss: 4360.5967
1251 itr: 125810
1252 training loss: 4631.3145
1253 itr: 125820
1254 training loss: 4916.1255
1255 itr: 125830
1256 training loss: 3864.2554
1257 itr: 125840
1258 training loss: 6657.4507
1259 itr: 125850
1260 training loss: 5888.347
1261 itr: 125860
1262 training loss: 7293.652
1263 itr: 125870
1264 training loss: 6903.1772
1265 itr: 125880
1266 training loss: 5130.7515
1267 itr: 125890
1268 training loss: 6110.492
1269 itr: 125900
1270 training loss: 1154.7872
1271 itr: 125910
```

```
1272 training loss: 1418.4874
1273 itr: 125920
1274 training loss: 4675.4775
1275 itr: 125930
1276 training loss: 5943.6836
1277 itr: 125940
1278 training loss: 4367.4595
1279 itr: 125950
1280 training loss: 5944.7197
1281 itr: 125960
1282 training loss: 5902.2163
1283 itr: 125970
1284 training loss: 3225.4404
1285 itr: 125980
1286 training loss: 5951.479
1287 itr: 125990
1288 training loss: 3295.9749
1289 itr: 126000
1290 training loss: 4322.2793
1291 itr: 126010
1292 training loss: 1876.918
1293 itr: 126020
1294 training loss: 5823.1963
1295 itr: 126030
1296 training loss: 4264.8374
1297 itr: 126040
1298 training loss: 4249.745
1299 itr: 126050
1300 training loss: 6226.6826
1301 itr: 126060
1302 training loss: 4196.8413
1303 itr: 126070
1304 training loss: 3860.9028
1305 itr: 126080
1306 training loss: 5672.5693
1307 itr: 126090
1308 training loss: 4365.187
```

```
1309 itr: 126100
1310 training loss: 3477.5156
1311 itr: 126110
1312 training loss: 3453.5532
1313 itr: 126120
1314 training loss: 3300.216
1315 itr: 126130
1316 training loss: 2974.6704
1317 itr: 126140
1318 training loss: 5556.2563
1319 itr: 126150
1320 training loss: 2500.7744
1321 itr: 126160
1322 training loss: 4196.5703
1323 itr: 126170
1324 training loss: 943.76855
1325 itr: 126180
1326 training loss: 3216.547
1327 itr: 126190
1328 training loss: 5886.2007
1329 itr: 126200
1330 training loss: 3348.3079
1331 itr: 126210
1332 training loss: 2826.2925
1333 itr: 126220
1334 training loss: 2974.978
1335 itr: 126230
1336 training loss: 4305.6074
1337 itr: 126240
1338 training loss: 3763.756
1339 itr: 126250
1340 training loss: 5442.718
1341 itr: 126260
1342 training loss: 3508.4504
1343 itr: 126270
1344 training loss: 6191.5776
1345 itr: 126280
```

```
1346 training loss: 5811.7065
1347 itr: 126290
1348 training loss: 5696.949
1349 itr: 126300
1350 training loss: 2598.0542
1351 itr: 126310
1352 training loss: 2146.8765
1353 itr: 126320
1354 training loss: 5659.708
1355 itr: 126330
1356 training loss: 3472.2588
1357 itr: 126340
1358 training loss: 5004.4863
1359 itr: 126350
1360 training loss: 6289.4556
1361 itr: 126360
1362 training loss: 4059.9229
1363 itr: 126370
1364 training loss: 4335.7236
1365 itr: 126380
1366 training loss: 4502.566
1367 itr: 126390
1368 training loss: 4240.585
1369 itr: 126400
1370 training loss: 4889.875
1371 itr: 126410
1372 training loss: 3984.9695
1373 itr: 126420
1374 training loss: 3330.4343
1375 itr: 126430
1376 training loss: 3831.8025
1377 itr: 126440
1378 training loss: 4674.1045
1379 itr: 126450
1380 training loss: 5058.046
1381 itr: 126460
1382 training loss: 1401.7087
```

```
1383 itr: 126470
1384 training loss: 2479.2808
1385 itr: 126480
1386 training loss: 5925.7305
1387 itr: 126490
1388 training loss: 5475.1797
1389 itr: 126500
1390 training loss: 4294.421
1391 itr: 126510
1392 training loss: 4766.2324
1393 itr: 126520
1394 training loss: 3182.037
1395 itr: 126530
1396 training loss: 5826.148
1397 itr: 126540
1398 training loss: 5507.374
1399 itr: 126550
1400 training loss: 2690.1184
1401 itr: 126560
1402 training loss: 1058.3414
1403 itr: 126570
1404 training loss: 3889.58
1405 itr: 126580
1406 training loss: 1687.5443
1407 itr: 126590
1408 training loss: 4653.8975
1409 itr: 126600
1410 training loss: 4150.316
1411 itr: 126610
1412 training loss: 5595.638
1413 itr: 126620
1414 training loss: 3988.398
1415 itr: 126630
1416 training loss: 6569.3013
1417 itr: 126640
1418 training loss: 5508.7563
1419 itr: 126650
```

```
1420 training loss: 3194.6536
1421 itr: 126660
1422 training loss: 4744.94
1423 itr: 126670
1424 training loss: 3603.1533
1425 itr: 126680
1426 training loss: 4944.29
1427 itr: 126690
1428 training loss: 2809.9146
1429 itr: 126700
1430 training loss: 2850.3418
1431 itr: 126710
1432 training loss: 7128.4775
1433 itr: 126720
1434 training loss: 1183.5323
1435 itr: 126730
1436 training loss: 4105.4883
1437 itr: 126740
1438 training loss: 2640.223
1439 itr: 126750
1440 training loss: 4855.624
1441 itr: 126760
1442 training loss: 3773.269
1443 itr: 126770
1444 training loss: 4353.926
1445 itr: 126780
1446 training loss: 5065.745
1447 itr: 126790
1448 training loss: 3330.624
1449 itr: 126800
1450 training loss: 3815.235
1451 itr: 126810
1452 training loss: 2579.175
1453 itr: 126820
1454 training loss: 7084.8003
1455 itr: 126830
1456 training loss: 4338.3594
```



```
1457 itr: 126840
1458 training loss: 1822.743
1459 itr: 126850
1460 training loss: 3749.2566
1461 itr: 126860
1462 training loss: 3868.29
1463 itr: 126870
1464 training loss: 5321.2124
1465 itr: 126880
1466 training loss: 4012.5503
1467 itr: 126890
1468 training loss: 3732.4734
1469 itr: 126900
1470 training loss: 6463.248
1471 itr: 126910
1472 training loss: 3138.7073
1473 itr: 126920
1474 training loss: 1868.8411
1475 itr: 126930
1476 training loss: 7756.1523
1477 itr: 126940
1478 training loss: 3995.9163
1479 itr: 126950
1480 training loss: 4323.9937
1481 itr: 126960
1482 training loss: 3892.5833
1483 itr: 126970
1484 training loss: 5045.391
1485 itr: 126980
1486 training loss: 3108.5925
1487 itr: 126990
1488 training loss: 4245.4897
1489 itr: 127000
1490 training loss: 6569.5806
1491 itr: 127010
1492 training loss: 3985.8062
1493 itr: 127020
```

```
1494 training loss: 1463.4426
1495 itr: 127030
1496 training loss: 4155.408
1497 itr: 127040
1498 training loss: 1873.891
1499 itr: 127050
1500 training loss: 3977.8076
1501 itr: 127060
1502 training loss: 3702.3445
1503 itr: 127070
1504 training loss: 2488.87
1505 itr: 127080
1506 training loss: 2105.0112
1507 itr: 127090
1508 training loss: 2551.5264
1509 itr: 127100
1510 training loss: 4133.7266
1511 itr: 127110
1512 training loss: 4803.5024
1513 itr: 127120
1514 training loss: 4611.3125
1515 itr: 127130
1516 training loss: 5241.576
1517 itr: 127140
1518 training loss: 5148.037
1519 itr: 127150
1520 training loss: 4282.8936
1521 itr: 127160
1522 training loss: 4800.227
1523 itr: 127170
1524 training loss: 3238.4956
1525 itr: 127180
1526 training loss: 3545.0479
1527 itr: 127190
1528 training loss: 3333.1062
1529 itr: 127200
1530 training loss: 5474.461
```

```
1531 itr: 127210
1532 training loss: 2034.6127
1533 itr: 127220
1534 training loss: 2675.4436
1535 itr: 127230
1536 training loss: 4642.3867
1537 itr: 127240
1538 training loss: 5532.9224
1539 itr: 127250
1540 training loss: 3622.3794
1541 itr: 127260
1542 training loss: 3493.87
1543 itr: 127270
1544 training loss: 413.7257
1545 itr: 127280
1546 training loss: 5305.466
1547 itr: 127290
1548 training loss: 2432.586
1549 itr: 127300
1550 training loss: 5606.988
1551 itr: 127310
1552 training loss: 4662.5215
1553 itr: 127320
1554 training loss: 5908.4634
1555 itr: 127330
1556 training loss: 7077.5327
1557 itr: 127340
1558 training loss: 4271.286
1559 itr: 127350
1560 training loss: 2893.2874
1561 itr: 127360
1562 training loss: 1859.2368
1563 itr: 127370
1564 training loss: 3533.3936
1565 itr: 127380
1566 training loss: 4075.759
1567 itr: 127390
```

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1568 training loss: 3973.2908
1569 itr: 127400
1570 training loss: 2456.5981
1571 itr: 127410
1572 training loss: 4889.788
1573 itr: 127420
1574 training loss: 4813.023
1575 itr: 127430
1576 training loss: 2167.4722
1577 itr: 127440
1578 training loss: 2162.237
1579 itr: 127450
1580 training loss: 2891.734
1581 itr: 127460
1582 training loss: 5488.7354
1583 itr: 127470
1584 training loss: 4082.4363
1585 itr: 127480
1586 training loss: 3512.9966
1587 itr: 127490
1588 training loss: 3666.611
1589 itr: 127500
1590 training loss: 3990.126
1591 itr: 127510
1592 training loss: 6296.346
1593 itr: 127520
1594 training loss: 3652.9797
1595 itr: 127530
1596 training loss: 5101.053
1597 itr: 127540
1598 training loss: 5878.9956
1599 itr: 127550
1600 training loss: 2618.0996
1601 itr: 127560
1602 training loss: 4029.9844
1603 itr: 127570
1604 training loss: 3489.1543
```

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1605 itr: 127580
1606 training loss: 4211.3755
1607 itr: 127590
1608 training loss: 2924.7595
1609 itr: 127600
1610 training loss: 2455.6296
1611 itr: 127610
1612 training loss: 2659.177
1613 itr: 127620
1614 training loss: 2631.0261
1615 itr: 127630
1616 training loss: 2305.9512
1617 itr: 127640
1618 training loss: 3544.8381
1619 itr: 127650
1620 training loss: 2492.032
1621 itr: 127660
1622 training loss: 3204.298
1623 itr: 127670
1624 training loss: 3494.2659
1625 itr: 127680
1626 training loss: 1771.9695
1627 itr: 127690
1628 training loss: 455.08728
1629 itr: 127700
1630 training loss: 3669.6736
1631 itr: 127710
1632 training loss: 2813.1995
1633 itr: 127720
1634 training loss: 5193.216
1635 itr: 127730
1636 training loss: 4740.3096
1637 itr: 127740
1638 training loss: 5600.667
1639 itr: 127750
1640 training loss: 4423.611
1641 itr: 127760
```

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1642 training loss: 2749.4556
1643 itr: 127770
1644 training loss: 4470.2627
1645 itr: 127780
1646 training loss: 5413.335
1647 itr: 127790
1648 training loss: 1836.2578
1649 itr: 127800
1650 training loss: 4370.151
1651 itr: 127810
1652 training loss: 3546.3145
1653 itr: 127820
1654 training loss: 2566.318
1655 itr: 127830
1656 training loss: 720.7197
1657 itr: 127840
1658 training loss: 3192.1191
1659 itr: 127850
1660 training loss: 5648.3647
1661 itr: 127860
1662 training loss: 4263.714
1663 itr: 127870
1664 training loss: 6544.891
1665 itr: 127880
1666 training loss: 2863.2515
1667 itr: 127890
1668 training loss: 3436.9888
1669 itr: 127900
1670 training loss: 4688.456
1671 itr: 127910
1672 training loss: 5027.7373
1673 itr: 127920
1674 training loss: 5864.7925
1675 itr: 127930
1676 training loss: 3506.0886
1677 itr: 127940
1678 training loss: 4424.591
```

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1679 itr: 127950
1680 training loss: 4009.0493
1681 itr: 127960
1682 training loss: 5920.96
1683 itr: 127970
1684 training loss: 3761.3855
1685 itr: 127980
1686 training loss: 2698.5422
1687 itr: 127990
1688 training loss: 3868.0637
1689 itr: 128000
1690 training loss: 5597.089
1691 itr: 128010
1692 training loss: 4328.8867
1693 itr: 128020
1694 training loss: 3685.5552
1695 itr: 128030
1696 training loss: 4376.694
1697 itr: 128040
1698 training loss: 4147.4385
1699 itr: 128050
1700 training loss: 4968.902
1701 itr: 128060
1702 training loss: 4116.3965
1703 itr: 128070
1704 training loss: 7081.904
1705 itr: 128080
1706 training loss: 5925.586
1707 itr: 128090
1708 training loss: 2318.1616
1709 itr: 128100
1710 training loss: 4568.626
1711 itr: 128110
1712 training loss: 5983.483
1713 itr: 128120
1714 training loss: 4959.735
1715 itr: 128130
```

```
1716 training loss: 4981.9604
1717 itr: 128140
1718 training loss: 3462.1548
1719 itr: 128150
1720 training loss: 4526.0903
1721 itr: 128160
1722 training loss: 4388.962
1723 itr: 128170
1724 training loss: 4207.8916
1725 itr: 128180
1726 training loss: 3185.596
1727 itr: 128190
1728 training loss: 4221.9053
1729 itr: 128200
1730 training loss: 3113.582
1731 itr: 128210
1732 training loss: 6094.8413
1733 itr: 128220
1734 training loss: 5560.251
1735 itr: 128230
1736 training loss: 3025.482
1737 itr: 128240
1738 training loss: 2134.5159
1739 itr: 128250
1740 training loss: 1742.079
1741 itr: 128260
1742 training loss: 3200.0276
1743 itr: 128270
1744 training loss: 2755.3423
1745 itr: 128280
1746 training loss: 6217.2246
1747 itr: 128290
1748 training loss: 3450.061
1749 itr: 128300
1750 training loss: 4814.5215
1751 itr: 128310
1752 training loss: 3656.887
```



```
1753 itr: 128320
1754 training loss: 3081.3335
1755 itr: 128330
1756 training loss: 5425.219
1757 itr: 128340
1758 training loss: 3882.7107
1759 itr: 128350
1760 training loss: 4059.2695
1761 itr: 128360
1762 training loss: 2838.3003
1763 itr: 128370
1764 training loss: 5009.931
1765 itr: 128380
1766 training loss: 2504.6416
1767 itr: 128390
1768 training loss: 1477.2219
1769 itr: 128400
1770 training loss: 2466.6208
1771 itr: 128410
1772 training loss: 3144.599
1773 itr: 128420
1774 training loss: 3677.3108
1775 itr: 128430
1776 training loss: 5333.3223
1777 itr: 128440
1778 training loss: 4323.415
1779 itr: 128450
1780 training loss: 2288.9058
1781 itr: 128460
1782 training loss: 6320.6094
1783 itr: 128470
1784 training loss: 6891.007
1785 itr: 128480
1786 training loss: 3482.767
1787 itr: 128490
1788 training loss: 5331.382
1789 itr: 128500
```

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1790 training loss: 3593.4487
1791 itr: 128510
1792 training loss: 3401.0437
1793 itr: 128520
1794 training loss: 2438.7139
1795 itr: 128530
1796 training loss: 3907.1926
1797 itr: 128540
1798 training loss: 3777.8892
1799 itr: 128550
1800 training loss: 4550.1245
1801 itr: 128560
1802 training loss: 1641.0614
1803 itr: 128570
1804 training loss: 2510.5635
1805 itr: 128580
1806 training loss: 5786.118
1807 itr: 128590
1808 training loss: 4050.1433
1809 itr: 128600
1810 training loss: 2548.5688
1811 itr: 128610
1812 training loss: 2022.8743
1813 itr: 128620
1814 training loss: 4102.928
1815 itr: 128630
1816 training loss: 5014.697
1817 itr: 128640
1818 training loss: 3648.9216
1819 itr: 128650
1820 training loss: 4360.0303
1821 itr: 128660
1822 training loss: 3667.2666
1823 itr: 128670
1824 training loss: 4085.1506
1825 itr: 128680
1826 training loss: 4262.5854
```

```
1827 itr: 128690
1828 training loss: 4609.938
1829 itr: 128700
1830 training loss: 4488.536
1831 itr: 128710
1832 training loss: 5129.965
1833 itr: 128720
1834 training loss: 2337.5295
1835 itr: 128730
1836 training loss: 2689.1877
1837 itr: 128740
1838 training loss: 3694.8867
1839 itr: 128750
1840 training loss: 3907.8823
1841 itr: 128760
1842 training loss: 5119.3423
1843 itr: 128770
1844 training loss: 1689.1608
1845 itr: 128780
1846 training loss: 4647.529
1847 itr: 128790
1848 training loss: 3697.1628
1849 itr: 128800
1850 training loss: 4994.4775
1851 itr: 128810
1852 training loss: 3635.86
1853 itr: 128820
1854 training loss: 4393.0796
1855 itr: 128830
1856 training loss: 3162.7173
1857 itr: 128840
1858 training loss: 2624.824
1859 itr: 128850
1860 training loss: 3514.0364
1861 itr: 128860
1862 training loss: 5468.819
1863 itr: 128870
```

```
1864 training loss: 6183.9424
1865 itr: 128880
1866 training loss: 3967.8333
1867 itr: 128890
1868 training loss: 3407.9297
1869 itr: 128900
1870 training loss: 4523.059
1871 itr: 128910
1872 training loss: 1905.4236
1873 itr: 128920
1874 training loss: 1597.0894
1875 itr: 128930
1876 training loss: 4179.53
1877 itr: 128940
1878 training loss: 3916.37
1879 itr: 128950
1880 training loss: 1021.63464
1881 itr: 128960
1882 training loss: 3606.6848
1883 itr: 128970
1884 training loss: 1357.1008
1885 itr: 128980
1886 training loss: 4358.3765
1887 itr: 128990
1888 training loss: 6425.546
1889 itr: 129000
1890 training loss: 747.6144
1891 itr: 129010
1892 training loss: 1921.8395
1893 itr: 129020
1894 training loss: 3259.201
1895 itr: 129030
1896 training loss: 1831.887
1897 itr: 129040
1898 training loss: 5962.12
1899 itr: 129050
1900 training loss: 2398.9062
```

```
1901 itr: 129060
1902 training loss: 2085.803
1903 itr: 129070
1904 training loss: 2721.3682
1905 itr: 129080
1906 training loss: 6165.4326
1907 itr: 129090
1908 training loss: 4390.604
1909 itr: 129100
1910 training loss: 4073.278
1911 itr: 129110
1912 training loss: 3600.4739
1913 itr: 129120
1914 training loss: 2166.377
1915 itr: 129130
1916 training loss: 2564.9854
1917 itr: 129140
1918 training loss: 3030.1748
1919 itr: 129150
1920 training loss: 869.6078
1921 itr: 129160
1922 training loss: 4461.865
1923 itr: 129170
1924 training loss: 2872.6238
1925 itr: 129180
1926 training loss: 3208.7036
1927 itr: 129190
1928 training loss: 5952.8623
1929 itr: 129200
1930 training loss: 2455.1475
1931 itr: 129210
1932 training loss: 4492.3315
1933 itr: 129220
1934 training loss: 1789.344
1935 itr: 129230
1936 training loss: 4685.52
1937 itr: 129240
```

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1938 training loss: 3992.3845
1939 itr: 129250
1940 training loss: 4410.7915
1941 itr: 129260
1942 training loss: 1613.6035
1943 itr: 129270
1944 training loss: 6635.9463
1945 itr: 129280
1946 training loss: 4581.6665
1947 itr: 129290
1948 training loss: 4585.9575
1949 itr: 129300
1950 training loss: 2908.7231
1951 itr: 129310
1952 training loss: 3242.3074
1953 itr: 129320
1954 training loss: 3174.4272
1955 itr: 129330
1956 training loss: 6606.401
1957 itr: 129340
1958 training loss: 3361.774
1959 itr: 129350
1960 training loss: 5525.054
1961 itr: 129360
1962 training loss: 4457.2847
1963 itr: 129370
1964 training loss: 2633.151
1965 itr: 129380
1966 training loss: 4538.75
1967 itr: 129390
1968 training loss: 2727.8096
1969 itr: 129400
1970 training loss: 3703.5896
1971 itr: 129410
1972 training loss: 4732.101
1973 itr: 129420
1974 training loss: 1947.8938
```

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1975 itr: 129430
1976 training loss: 4127.136
1977 itr: 129440
1978 training loss: 2089.8389
1979 itr: 129450
1980 training loss: 3380.7441
1981 itr: 129460
1982 training loss: 4976.8145
1983 itr: 129470
1984 training loss: 3744.3745
1985 itr: 129480
1986 training loss: 4791.6323
1987 itr: 129490
1988 training loss: 4869.738
1989 itr: 129500
1990 training loss: 5457.74
1991 itr: 129510
1992 training loss: 2745.302
1993 itr: 129520
1994 training loss: 4374.2905
1995 itr: 129530
1996 training loss: 6021.469
1997 itr: 129540
1998 training loss: 5295.1406
1999 itr: 129550
2000 training loss: 6366.872
2001 itr: 129560
2002 training loss: 3948.6948
2003 itr: 129570
2004 training loss: 5730.514
2005 itr: 129580
2006 training loss: 4222.58
2007 itr: 129590
2008 training loss: 2413.6096
2009 itr: 129600
2010 training loss: 2503.8547
2011 itr: 129610
```

2012	training loss: 3358.8616
2013	itr: 129620
2014	training loss: 5964.9277
2015	itr: 129630
2016	training loss: 1185.9822
2017	itr: 129640
2018	training loss: 5793.4653
2019	itr: 129650
2020	training loss: 7815.7363
2021	itr: 129660
2022	training loss: 4199.4146
2023	itr: 129670
2024	training loss: 3703.3962
2025	itr: 129680
2026	training loss: 1956.8804
2027	itr: 129690
2028	training loss: 4802.085
2029	itr: 129700
2030	training loss: 3637.8594
2031	itr: 129710
2032	training loss: 2770.0664
2033	itr: 129720
2034	training loss: 7785.551
2035	itr: 129730
2036	training loss: 4386.9985
2037	itr: 129740
2038	training loss: 1092.2762
2039	itr: 129750
2040	training loss: 5037.6313
2041	itr: 129760
2042	training loss: 2790.3943
2043	itr: 129770
2044	training loss: 2118.2139
2045	itr: 129780
2046	training loss: 3259.8518
2047	itr: 129790
2048	training loss: 3291.691


```
2049 itr: 129800
2050 training loss: 6095.102
2051 itr: 129810
2052 training loss: 3739.5928
2053 itr: 129820
2054 training loss: 6592.0215
2055 itr: 129830
2056 training loss: 5555.644
2057 itr: 129840
2058 training loss: 1614.3412
2059 itr: 129850
2060 training loss: 2795.8677
2061 itr: 129860
2062 training loss: 3745.3257
2063 itr: 129870
2064 training loss: 4780.0957
2065 itr: 129880
2066 training loss: 3379.97
2067 itr: 129890
2068 training loss: 3320.227
2069 itr: 129900
2070 training loss: 2277.699
2071 itr: 129910
2072 training loss: 5496.232
2073 itr: 129920
2074 training loss: 2679.5864
2075 itr: 129930
2076 training loss: 3559.6204
2077 itr: 129940
2078 training loss: 2866.5413
2079 itr: 129950
2080 training loss: 3361.9028
2081 itr: 129960
2082 training loss: 5724.923
2083 itr: 129970
2084 training loss: 5921.314
2085 itr: 129980
```

```
2086 training loss: 4194.642
2087 itr: 129990
2088 training loss: 5073.861
2089 itr: 130000
2090 training loss: 3060.508
2091 test...
2092 mse per seq: 8829.30547926161
2093 617.7182628490307
2094 708.0147213406033
2095 780.7213223775228
2096 825.2382784242983
2097 886.9337360240795
2098 973.9822435732241
2099 986.962644788954
2100 996.3717234576189
2101 1015.6282889754684
2102 1037.7342574508102
2103 psnr per frame: 17.38338
2104 18.6907
2105 18.125261
2106 17.818356
2107 17.59575
2108 17.380146
2109 16.932169
2110 16.874672
2111 16.827765
2112 16.80306
2113 16.785921
2114 fmae per frame: 1867.6849
2115 1491.4812
2116 1632.674
2117 1744.6222
2118 1808.8044
2119 1889.3682
2120 1999.3452
2121 2016.3883
2122 2021.9083
```

```
2123 2028.8693
2124 2043.3884
2125 ssim per frame: 0.7887744
2126 0.81909806
2127 0.8065488
2128 0.79854786
2129 0.79345405
2130 0.78916085
2131 0.7783872
2132 0.7766735
2133 0.77575535
2134 0.7747718
2135 0.77534634
2136 sharpness per frame: 254.67314
2137 255.0
2138 254.86111
2139 254.87962
2140 254.88426
2141 254.58797
2142 254.71297
2143 254.625
2144 254.52315
2145 254.56018
2146 254.09723
2147 saved to checkpoints/radar_predrnn_pp
2148 itr: 130010
2149 training loss: 2575.2302
2150 itr: 130020
2151 training loss: 1932.923
2152 itr: 130030
2153 training loss: 4259.2793
2154 itr: 130040
2155 training loss: 2326.55
2156 itr: 130050
2157 training loss: 2285.0017
2158 itr: 130060
2159 training loss: 2817.8281
```

```
2160 itr: 130070
2161 training loss: 4848.883
2162 itr: 130080
2163 training loss: 2611.6472
2164 itr: 130090
2165 training loss: 3120.62
2166 itr: 130100
2167 training loss: 3074.1833
2168 itr: 130110
2169 training loss: 4275.827
2170 itr: 130120
2171 training loss: 1499.4658
2172 itr: 130130
2173 training loss: 2910.5815
2174 itr: 130140
2175 training loss: 4146.029
2176 itr: 130150
2177 training loss: 3997.5168
2178 itr: 130160
2179 training loss: 3233.9216
2180 itr: 130170
2181 training loss: 5337.856
2182 itr: 130180
2183 training loss: 5066.4688
2184 itr: 130190
2185 training loss: 6632.6973
2186 itr: 130200
2187 training loss: 4803.3667
2188 itr: 130210
2189 training loss: 4495.2534
2190 itr: 130220
2191 training loss: 4975.5586
2192 itr: 130230
2193 training loss: 6219.5933
2194 itr: 130240
2195 training loss: 6223.9727
2196 itr: 130250
```

```
2197 training loss: 3063.5938
2198 itr: 130260
2199 training loss: 4344.4385
2200 itr: 130270
2201 training loss: 4410.55
2202 itr: 130280
2203 training loss: 5761.1875
2204 itr: 130290
2205 training loss: 2259.0332
2206 itr: 130300
2207 training loss: 5291.9844
2208 itr: 130310
2209 training loss: 3630.1794
2210 itr: 130320
2211 training loss: 3270.3948
2212 itr: 130330
2213 training loss: 4230.65
2214 itr: 130340
2215 training loss: 2653.4673
2216 itr: 130350
2217 training loss: 3368.043
2218 itr: 130360
2219 training loss: 3077.963
2220 itr: 130370
2221 training loss: 4069.0
2222 itr: 130380
2223 training loss: 1343.7655
2224 itr: 130390
2225 training loss: 3167.2725
2226 itr: 130400
2227 training loss: 4331.9863
2228 itr: 130410
2229 training loss: 3273.3167
2230 itr: 130420
2231 training loss: 3766.544
2232 itr: 130430
2233 training loss: 3133.4932
```

```
2234 itr: 130440
2235 training loss: 4086.8643
2236 itr: 130450
2237 training loss: 4922.3145
2238 itr: 130460
2239 training loss: 4041.4915
2240 itr: 130470
2241 training loss: 3855.7002
2242 itr: 130480
2243 training loss: 5028.2393
2244 itr: 130490
2245 training loss: 4626.742
2246 itr: 130500
2247 training loss: 6939.9043
2248 itr: 130510
2249 training loss: 3171.172
2250 itr: 130520
2251 training loss: 4704.884
2252 itr: 130530
2253 training loss: 6812.501
2254 itr: 130540
2255 training loss: 753.59705
2256 itr: 130550
2257 training loss: 5825.11
2258 itr: 130560
2259 training loss: 4227.108
2260 itr: 130570
2261 training loss: 4912.59
2262 itr: 130580
2263 training loss: 3151.156
2264 itr: 130590
2265 training loss: 975.723
2266 itr: 130600
2267 training loss: 6085.997
2268 itr: 130610
2269 training loss: 2873.058
2270 itr: 130620
```

```
2271 training loss: 4371.2715
2272 itr: 130630
2273 training loss: 3421.9136
2274 itr: 130640
2275 training loss: 2841.3435
2276 itr: 130650
2277 training loss: 4005.856
2278 itr: 130660
2279 training loss: 2566.7812
2280 itr: 130670
2281 training loss: 4078.1584
2282 itr: 130680
2283 training loss: 5708.2046
2284 itr: 130690
2285 training loss: 3736.8298
2286 itr: 130700
2287 training loss: 3570.563
2288 itr: 130710
2289 training loss: 4167.7446
2290 itr: 130720
2291 training loss: 5499.59
2292 itr: 130730
2293 training loss: 3835.3318
2294 itr: 130740
2295 training loss: 2816.229
2296 itr: 130750
2297 training loss: 5742.562
2298 itr: 130760
2299 training loss: 2243.8767
2300 itr: 130770
2301 training loss: 5726.721
2302 itr: 130780
2303 training loss: 4366.1567
2304 itr: 130790
2305 training loss: 6241.5
2306 itr: 130800
2307 training loss: 5448.628
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2308 itr: 130810
2309 training loss: 3258.588
2310 itr: 130820
2311 training loss: 4357.181
2312 itr: 130830
2313 training loss: 6417.4604
2314 itr: 130840
2315 training loss: 3223.107
2316 itr: 130850
2317 training loss: 4332.3604
2318 itr: 130860
2319 training loss: 1763.3425
2320 itr: 130870
2321 training loss: 4458.412
2322 itr: 130880
2323 training loss: 4743.05
2324 itr: 130890
2325 training loss: 3735.251
2326 itr: 130900
2327 training loss: 4289.0034
2328 itr: 130910
2329 training loss: 3067.252
2330 itr: 130920
2331 training loss: 4538.0127
2332 itr: 130930
2333 training loss: 1522.0735
2334 itr: 130940
2335 training loss: 4466.4297
2336 itr: 130950
2337 training loss: 4376.284
2338 itr: 130960
2339 training loss: 2543.9036
2340 itr: 130970
2341 training loss: 2726.2148
2342 itr: 130980
2343 training loss: 3282.7659
2344 itr: 130990
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2345 training loss: 3728.731
2346 itr: 131000
2347 training loss: 2119.2275
2348 itr: 131010
2349 training loss: 6513.613
2350 itr: 131020
2351 training loss: 4651.59
2352 itr: 131030
2353 training loss: 5307.3716
2354 itr: 131040
2355 training loss: 4788.821
2356 itr: 131050
2357 training loss: 3883.6448
2358 itr: 131060
2359 training loss: 4885.9824
2360 itr: 131070
2361 training loss: 2330.909
2362 itr: 131080
2363 training loss: 3783.7432
2364 itr: 131090
2365 training loss: 1425.5618
2366 itr: 131100
2367 training loss: 3819.6436
2368 itr: 131110
2369 training loss: 3493.6436
2370 itr: 131120
2371 training loss: 4796.4775
2372 itr: 131130
2373 training loss: 2926.8157
2374 itr: 131140
2375 training loss: 4269.8022
2376 itr: 131150
2377 training loss: 5911.1157
2378 itr: 131160
2379 training loss: 5218.8647
2380 itr: 131170
2381 training loss: 3946.5464
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2382 itr: 131180
2383 training loss: 4008.772
2384 itr: 131190
2385 training loss: 3173.598
2386 itr: 131200
2387 training loss: 4922.6978
2388 itr: 131210
2389 training loss: 2974.7615
2390 itr: 131220
2391 training loss: 4404.538
2392 itr: 131230
2393 training loss: 4871.648
2394 itr: 131240
2395 training loss: 5004.835
2396 itr: 131250
2397 training loss: 5717.174
2398 itr: 131260
2399 training loss: 4337.7827
2400 itr: 131270
2401 training loss: 3473.825
2402 itr: 131280
2403 training loss: 4391.0596
2404 itr: 131290
2405 training loss: 4624.783
2406 itr: 131300
2407 training loss: 4385.3794
2408 itr: 131310
2409 training loss: 5202.1743
2410 itr: 131320
2411 training loss: 6037.8794
2412 itr: 131330
2413 training loss: 6297.2266
2414 itr: 131340
2415 training loss: 3348.8213
2416 itr: 131350
2417 training loss: 3556.179
2418 itr: 131360
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2419 training loss: 2591.5938
2420 itr: 131370
2421 training loss: 3221.8132
2422 itr: 131380
2423 training loss: 4200.8125
2424 itr: 131390
2425 training loss: 5499.1787
2426 itr: 131400
2427 training loss: 5594.293
2428 itr: 131410
2429 training loss: 3693.7544
2430 itr: 131420
2431 training loss: 2580.6077
2432 itr: 131430
2433 training loss: 5883.698
2434 itr: 131440
2435 training loss: 1880.1042
2436 itr: 131450
2437 training loss: 2842.3652
2438 itr: 131460
2439 training loss: 4614.2856
2440 itr: 131470
2441 training loss: 2941.979
2442 itr: 131480
2443 training loss: 3072.9304
2444 itr: 131490
2445 training loss: 3623.8047
2446 itr: 131500
2447 training loss: 5931.2754
2448 itr: 131510
2449 training loss: 4339.536
2450 itr: 131520
2451 training loss: 7148.635
2452 itr: 131530
2453 training loss: 4307.6455
2454 itr: 131540
2455 training loss: 5262.2085
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2456 itr: 131550
2457 training loss: 3475.5586
2458 itr: 131560
2459 training loss: 3448.213
2460 itr: 131570
2461 training loss: 4079.251
2462 itr: 131580
2463 training loss: 3715.0986
2464 itr: 131590
2465 training loss: 5044.4556
2466 itr: 131600
2467 training loss: 6053.131
2468 itr: 131610
2469 training loss: 3587.4956
2470 itr: 131620
2471 training loss: 1555.3401
2472 itr: 131630
2473 training loss: 4436.27
2474 itr: 131640
2475 training loss: 3146.4114
2476 itr: 131650
2477 training loss: 5655.9043
2478 itr: 131660
2479 training loss: 1972.5125
2480 itr: 131670
2481 training loss: 3394.0625
2482 itr: 131680
2483 training loss: 4813.6553
2484 itr: 131690
2485 training loss: 3875.9321
2486 itr: 131700
2487 training loss: 2752.2256
2488 itr: 131710
2489 training loss: 4744.1196
2490 itr: 131720
2491 training loss: 3960.0212
2492 itr: 131730
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2493 training loss: 3415.5146
2494 itr: 131740
2495 training loss: 6515.329
2496 itr: 131750
2497 training loss: 4142.516
2498 itr: 131760
2499 training loss: 3472.4692
2500 itr: 131770
2501 training loss: 5318.1606
2502 itr: 131780
2503 training loss: 3802.6128
2504 itr: 131790
2505 training loss: 4151.404
2506 itr: 131800
2507 training loss: 5732.7837
2508 itr: 131810
2509 training loss: 4688.9253
2510 itr: 131820
2511 training loss: 3290.3225
2512 itr: 131830
2513 training loss: 5072.139
2514 itr: 131840
2515 training loss: 3149.7292
2516 itr: 131850
2517 training loss: 2514.9207
2518 itr: 131860
2519 training loss: 2591.3672
2520 itr: 131870
2521 training loss: 3460.0518
2522 itr: 131880
2523 training loss: 1922.4076
2524 itr: 131890
2525 training loss: 4298.8223
2526 itr: 131900
2527 training loss: 4028.7073
2528 itr: 131910
2529 training loss: 5605.5127
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2530 itr: 131920
2531 training loss: 2645.9312
2532 itr: 131930
2533 training loss: 4543.8574
2534 itr: 131940
2535 training loss: 3511.6265
2536 itr: 131950
2537 training loss: 4899.825
2538 itr: 131960
2539 training loss: 1618.8518
2540 itr: 131970
2541 training loss: 4714.313
2542 itr: 131980
2543 training loss: 2857.8496
2544 itr: 131990
2545 training loss: 5760.5654
2546 itr: 132000
2547 training loss: 6142.464
2548 itr: 132010
2549 training loss: 2120.696
2550 itr: 132020
2551 training loss: 6361.1997
2552 itr: 132030
2553 training loss: 6623.744
2554 itr: 132040
2555 training loss: 3718.6582
2556 itr: 132050
2557 training loss: 4136.8853
2558 itr: 132060
2559 training loss: 3428.2258
2560 itr: 132070
2561 training loss: 4737.5884
2562 itr: 132080
2563 training loss: 4112.5093
2564 itr: 132090
2565 training loss: 4990.0605
2566 itr: 132100
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2567 training loss: 1727.875
2568 itr: 132110
2569 training loss: 5610.767
2570 itr: 132120
2571 training loss: 2745.5674
2572 itr: 132130
2573 training loss: 3389.8867
2574 itr: 132140
2575 training loss: 3863.9814
2576 itr: 132150
2577 training loss: 2539.127
2578 itr: 132160
2579 training loss: 3308.912
2580 itr: 132170
2581 training loss: 2774.242
2582 itr: 132180
2583 training loss: 2091.797
2584 itr: 132190
2585 training loss: 5012.304
2586 itr: 132200
2587 training loss: 4452.5107
2588 itr: 132210
2589 training loss: 3381.021
2590 itr: 132220
2591 training loss: 3053.3545
2592 itr: 132230
2593 training loss: 4611.6694
2594 itr: 132240
2595 training loss: 4026.8127
2596 itr: 132250
2597 training loss: 3217.2083
2598 itr: 132260
2599 training loss: 2505.317
2600 itr: 132270
2601 training loss: 4174.8643
2602 itr: 132280
2603 training loss: 1239.7977
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2604 itr: 132290
2605 training loss: 3173.0952
2606 itr: 132300
2607 training loss: 2900.8079
2608 itr: 132310
2609 training loss: 2314.9102
2610 itr: 132320
2611 training loss: 4915.723
2612 itr: 132330
2613 training loss: 5391.076
2614 itr: 132340
2615 training loss: 3515.5784
2616 itr: 132350
2617 training loss: 6684.642
2618 itr: 132360
2619 training loss: 5889.1147
2620 itr: 132370
2621 training loss: 2139.654
2622 itr: 132380
2623 training loss: 3170.5972
2624 itr: 132390
2625 training loss: 5020.3564
2626 itr: 132400
2627 training loss: 4288.02
2628 itr: 132410
2629 training loss: 5815.6963
2630 itr: 132420
2631 training loss: 4431.8516
2632 itr: 132430
2633 training loss: 3764.0994
2634 itr: 132440
2635 training loss: 1702.5605
2636 itr: 132450
2637 training loss: 3316.729
2638 itr: 132460
2639 training loss: 5114.8335
2640 itr: 132470
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2641 training loss: 4185.843
2642 itr: 132480
2643 training loss: 4871.215
2644 itr: 132490
2645 training loss: 5266.046
2646 itr: 132500
2647 training loss: 2485.9565
2648 itr: 132510
2649 training loss: 4518.9688
2650 itr: 132520
2651 training loss: 3380.4446
2652 itr: 132530
2653 training loss: 4298.4624
2654 itr: 132540
2655 training loss: 3529.0234
2656 itr: 132550
2657 training loss: 2849.9102
2658 itr: 132560
2659 training loss: 5920.6123
2660 itr: 132570
2661 training loss: 6982.421
2662 itr: 132580
2663 training loss: 1334.9406
2664 itr: 132590
2665 training loss: 4412.1846
2666 itr: 132600
2667 training loss: 2930.511
2668 itr: 132610
2669 training loss: 2809.5732
2670 itr: 132620
2671 training loss: 1798.664
2672 itr: 132630
2673 training loss: 1301.7343
2674 itr: 132640
2675 training loss: 3173.5342
2676 itr: 132650
2677 training loss: 3717.443
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2678 itr: 132660
2679 training loss: 3720.5886
2680 itr: 132670
2681 training loss: 3674.09
2682 itr: 132680
2683 training loss: 3678.9404
2684 itr: 132690
2685 training loss: 5074.6177
2686 itr: 132700
2687 training loss: 2826.2942
2688 itr: 132710
2689 training loss: 4950.9126
2690 itr: 132720
2691 training loss: 5324.7954
2692 itr: 132730
2693 training loss: 2453.701
2694 itr: 132740
2695 training loss: 3831.9055
2696 itr: 132750
2697 training loss: 4418.1157
2698 itr: 132760
2699 training loss: 1503.3048
2700 itr: 132770
2701 training loss: 6801.6084
2702 itr: 132780
2703 training loss: 5092.027
2704 itr: 132790
2705 training loss: 5316.6963
2706 itr: 132800
2707 training loss: 6492.142
2708 itr: 132810
2709 training loss: 4026.7083
2710 itr: 132820
2711 training loss: 6141.085
2712 itr: 132830
2713 training loss: 3673.0056
2714 itr: 132840
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2715 training loss: 3901.7756
2716 itr: 132850
2717 training loss: 1629.8925
2718 itr: 132860
2719 training loss: 4824.3223
2720 itr: 132870
2721 training loss: 5106.436
2722 itr: 132880
2723 training loss: 4073.1116
2724 itr: 132890
2725 training loss: 7304.0327
2726 itr: 132900
2727 training loss: 2649.7417
2728 itr: 132910
2729 training loss: 1277.1523
2730 itr: 132920
2731 training loss: 2127.1987
2732 itr: 132930
2733 training loss: 2544.1873
2734 itr: 132940
2735 training loss: 6238.738
2736 itr: 132950
2737 training loss: 4942.418
2738 itr: 132960
2739 training loss: 2463.0452
2740 itr: 132970
2741 training loss: 3592.7747
2742 itr: 132980
2743 training loss: 3862.623
2744 itr: 132990
2745 training loss: 2536.4277
2746 itr: 133000
2747 training loss: 1987.2788
2748 itr: 133010
2749 training loss: 3303.7207
2750 itr: 133020
2751 training loss: 1363.269
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2752 itr: 133030
2753 training loss: 3878.1963
2754 itr: 133040
2755 training loss: 6430.872
2756 itr: 133050
2757 training loss: 4056.1982
2758 itr: 133060
2759 training loss: 5884.6875
2760 itr: 133070
2761 training loss: 833.7327
2762 itr: 133080
2763 training loss: 5132.2393
2764 itr: 133090
2765 training loss: 5851.326
2766 itr: 133100
2767 training loss: 5736.7144
2768 itr: 133110
2769 training loss: 4436.132
2770 itr: 133120
2771 training loss: 3377.1536
2772 itr: 133130
2773 training loss: 3825.8623
2774 itr: 133140
2775 training loss: 4647.334
2776 itr: 133150
2777 training loss: 3799.2114
2778 itr: 133160
2779 training loss: 5329.502
2780 itr: 133170
2781 training loss: 2977.748
2782 itr: 133180
2783 training loss: 2837.4473
2784 itr: 133190
2785 training loss: 2807.703
2786 itr: 133200
2787 training loss: 3860.6536
2788 itr: 133210
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2789 training loss: 4755.658
2790 itr: 133220
2791 training loss: 3969.004
2792 itr: 133230
2793 training loss: 2623.6675
2794 itr: 133240
2795 training loss: 2405.2722
2796 itr: 133250
2797 training loss: 3924.9248
2798 itr: 133260
2799 training loss: 2220.9094
2800 itr: 133270
2801 training loss: 2133.7
2802 itr: 133280
2803 training loss: 6330.664
2804 itr: 133290
2805 training loss: 4341.613
2806 itr: 133300
2807 training loss: 2817.6294
2808 itr: 133310
2809 training loss: 4279.7715
2810 itr: 133320
2811 training loss: 5274.0347
2812 itr: 133330
2813 training loss: 5352.425
2814 itr: 133340
2815 training loss: 4147.804
2816 itr: 133350
2817 training loss: 4105.471
2818 itr: 133360
2819 training loss: 3006.3423
2820 itr: 133370
2821 training loss: 2517.4756
2822 itr: 133380
2823 training loss: 4832.9565
2824 itr: 133390
2825 training loss: 4600.5767
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2826 itr: 133400
2827 training loss: 1961.1136
2828 itr: 133410
2829 training loss: 3327.578
2830 itr: 133420
2831 training loss: 3898.7102
2832 itr: 133430
2833 training loss: 4160.818
2834 itr: 133440
2835 training loss: 5292.326
2836 itr: 133450
2837 training loss: 2496.2666
2838 itr: 133460
2839 training loss: 4356.6577
2840 itr: 133470
2841 training loss: 6096.2217
2842 itr: 133480
2843 training loss: 3843.5918
2844 itr: 133490
2845 training loss: 6832.6406
2846 itr: 133500
2847 training loss: 4144.353
2848 itr: 133510
2849 training loss: 3789.9197
2850 itr: 133520
2851 training loss: 4030.6245
2852 itr: 133530
2853 training loss: 922.5808
2854 itr: 133540
2855 training loss: 4991.949
2856 itr: 133550
2857 training loss: 3075.2898
2858 itr: 133560
2859 training loss: 5964.28
2860 itr: 133570
2861 training loss: 2591.5847
2862 itr: 133580
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2863 training loss: 2670.651
2864 itr: 133590
2865 training loss: 2008.5854
2866 itr: 133600
2867 training loss: 3205.3286
2868 itr: 133610
2869 training loss: 3603.21
2870 itr: 133620
2871 training loss: 5250.359
2872 itr: 133630
2873 training loss: 3668.954
2874 itr: 133640
2875 training loss: 4753.452
2876 itr: 133650
2877 training loss: 5868.013
2878 itr: 133660
2879 training loss: 2980.5334
2880 itr: 133670
2881 training loss: 3897.3616
2882 itr: 133680
2883 training loss: 3928.9968
2884 itr: 133690
2885 training loss: 6620.2275
2886 itr: 133700
2887 training loss: 3159.428
2888 itr: 133710
2889 training loss: 1902.1141
2890 itr: 133720
2891 training loss: 6788.4917
2892 itr: 133730
2893 training loss: 3338.9724
2894 itr: 133740
2895 training loss: 4867.374
2896 itr: 133750
2897 training loss: 2102.4695
2898 itr: 133760
2899 training loss: 4413.0806
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2900 itr: 133770
2901 training loss: 3546.0007
2902 itr: 133780
2903 training loss: 4559.911
2904 itr: 133790
2905 training loss: 4959.255
2906 itr: 133800
2907 training loss: 4943.5073
2908 itr: 133810
2909 training loss: 3482.1882
2910 itr: 133820
2911 training loss: 7547.1143
2912 itr: 133830
2913 training loss: 5046.777
2914 itr: 133840
2915 training loss: 6201.246
2916 itr: 133850
2917 training loss: 2876.0693
2918 itr: 133860
2919 training loss: 1988.7288
2920 itr: 133870
2921 training loss: 4126.3984
2922 itr: 133880
2923 training loss: 4110.4053
2924 itr: 133890
2925 training loss: 2804.9897
2926 itr: 133900
2927 training loss: 4811.1255
2928 itr: 133910
2929 training loss: 918.1776
2930 itr: 133920
2931 training loss: 3288.097
2932 itr: 133930
2933 training loss: 2543.0273
2934 itr: 133940
2935 training loss: 2768.483
2936 itr: 133950
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2937 training loss: 3096.1357
2938 itr: 133960
2939 training loss: 5652.037
2940 itr: 133970
2941 training loss: 3785.4976
2942 itr: 133980
2943 training loss: 3722.53
2944 itr: 133990
2945 training loss: 4048.812
2946 itr: 134000
2947 training loss: 4574.9595
2948 itr: 134010
2949 training loss: 3319.4937
2950 itr: 134020
2951 training loss: 3688.193
2952 itr: 134030
2953 training loss: 5611.3867
2954 itr: 134040
2955 training loss: 3986.967
2956 itr: 134050
2957 training loss: 2697.8657
2958 itr: 134060
2959 training loss: 5231.498
2960 itr: 134070
2961 training loss: 5311.086
2962 itr: 134080
2963 training loss: 4761.2305
2964 itr: 134090
2965 training loss: 6250.049
2966 itr: 134100
2967 training loss: 3228.6228
2968 itr: 134110
2969 training loss: 4555.606
2970 itr: 134120
2971 training loss: 1788.9141
2972 itr: 134130
2973 training loss: 4285.5464
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2974 itr: 134140
2975 training loss: 2656.5947
2976 itr: 134150
2977 training loss: 2966.1047
2978 itr: 134160
2979 training loss: 5916.2856
2980 itr: 134170
2981 training loss: 3792.619
2982 itr: 134180
2983 training loss: 3176.2954
2984 itr: 134190
2985 training loss: 3854.2922
2986 itr: 134200
2987 training loss: 3155.6267
2988 itr: 134210
2989 training loss: 2467.0706
2990 itr: 134220
2991 training loss: 4865.0693
2992 itr: 134230
2993 training loss: 4208.868
2994 itr: 134240
2995 training loss: 5012.9844
2996 itr: 134250
2997 training loss: 1772.5643
2998 itr: 134260
2999 training loss: 1974.6586
3000 itr: 134270
3001 training loss: 4391.6875
3002 itr: 134280
3003 training loss: 3967.0718
3004 itr: 134290
3005 training loss: 4807.9326
3006 itr: 134300
3007 training loss: 2703.6582
3008 itr: 134310
3009 training loss: 3736.374
3010 itr: 134320
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3011 training loss: 5713.422
3012 itr: 134330
3013 training loss: 4308.4595
3014 itr: 134340
3015 training loss: 4636.951
3016 itr: 134350
3017 training loss: 4439.805
3018 itr: 134360
3019 training loss: 1477.9031
3020 itr: 134370
3021 training loss: 3464.2234
3022 itr: 134380
3023 training loss: 3900.954
3024 itr: 134390
3025 training loss: 4811.5825
3026 itr: 134400
3027 training loss: 1230.7831
3028 itr: 134410
3029 training loss: 4901.059
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3031 training loss: 3981.7837
3032 itr: 134430
3033 training loss: 5281.3516
3034 itr: 134440
3035 training loss: 6160.6953
3036 itr: 134450
3037 training loss: 4153.2725
3038 itr: 134460
3039 training loss: 4408.8955
3040 itr: 134470
3041 training loss: 7464.5273
3042 itr: 134480
3043 training loss: 2605.57
3044 itr: 134490
3045 training loss: 5404.5747
3046 itr: 134500
3047 training loss: 4269.0835
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3048 itr: 134510
3049 training loss: 3449.7292
3050 itr: 134520
3051 training loss: 1567.0465
3052 itr: 134530
3053 training loss: 3647.0085
3054 itr: 134540
3055 training loss: 6873.2144
3056 itr: 134550
3057 training loss: 7456.1455
3058 itr: 134560
3059 training loss: 5029.3164
3060 itr: 134570
3061 training loss: 2011.2797
3062 itr: 134580
3063 training loss: 4319.5005
3064 itr: 134590
3065 training loss: 2325.7024
3066 itr: 134600
3067 training loss: 3467.327
3068 itr: 134610
3069 training loss: 3929.6797
3070 itr: 134620
3071 training loss: 3222.7644
3072 itr: 134630
3073 training loss: 1101.5566
3074 itr: 134640
3075 training loss: 4857.7676
3076 itr: 134650
3077 training loss: 5149.2803
3078 itr: 134660
3079 training loss: 5708.7285
3080 itr: 134670
3081 training loss: 2317.53
3082 itr: 134680
3083 training loss: 3282.3616
3084 itr: 134690
```

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3085 training loss: 6589.619
3086 itr: 134700
3087 training loss: 2981.501
3088 itr: 134710
3089 training loss: 5049.1343
3090 itr: 134720
3091 training loss: 2788.7036
3092 itr: 134730
3093 training loss: 5356.0063
3094 itr: 134740
3095 training loss: 2557.4907
3096 itr: 134750
3097 training loss: 6625.329
3098 itr: 134760
3099 training loss: 2319.857
3100 itr: 134770
3101 training loss: 3773.5488
3102 itr: 134780
3103 training loss: 1284.4465
3104 itr: 134790
3105 training loss: 2877.0183
3106 itr: 134800
3107 training loss: 5484.4404
3108 itr: 134810
3109 training loss: 6887.0083
3110 itr: 134820
3111 training loss: 3861.3994
3112 itr: 134830
3113 training loss: 4286.537
3114 itr: 134840
3115 training loss: 2162.8755
3116 itr: 134850
3117 training loss: 4265.006
3118 itr: 134860
3119 training loss: 4256.9756
3120 itr: 134870
3121 training loss: 2773.9119
```

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3122 itr: 134880
3123 training loss: 4902.361
3124 itr: 134890
3125 training loss: 4615.966
3126 itr: 134900
3127 training loss: 4073.4915
3128 itr: 134910
3129 training loss: 4968.2896
3130 itr: 134920
3131 training loss: 3458.0254
3132 itr: 134930
3133 training loss: 3956.2598
3134 itr: 134940
3135 training loss: 3983.753
3136 itr: 134950
3137 training loss: 2495.7874
3138 itr: 134960
3139 training loss: 3964.1123
3140 itr: 134970
3141 training loss: 7560.5225
3142 itr: 134980
3143 training loss: 3535.3203
3144 itr: 134990
3145 training loss: 4157.276
3146 itr: 135000
3147 training loss: 5329.904
3148 test...
3149 mse per seq: 8912.832687024717
3150 617.3612073262533
3151 709.8468893545645
3152 785.5646596837927
3153 828.2639572708695
3154 888.1908329151295
3155 985.1852904425728
3156 1000.3191397631609
3157 1012.3274016203703
3158 1029.7994594573975
```

```
3159 1055.973849190606
3160 psnr per frame: 17.361208
3161 18.69176
3162 18.1186
3163 17.79351
3164 17.586998
3165 17.38544
3166 16.89512
3167 16.833977
3168 16.78395
3169 16.766104
3170 16.75662
3171 fmae per frame: 1947.112
3172 1583.044
3173 1714.6538
3174 1824.3953
3175 1882.7162
3176 1958.071
3177 2074.2896
3178 2095.4973
3179 2103.3748
3180 2109.989
3181 2125.092
3182 ssim per frame: 0.79561794
3183 0.82534707
3184 0.81338704
3185 0.8053923
3186 0.80009776
3187 0.7958513
3188 0.7849915
3189 0.7836827
3190 0.78265864
3191 0.78168136
3192 0.78309023
3193 sharpness per frame: 254.6741
3194 255.0
3195 254.83333
```

```
3196 254.61111
3197 254.89352
3198 254.94908
3199 254.47223
3200 254.66667
3201 254.75926
3202 254.51852
3203 254.03703
3204 saved to checkpoints/radar_predrnn_pp
3205 itr: 135010
3206 training loss: 1912.179
3207 itr: 135020
3208 training loss: 4276.657
3209 itr: 135030
3210 training loss: 4532.95
3211 itr: 135040
3212 training loss: 4255.9233
3213 itr: 135050
3214 training loss: 2848.9915
3215 itr: 135060
3216 training loss: 4841.7764
3217 itr: 135070
3218 training loss: 3771.1365
3219 itr: 135080
3220 training loss: 5334.628
3221 itr: 135090
3222 training loss: 4056.3025
3223 itr: 135100
3224 training loss: 3789.4053
3225 itr: 135110
3226 training loss: 2315.938
3227 itr: 135120
3228 training loss: 3767.231
3229 itr: 135130
3230 training loss: 3988.9211
3231 itr: 135140
3232 training loss: 3498.335
```



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3233 itr: 135150
3234 training loss: 4150.427
3235 itr: 135160
3236 training loss: 4094.183
3237 itr: 135170
3238 training loss: 2873.5132
3239 itr: 135180
3240 training loss: 3292.5
3241 itr: 135190
3242 training loss: 4789.713
3243 itr: 135200
3244 training loss: 5340.459
3245 itr: 135210
3246 training loss: 3938.8743
3247 itr: 135220
3248 training loss: 6785.8027
3249 itr: 135230
3250 training loss: 4059.433
3251 itr: 135240
3252 training loss: 2228.712
3253 itr: 135250
3254 training loss: 6405.903
3255 itr: 135260
3256 training loss: 3732.5415
3257 itr: 135270
3258 training loss: 6112.173
3259 itr: 135280
3260 training loss: 3759.437
3261 itr: 135290
3262 training loss: 4013.8987
3263 itr: 135300
3264 training loss: 4010.843
3265 itr: 135310
3266 training loss: 3009.977
3267 itr: 135320
3268 training loss: 1626.2368
3269 itr: 135330
```

```
3270 training loss: 3657.6697
3271 itr: 135340
3272 training loss: 2895.1724
3273 itr: 135350
3274 training loss: 6987.59
3275 itr: 135360
3276 training loss: 5270.9014
3277 itr: 135370
3278 training loss: 3225.5718
3279 itr: 135380
3280 training loss: 4975.903
3281 itr: 135390
3282 training loss: 5797.4097
3283 itr: 135400
3284 training loss: 5124.3164
3285 itr: 135410
3286 training loss: 4664.008
3287 itr: 135420
3288 training loss: 4669.9414
3289 itr: 135430
3290 training loss: 2127.2346
3291 itr: 135440
3292 training loss: 2530.149
3293 itr: 135450
3294 training loss: 5691.204
3295 itr: 135460
3296 training loss: 3543.661
3297 itr: 135470
3298 training loss: 4314.095
3299 itr: 135480
3300 training loss: 6018.2456
3301 itr: 135490
3302 training loss: 2624.4973
3303 itr: 135500
3304 training loss: 3221.116
3305 itr: 135510
3306 training loss: 4162.294
```

```
3307 itr: 135520
3308 training loss: 2166.116
3309 itr: 135530
3310 training loss: 5895.3096
3311 itr: 135540
3312 training loss: 4661.767
3313 itr: 135550
3314 training loss: 2806.3022
3315 itr: 135560
3316 training loss: 6112.271
3317 itr: 135570
3318 training loss: 2557.4214
3319 itr: 135580
3320 training loss: 2826.5994
3321 itr: 135590
3322 training loss: 4321.7573
3323 itr: 135600
3324 training loss: 4926.185
3325 itr: 135610
3326 training loss: 2781.4204
3327 itr: 135620
3328 training loss: 4033.5205
3329 itr: 135630
3330 training loss: 2135.1763
3331 itr: 135640
3332 training loss: 4044.3809
3333 itr: 135650
3334 training loss: 5507.2314
3335 itr: 135660
3336 training loss: 4147.295
3337 itr: 135670
3338 training loss: 4950.519
3339 itr: 135680
3340 training loss: 2446.894
3341 itr: 135690
3342 training loss: 3024.359
3343 itr: 135700
```

```
3344 training loss: 1796.3788
3345 itr: 135710
3346 training loss: 4558.1646
3347 itr: 135720
3348 training loss: 2826.216
3349 itr: 135730
3350 training loss: 4642.2407
3351 itr: 135740
3352 training loss: 5073.9766
3353 itr: 135750
3354 training loss: 4935.7764
3355 itr: 135760
3356 training loss: 6992.8457
3357 itr: 135770
3358 training loss: 3352.826
3359 itr: 135780
3360 training loss: 1586.2683
3361 itr: 135790
3362 training loss: 5631.3784
3363 itr: 135800
3364 training loss: 5146.389
3365 itr: 135810
3366 training loss: 3005.3137
3367 itr: 135820
3368 training loss: 4202.891
3369 itr: 135830
3370 training loss: 2850.3193
3371 itr: 135840
3372 training loss: 5128.696
3373 itr: 135850
3374 training loss: 4686.1104
3375 itr: 135860
3376 training loss: 1532.5596
3377 itr: 135870
3378 training loss: 4089.996
3379 itr: 135880
3380 training loss: 4211.943
```

```
3381 itr: 135890
3382 training loss: 3678.0754
3383 itr: 135900
3384 training loss: 3628.0073
3385 itr: 135910
3386 training loss: 3751.8735
3387 itr: 135920
3388 training loss: 5033.7944
3389 itr: 135930
3390 training loss: 3563.3418
3391 itr: 135940
3392 training loss: 6710.125
3393 itr: 135950
3394 training loss: 6039.8184
3395 itr: 135960
3396 training loss: 4482.782
3397 itr: 135970
3398 training loss: 5471.57
3399 itr: 135980
3400 training loss: 3350.0513
3401 itr: 135990
3402 training loss: 3765.4614
3403 itr: 136000
3404 training loss: 4015.1353
3405 itr: 136010
3406 training loss: 2953.959
3407 itr: 136020
3408 training loss: 4974.389
3409 itr: 136030
3410 training loss: 3309.965
3411 itr: 136040
3412 training loss: 5013.6514
3413 itr: 136050
3414 training loss: 4387.701
3415 itr: 136060
3416 training loss: 3462.3022
3417 itr: 136070
```

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3418 training loss: 1866.809
3419 itr: 136080
3420 training loss: 2187.2544
3421 itr: 136090
3422 training loss: 1692.5431
3423 itr: 136100
3424 training loss: 2401.153
3425 itr: 136110
3426 training loss: 2985.5962
3427 itr: 136120
3428 training loss: 2531.6543
3429 itr: 136130
3430 training loss: 1977.298
3431 itr: 136140
3432 training loss: 2183.5835
3433 itr: 136150
3434 training loss: 6075.649
3435 itr: 136160
3436 training loss: 3248.003
3437 itr: 136170
3438 training loss: 3570.1401
3439 itr: 136180
3440 training loss: 1425.3036
3441 itr: 136190
3442 training loss: 3369.6875
3443 itr: 136200
3444 training loss: 5002.0938
3445 itr: 136210
3446 training loss: 6609.8027
3447 itr: 136220
3448 training loss: 5271.449
3449 itr: 136230
3450 training loss: 2522.5854
3451 itr: 136240
3452 training loss: 1781.261
3453 itr: 136250
3454 training loss: 4098.8765
```

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3455 itr: 136260
3456 training loss: 7315.3867
3457 itr: 136270
3458 training loss: 3126.3682
3459 itr: 136280
3460 training loss: 5693.44
3461 itr: 136290
3462 training loss: 3952.4692
3463 itr: 136300
3464 training loss: 4038.6396
3465 itr: 136310
3466 training loss: 4340.363
3467 itr: 136320
3468 training loss: 3407.182
3469 itr: 136330
3470 training loss: 3712.5608
3471 itr: 136340
3472 training loss: 3410.7256
3473 itr: 136350
3474 training loss: 3957.7158
3475 itr: 136360
3476 training loss: 2743.1963
3477 itr: 136370
3478 training loss: 4541.4814
3479 itr: 136380
3480 training loss: 5485.429
3481 itr: 136390
3482 training loss: 5460.642
3483 itr: 136400
3484 training loss: 2470.6084
3485 itr: 136410
3486 training loss: 7687.948
3487 itr: 136420
3488 training loss: 3339.1487
3489 itr: 136430
3490 training loss: 4354.2583
3491 itr: 136440
```

```
3492 training loss: 5006.8413
3493 itr: 136450
3494 training loss: 2659.2544
3495 itr: 136460
3496 training loss: 816.01733
3497 itr: 136470
3498 training loss: 3716.9575
3499 itr: 136480
3500 training loss: 3012.9697
3501 itr: 136490
3502 training loss: 3456.8564
3503 itr: 136500
3504 training loss: 4342.734
3505 itr: 136510
3506 training loss: 6429.5464
3507 itr: 136520
3508 training loss: 2079.7495
3509 itr: 136530
3510 training loss: 2918.794
3511 itr: 136540
3512 training loss: 5029.848
3513 itr: 136550
3514 training loss: 4604.2295
3515 itr: 136560
3516 training loss: 4996.5625
3517 itr: 136570
3518 training loss: 3658.7378
3519 itr: 136580
3520 training loss: 2907.2583
3521 itr: 136590
3522 training loss: 1764.2854
3523 itr: 136600
3524 training loss: 2122.1562
3525 itr: 136610
3526 training loss: 2653.3518
3527 itr: 136620
3528 training loss: 5865.43
```



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3529 itr: 136630
3530 training loss: 2930.1348
3531 itr: 136640
3532 training loss: 3168.312
3533 itr: 136650
3534 training loss: 3419.6096
3535 itr: 136660
3536 training loss: 4933.077
3537 itr: 136670
3538 training loss: 2790.4688
3539 itr: 136680
3540 training loss: 1994.8271
3541 itr: 136690
3542 training loss: 3251.2842
3543 itr: 136700
3544 training loss: 6852.908
3545 itr: 136710
3546 training loss: 3764.6604
3547 itr: 136720
3548 training loss: 1013.0348
3549 itr: 136730
3550 training loss: 3735.7983
3551 itr: 136740
3552 training loss: 3929.7766
3553 itr: 136750
3554 training loss: 4535.9897
3555 itr: 136760
3556 training loss: 4571.9893
3557 itr: 136770
3558 training loss: 4479.248
3559 itr: 136780
3560 training loss: 3281.0264
3561 itr: 136790
3562 training loss: 4470.5596
3563 itr: 136800
3564 training loss: 2781.0244
3565 itr: 136810
```

```
3566 training loss: 2904.6494
3567 itr: 136820
3568 training loss: 2903.6458
3569 itr: 136830
3570 training loss: 6533.0723
3571 itr: 136840
3572 training loss: 2679.4402
3573 itr: 136850
3574 training loss: 2681.9548
3575 itr: 136860
3576 training loss: 3772.0508
3577 itr: 136870
3578 training loss: 2445.2925
3579 itr: 136880
3580 training loss: 5048.034
3581 itr: 136890
3582 training loss: 4008.9521
3583 itr: 136900
3584 training loss: 4465.615
3585 itr: 136910
3586 training loss: 4503.5967
3587 itr: 136920
3588 training loss: 4135.729
3589 itr: 136930
3590 training loss: 3166.4785
3591 itr: 136940
3592 training loss: 2351.5767
3593 itr: 136950
3594 training loss: 3428.7278
3595 itr: 136960
3596 training loss: 3052.8809
3597 itr: 136970
3598 training loss: 3977.153
3599 itr: 136980
3600 training loss: 4952.7573
3601 itr: 136990
3602 training loss: 5628.6626
```

```
3603 itr: 137000
3604 training loss: 5142.5483
3605 itr: 137010
3606 training loss: 4780.5664
3607 itr: 137020
3608 training loss: 4309.58
3609 itr: 137030
3610 training loss: 3108.4763
3611 itr: 137040
3612 training loss: 6371.699
3613 itr: 137050
3614 training loss: 4606.9385
3615 itr: 137060
3616 training loss: 2803.1726
3617 itr: 137070
3618 training loss: 5165.378
3619 itr: 137080
3620 training loss: 5481.9478
3621 itr: 137090
3622 training loss: 3415.8086
3623 itr: 137100
3624 training loss: 1116.1326
3625 itr: 137110
3626 training loss: 2123.2898
3627 itr: 137120
3628 training loss: 2473.6523
3629 itr: 137130
3630 training loss: 3602.9436
3631 itr: 137140
3632 training loss: 4804.545
3633 itr: 137150
3634 training loss: 3731.504
3635 itr: 137160
3636 training loss: 2721.8794
3637 itr: 137170
3638 training loss: 2472.8271
3639 itr: 137180
```

```
3640 training loss: 5729.836
3641 itr: 137190
3642 training loss: 3618.337
3643 itr: 137200
3644 training loss: 1787.8025
3645 itr: 137210
3646 training loss: 6766.1475
3647 itr: 137220
3648 training loss: 4661.133
3649 itr: 137230
3650 training loss: 6594.8936
3651 itr: 137240
3652 training loss: 726.7208
3653 itr: 137250
3654 training loss: 2914.6938
3655 itr: 137260
3656 training loss: 970.60254
3657 itr: 137270
3658 training loss: 6920.666
3659 itr: 137280
3660 training loss: 4225.7
3661 itr: 137290
3662 training loss: 2580.9722
3663 itr: 137300
3664 training loss: 3795.4211
3665 itr: 137310
3666 training loss: 3817.0688
3667 itr: 137320
3668 training loss: 3349.8645
3669 itr: 137330
3670 training loss: 3151.5469
3671 itr: 137340
3672 training loss: 5616.018
3673 itr: 137350
3674 training loss: 6597.4194
3675 itr: 137360
3676 training loss: 7125.139
```

```
3677 itr: 137370
3678 training loss: 4452.257
3679 itr: 137380
3680 training loss: 2670.6873
3681 itr: 137390
3682 training loss: 5655.2393
3683 itr: 137400
3684 training loss: 5106.673
3685 itr: 137410
3686 training loss: 2436.1467
3687 itr: 137420
3688 training loss: 5585.099
3689 itr: 137430
3690 training loss: 6101.4106
3691 itr: 137440
3692 training loss: 3601.738
3693 itr: 137450
3694 training loss: 3355.9727
3695 itr: 137460
3696 training loss: 4906.8174
3697 itr: 137470
3698 training loss: 1932.7947
3699 itr: 137480
3700 training loss: 1630.597
3701 itr: 137490
3702 training loss: 4582.732
3703 itr: 137500
3704 training loss: 5144.4746
3705 itr: 137510
3706 training loss: 4082.8809
3707 itr: 137520
3708 training loss: 4791.9087
3709 itr: 137530
3710 training loss: 3628.9082
3711 itr: 137540
3712 training loss: 5815.842
3713 itr: 137550
```

```
3714 training loss: 2769.1194
3715 itr: 137560
3716 training loss: 2887.1333
3717 itr: 137570
3718 training loss: 5471.3174
3719 itr: 137580
3720 training loss: 4250.796
3721 itr: 137590
3722 training loss: 4858.626
3723 itr: 137600
3724 training loss: 4873.0615
3725 itr: 137610
3726 training loss: 4874.156
3727 itr: 137620
3728 training loss: 3003.5757
3729 itr: 137630
3730 training loss: 5102.7617
3731 itr: 137640
3732 training loss: 4925.745
3733 itr: 137650
3734 training loss: 3014.151
3735 itr: 137660
3736 training loss: 6256.451
3737 itr: 137670
3738 training loss: 3141.6077
3739 itr: 137680
3740 training loss: 3032.3108
3741 itr: 137690
3742 training loss: 2216.5913
3743 itr: 137700
3744 training loss: 3141.429
3745 itr: 137710
3746 training loss: 3574.6323
3747 itr: 137720
3748 training loss: 5181.4966
3749 itr: 137730
3750 training loss: 2567.8499
```

```
3751 itr: 137740
3752 training loss: 3433.9214
3753 itr: 137750
3754 training loss: 4096.3774
3755 itr: 137760
3756 training loss: 2970.3516
3757 itr: 137770
3758 training loss: 2696.801
3759 itr: 137780
3760 training loss: 2440.2573
3761 itr: 137790
3762 training loss: 4675.4966
3763 itr: 137800
3764 training loss: 5276.2812
3765 itr: 137810
3766 training loss: 1798.1091
3767 itr: 137820
3768 training loss: 4283.2856
3769 itr: 137830
3770 training loss: 3419.8872
3771 itr: 137840
3772 training loss: 3458.266
3773 itr: 137850
3774 training loss: 5408.975
3775 itr: 137860
3776 training loss: 3691.772
3777 itr: 137870
3778 training loss: 4417.388
3779 itr: 137880
3780 training loss: 3326.8674
3781 itr: 137890
3782 training loss: 3838.372
3783 itr: 137900
3784 training loss: 2079.6416
3785 itr: 137910
3786 training loss: 2159.076
3787 itr: 137920
```

```
3788 training loss: 2087.36
3789 itr: 137930
3790 training loss: 5147.7266
3791 itr: 137940
3792 training loss: 1820.3625
3793 itr: 137950
3794 training loss: 4199.3794
3795 itr: 137960
3796 training loss: 3747.5945
3797 itr: 137970
3798 training loss: 3591.045
3799 itr: 137980
3800 training loss: 3882.7039
3801 itr: 137990
3802 training loss: 3897.941
3803 itr: 138000
3804 training loss: 3586.0935
3805 itr: 138010
3806 training loss: 3123.1294
3807 itr: 138020
3808 training loss: 5737.31
3809 itr: 138030
3810 training loss: 2244.5747
3811 itr: 138040
3812 training loss: 2874.3643
3813 itr: 138050
3814 training loss: 3105.187
3815 itr: 138060
3816 training loss: 1075.6531
3817 itr: 138070
3818 training loss: 3181.9358
3819 itr: 138080
3820 training loss: 3907.7473
3821 itr: 138090
3822 training loss: 3934.7302
3823 itr: 138100
3824 training loss: 4613.086
```



```
3825 itr: 138110
3826 training loss: 4570.8374
3827 itr: 138120
3828 training loss: 3604.5396
3829 itr: 138130
3830 training loss: 4649.7393
3831 itr: 138140
3832 training loss: 6376.2593
3833 itr: 138150
3834 training loss: 5230.8613
3835 itr: 138160
3836 training loss: 6856.0293
3837 itr: 138170
3838 training loss: 2914.0825
3839 itr: 138180
3840 training loss: 3041.8003
3841 itr: 138190
3842 training loss: 3512.7354
3843 itr: 138200
3844 training loss: 2078.953
3845 itr: 138210
3846 training loss: 4291.654
3847 itr: 138220
3848 training loss: 3978.1821
3849 itr: 138230
3850 training loss: 6244.2656
3851 itr: 138240
3852 training loss: 3776.0583
3853 itr: 138250
3854 training loss: 6781.064
3855 itr: 138260
3856 training loss: 5294.84
3857 itr: 138270
3858 training loss: 3506.1833
3859 itr: 138280
3860 training loss: 4997.8955
3861 itr: 138290
```

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3862 training loss: 3197.708
3863 itr: 138300
3864 training loss: 4633.867
3865 itr: 138310
3866 training loss: 4904.721
3867 itr: 138320
3868 training loss: 6130.427
3869 itr: 138330
3870 training loss: 2608.613
3871 itr: 138340
3872 training loss: 4349.19
3873 itr: 138350
3874 training loss: 1594.9418
3875 itr: 138360
3876 training loss: 4331.083
3877 itr: 138370
3878 training loss: 4447.0923
3879 itr: 138380
3880 training loss: 4193.5186
3881 itr: 138390
3882 training loss: 5200.6675
3883 itr: 138400
3884 training loss: 5325.8086
3885 itr: 138410
3886 training loss: 4502.0103
3887 itr: 138420
3888 training loss: 3463.2036
3889 itr: 138430
3890 training loss: 3222.0864
3891 itr: 138440
3892 training loss: 5437.455
3893 itr: 138450
3894 training loss: 1634.5665
3895 itr: 138460
3896 training loss: 4621.851
3897 itr: 138470
3898 training loss: 4723.4365
```

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3899 itr: 138480
3900 training loss: 1987.2156
3901 itr: 138490
3902 training loss: 4199.435
3903 itr: 138500
3904 training loss: 1867.5408
3905 itr: 138510
3906 training loss: 2858.986
3907 itr: 138520
3908 training loss: 2475.0933
3909 itr: 138530
3910 training loss: 3967.1262
3911 itr: 138540
3912 training loss: 1851.7717
3913 itr: 138550
3914 training loss: 4937.415
3915 itr: 138560
3916 training loss: 4084.007
3917 itr: 138570
3918 training loss: 2058.1047
3919 itr: 138580
3920 training loss: 3018.0244
3921 itr: 138590
3922 training loss: 4553.381
3923 itr: 138600
3924 training loss: 3701.5403
3925 itr: 138610
3926 training loss: 2842.4575
3927 itr: 138620
3928 training loss: 4111.6377
3929 itr: 138630
3930 training loss: 4902.2876
3931 itr: 138640
3932 training loss: 2586.1055
3933 itr: 138650
3934 training loss: 5845.9634
3935 itr: 138660
```

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3936 training loss: 4704.6626
3937 itr: 138670
3938 training loss: 7375.744
3939 itr: 138680
3940 training loss: 2593.2583
3941 itr: 138690
3942 training loss: 9874.7
3943 itr: 138700
3944 training loss: 7201.0503
3945 itr: 138710
3946 training loss: 3364.0374
3947 itr: 138720
3948 training loss: 9070.539
3949 itr: 138730
3950 training loss: 8262.965
3951 itr: 138740
3952 training loss: 6782.7217
3953 itr: 138750
3954 training loss: 12214.58
3955 itr: 138760
3956 training loss: 9837.07
3957 itr: 138770
3958 training loss: 8304.292
3959 itr: 138780
3960 training loss: 4242.4766
3961 itr: 138790
3962 training loss: 6564.989
3963 itr: 138800
3964 training loss: 5812.9795
3965 itr: 138810
3966 training loss: 7392.6025
3967 itr: 138820
3968 training loss: 4816.883
3969 itr: 138830
3970 training loss: 4314.6826
3971 itr: 138840
3972 training loss: 7498.5913
```

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3973 itr: 138850
3974 training loss: 3622.9636
3975 itr: 138860
3976 training loss: 2215.9426
3977 itr: 138870
3978 training loss: 1915.3253
3979 itr: 138880
3980 training loss: 4227.1177
3981 itr: 138890
3982 training loss: 3693.4905
3983 itr: 138900
3984 training loss: 4160.309
3985 itr: 138910
3986 training loss: 2909.8582
3987 itr: 138920
3988 training loss: 5798.5386
3989 itr: 138930
3990 training loss: 5585.699
3991 itr: 138940
3992 training loss: 4801.132
3993 itr: 138950
3994 training loss: 5347.55
3995 itr: 138960
3996 training loss: 6367.6064
3997 itr: 138970
3998 training loss: 7338.8975
3999 itr: 138980
4000 training loss: 4474.728
4001 itr: 138990
4002 training loss: 5340.798
4003 itr: 139000
4004 training loss: 6351.2227
4005 itr: 139010
4006 training loss: 3264.652
4007 itr: 139020
4008 training loss: 3015.7148
4009 itr: 139030
```

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4010 training loss: 7844.379
4011 itr: 139040
4012 training loss: 5827.1255
4013 itr: 139050
4014 training loss: 4483.0303
4015 itr: 139060
4016 training loss: 8404.173
4017 itr: 139070
4018 training loss: 4579.3813
4019 itr: 139080
4020 training loss: 4566.811
4021 itr: 139090
4022 training loss: 6274.4736
4023 itr: 139100
4024 training loss: 4236.3477
4025 itr: 139110
4026 training loss: 7977.2373
4027 itr: 139120
4028 training loss: 4187.3887
4029 itr: 139130
4030 training loss: 2534.921
4031 itr: 139140
4032 training loss: 4460.583
4033 itr: 139150
4034 training loss: 2760.696
4035 itr: 139160
4036 training loss: 7568.235
4037 itr: 139170
4038 training loss: 2820.6973
4039 itr: 139180
4040 training loss: 4320.907
4041 itr: 139190
4042 training loss: 5359.394
4043 itr: 139200
4044 training loss: 2970.8032
4045 itr: 139210
4046 training loss: 2743.2573
```

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4047 itr: 139220
4048 training loss: 1910.7312
4049 itr: 139230
4050 training loss: 2932.0598
4051 itr: 139240
4052 training loss: 5112.828
4053 itr: 139250
4054 training loss: 3964.3076
4055 itr: 139260
4056 training loss: 4390.3394
4057 itr: 139270
4058 training loss: 3298.6697
4059 itr: 139280
4060 training loss: 3571.1655
4061 itr: 139290
4062 training loss: 4755.747
4063 itr: 139300
4064 training loss: 2404.2737
4065 itr: 139310
4066 training loss: 1925.6433
4067 itr: 139320
4068 training loss: 4308.4473
4069 itr: 139330
4070 training loss: 2345.3428
4071 itr: 139340
4072 training loss: 4467.5273
4073 itr: 139350
4074 training loss: 5027.737
4075 itr: 139360
4076 training loss: 3927.4075
4077 itr: 139370
4078 training loss: 7244.9976
4079 itr: 139380
4080 training loss: 5827.7695
4081 itr: 139390
4082 training loss: 3305.02
4083 itr: 139400
```

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4084 training loss: 7499.494
4085 itr: 139410
4086 training loss: 3208.5
4087 itr: 139420
4088 training loss: 4356.5034
4089 itr: 139430
4090 training loss: 4681.9346
4091 itr: 139440
4092 training loss: 3511.3867
4093 itr: 139450
4094 training loss: 7409.6577
4095 itr: 139460
4096 training loss: 2228.575
4097 itr: 139470
4098 training loss: 2285.1448
4099 itr: 139480
4100 training loss: 5083.175
4101 itr: 139490
4102 training loss: 5810.5195
4103 itr: 139500
4104 training loss: 642.4219
4105 itr: 139510
4106 training loss: 4634.309
4107 itr: 139520
4108 training loss: 5389.2407
4109 itr: 139530
4110 training loss: 3881.8486
4111 itr: 139540
4112 training loss: 7405.4033
4113 itr: 139550
4114 training loss: 6163.335
4115 itr: 139560
4116 training loss: 4091.0012
4117 itr: 139570
4118 training loss: 3118.5322
4119 itr: 139580
4120 training loss: 7116.5137
```



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4121 itr: 139590
4122 training loss: 4955.462
4123 itr: 139600
4124 training loss: 4922.1865
4125 itr: 139610
4126 training loss: 5733.233
4127 itr: 139620
4128 training loss: 2652.391
4129 itr: 139630
4130 training loss: 4779.4043
4131 itr: 139640
4132 training loss: 4378.2075
4133 itr: 139650
4134 training loss: 3094.5645
4135 itr: 139660
4136 training loss: 3837.027
4137 itr: 139670
4138 training loss: 2243.4255
4139 itr: 139680
4140 training loss: 1528.8623
4141 itr: 139690
4142 training loss: 2181.811
4143 itr: 139700
4144 training loss: 2535.167
4145 itr: 139710
4146 training loss: 4686.819
4147 itr: 139720
4148 training loss: 5639.0835
4149 itr: 139730
4150 training loss: 4784.462
4151 itr: 139740
4152 training loss: 3495.484
4153 itr: 139750
4154 training loss: 5379.373
4155 itr: 139760
4156 training loss: 2768.933
4157 itr: 139770
```

```
4158 training loss: 5811.156
4159 itr: 139780
4160 training loss: 3191.0376
4161 itr: 139790
4162 training loss: 4541.861
4163 itr: 139800
4164 training loss: 5290.1885
4165 itr: 139810
4166 training loss: 1678.5679
4167 itr: 139820
4168 training loss: 5623.5635
4169 itr: 139830
4170 training loss: 3860.4402
4171 itr: 139840
4172 training loss: 6953.275
4173 itr: 139850
4174 training loss: 4276.493
4175 itr: 139860
4176 training loss: 3360.8372
4177 itr: 139870
4178 training loss: 3715.34
4179 itr: 139880
4180 training loss: 2666.1592
4181 itr: 139890
4182 training loss: 4990.8857
4183 itr: 139900
4184 training loss: 2828.5007
4185 itr: 139910
4186 training loss: 4089.9363
4187 itr: 139920
4188 training loss: 3630.4785
4189 itr: 139930
4190 training loss: 6477.167
4191 itr: 139940
4192 training loss: 3532.07
4193 itr: 139950
4194 training loss: 1894.7488
```

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4195 itr: 139960
4196 training loss: 2852.1003
4197 itr: 139970
4198 training loss: 5252.4277
4199 itr: 139980
4200 training loss: 4942.197
4201 itr: 139990
4202 training loss: 4729.9395
4203 itr: 140000
4204 training loss: 3140.7014
4205 test...
4206 mse per seq: 8708.798885416101
4207 611.8503953439218
4208 700.178817042598
4209 766.4468580881754
4210 805.7483764931007
4211 869.9743309020996
4212 960.3390206231011
4213 961.4115154125072
4214 984.679542824074
4215 1010.4701519718876
4216 1037.6998767146358
4217 psnr per frame: 17.43752
4218 18.719145
4219 18.17204
4220 17.877169
4221 17.672075
4222 17.450924
4223 16.987204
4224 16.946365
4225 16.878744
4226 16.842093
4227 16.829435
4228 fmae per frame: 1821.6472
4229 1484.1349
4230 1611.2205
4231 1713.6884
```

```
4232 1762.5464
4233 1840.442
4234 1943.7
4235 1944.3851
4236 1957.1853
4237 1971.7596
4238 1987.4097
4239 ssim per frame: 0.7964133
4240 0.82329804
4241 0.8119184
4242 0.8047076
4243 0.80048615
4244 0.7962022
4245 0.7864966
4246 0.7858326
4247 0.78531164
4248 0.7842518
4249 0.78562784
4250 sharpness per frame: 254.38474
4251 254.89352
4252 254.92592
4253 254.48611
4254 254.47223
4255 254.43518
4256 254.24538
4257 254.50462
4258 254.31482
4259 254.02315
4260 253.5463
4261 saved to checkpoints/radar_predrnn_pp
4262 itr: 140010
4263 training loss: 2383.0325
4264 itr: 140020
4265 training loss: 5099.222
4266 itr: 140030
4267 training loss: 4560.4023
4268 itr: 140040
```

```
4269 training loss: 5558.168
4270 itr: 140050
4271 training loss: 2996.3652
4272 itr: 140060
4273 training loss: 4611.9854
4274 itr: 140070
4275 training loss: 4836.947
4276 itr: 140080
4277 training loss: 3632.0862
4278 itr: 140090
4279 training loss: 2858.3054
4280 itr: 140100
4281 training loss: 2001.5764
4282 itr: 140110
4283 training loss: 3228.9841
4284 itr: 140120
4285 training loss: 2803.7158
4286 itr: 140130
4287 training loss: 2278.769
4288 itr: 140140
4289 training loss: 4813.7124
4290 itr: 140150
4291 training loss: 4486.155
4292 itr: 140160
4293 training loss: 598.0916
4294 itr: 140170
4295 training loss: 3429.4294
4296 itr: 140180
4297 training loss: 3113.4456
4298 itr: 140190
4299 training loss: 5147.339
4300 itr: 140200
4301 training loss: 2997.489
4302 itr: 140210
4303 training loss: 2667.5125
4304 itr: 140220
4305 training loss: 2231.4695
```

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4306 itr: 140230
4307 training loss: 4218.2876
4308 itr: 140240
4309 training loss: 2303.4126
4310 itr: 140250
4311 training loss: 6361.167
4312 itr: 140260
4313 training loss: 4575.1836
4314 itr: 140270
4315 training loss: 4518.8438
4316 itr: 140280
4317 training loss: 3669.3987
4318 itr: 140290
4319 training loss: 4806.581
4320 itr: 140300
4321 training loss: 2748.668
4322 itr: 140310
4323 training loss: 3406.6765
4324 itr: 140320
4325 training loss: 4041.559
4326 itr: 140330
4327 training loss: 3087.401
4328 itr: 140340
4329 training loss: 7036.413
4330 itr: 140350
4331 training loss: 4795.8076
4332 itr: 140360
4333 training loss: 4561.7075
4334 itr: 140370
4335 training loss: 4709.4316
4336 itr: 140380
4337 training loss: 846.36584
4338 itr: 140390
4339 training loss: 1841.655
4340 itr: 140400
4341 training loss: 6475.0757
4342 itr: 140410
```

```
4343 training loss: 2180.386
4344 itr: 140420
4345 training loss: 4841.212
4346 itr: 140430
4347 training loss: 4316.6665
4348 itr: 140440
4349 training loss: 3784.3047
4350 itr: 140450
4351 training loss: 2488.6545
4352 itr: 140460
4353 training loss: 6415.8457
4354 itr: 140470
4355 training loss: 3284.7485
4356 itr: 140480
4357 training loss: 4081.0132
4358 itr: 140490
4359 training loss: 4857.8286
4360 itr: 140500
4361 training loss: 4791.13
4362 itr: 140510
4363 training loss: 4481.0894
4364 itr: 140520
4365 training loss: 2143.2256
4366 itr: 140530
4367 training loss: 4370.0044
4368 itr: 140540
4369 training loss: 2221.72
4370 itr: 140550
4371 training loss: 6696.7627
4372 itr: 140560
4373 training loss: 3886.669
4374 itr: 140570
4375 training loss: 2844.9272
4376 itr: 140580
4377 training loss: 2313.6953
4378 itr: 140590
4379 training loss: 5481.8184
```

```
4380 itr: 140600
4381 training loss: 3953.5315
4382 itr: 140610
4383 training loss: 4185.7905
4384 itr: 140620
4385 training loss: 4694.843
4386 itr: 140630
4387 training loss: 5162.1655
4388 itr: 140640
4389 training loss: 5176.1265
4390 itr: 140650
4391 training loss: 1793.9523
4392 itr: 140660
4393 training loss: 3786.9177
4394 itr: 140670
4395 training loss: 4593.743
4396 itr: 140680
4397 training loss: 5686.067
4398 itr: 140690
4399 training loss: 3861.0332
4400 itr: 140700
4401 training loss: 7206.612
4402 itr: 140710
4403 training loss: 6585.737
4404 itr: 140720
4405 training loss: 3051.721
4406 itr: 140730
4407 training loss: 4956.3193
4408 itr: 140740
4409 training loss: 3580.3894
4410 itr: 140750
4411 training loss: 4677.1455
4412 itr: 140760
4413 training loss: 5279.53
4414 itr: 140770
4415 training loss: 5044.5786
4416 itr: 140780
```



```
4417 training loss: 3229.4756
4418 itr: 140790
4419 training loss: 2033.7981
4420 itr: 140800
4421 training loss: 5659.552
4422 itr: 140810
4423 training loss: 5704.187
4424 itr: 140820
4425 training loss: 4700.8896
4426 itr: 140830
4427 training loss: 3004.4382
4428 itr: 140840
4429 training loss: 3891.174
4430 itr: 140850
4431 training loss: 3044.8958
4432 itr: 140860
4433 training loss: 2724.0974
4434 itr: 140870
4435 training loss: 3980.2117
4436 itr: 140880
4437 training loss: 1784.3816
4438 itr: 140890
4439 training loss: 5181.091
4440 itr: 140900
4441 training loss: 2759.2734
4442 itr: 140910
4443 training loss: 3539.7705
4444 itr: 140920
4445 training loss: 4441.2666
4446 itr: 140930
4447 training loss: 5104.144
4448 itr: 140940
4449 training loss: 3772.3428
4450 itr: 140950
4451 training loss: 5749.5303
4452 itr: 140960
4453 training loss: 3648.2903
```

```
4454 itr: 140970
4455 training loss: 6177.425
4456 itr: 140980
4457 training loss: 2291.788
4458 itr: 140990
4459 training loss: 1858.7692
4460 itr: 141000
4461 training loss: 3405.5635
4462 itr: 141010
4463 training loss: 4379.329
4464 itr: 141020
4465 training loss: 1402.7877
4466 itr: 141030
4467 training loss: 4785.8887
4468 itr: 141040
4469 training loss: 4731.219
4470 itr: 141050
4471 training loss: 4500.657
4472 itr: 141060
4473 training loss: 5496.2246
4474 itr: 141070
4475 training loss: 2325.9805
4476 itr: 141080
4477 training loss: 1405.4224
4478 itr: 141090
4479 training loss: 2669.4429
4480 itr: 141100
4481 training loss: 3115.9675
4482 itr: 141110
4483 training loss: 2747.9172
4484 itr: 141120
4485 training loss: 4206.8857
4486 itr: 141130
4487 training loss: 2674.5537
4488 itr: 141140
4489 training loss: 3512.774
4490 itr: 141150
```

```
4491 training loss: 3165.9226
4492 itr: 141160
4493 training loss: 3092.8337
4494 itr: 141170
4495 training loss: 4878.0874
4496 itr: 141180
4497 training loss: 3097.6367
4498 itr: 141190
4499 training loss: 3326.5232
4500 itr: 141200
4501 training loss: 1586.4744
4502 itr: 141210
4503 training loss: 3133.2966
4504 itr: 141220
4505 training loss: 5137.646
4506 itr: 141230
4507 training loss: 3396.4976
4508 itr: 141240
4509 training loss: 2914.5393
4510 itr: 141250
4511 training loss: 4972.289
4512 itr: 141260
4513 training loss: 2256.2224
4514 itr: 141270
4515 training loss: 903.8717
4516 itr: 141280
4517 training loss: 2888.4248
4518 itr: 141290
4519 training loss: 3466.3787
4520 itr: 141300
4521 training loss: 4389.965
4522 itr: 141310
4523 training loss: 4509.3857
4524 itr: 141320
4525 training loss: 1222.942
4526 itr: 141330
4527 training loss: 6568.832
```

```
4528 itr: 141340
4529 training loss: 2068.105
4530 itr: 141350
4531 training loss: 3659.1055
4532 itr: 141360
4533 training loss: 6151.584
4534 itr: 141370
4535 training loss: 6036.5073
4536 itr: 141380
4537 training loss: 2390.912
4538 itr: 141390
4539 training loss: 3400.9924
4540 itr: 141400
4541 training loss: 6365.588
4542 itr: 141410
4543 training loss: 3054.9229
4544 itr: 141420
4545 training loss: 2924.3577
4546 itr: 141430
4547 training loss: 4104.7876
4548 itr: 141440
4549 training loss: 4650.4136
4550 itr: 141450
4551 training loss: 4639.4175
4552 itr: 141460
4553 training loss: 5173.0522
4554 itr: 141470
4555 training loss: 4160.547
4556 itr: 141480
4557 training loss: 3332.6973
4558 itr: 141490
4559 training loss: 5884.506
4560 itr: 141500
4561 training loss: 5124.1943
4562 itr: 141510
4563 training loss: 2960.49
4564 itr: 141520
```

```
4565 training loss: 4293.84
4566 itr: 141530
4567 training loss: 2753.3237
4568 itr: 141540
4569 training loss: 3426.8315
4570 itr: 141550
4571 training loss: 5458.7793
4572 itr: 141560
4573 training loss: 3087.981
4574 itr: 141570
4575 training loss: 4914.778
4576 itr: 141580
4577 training loss: 3882.8154
4578 itr: 141590
4579 training loss: 3324.1238
4580 itr: 141600
4581 training loss: 3123.6519
4582 itr: 141610
4583 training loss: 6253.529
4584 itr: 141620
4585 training loss: 2362.3176
4586 itr: 141630
4587 training loss: 3183.9863
4588 itr: 141640
4589 training loss: 3178.5874
4590 itr: 141650
4591 training loss: 4019.6577
4592 itr: 141660
4593 training loss: 5362.513
4594 itr: 141670
4595 training loss: 3357.83
4596 itr: 141680
4597 training loss: 2619.0442
4598 itr: 141690
4599 training loss: 2097.4836
4600 itr: 141700
4601 training loss: 3859.756
```

```
4602 itr: 141710
4603 training loss: 4393.704
4604 itr: 141720
4605 training loss: 5901.2437
4606 itr: 141730
4607 training loss: 3254.2747
4608 itr: 141740
4609 training loss: 7147.978
4610 itr: 141750
4611 training loss: 2586.9536
4612 itr: 141760
4613 training loss: 5916.83
4614 itr: 141770
4615 training loss: 1551.5245
4616 itr: 141780
4617 training loss: 4641.839
4618 itr: 141790
4619 training loss: 5717.8438
4620 itr: 141800
4621 training loss: 1145.6571
4622 itr: 141810
4623 training loss: 4925.9414
4624 itr: 141820
4625 training loss: 3536.2134
4626 itr: 141830
4627 training loss: 4299.721
4628 itr: 141840
4629 training loss: 3076.4592
4630 itr: 141850
4631 training loss: 4252.271
4632 itr: 141860
4633 training loss: 2168.6687
4634 itr: 141870
4635 training loss: 1370.6852
4636 itr: 141880
4637 training loss: 2990.376
4638 itr: 141890
```

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4639 training loss: 2445.1943
4640 itr: 141900
4641 training loss: 5449.215
4642 itr: 141910
4643 training loss: 3371.7134
4644 itr: 141920
4645 training loss: 2223.0842
4646 itr: 141930
4647 training loss: 2549.4812
4648 itr: 141940
4649 training loss: 4235.249
4650 itr: 141950
4651 training loss: 3450.9834
4652 itr: 141960
4653 training loss: 5514.323
4654 itr: 141970
4655 training loss: 4212.6553
4656 itr: 141980
4657 training loss: 2018.5303
4658 itr: 141990
4659 training loss: 2970.783
4660 itr: 142000
4661 training loss: 4354.7
4662 itr: 142010
4663 training loss: 5047.1377
4664 itr: 142020
4665 training loss: 4437.097
4666 itr: 142030
4667 training loss: 4308.885
4668 itr: 142040
4669 training loss: 4331.604
4670 itr: 142050
4671 training loss: 4357.7036
4672 itr: 142060
4673 training loss: 1902.1572
4674 itr: 142070
4675 training loss: 2438.0044
```

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4676 itr: 142080
4677 training loss: 5908.9443
4678 itr: 142090
4679 training loss: 3637.6416
4680 itr: 142100
4681 training loss: 3219.8306
4682 itr: 142110
4683 training loss: 2740.9084
4684 itr: 142120
4685 training loss: 4634.2256
4686 itr: 142130
4687 training loss: 3479.586
4688 itr: 142140
4689 training loss: 6097.8423
4690 itr: 142150
4691 training loss: 2814.805
4692 itr: 142160
4693 training loss: 4826.557
4694 itr: 142170
4695 training loss: 5144.468
4696 itr: 142180
4697 training loss: 1413.0254
4698 itr: 142190
4699 training loss: 4123.8735
4700 itr: 142200
4701 training loss: 4053.4753
4702 itr: 142210
4703 training loss: 4530.641
4704 itr: 142220
4705 training loss: 2633.997
4706 itr: 142230
4707 training loss: 3413.5986
4708 itr: 142240
4709 training loss: 2934.7175
4710 itr: 142250
4711 training loss: 3205.1016
4712 itr: 142260
```



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4713 training loss: 1356.845
4714 itr: 142270
4715 training loss: 3304.0654
4716 itr: 142280
4717 training loss: 4121.7515
4718 itr: 142290
4719 training loss: 5599.6035
4720 itr: 142300
4721 training loss: 3402.2627
4722 itr: 142310
4723 training loss: 2820.924
4724 itr: 142320
4725 training loss: 5216.3276
4726 itr: 142330
4727 training loss: 4873.5024
4728 itr: 142340
4729 training loss: 6684.3755
4730 itr: 142350
4731 training loss: 3262.196
4732 itr: 142360
4733 training loss: 2906.411
4734 itr: 142370
4735 training loss: 1712.872
4736 itr: 142380
4737 training loss: 5427.9062
4738 itr: 142390
4739 training loss: 5824.4414
4740 itr: 142400
4741 training loss: 4571.609
4742 itr: 142410
4743 training loss: 1876.9128
4744 itr: 142420
4745 training loss: 2932.8035
4746 itr: 142430
4747 training loss: 4074.3398
4748 itr: 142440
4749 training loss: 2372.4788
```

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4750 itr: 142450
4751 training loss: 4203.545
4752 itr: 142460
4753 training loss: 3522.5278
4754 itr: 142470
4755 training loss: 2177.736
4756 itr: 142480
4757 training loss: 5055.9067
4758 itr: 142490
4759 training loss: 1751.1346
4760 itr: 142500
4761 training loss: 5390.6357
4762 itr: 142510
4763 training loss: 6852.267
4764 itr: 142520
4765 training loss: 2424.66
4766 itr: 142530
4767 training loss: 4983.2656
4768 itr: 142540
4769 training loss: 2535.787
4770 itr: 142550
4771 training loss: 3752.521
4772 itr: 142560
4773 training loss: 4420.994
4774 itr: 142570
4775 training loss: 2946.7268
4776 itr: 142580
4777 training loss: 3544.1777
4778 itr: 142590
4779 training loss: 3729.9211
4780 itr: 142600
4781 training loss: 4361.393
4782 itr: 142610
4783 training loss: 4233.818
4784 itr: 142620
4785 training loss: 6585.549
4786 itr: 142630
```

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4787 training loss: 4368.784
4788 itr: 142640
4789 training loss: 5563.825
4790 itr: 142650
4791 training loss: 2637.0942
4792 itr: 142660
4793 training loss: 1758.2783
4794 itr: 142670
4795 training loss: 2407.5
4796 itr: 142680
4797 training loss: 2299.5808
4798 itr: 142690
4799 training loss: 2388.6118
4800 itr: 142700
4801 training loss: 3787.8528
4802 itr: 142710
4803 training loss: 4932.4897
4804 itr: 142720
4805 training loss: 4273.676
4806 itr: 142730
4807 training loss: 3042.4104
4808 itr: 142740
4809 training loss: 2147.3103
4810 itr: 142750
4811 training loss: 3631.6519
4812 itr: 142760
4813 training loss: 3301.0647
4814 itr: 142770
4815 training loss: 4651.014
4816 itr: 142780
4817 training loss: 3746.1982
4818 itr: 142790
4819 training loss: 6452.166
4820 itr: 142800
4821 training loss: 3989.8623
4822 itr: 142810
4823 training loss: 2360.4873
```

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4824 itr: 142820
4825 training loss: 5617.3467
4826 itr: 142830
4827 training loss: 4159.271
4828 itr: 142840
4829 training loss: 3952.5168
4830 itr: 142850
4831 training loss: 3338.307
4832 itr: 142860
4833 training loss: 5799.466
4834 itr: 142870
4835 training loss: 6463.5557
4836 itr: 142880
4837 training loss: 6175.9873
4838 itr: 142890
4839 training loss: 3645.8523
4840 itr: 142900
4841 training loss: 4561.888
4842 itr: 142910
4843 training loss: 5237.0728
4844 itr: 142920
4845 training loss: 6110.2915
4846 itr: 142930
4847 training loss: 1463.9286
4848 itr: 142940
4849 training loss: 4282.4165
4850 itr: 142950
4851 training loss: 3713.6187
4852 itr: 142960
4853 training loss: 6210.6265
4854 itr: 142970
4855 training loss: 4281.7246
4856 itr: 142980
4857 training loss: 2469.593
4858 itr: 142990
4859 training loss: 4799.469
4860 itr: 143000
```

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4861 training loss: 5596.4775
4862 itr: 143010
4863 training loss: 6593.6353
4864 itr: 143020
4865 training loss: 1676.6702
4866 itr: 143030
4867 training loss: 2117.024
4868 itr: 143040
4869 training loss: 4164.8384
4870 itr: 143050
4871 training loss: 2119.8555
4872 itr: 143060
4873 training loss: 3920.8313
4874 itr: 143070
4875 training loss: 7655.1943
4876 itr: 143080
4877 training loss: 4036.7148
4878 itr: 143090
4879 training loss: 3064.705
4880 itr: 143100
4881 training loss: 3626.7356
4882 itr: 143110
4883 training loss: 3290.2642
4884 itr: 143120
4885 training loss: 7464.5015
4886 itr: 143130
4887 training loss: 3005.7354
4888 itr: 143140
4889 training loss: 5393.0444
4890 itr: 143150
4891 training loss: 4842.664
4892 itr: 143160
4893 training loss: 4726.296
4894 itr: 143170
4895 training loss: 3506.7605
4896 itr: 143180
4897 training loss: 4516.698
```

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4898 itr: 143190
4899 training loss: 3209.4214
4900 itr: 143200
4901 training loss: 4120.6445
4902 itr: 143210
4903 training loss: 2596.9424
4904 itr: 143220
4905 training loss: 4755.376
4906 itr: 143230
4907 training loss: 3332.9883
4908 itr: 143240
4909 training loss: 3832.0254
4910 itr: 143250
4911 training loss: 4201.1074
4912 itr: 143260
4913 training loss: 5208.269
4914 itr: 143270
4915 training loss: 3642.3877
4916 itr: 143280
4917 training loss: 4000.1646
4918 itr: 143290
4919 training loss: 4971.708
4920 itr: 143300
4921 training loss: 5030.6455
4922 itr: 143310
4923 training loss: 5578.2603
4924 itr: 143320
4925 training loss: 4257.264
4926 itr: 143330
4927 training loss: 2714.691
4928 itr: 143340
4929 training loss: 2064.3733
4930 itr: 143350
4931 training loss: 2329.9075
4932 itr: 143360
4933 training loss: 3044.986
4934 itr: 143370
```

```
4935 training loss: 1169.3717
4936 itr: 143380
4937 training loss: 1435.6732
4938 itr: 143390
4939 training loss: 3380.1846
4940 itr: 143400
4941 training loss: 4606.735
4942 itr: 143410
4943 training loss: 4964.5166
4944 itr: 143420
4945 training loss: 5000.3516
4946 itr: 143430
4947 training loss: 979.96375
4948 itr: 143440
4949 training loss: 4419.661
4950 itr: 143450
4951 training loss: 3887.8765
4952 itr: 143460
4953 training loss: 4005.272
4954 itr: 143470
4955 training loss: 3868.8647
4956 itr: 143480
4957 training loss: 3517.5774
4958 itr: 143490
4959 training loss: 4551.033
4960 itr: 143500
4961 training loss: 4011.936
4962 itr: 143510
4963 training loss: 4166.366
4964 itr: 143520
4965 training loss: 3076.1992
4966 itr: 143530
4967 training loss: 501.53406
4968 itr: 143540
4969 training loss: 3874.2024
4970 itr: 143550
4971 training loss: 4069.7654
```

```
4972 itr: 143560
4973 training loss: 2317.56
4974 itr: 143570
4975 training loss: 2216.9707
4976 itr: 143580
4977 training loss: 5998.504
4978 itr: 143590
4979 training loss: 4909.7197
4980 itr: 143600
4981 training loss: 3730.0642
4982 itr: 143610
4983 training loss: 3274.4182
4984 itr: 143620
4985 training loss: 4608.424
4986 itr: 143630
4987 training loss: 2970.6973
4988 itr: 143640
4989 training loss: 5636.8857
4990 itr: 143650
4991 training loss: 3128.5283
4992 itr: 143660
4993 training loss: 4452.1465
4994 itr: 143670
4995 training loss: 1062.7001
4996 itr: 143680
4997 training loss: 2559.3545
4998 itr: 143690
4999 training loss: 3537.9475
5000 itr: 143700
5001 training loss: 5787.4917
5002 itr: 143710
5003 training loss: 6159.711
5004 itr: 143720
5005 training loss: 3386.245
5006 itr: 143730
5007 training loss: 3469.476
5008 itr: 143740
```



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5009 training loss: 2426.9827
5010 itr: 143750
5011 training loss: 3426.665
5012 itr: 143760
5013 training loss: 3509.9749
5014 itr: 143770
5015 training loss: 2811.9316
5016 itr: 143780
5017 training loss: 2088.2258
5018 itr: 143790
5019 training loss: 1529.4705
5020 itr: 143800
5021 training loss: 4806.117
5022 itr: 143810
5023 training loss: 4400.1475
5024 itr: 143820
5025 training loss: 4570.626
5026 itr: 143830
5027 training loss: 2708.357
5028 itr: 143840
5029 training loss: 2266.3835
5030 itr: 143850
5031 training loss: 4093.9756
5032 itr: 143860
5033 training loss: 2947.064
5034 itr: 143870
5035 training loss: 6523.9155
5036 itr: 143880
5037 training loss: 4822.8896
5038 itr: 143890
5039 training loss: 3520.4785
5040 itr: 143900
5041 training loss: 3778.456
5042 itr: 143910
5043 training loss: 5808.9204
5044 itr: 143920
5045 training loss: 1287.0154
```

```
5046 itr: 143930
5047 training loss: 4806.2896
5048 itr: 143940
5049 training loss: 2087.7966
5050 itr: 143950
5051 training loss: 2555.8408
5052 itr: 143960
5053 training loss: 2717.9202
5054 itr: 143970
5055 training loss: 1791.0677
5056 itr: 143980
5057 training loss: 4619.6187
5058 itr: 143990
5059 training loss: 3079.2285
5060 itr: 144000
5061 training loss: 4111.456
5062 itr: 144010
5063 training loss: 2717.1555
5064 itr: 144020
5065 training loss: 3828.4001
5066 itr: 144030
5067 training loss: 4374.8276
5068 itr: 144040
5069 training loss: 3304.9187
5070 itr: 144050
5071 training loss: 4110.744
5072 itr: 144060
5073 training loss: 4260.9297
5074 itr: 144070
5075 training loss: 3886.1052
5076 itr: 144080
5077 training loss: 3793.7634
5078 itr: 144090
5079 training loss: 3574.4585
5080 itr: 144100
5081 training loss: 2964.5203
5082 itr: 144110
```

```
5083 training loss: 6161.617
5084 itr: 144120
5085 training loss: 4841.271
5086 itr: 144130
5087 training loss: 3381.113
5088 itr: 144140
5089 training loss: 3000.2478
5090 itr: 144150
5091 training loss: 6199.9546
5092 itr: 144160
5093 training loss: 3803.3188
5094 itr: 144170
5095 training loss: 5444.7935
5096 itr: 144180
5097 training loss: 4468.045
5098 itr: 144190
5099 training loss: 4880.8687
5100 itr: 144200
5101 training loss: 3662.4255
5102 itr: 144210
5103 training loss: 3808.4924
5104 itr: 144220
5105 training loss: 3452.3164
5106 itr: 144230
5107 training loss: 3279.105
5108 itr: 144240
5109 training loss: 2687.0137
5110 itr: 144250
5111 training loss: 5067.6226
5112 itr: 144260
5113 training loss: 988.0662
5114 itr: 144270
5115 training loss: 3687.31
5116 itr: 144280
5117 training loss: 4117.39
5118 itr: 144290
5119 training loss: 4188.3115
```

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5120 itr: 144300
5121 training loss: 2758.872
5122 itr: 144310
5123 training loss: 4706.645
5124 itr: 144320
5125 training loss: 3746.9336
5126 itr: 144330
5127 training loss: 7141.4688
5128 itr: 144340
5129 training loss: 2683.0015
5130 itr: 144350
5131 training loss: 2698.3757
5132 itr: 144360
5133 training loss: 3935.8335
5134 itr: 144370
5135 training loss: 2858.6946
5136 itr: 144380
5137 training loss: 2108.509
5138 itr: 144390
5139 training loss: 2167.7598
5140 itr: 144400
5141 training loss: 4352.3486
5142 itr: 144410
5143 training loss: 5705.8857
5144 itr: 144420
5145 training loss: 3287.4946
5146 itr: 144430
5147 training loss: 5969.6406
5148 itr: 144440
5149 training loss: 1503.5217
5150 itr: 144450
5151 training loss: 2660.7712
5152 itr: 144460
5153 training loss: 4589.78
5154 itr: 144470
5155 training loss: 3883.778
5156 itr: 144480
```

```
5157 training loss: 1472.0614
5158 itr: 144490
5159 training loss: 3026.2427
5160 itr: 144500
5161 training loss: 1072.9061
5162 itr: 144510
5163 training loss: 2159.8994
5164 itr: 144520
5165 training loss: 4638.2627
5166 itr: 144530
5167 training loss: 3424.0664
5168 itr: 144540
5169 training loss: 4457.88
5170 itr: 144550
5171 training loss: 2146.0964
5172 itr: 144560
5173 training loss: 3135.9956
5174 itr: 144570
5175 training loss: 3507.7874
5176 itr: 144580
5177 training loss: 4137.4375
5178 itr: 144590
5179 training loss: 3468.2063
5180 itr: 144600
5181 training loss: 6164.3257
5182 itr: 144610
5183 training loss: 4776.588
5184 itr: 144620
5185 training loss: 2370.2817
5186 itr: 144630
5187 training loss: 5855.923
5188 itr: 144640
5189 training loss: 3506.1926
5190 itr: 144650
5191 training loss: 2480.823
5192 itr: 144660
5193 training loss: 4198.801
```

```
5194 itr: 144670
5195 training loss: 4481.005
5196 itr: 144680
5197 training loss: 2580.1482
5198 itr: 144690
5199 training loss: 3494.1711
5200 itr: 144700
5201 training loss: 5218.443
5202 itr: 144710
5203 training loss: 3403.8013
5204 itr: 144720
5205 training loss: 2553.8906
5206 itr: 144730
5207 training loss: 4999.935
5208 itr: 144740
5209 training loss: 5819.3066
5210 itr: 144750
5211 training loss: 5444.4077
5212 itr: 144760
5213 training loss: 3349.9775
5214 itr: 144770
5215 training loss: 5095.4604
5216 itr: 144780
5217 training loss: 2667.132
5218 itr: 144790
5219 training loss: 3858.5764
5220 itr: 144800
5221 training loss: 2941.425
5222 itr: 144810
5223 training loss: 3836.4216
5224 itr: 144820
5225 training loss: 3122.6274
5226 itr: 144830
5227 training loss: 3217.004
5228 itr: 144840
5229 training loss: 3132.538
5230 itr: 144850
```

```
5231 training loss: 2994.545
5232 itr: 144860
5233 training loss: 3577.6743
5234 itr: 144870
5235 training loss: 3900.591
5236 itr: 144880
5237 training loss: 4653.8887
5238 itr: 144890
5239 training loss: 3917.0522
5240 itr: 144900
5241 training loss: 2160.9592
5242 itr: 144910
5243 training loss: 3046.119
5244 itr: 144920
5245 training loss: 2052.0815
5246 itr: 144930
5247 training loss: 3144.81
5248 itr: 144940
5249 training loss: 4310.947
5250 itr: 144950
5251 training loss: 3745.8643
5252 itr: 144960
5253 training loss: 1131.8467
5254 itr: 144970
5255 training loss: 2706.9119
5256 itr: 144980
5257 training loss: 3785.9827
5258 itr: 144990
5259 training loss: 1660.2648
5260 itr: 145000
5261 training loss: 3301.1904
5262 test...
5263 mse per seq: 8847.714251059073
5264 610.2917002925167
5265 698.9859171266909
5266 770.2752983658402
5267 811.7815233866373
```

5268	877.0433626528139
5269	972.9493964866356
5270	993.7849422737404
5271	1010.9047512478298
5272	1034.3652198226364
5273	1067.3321394037318
5274	psnr per frame: 17.37849
5275	18.73308
5276	18.177565
5277	17.858349
5278	17.645134
5279	17.413795
5280	16.9248
5281	16.83935
5282	16.773699
5283	16.73243
5284	16.68671
5285	fmae per frame: 1812.4323
5286	1447.6686
5287	1578.9849
5288	1687.1697
5289	1741.8585
5290	1821.9662
5291	1934.5513
5292	1957.0507
5293	1968.7681
5294	1981.9857
5295	2004.3186
5296	ssim per frame: 0.79178
5297	0.8211781
5298	0.80947185
5299	0.80170166
5300	0.7970266
5301	0.792216
5302	0.7815498
5303	0.77981263
5304	0.7791255


```
5305 0.77758574
5306 0.7781324
5307 sharpness per frame: 254.52682
5308 254.77315
5309 254.9213
5310 254.74074
5311 254.99074
5312 254.77315
5313 254.68056
5314 254.54167
5315 254.41203
5316 253.97223
5317 253.46297
5318 saved to checkpoints/radar_predrnn_pp
5319 itr: 145010
5320 training loss: 1717.6313
5321 itr: 145020
5322 training loss: 4201.029
5323 itr: 145030
5324 training loss: 2302.3086
5325 itr: 145040
5326 training loss: 5526.806
5327 itr: 145050
5328 training loss: 4534.056
5329 itr: 145060
5330 training loss: 2933.1216
5331 itr: 145070
5332 training loss: 1834.5449
5333 itr: 145080
5334 training loss: 3994.281
5335 itr: 145090
5336 training loss: 3181.6714
5337 itr: 145100
5338 training loss: 4628.1846
5339 itr: 145110
5340 training loss: 3029.0037
5341 itr: 145120
```

```
5342 training loss: 3502.2327
5343 itr: 145130
5344 training loss: 5249.5195
5345 itr: 145140
5346 training loss: 3919.6445
5347 itr: 145150
5348 training loss: 4160.578
5349 itr: 145160
5350 training loss: 3010.7012
5351 itr: 145170
5352 training loss: 6226.914
5353 itr: 145180
5354 training loss: 1880.3529
5355 itr: 145190
5356 training loss: 4233.245
5357 itr: 145200
5358 training loss: 5198.498
5359 itr: 145210
5360 training loss: 4652.069
5361 itr: 145220
5362 training loss: 5561.819
5363 itr: 145230
5364 training loss: 4295.75
5365 itr: 145240
5366 training loss: 2346.4473
5367 itr: 145250
5368 training loss: 4077.4038
5369 itr: 145260
5370 training loss: 5834.257
5371 itr: 145270
5372 training loss: 2737.3696
5373 itr: 145280
5374 training loss: 4835.6084
5375 itr: 145290
5376 training loss: 3627.4868
5377 itr: 145300
5378 training loss: 4600.6987
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5379 itr: 145310
5380 training loss: 3704.933
5381 itr: 145320
5382 training loss: 3129.0903
5383 itr: 145330
5384 training loss: 3044.6628
5385 itr: 145340
5386 training loss: 4880.8984
5387 itr: 145350
5388 training loss: 1327.3887
5389 itr: 145360
5390 training loss: 4396.5537
5391 itr: 145370
5392 training loss: 3601.439
5393 itr: 145380
5394 training loss: 3569.8245
5395 itr: 145390
5396 training loss: 3290.1829
5397 itr: 145400
5398 training loss: 3505.176
5399 itr: 145410
5400 training loss: 2251.1597
5401 itr: 145420
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5403 itr: 145430
5404 training loss: 5402.706
5405 itr: 145440
5406 training loss: 1237.6847
5407 itr: 145450
5408 training loss: 2509.2803
5409 itr: 145460
5410 training loss: 4299.583
5411 itr: 145470
5412 training loss: 5635.554
5413 itr: 145480
5414 training loss: 1114.352
5415 itr: 145490
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5416 training loss: 4964.2427
5417 itr: 145500
5418 training loss: 3141.2566
5419 itr: 145510
5420 training loss: 4711.91
5421 itr: 145520
5422 training loss: 2549.6614
5423 itr: 145530
5424 training loss: 2551.5215
5425 itr: 145540
5426 training loss: 2326.1968
5427 itr: 145550
5428 training loss: 4507.5723
5429 itr: 145560
5430 training loss: 5170.3994
5431 itr: 145570
5432 training loss: 3042.7058
5433 itr: 145580
5434 training loss: 4663.606
5435 itr: 145590
5436 training loss: 4247.361
5437 itr: 145600
5438 training loss: 3200.0767
5439 itr: 145610
5440 training loss: 3604.008
5441 itr: 145620
5442 training loss: 3924.3533
5443 itr: 145630
5444 training loss: 5740.155
5445 itr: 145640
5446 training loss: 3375.605
5447 itr: 145650
5448 training loss: 5177.1436
5449 itr: 145660
5450 training loss: 2693.3462
5451 itr: 145670
5452 training loss: 4088.561
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5453 itr: 145680
5454 training loss: 4433.555
5455 itr: 145690
5456 training loss: 5856.19
5457 itr: 145700
5458 training loss: 3044.867
5459 itr: 145710
5460 training loss: 3844.0828
5461 itr: 145720
5462 training loss: 5721.8413
5463 itr: 145730
5464 training loss: 5023.7886
5465 itr: 145740
5466 training loss: 3868.4631
5467 itr: 145750
5468 training loss: 3593.767
5469 itr: 145760
5470 training loss: 5035.85
5471 itr: 145770
5472 training loss: 1442.329
5473 itr: 145780
5474 training loss: 3760.5764
5475 itr: 145790
5476 training loss: 5523.634
5477 itr: 145800
5478 training loss: 3795.0068
5479 itr: 145810
5480 training loss: 6283.371
5481 itr: 145820
5482 training loss: 5705.5635
5483 itr: 145830
5484 training loss: 3035.2866
5485 itr: 145840
5486 training loss: 1634.8274
5487 itr: 145850
5488 training loss: 3114.2852
5489 itr: 145860
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5490 training loss: 1543.5254
5491 itr: 145870
5492 training loss: 4835.8716
5493 itr: 145880
5494 training loss: 2845.6182
5495 itr: 145890
5496 training loss: 4706.5938
5497 itr: 145900
5498 training loss: 6238.8535
5499 itr: 145910
5500 training loss: 5928.0303
5501 itr: 145920
5502 training loss: 5947.0312
5503 itr: 145930
5504 training loss: 4800.5044
5505 itr: 145940
5506 training loss: 5863.754
5507 itr: 145950
5508 training loss: 4441.517
5509 itr: 145960
5510 training loss: 2502.7747
5511 itr: 145970
5512 training loss: 4354.441
5513 itr: 145980
5514 training loss: 5024.729
5515 itr: 145990
5516 training loss: 4605.101
5517 itr: 146000
5518 training loss: 4537.6562
5519 itr: 146010
5520 training loss: 4288.9053
5521 itr: 146020
5522 training loss: 1068.2395
5523 itr: 146030
5524 training loss: 4825.0723
5525 itr: 146040
5526 training loss: 6053.9307
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5527 itr: 146050
5528 training loss: 5387.876
5529 itr: 146060
5530 training loss: 2160.481
5531 itr: 146070
5532 training loss: 5570.144
5533 itr: 146080
5534 training loss: 3490.0503
5535 itr: 146090
5536 training loss: 2748.8274
5537 itr: 146100
5538 training loss: 4795.26
5539 itr: 146110
5540 training loss: 3970.9844
5541 itr: 146120
5542 training loss: 2094.331
5543 itr: 146130
5544 training loss: 4264.0005
5545 itr: 146140
5546 training loss: 3447.8418
5547 itr: 146150
5548 training loss: 4104.1646
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5550 training loss: 2011.8264
5551 itr: 146170
5552 training loss: 5623.7114
5553 itr: 146180
5554 training loss: 1243.8688
5555 itr: 146190
5556 training loss: 3716.9148
5557 itr: 146200
5558 training loss: 4238.1724
5559 itr: 146210
5560 training loss: 3393.9666
5561 itr: 146220
5562 training loss: 3701.7517
5563 itr: 146230
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5564 training loss: 7074.494
5565 itr: 146240
5566 training loss: 3038.136
5567 itr: 146250
5568 training loss: 2768.4854
5569 itr: 146260
5570 training loss: 3410.8975
5571 itr: 146270
5572 training loss: 3438.2495
5573 itr: 146280
5574 training loss: 4980.317
5575 itr: 146290
5576 training loss: 4679.6245
5577 itr: 146300
5578 training loss: 3766.3474
5579 itr: 146310
5580 training loss: 4523.7124
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5583 itr: 146330
5584 training loss: 5216.3467
5585 itr: 146340
5586 training loss: 2442.1655
5587 itr: 146350
5588 training loss: 3805.3496
5589 itr: 146360
5590 training loss: 2980.2002
5591 itr: 146370
5592 training loss: 2460.2205
5593 itr: 146380
5594 training loss: 3333.3333
5595 itr: 146390
5596 training loss: 4928.786
5597 itr: 146400
5598 training loss: 4368.298
5599 itr: 146410
5600 training loss: 3490.6313
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5604 training loss: 4666.504
5605 itr: 146440
5606 training loss: 3264.9927
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5609 itr: 146460
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5612 training loss: 5430.207
5613 itr: 146480
5614 training loss: 4144.8003
5615 itr: 146490
5616 training loss: 2233.1682
5617 itr: 146500
5618 training loss: 3409.3118
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5622 training loss: 4777.9707
5623 itr: 146530
5624 training loss: 4553.677
5625 itr: 146540
5626 training loss: 4260.9395
5627 itr: 146550
5628 training loss: 3930.5398
5629 itr: 146560
5630 training loss: 2993.582
5631 itr: 146570
5632 training loss: 1667.0721
5633 itr: 146580
5634 training loss: 3808.3865
5635 itr: 146590
5636 training loss: 4365.5684
5637 itr: 146600
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5643 itr: 146630
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5645 itr: 146640
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5647 itr: 146650
5648 training loss: 5190.8647
5649 itr: 146660
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5651 itr: 146670
5652 training loss: 3230.923
5653 itr: 146680
5654 training loss: 3144.715
5655 itr: 146690
5656 training loss: 4146.8643
5657 itr: 146700
5658 training loss: 1473.2738
5659 itr: 146710
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5663 itr: 146730
5664 training loss: 5183.422
5665 itr: 146740
5666 training loss: 3690.0476
5667 itr: 146750
5668 training loss: 3835.0603
5669 itr: 146760
5670 training loss: 2250.4045
5671 itr: 146770
5672 training loss: 3872.4988
5673 itr: 146780
5674 training loss: 3993.869
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5675 itr: 146790
5676 training loss: 3604.0317
5677 itr: 146800
5678 training loss: 4961.2417
5679 itr: 146810
5680 training loss: 5541.4854
5681 itr: 146820
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5683 itr: 146830
5684 training loss: 4111.9277
5685 itr: 146840
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5687 itr: 146850
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5690 training loss: 4267.558
5691 itr: 146870
5692 training loss: 4593.8735
5693 itr: 146880
5694 training loss: 5607.2446
5695 itr: 146890
5696 training loss: 3418.7632
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5698 training loss: 3027.4688
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5703 itr: 146930
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5706 training loss: 4770.334
5707 itr: 146950
5708 training loss: 2639.814
5709 itr: 146960
5710 training loss: 4552.6475
5711 itr: 146970
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5712 training loss: 3327.133
5713 itr: 146980
5714 training loss: 4420.952
5715 itr: 146990
5716 training loss: 4808.3687
5717 itr: 147000
5718 training loss: 3709.7725
5719 itr: 147010
5720 training loss: 5551.55
5721 itr: 147020
5722 training loss: 4936.533
5723 itr: 147030
5724 training loss: 3260.7554
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5727 itr: 147050
5728 training loss: 3506.4014
5729 itr: 147060
5730 training loss: 5225.087
5731 itr: 147070
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5733 itr: 147080
5734 training loss: 3242.8452
5735 itr: 147090
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5737 itr: 147100
5738 training loss: 3599.6614
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5741 itr: 147120
5742 training loss: 3438.115
5743 itr: 147130
5744 training loss: 876.07965
5745 itr: 147140
5746 training loss: 3795.9033
5747 itr: 147150
5748 training loss: 4218.6724
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5749 itr: 147160
5750 training loss: 4703.0386
5751 itr: 147170
5752 training loss: 2506.0508
5753 itr: 147180
5754 training loss: 1715.7168
5755 itr: 147190
5756 training loss: 4026.318
5757 itr: 147200
5758 training loss: 3626.5977
5759 itr: 147210
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5761 itr: 147220
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5763 itr: 147230
5764 training loss: 6418.512
5765 itr: 147240
5766 training loss: 1015.1285
5767 itr: 147250
5768 training loss: 5919.4614
5769 itr: 147260
5770 training loss: 3201.0393
5771 itr: 147270
5772 training loss: 4221.4863
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5774 training loss: 4822.6294
5775 itr: 147290
5776 training loss: 4424.357
5777 itr: 147300
5778 training loss: 1843.5612
5779 itr: 147310
5780 training loss: 4208.8774
5781 itr: 147320
5782 training loss: 3961.2766
5783 itr: 147330
5784 training loss: 4217.559
5785 itr: 147340
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5786 training loss: 5424.882
5787 itr: 147350
5788 training loss: 2720.407
5789 itr: 147360
5790 training loss: 5491.0
5791 itr: 147370
5792 training loss: 6061.672
5793 itr: 147380
5794 training loss: 4080.9583
5795 itr: 147390
5796 training loss: 5986.5415
5797 itr: 147400
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5799 itr: 147410
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5801 itr: 147420
5802 training loss: 4271.344
5803 itr: 147430
5804 training loss: 2064.8
5805 itr: 147440
5806 training loss: 2829.3806
5807 itr: 147450
5808 training loss: 5587.0664
5809 itr: 147460
5810 training loss: 400.3435
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5816 training loss: 3953.767
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5818 training loss: 3113.9631
5819 itr: 147510
5820 training loss: 3593.7275
5821 itr: 147520
5822 training loss: 6021.0444
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5823 itr: 147530
5824 training loss: 2989.1028
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5826 training loss: 4353.9175
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5836 training loss: 2618.3582
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5844 training loss: 3376.0278
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5854 training loss: 2075.8333
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5856 training loss: 4727.1284
5857 itr: 147700
5858 training loss: 3417.7231
5859 itr: 147710
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5861 itr: 147720
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5863 itr: 147730
5864 training loss: 4618.6323
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5869 itr: 147760
5870 training loss: 4744.4224
5871 itr: 147770
5872 training loss: 4300.8936
5873 itr: 147780
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5878 training loss: 5212.614
5879 itr: 147810
5880 training loss: 3424.4053
5881 itr: 147820
5882 training loss: 2038.2219
5883 itr: 147830
5884 training loss: 4498.576
5885 itr: 147840
5886 training loss: 4059.8547
5887 itr: 147850
5888 training loss: 1159.4194
5889 itr: 147860
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5892 training loss: 2579.9053
5893 itr: 147880
5894 training loss: 2450.2466
5895 itr: 147890
5896 training loss: 6526.029
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5898 training loss: 4981.9146
5899 itr: 147910
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5907 itr: 147950
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5909 itr: 147960
5910 training loss: 5056.348
5911 itr: 147970
5912 training loss: 5084.2324
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5916 training loss: 4651.4326
5917 itr: 148000
5918 training loss: 4518.2866
5919 itr: 148010
5920 training loss: 4361.6865
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5924 training loss: 2325.4963
5925 itr: 148040
5926 training loss: 3556.5571
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5928 training loss: 6405.967
5929 itr: 148060
5930 training loss: 4570.419
5931 itr: 148070
5932 training loss: 4363.983
5933 itr: 148080
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5934 training loss: 4586.2036
5935 itr: 148090
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5938 training loss: 5892.537
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5950 training loss: 6289.8477
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5952 training loss: 3159.48
5953 itr: 148180
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5956 training loss: 4225.09
5957 itr: 148200
5958 training loss: 2403.4656
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5963 itr: 148230
5964 training loss: 1281.3739
5965 itr: 148240
5966 training loss: 3579.2803
5967 itr: 148250
5968 training loss: 1653.5569
5969 itr: 148260
5970 training loss: 7209.8325
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5971 itr: 148270
5972 training loss: 4552.9194
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5975 itr: 148290
5976 training loss: 3538.3928
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5979 itr: 148310
5980 training loss: 2144.2073
5981 itr: 148320
5982 training loss: 6741.651
5983 itr: 148330
5984 training loss: 4327.829
5985 itr: 148340
5986 training loss: 5800.905
5987 itr: 148350
5988 training loss: 3151.6633
5989 itr: 148360
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5991 itr: 148370
5992 training loss: 4447.2344
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5994 training loss: 2166.0383
5995 itr: 148390
5996 training loss: 2321.055
5997 itr: 148400
5998 training loss: 3713.4365
5999 itr: 148410
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6001 itr: 148420
6002 training loss: 5243.058
6003 itr: 148430
6004 training loss: 4613.8516
6005 itr: 148440
6006 training loss: 3546.729
6007 itr: 148450
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6008 training loss: 4672.3135
6009 itr: 148460
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6011 itr: 148470
6012 training loss: 4078.071
6013 itr: 148480
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6017 itr: 148500
6018 training loss: 7397.601
6019 itr: 148510
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6023 itr: 148530
6024 training loss: 4073.4238
6025 itr: 148540
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6027 itr: 148550
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6030 training loss: 4359.3745
6031 itr: 148570
6032 training loss: 4354.02
6033 itr: 148580
6034 training loss: 2814.1816
6035 itr: 148590
6036 training loss: 2032.7017
6037 itr: 148600
6038 training loss: 4200.736
6039 itr: 148610
6040 training loss: 5357.179
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6042 training loss: 4268.918
6043 itr: 148630
6044 training loss: 3455.6
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6053 itr: 148680
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6055 itr: 148690
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6057 itr: 148700
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6069 itr: 148760
6070 training loss: 5376.9307
6071 itr: 148770
6072 training loss: 4674.298
6073 itr: 148780
6074 training loss: 1827.1866
6075 itr: 148790
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6077 itr: 148800
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6079 itr: 148810
6080 training loss: 2408.2915
6081 itr: 148820
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6083 itr: 148830
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6085 itr: 148840
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6087 itr: 148850
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6091 itr: 148870
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6094 training loss: 3234.6848
6095 itr: 148890
6096 training loss: 4018.9236
6097 itr: 148900
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6105 itr: 148940
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6111 itr: 148970
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6114 training loss: 4872.6064
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6117 itr: 149000
6118 training loss: 2704.1843
```

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6119 itr: 149010
6120 training loss: 6023.6753
6121 itr: 149020
6122 training loss: 6754.4463
6123 itr: 149030
6124 training loss: 2886.954
6125 itr: 149040
6126 training loss: 4742.449
6127 itr: 149050
6128 training loss: 5244.696
6129 itr: 149060
6130 training loss: 5830.054
6131 itr: 149070
6132 training loss: 3270.943
6133 itr: 149080
6134 training loss: 4076.736
6135 itr: 149090
6136 training loss: 5813.7285
6137 itr: 149100
6138 training loss: 2335.2026
6139 itr: 149110
6140 training loss: 2394.311
6141 itr: 149120
6142 training loss: 3376.946
6143 itr: 149130
6144 training loss: 4746.3213
6145 itr: 149140
6146 training loss: 3703.8438
6147 itr: 149150
6148 training loss: 3330.0999
6149 itr: 149160
6150 training loss: 3803.8708
6151 itr: 149170
6152 training loss: 3734.0432
6153 itr: 149180
6154 training loss: 6331.4224
6155 itr: 149190
```

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6156 training loss: 3624.274
6157 itr: 149200
6158 training loss: 3579.3862
6159 itr: 149210
6160 training loss: 5876.932
6161 itr: 149220
6162 training loss: 3706.9219
6163 itr: 149230
6164 training loss: 3565.3271
6165 itr: 149240
6166 training loss: 2888.2454
6167 itr: 149250
6168 training loss: 5909.154
6169 itr: 149260
6170 training loss: 4040.9514
6171 itr: 149270
6172 training loss: 2835.9263
6173 itr: 149280
6174 training loss: 6295.9233
6175 itr: 149290
6176 training loss: 3372.2476
6177 itr: 149300
6178 training loss: 3201.2908
6179 itr: 149310
6180 training loss: 2939.5132
6181 itr: 149320
6182 training loss: 6505.849
6183 itr: 149330
6184 training loss: 3880.4768
6185 itr: 149340
6186 training loss: 6062.535
6187 itr: 149350
6188 training loss: 3077.2258
6189 itr: 149360
6190 training loss: 5417.3657
6191 itr: 149370
6192 training loss: 3176.1414
```



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6193 itr: 149380
6194 training loss: 5610.082
6195 itr: 149390
6196 training loss: 4771.6406
6197 itr: 149400
6198 training loss: 3254.5586
6199 itr: 149410
6200 training loss: 4372.1987
6201 itr: 149420
6202 training loss: 4953.2056
6203 itr: 149430
6204 training loss: 4142.7983
6205 itr: 149440
6206 training loss: 3995.9714
6207 itr: 149450
6208 training loss: 5237.174
6209 itr: 149460
6210 training loss: 2254.1497
6211 itr: 149470
6212 training loss: 1354.9574
6213 itr: 149480
6214 training loss: 4682.7593
6215 itr: 149490
6216 training loss: 5205.1025
6217 itr: 149500
6218 training loss: 3968.679
6219 itr: 149510
6220 training loss: 4099.881
6221 itr: 149520
6222 training loss: 2740.016
6223 itr: 149530
6224 training loss: 4262.5244
6225 itr: 149540
6226 training loss: 2607.986
6227 itr: 149550
6228 training loss: 2220.4277
6229 itr: 149560
```

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6230 training loss: 2516.4395
6231 itr: 149570
6232 training loss: 4068.5703
6233 itr: 149580
6234 training loss: 3840.6738
6235 itr: 149590
6236 training loss: 5150.8506
6237 itr: 149600
6238 training loss: 795.64166
6239 itr: 149610
6240 training loss: 3309.9248
6241 itr: 149620
6242 training loss: 5868.5415
6243 itr: 149630
6244 training loss: 2879.5994
6245 itr: 149640
6246 training loss: 5282.6416
6247 itr: 149650
6248 training loss: 4397.388
6249 itr: 149660
6250 training loss: 4218.441
6251 itr: 149670
6252 training loss: 5602.246
6253 itr: 149680
6254 training loss: 4459.586
6255 itr: 149690
6256 training loss: 2993.8845
6257 itr: 149700
6258 training loss: 2571.658
6259 itr: 149710
6260 training loss: 5078.1562
6261 itr: 149720
6262 training loss: 6252.3594
6263 itr: 149730
6264 training loss: 3510.4036
6265 itr: 149740
6266 training loss: 3319.6765
```

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6267 itr: 149750
6268 training loss: 4332.3623
6269 itr: 149760
6270 training loss: 3410.4312
6271 itr: 149770
6272 training loss: 2092.8843
6273 itr: 149780
6274 training loss: 1146.8422
6275 itr: 149790
6276 training loss: 3863.975
6277 itr: 149800
6278 training loss: 6567.6045
6279 itr: 149810
6280 training loss: 4462.4546
6281 itr: 149820
6282 training loss: 2202.746
6283 itr: 149830
6284 training loss: 3013.2576
6285 itr: 149840
6286 training loss: 6343.85
6287 itr: 149850
6288 training loss: 1904.5985
6289 itr: 149860
6290 training loss: 1740.0898
6291 itr: 149870
6292 training loss: 4307.869
6293 itr: 149880
6294 training loss: 2411.2627
6295 itr: 149890
6296 training loss: 3700.7893
6297 itr: 149900
6298 training loss: 4575.378
6299 itr: 149910
6300 training loss: 4793.624
6301 itr: 149920
6302 training loss: 4297.932
6303 itr: 149930
```

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6304 training loss: 2340.625
6305 itr: 149940
6306 training loss: 4338.6216
6307 itr: 149950
6308 training loss: 4701.6406
6309 itr: 149960
6310 training loss: 5871.6245
6311 itr: 149970
6312 training loss: 3912.7368
6313 itr: 149980
6314 training loss: 2993.1206
6315 itr: 149990
6316 training loss: 4974.0405
6317 itr: 150000
6318 training loss: 6522.653
6319 test...
6320 mse per seq: 8800.693684471978
6321 611.0481150591814
6322 699.0054259123625
6323 772.9241701761881
6324 815.7301447833025
6325 881.8048266658077
6326 977.8300059283221
6327 986.3754598829481
6328 998.8532829284668
6329 1015.8154135810005
6330 1041.306839554398
6331 psnr per frame: 17.39944
6332 18.734632
6333 18.187433
6334 17.857092
6335 17.647125
6336 17.412506
6337 16.924997
6338 16.869846
6339 16.82045
6340 16.784317
```

```
6341 16.756016
6342 fmae per frame: 1846.7136
6343 1478.7268
6344 1612.2334
6345 1724.6117
6346 1784.1216
6347 1867.5475
6348 1980.602
6349 1993.4165
6350 2000.0771
6351 2004.9321
6352 2020.869
6353 ssim per frame: 0.78990376
6354 0.8198304
6355 0.8077502
6356 0.79985607
6357 0.7950153
6358 0.78981733
6359 0.77887416
6360 0.77766395
6361 0.77718776
6362 0.77603453
6363 0.77700806
6364 sharpness per frame: 254.7111
6365 254.82408
6366 254.75462
6367 254.86574
6368 254.96297
6369 254.81018
6370 254.79167
6371 254.7963
6372 254.5463
6373 254.2963
6374 254.46297
6375 saved to checkpoints/radar_predrnn_pp
6376 itr: 150010
6377 training loss: 2360.3787
```

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6378 itr: 150020
6379 training loss: 3958.8325
6380 itr: 150030
6381 training loss: 2672.6118
6382 itr: 150040
6383 training loss: 1572.6392
6384 itr: 150050
6385 training loss: 3251.7122
6386 itr: 150060
6387 training loss: 2722.4229
6388 itr: 150070
6389 training loss: 1995.6979
6390 itr: 150080
6391 training loss: 2299.5317
6392 itr: 150090
6393 training loss: 4121.5293
6394 itr: 150100
6395 training loss: 4642.427
6396 itr: 150110
6397 training loss: 2964.567
6398 itr: 150120
6399 training loss: 3579.0444
6400 itr: 150130
6401 training loss: 2910.3506
6402 itr: 150140
6403 training loss: 3731.9473
6404 itr: 150150
6405 training loss: 4032.026
6406 itr: 150160
6407 training loss: 3231.0793
6408 itr: 150170
6409 training loss: 3911.4238
6410 itr: 150180
6411 training loss: 3213.2383
6412 itr: 150190
6413 training loss: 4282.3203
6414 itr: 150200
```

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6415 training loss: 4880.146
6416 itr: 150210
6417 training loss: 4030.0176
6418 itr: 150220
6419 training loss: 3493.777
6420 itr: 150230
6421 training loss: 2773.2048
6422 itr: 150240
6423 training loss: 2997.769
6424 itr: 150250
6425 training loss: 3046.54
6426 itr: 150260
6427 training loss: 5020.1807
6428 itr: 150270
6429 training loss: 2675.3928
6430 itr: 150280
6431 training loss: 6309.1533
6432 itr: 150290
6433 training loss: 2868.5923
6434 itr: 150300
6435 training loss: 4467.2773
6436 itr: 150310
6437 training loss: 4090.8342
6438 itr: 150320
6439 training loss: 4324.3647
6440 itr: 150330
6441 training loss: 3254.6445
6442 itr: 150340
6443 training loss: 3049.8103
6444 itr: 150350
6445 training loss: 2219.0342
6446 itr: 150360
6447 training loss: 3344.5742
6448 itr: 150370
6449 training loss: 3512.6914
6450 itr: 150380
6451 training loss: 6187.3174
```

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6452 itr: 150390
6453 training loss: 3950.661
6454 itr: 150400
6455 training loss: 2786.9937
6456 itr: 150410
6457 training loss: 5048.104
6458 itr: 150420
6459 training loss: 2992.6533
6460 itr: 150430
6461 training loss: 2454.211
6462 itr: 150440
6463 training loss: 5101.9346
6464 itr: 150450
6465 training loss: 5026.145
6466 itr: 150460
6467 training loss: 1788.6213
6468 itr: 150470
6469 training loss: 2135.5981
6470 itr: 150480
6471 training loss: 4591.08
6472 itr: 150490
6473 training loss: 5223.4385
6474 itr: 150500
6475 training loss: 5003.1606
6476 itr: 150510
6477 training loss: 2994.2014
6478 itr: 150520
6479 training loss: 4660.571
6480 itr: 150530
6481 training loss: 4735.421
6482 itr: 150540
6483 training loss: 4517.968
6484 itr: 150550
6485 training loss: 3221.725
6486 itr: 150560
6487 training loss: 5666.72
6488 itr: 150570
```



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6489 training loss: 2598.1272
6490 itr: 150580
6491 training loss: 4526.873
6492 itr: 150590
6493 training loss: 4422.375
6494 itr: 150600
6495 training loss: 6035.5557
6496 itr: 150610
6497 training loss: 4321.4727
6498 itr: 150620
6499 training loss: 2688.8457
6500 itr: 150630
6501 training loss: 4964.862
6502 itr: 150640
6503 training loss: 2451.27
6504 itr: 150650
6505 training loss: 4758.644
6506 itr: 150660
6507 training loss: 3423.9026
6508 itr: 150670
6509 training loss: 5613.0317
6510 itr: 150680
6511 training loss: 6250.248
6512 itr: 150690
6513 training loss: 5297.6187
6514 itr: 150700
6515 training loss: 2471.6467
6516 itr: 150710
6517 training loss: 2801.9873
6518 itr: 150720
6519 training loss: 2474.1797
6520 itr: 150730
6521 training loss: 3267.835
6522 itr: 150740
6523 training loss: 3344.6362
6524 itr: 150750
6525 training loss: 3959.702
```

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6526 itr: 150760
6527 training loss: 3110.4473
6528 itr: 150770
6529 training loss: 6877.415
6530 itr: 150780
6531 training loss: 2123.418
6532 itr: 150790
6533 training loss: 5265.8115
6534 itr: 150800
6535 training loss: 775.7754
6536 itr: 150810
6537 training loss: 4708.39
6538 itr: 150820
6539 training loss: 4238.6675
6540 itr: 150830
6541 training loss: 4765.1484
6542 itr: 150840
6543 training loss: 2016.5857
6544 itr: 150850
6545 training loss: 2724.9927
6546 itr: 150860
6547 training loss: 2120.4263
6548 itr: 150870
6549 training loss: 4163.251
6550 itr: 150880
6551 training loss: 4023.4304
6552 itr: 150890
6553 training loss: 3372.15
6554 itr: 150900
6555 training loss: 4394.6826
6556 itr: 150910
6557 training loss: 2715.6848
6558 itr: 150920
6559 training loss: 4554.6294
6560 itr: 150930
6561 training loss: 5211.9966
6562 itr: 150940
```

```
6563 training loss: 4451.9155
6564 itr: 150950
6565 training loss: 3416.996
6566 itr: 150960
6567 training loss: 4301.4277
6568 itr: 150970
6569 training loss: 2839.2134
6570 itr: 150980
6571 training loss: 5332.867
6572 itr: 150990
6573 training loss: 1405.0089
6574 itr: 151000
6575 training loss: 5049.4624
6576 itr: 151010
6577 training loss: 4538.42
6578 itr: 151020
6579 training loss: 4764.434
6580 itr: 151030
6581 training loss: 2934.5015
6582 itr: 151040
6583 training loss: 3768.0903
6584 itr: 151050
6585 training loss: 2580.989
6586 itr: 151060
6587 training loss: 4126.9976
6588 itr: 151070
6589 training loss: 3273.722
6590 itr: 151080
6591 training loss: 3094.9106
6592 itr: 151090
6593 training loss: 3764.6025
6594 itr: 151100
6595 training loss: 4961.982
6596 itr: 151110
6597 training loss: 4146.2993
6598 itr: 151120
6599 training loss: 4153.142
```

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6600 itr: 151130
6601 training loss: 3490.7468
6602 itr: 151140
6603 training loss: 6237.1343
6604 itr: 151150
6605 training loss: 3796.953
6606 itr: 151160
6607 training loss: 1510.0057
6608 itr: 151170
6609 training loss: 4943.8877
6610 itr: 151180
6611 training loss: 4798.701
6612 itr: 151190
6613 training loss: 4042.064
6614 itr: 151200
6615 training loss: 1264.3993
6616 itr: 151210
6617 training loss: 5213.1904
6618 itr: 151220
6619 training loss: 4478.088
6620 itr: 151230
6621 training loss: 4405.3965
6622 itr: 151240
6623 training loss: 2831.528
6624 itr: 151250
6625 training loss: 3788.9768
6626 itr: 151260
6627 training loss: 4278.521
6628 itr: 151270
6629 training loss: 3845.0054
6630 itr: 151280
6631 training loss: 2737.7983
6632 itr: 151290
6633 training loss: 3670.0962
6634 itr: 151300
6635 training loss: 4519.8467
6636 itr: 151310
```

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6637 training loss: 2686.114
6638 itr: 151320
6639 training loss: 4844.073
6640 itr: 151330
6641 training loss: 2692.0964
6642 itr: 151340
6643 training loss: 3532.584
6644 itr: 151350
6645 training loss: 3486.2678
6646 itr: 151360
6647 training loss: 4711.2007
6648 itr: 151370
6649 training loss: 1856.6531
6650 itr: 151380
6651 training loss: 2318.2246
6652 itr: 151390
6653 training loss: 3387.8872
6654 itr: 151400
6655 training loss: 2696.7354
6656 itr: 151410
6657 training loss: 2260.7717
6658 itr: 151420
6659 training loss: 2766.938
6660 itr: 151430
6661 training loss: 5822.041
6662 itr: 151440
6663 training loss: 5025.7607
6664 itr: 151450
6665 training loss: 3165.8357
6666 itr: 151460
6667 training loss: 4350.409
6668 itr: 151470
6669 training loss: 4633.9834
6670 itr: 151480
6671 training loss: 2824.984
6672 itr: 151490
6673 training loss: 2119.5415
```

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6674 itr: 151500
6675 training loss: 1793.1836
6676 itr: 151510
6677 training loss: 2999.6243
6678 itr: 151520
6679 training loss: 3685.219
6680 itr: 151530
6681 training loss: 5314.302
6682 itr: 151540
6683 training loss: 6179.8
6684 itr: 151550
6685 training loss: 2873.894
6686 itr: 151560
6687 training loss: 1105.2761
6688 itr: 151570
6689 training loss: 3214.0803
6690 itr: 151580
6691 training loss: 2515.2397
6692 itr: 151590
6693 training loss: 2218.1553
6694 itr: 151600
6695 training loss: 3439.7212
6696 itr: 151610
6697 training loss: 4047.2756
6698 itr: 151620
6699 training loss: 4443.533
6700 itr: 151630
6701 training loss: 3139.8237
6702 itr: 151640
6703 training loss: 2763.6484
6704 itr: 151650
6705 training loss: 5040.564
6706 itr: 151660
6707 training loss: 2966.0771
6708 itr: 151670
6709 training loss: 4006.229
6710 itr: 151680
```

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6711 training loss: 4414.762
6712 itr: 151690
6713 training loss: 1948.5929
6714 itr: 151700
6715 training loss: 5379.7334
6716 itr: 151710
6717 training loss: 4015.4172
6718 itr: 151720
6719 training loss: 4188.522
6720 itr: 151730
6721 training loss: 2707.0244
6722 itr: 151740
6723 training loss: 4428.578
6724 itr: 151750
6725 training loss: 5886.1606
6726 itr: 151760
6727 training loss: 5394.295
6728 itr: 151770
6729 training loss: 5677.3105
6730 itr: 151780
6731 training loss: 3686.1335
6732 itr: 151790
6733 training loss: 3250.871
6734 itr: 151800
6735 training loss: 1991.0555
6736 itr: 151810
6737 training loss: 5512.0293
6738 itr: 151820
6739 training loss: 6421.6763
6740 itr: 151830
6741 training loss: 2350.4216
6742 itr: 151840
6743 training loss: 7608.906
6744 itr: 151850
6745 training loss: 4116.749
6746 itr: 151860
6747 training loss: 1418.2596
```

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6748 itr: 151870
6749 training loss: 2556.9138
6750 itr: 151880
6751 training loss: 1889.0392
6752 itr: 151890
6753 training loss: 5316.024
6754 itr: 151900
6755 training loss: 5115.8633
6756 itr: 151910
6757 training loss: 3790.2139
6758 itr: 151920
6759 training loss: 2919.1824
6760 itr: 151930
6761 training loss: 2419.7742
6762 itr: 151940
6763 training loss: 3528.3113
6764 itr: 151950
6765 training loss: 3689.0977
6766 itr: 151960
6767 training loss: 4324.1265
6768 itr: 151970
6769 training loss: 5900.9976
6770 itr: 151980
6771 training loss: 4049.3213
6772 itr: 151990
6773 training loss: 4088.7979
6774 itr: 152000
6775 training loss: 1584.0995
6776 itr: 152010
6777 training loss: 4679.584
6778 itr: 152020
6779 training loss: 5151.1763
6780 itr: 152030
6781 training loss: 5388.894
6782 itr: 152040
6783 training loss: 3055.6772
6784 itr: 152050
```



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6785 training loss: 4757.552
6786 itr: 152060
6787 training loss: 5258.3286
6788 itr: 152070
6789 training loss: 2897.0974
6790 itr: 152080
6791 training loss: 1278.8209
6792 itr: 152090
6793 training loss: 4351.995
6794 itr: 152100
6795 training loss: 3509.5737
6796 itr: 152110
6797 training loss: 1910.0376
6798 itr: 152120
6799 training loss: 4954.312
6800 itr: 152130
6801 training loss: 2645.3037
6802 itr: 152140
6803 training loss: 4798.578
6804 itr: 152150
6805 training loss: 7192.6055
6806 itr: 152160
6807 training loss: 3774.3943
6808 itr: 152170
6809 training loss: 3982.793
6810 itr: 152180
6811 training loss: 5134.635
6812 itr: 152190
6813 training loss: 2415.6472
6814 itr: 152200
6815 training loss: 3863.0127
6816 itr: 152210
6817 training loss: 4167.535
6818 itr: 152220
6819 training loss: 1566.2076
6820 itr: 152230
6821 training loss: 4965.22
```

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6822 itr: 152240
6823 training loss: 1572.1497
6824 itr: 152250
6825 training loss: 3584.2173
6826 itr: 152260
6827 training loss: 4869.3657
6828 itr: 152270
6829 training loss: 5299.102
6830 itr: 152280
6831 training loss: 3025.1836
6832 itr: 152290
6833 training loss: 3850.0474
6834 itr: 152300
6835 training loss: 3061.9565
6836 itr: 152310
6837 training loss: 4074.0146
6838 itr: 152320
6839 training loss: 5159.4795
6840 itr: 152330
6841 training loss: 2395.949
6842 itr: 152340
6843 training loss: 4441.439
6844 itr: 152350
6845 training loss: 2646.709
6846 itr: 152360
6847 training loss: 3682.349
6848 itr: 152370
6849 training loss: 2679.0598
6850 itr: 152380
6851 training loss: 5741.1147
6852 itr: 152390
6853 training loss: 4657.547
6854 itr: 152400
6855 training loss: 3064.4062
6856 itr: 152410
6857 training loss: 2628.5056
6858 itr: 152420
```

```
6859 training loss: 2956.721
6860 itr: 152430
6861 training loss: 5454.0776
6862 itr: 152440
6863 training loss: 4361.1274
6864 itr: 152450
6865 training loss: 6060.5396
6866 itr: 152460
6867 training loss: 4809.819
6868 itr: 152470
6869 training loss: 3594.2463
6870 itr: 152480
6871 training loss: 4657.652
6872 itr: 152490
6873 training loss: 4217.684
6874 itr: 152500
6875 training loss: 6283.5312
6876 itr: 152510
6877 training loss: 3994.6958
6878 itr: 152520
6879 training loss: 3820.77
6880 itr: 152530
6881 training loss: 3881.0183
6882 itr: 152540
6883 training loss: 5207.718
6884 itr: 152550
6885 training loss: 1801.3722
6886 itr: 152560
6887 training loss: 4411.8105
6888 itr: 152570
6889 training loss: 6217.9272
6890 itr: 152580
6891 training loss: 3679.8044
6892 itr: 152590
6893 training loss: 3745.8157
6894 itr: 152600
6895 training loss: 3457.1987
```

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6896 itr: 152610
6897 training loss: 3139.3835
6898 itr: 152620
6899 training loss: 5013.8125
6900 itr: 152630
6901 training loss: 3330.7617
6902 itr: 152640
6903 training loss: 5590.5244
6904 itr: 152650
6905 training loss: 2105.1606
6906 itr: 152660
6907 training loss: 3599.6084
6908 itr: 152670
6909 training loss: 3515.9663
6910 itr: 152680
6911 training loss: 4992.0117
6912 itr: 152690
6913 training loss: 3460.7825
6914 itr: 152700
6915 training loss: 2387.3215
6916 itr: 152710
6917 training loss: 3937.166
6918 itr: 152720
6919 training loss: 4633.456
6920 itr: 152730
6921 training loss: 2956.2393
6922 itr: 152740
6923 training loss: 3571.8481
6924 itr: 152750
6925 training loss: 2769.1711
6926 itr: 152760
6927 training loss: 3294.24
6928 itr: 152770
6929 training loss: 5911.247
6930 itr: 152780
6931 training loss: 5355.2256
6932 itr: 152790
```

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6933 training loss: 1177.7227
6934 itr: 152800
6935 training loss: 3684.275
6936 itr: 152810
6937 training loss: 4455.4517
6938 itr: 152820
6939 training loss: 1725.8223
6940 itr: 152830
6941 training loss: 5751.5137
6942 itr: 152840
6943 training loss: 4272.01
6944 itr: 152850
6945 training loss: 3933.2915
6946 itr: 152860
6947 training loss: 4942.57
6948 itr: 152870
6949 training loss: 5929.413
6950 itr: 152880
6951 training loss: 7159.669
6952 itr: 152890
6953 training loss: 4612.442
6954 itr: 152900
6955 training loss: 3736.3826
6956 itr: 152910
6957 training loss: 2339.839
6958 itr: 152920
6959 training loss: 1758.6499
6960 itr: 152930
6961 training loss: 3353.7603
6962 itr: 152940
6963 training loss: 4289.805
6964 itr: 152950
6965 training loss: 2079.1482
6966 itr: 152960
6967 training loss: 3862.4895
6968 itr: 152970
6969 training loss: 6609.123
```

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6970 itr: 152980
6971 training loss: 3595.5552
6972 itr: 152990
6973 training loss: 2068.4565
6974 itr: 153000
6975 training loss: 2158.0972
6976 itr: 153010
6977 training loss: 2742.5962
6978 itr: 153020
6979 training loss: 2123.2659
6980 itr: 153030
6981 training loss: 2087.9275
6982 itr: 153040
6983 training loss: 2453.1108
6984 itr: 153050
6985 training loss: 5503.3975
6986 itr: 153060
6987 training loss: 3647.017
6988 itr: 153070
6989 training loss: 4220.6187
6990 itr: 153080
6991 training loss: 6170.91
6992 itr: 153090
6993 training loss: 4162.8335
6994 itr: 153100
6995 training loss: 2096.8987
6996 itr: 153110
6997 training loss: 4057.4182
6998 itr: 153120
6999 training loss: 5524.0127
7000 itr: 153130
7001 training loss: 4218.6235
7002 itr: 153140
7003 training loss: 3082.7808
7004 itr: 153150
7005 training loss: 5626.1685
7006 itr: 153160
```

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7007 training loss: 3129.6064
7008 itr: 153170
7009 training loss: 4233.2925
7010 itr: 153180
7011 training loss: 5213.6416
7012 itr: 153190
7013 training loss: 3501.6694
7014 itr: 153200
7015 training loss: 5661.439
7016 itr: 153210
7017 training loss: 5935.6777
7018 itr: 153220
7019 training loss: 1496.4236
7020 itr: 153230
7021 training loss: 2114.2534
7022 itr: 153240
7023 training loss: 1498.0847
7024 itr: 153250
7025 training loss: 5225.6694
7026 itr: 153260
7027 training loss: 3476.8357
7028 itr: 153270
7029 training loss: 4902.677
7030 itr: 153280
7031 training loss: 1974.3997
7032 itr: 153290
7033 training loss: 2482.371
7034 itr: 153300
7035 training loss: 2588.164
7036 itr: 153310
7037 training loss: 3052.191
7038 itr: 153320
7039 training loss: 4005.5623
7040 itr: 153330
7041 training loss: 1747.2445
7042 itr: 153340
7043 training loss: 463.16595
```

```
7044 itr: 153350
7045 training loss: 3365.5415
7046 itr: 153360
7047 training loss: 2814.9763
7048 itr: 153370
7049 training loss: 2860.2988
7050 itr: 153380
7051 training loss: 3372.3838
7052 itr: 153390
7053 training loss: 5783.8086
7054 itr: 153400
7055 training loss: 3919.074
7056 itr: 153410
7057 training loss: 2722.815
7058 itr: 153420
7059 training loss: 3649.4526
7060 itr: 153430
7061 training loss: 3541.3906
7062 itr: 153440
7063 training loss: 2856.4966
7064 itr: 153450
7065 training loss: 3399.4016
7066 itr: 153460
7067 training loss: 2575.3108
7068 itr: 153470
7069 training loss: 4376.5176
7070 itr: 153480
7071 training loss: 4723.4194
7072 itr: 153490
7073 training loss: 4326.982
7074 itr: 153500
7075 training loss: 3517.226
7076 itr: 153510
7077 training loss: 3503.1582
7078 itr: 153520
7079 training loss: 1988.0316
7080 itr: 153530
```



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7081 training loss: 5120.0864
7082 itr: 153540
7083 training loss: 5613.1616
7084 itr: 153550
7085 training loss: 3785.8032
7086 itr: 153560
7087 training loss: 4035.5244
7088 itr: 153570
7089 training loss: 4780.657
7090 itr: 153580
7091 training loss: 3845.636
7092 itr: 153590
7093 training loss: 3815.6206
7094 itr: 153600
7095 training loss: 4743.2505
7096 itr: 153610
7097 training loss: 4364.864
7098 itr: 153620
7099 training loss: 4415.365
7100 itr: 153630
7101 training loss: 3846.7056
7102 itr: 153640
7103 training loss: 5238.702
7104 itr: 153650
7105 training loss: 2809.849
7106 itr: 153660
7107 training loss: 2863.3506
7108 itr: 153670
7109 training loss: 2758.294
7110 itr: 153680
7111 training loss: 5930.5586
7112 itr: 153690
7113 training loss: 4977.684
7114 itr: 153700
7115 training loss: 2136.366
7116 itr: 153710
7117 training loss: 4139.552
```

```
7118 itr: 153720
7119 training loss: 1413.097
7120 itr: 153730
7121 training loss: 3126.4128
7122 itr: 153740
7123 training loss: 3475.7073
7124 itr: 153750
7125 training loss: 5409.5435
7126 itr: 153760
7127 training loss: 1313.2207
7128 itr: 153770
7129 training loss: 2243.017
7130 itr: 153780
7131 training loss: 3835.7686
7132 itr: 153790
7133 training loss: 3868.9097
7134 itr: 153800
7135 training loss: 4147.596
7136 itr: 153810
7137 training loss: 5138.032
7138 itr: 153820
7139 training loss: 5636.7744
7140 itr: 153830
7141 training loss: 4481.781
7142 itr: 153840
7143 training loss: 3340.4314
7144 itr: 153850
7145 training loss: 2856.4165
7146 itr: 153860
7147 training loss: 3033.7993
7148 itr: 153870
7149 training loss: 5185.165
7150 itr: 153880
7151 training loss: 5726.4688
7152 itr: 153890
7153 training loss: 3993.4104
7154 itr: 153900
```

```
7155 training loss: 2907.3096
7156 itr: 153910
7157 training loss: 5029.8223
7158 itr: 153920
7159 training loss: 3381.69
7160 itr: 153930
7161 training loss: 4138.547
7162 itr: 153940
7163 training loss: 2957.3484
7164 itr: 153950
7165 training loss: 4805.3467
7166 itr: 153960
7167 training loss: 894.53076
7168 itr: 153970
7169 training loss: 4501.4688
7170 itr: 153980
7171 training loss: 5138.0474
7172 itr: 153990
7173 training loss: 2996.8083
7174 itr: 154000
7175 training loss: 4828.9766
7176 itr: 154010
7177 training loss: 3513.0583
7178 itr: 154020
7179 training loss: 5328.404
7180 itr: 154030
7181 training loss: 4147.579
7182 itr: 154040
7183 training loss: 4839.037
7184 itr: 154050
7185 training loss: 4605.3066
7186 itr: 154060
7187 training loss: 5200.163
7188 itr: 154070
7189 training loss: 3486.4448
7190 itr: 154080
7191 training loss: 4707.664
```

```
7192 itr: 154090
7193 training loss: 4749.0317
7194 itr: 154100
7195 training loss: 6153.5654
7196 itr: 154110
7197 training loss: 5220.886
7198 itr: 154120
7199 training loss: 2726.8499
7200 itr: 154130
7201 training loss: 4304.251
7202 itr: 154140
7203 training loss: 2602.7256
7204 itr: 154150
7205 training loss: 3975.484
7206 itr: 154160
7207 training loss: 3388.4893
7208 itr: 154170
7209 training loss: 3725.1
7210 itr: 154180
7211 training loss: 1931.6437
7212 itr: 154190
7213 training loss: 5267.5996
7214 itr: 154200
7215 training loss: 2851.1467
7216 itr: 154210
7217 training loss: 1045.6836
7218 itr: 154220
7219 training loss: 3427.1592
7220 itr: 154230
7221 training loss: 3751.849
7222 itr: 154240
7223 training loss: 3374.894
7224 itr: 154250
7225 training loss: 5856.607
7226 itr: 154260
7227 training loss: 5092.134
7228 itr: 154270
```

```
7229 training loss: 4324.9897
7230 itr: 154280
7231 training loss: 3978.9924
7232 itr: 154290
7233 training loss: 4975.5977
7234 itr: 154300
7235 training loss: 4597.9805
7236 itr: 154310
7237 training loss: 2305.2625
7238 itr: 154320
7239 training loss: 5108.5356
7240 itr: 154330
7241 training loss: 3050.293
7242 itr: 154340
7243 training loss: 3881.6362
7244 itr: 154350
7245 training loss: 1985.6086
7246 itr: 154360
7247 training loss: 2580.1594
7248 itr: 154370
7249 training loss: 1620.3596
7250 itr: 154380
7251 training loss: 3694.8037
7252 itr: 154390
7253 training loss: 3967.2537
7254 itr: 154400
7255 training loss: 3458.5452
7256 itr: 154410
7257 training loss: 2285.344
7258 itr: 154420
7259 training loss: 4903.603
7260 itr: 154430
7261 training loss: 4519.2227
7262 itr: 154440
7263 training loss: 4061.1094
7264 itr: 154450
7265 training loss: 6035.6714
```

```
7266 itr: 154460
7267 training loss: 4210.6387
7268 itr: 154470
7269 training loss: 3436.7544
7270 itr: 154480
7271 training loss: 4238.629
7272 itr: 154490
7273 training loss: 4054.4712
7274 itr: 154500
7275 training loss: 4379.4624
7276 itr: 154510
7277 training loss: 4504.369
7278 itr: 154520
7279 training loss: 3470.627
7280 itr: 154530
7281 training loss: 3009.3538
7282 itr: 154540
7283 training loss: 2124.47
7284 itr: 154550
7285 training loss: 5132.2466
7286 itr: 154560
7287 training loss: 3603.7935
7288 itr: 154570
7289 training loss: 520.14056
7290 itr: 154580
7291 training loss: 3077.1504
7292 itr: 154590
7293 training loss: 3440.4368
7294 itr: 154600
7295 training loss: 3041.591
7296 itr: 154610
7297 training loss: 1283.4067
7298 itr: 154620
7299 training loss: 1238.5981
7300 itr: 154630
7301 training loss: 1076.8003
7302 itr: 154640
```

```
7303 training loss: 3652.5608
7304 itr: 154650
7305 training loss: 2646.188
7306 itr: 154660
7307 training loss: 3109.3835
7308 itr: 154670
7309 training loss: 3115.809
7310 itr: 154680
7311 training loss: 712.87354
7312 itr: 154690
7313 training loss: 3932.9475
7314 itr: 154700
7315 training loss: 2347.9104
7316 itr: 154710
7317 training loss: 5180.402
7318 itr: 154720
7319 training loss: 2033.5498
7320 itr: 154730
7321 training loss: 4778.989
7322 itr: 154740
7323 training loss: 1833.9143
7324 itr: 154750
7325 training loss: 4724.1743
7326 itr: 154760
7327 training loss: 3260.9412
7328 itr: 154770
7329 training loss: 4196.6055
7330 itr: 154780
7331 training loss: 2509.3215
7332 itr: 154790
7333 training loss: 6635.729
7334 itr: 154800
7335 training loss: 4076.768
7336 itr: 154810
7337 training loss: 3705.2666
7338 itr: 154820
7339 training loss: 3647.6733
```

```
7340 itr: 154830
7341 training loss: 3476.6602
7342 itr: 154840
7343 training loss: 4221.239
7344 itr: 154850
7345 training loss: 3293.586
7346 itr: 154860
7347 training loss: 2364.8384
7348 itr: 154870
7349 training loss: 2836.4148
7350 itr: 154880
7351 training loss: 5421.117
7352 itr: 154890
7353 training loss: 4350.4316
7354 itr: 154900
7355 training loss: 4023.0466
7356 itr: 154910
7357 training loss: 1210.5723
7358 itr: 154920
7359 training loss: 6600.1914
7360 itr: 154930
7361 training loss: 3383.8967
7362 itr: 154940
7363 training loss: 3086.879
7364 itr: 154950
7365 training loss: 3659.0747
7366 itr: 154960
7367 training loss: 3302.911
7368 itr: 154970
7369 training loss: 2950.7288
7370 itr: 154980
7371 training loss: 2696.6052
7372 itr: 154990
7373 training loss: 5252.0884
7374 itr: 155000
7375 training loss: 5961.844
7376 test...
```



```
7377 mse per seq: 8898.887546609949
7378 608.1770735846626
7379 696.5056163646557
7380 769.020893520779
7381 815.2033490781431
7382 884.355556205467
7383 987.3137218334057
7384 1004.3760963722511
7385 1019.1320595917879
7386 1041.7225594697175
7387 1073.0806205890797
7388 psnr per frame: 17.364782
7389 18.74909
7390 18.19663
7391 17.870056
7392 17.641779
7393 17.399502
7394 16.879122
7395 16.798458
7396 16.740383
7397 16.7043
7398 16.668507
7399 fmae per frame: 1861.7457
7400 1497.4729
7401 1621.7142
7402 1727.1953
7403 1787.6295
7404 1869.814
7405 1990.557
7406 2011.2244
7407 2022.4097
7408 2033.7333
7409 2055.708
7410 ssim per frame: 0.7947064
7411 0.82450753
7412 0.8130395
7413 0.8056874
```

```
7414 0.80044734
7415 0.79547465
7416 0.78396636
7417 0.7820606
7418 0.7814961
7419 0.7799012
7420 0.7804832
7421 sharpness per frame: 254.90555
7422 255.0
7423 254.90277
7424 254.93056
7425 254.85185
7426 254.98148
7427 254.875
7428 254.93056
7429 254.81482
7430 254.90277
7431 254.86574
7432 saved to checkpoints/radar_predrnn_pp
7433 itr: 155010
7434 training loss: 3093.3745
7435 itr: 155020
7436 training loss: 2800.462
7437 itr: 155030
7438 training loss: 2165.4634
7439 itr: 155040
7440 training loss: 5843.3643
7441 itr: 155050
7442 training loss: 2382.189
7443 itr: 155060
7444 training loss: 5551.693
7445 itr: 155070
7446 training loss: 5623.6895
7447 itr: 155080
7448 training loss: 5051.09
7449 itr: 155090
7450 training loss: 2275.854
```

```
7451 itr: 155100
7452 training loss: 4790.693
7453 itr: 155110
7454 training loss: 3425.6216
7455 itr: 155120
7456 training loss: 5592.585
7457 itr: 155130
7458 training loss: 1705.7361
7459 itr: 155140
7460 training loss: 3637.7727
7461 itr: 155150
7462 training loss: 1423.0662
7463 itr: 155160
7464 training loss: 2119.8867
7465 itr: 155170
7466 training loss: 1813.9636
7467 itr: 155180
7468 training loss: 1657.819
7469 itr: 155190
7470 training loss: 3096.0547
7471 itr: 155200
7472 training loss: 3925.9287
7473 itr: 155210
7474 training loss: 1838.6389
7475 itr: 155220
7476 training loss: 1188.1248
7477 itr: 155230
7478 training loss: 5230.6753
7479 itr: 155240
7480 training loss: 4601.2188
7481 itr: 155250
7482 training loss: 3167.6248
7483 itr: 155260
7484 training loss: 4383.634
7485 itr: 155270
7486 training loss: 3608.4941
7487 itr: 155280
```

```
7488 training loss: 2666.2544
7489 itr: 155290
7490 training loss: 4878.4795
7491 itr: 155300
7492 training loss: 4391.428
7493 itr: 155310
7494 training loss: 5136.253
7495 itr: 155320
7496 training loss: 4695.933
7497 itr: 155330
7498 training loss: 5832.444
7499 itr: 155340
7500 training loss: 2836.7166
7501 itr: 155350
7502 training loss: 2419.7068
7503 itr: 155360
7504 training loss: 3738.204
7505 itr: 155370
7506 training loss: 4208.236
7507 itr: 155380
7508 training loss: 3402.1633
7509 itr: 155390
7510 training loss: 5562.3677
7511 itr: 155400
7512 training loss: 3539.4966
7513 itr: 155410
7514 training loss: 5509.12
7515 itr: 155420
7516 training loss: 3005.0266
7517 itr: 155430
7518 training loss: 3752.845
7519 itr: 155440
7520 training loss: 5493.801
7521 itr: 155450
7522 training loss: 2691.9683
7523 itr: 155460
7524 training loss: 4318.7783
```

```
7525 itr: 155470
7526 training loss: 3841.1914
7527 itr: 155480
7528 training loss: 4244.7344
7529 itr: 155490
7530 training loss: 3003.562
7531 itr: 155500
7532 training loss: 4634.9146
7533 itr: 155510
7534 training loss: 2161.6243
7535 itr: 155520
7536 training loss: 3353.2334
7537 itr: 155530
7538 training loss: 4582.924
7539 itr: 155540
7540 training loss: 3549.2244
7541 itr: 155550
7542 training loss: 4732.539
7543 itr: 155560
7544 training loss: 5287.052
7545 itr: 155570
7546 training loss: 2430.4668
7547 itr: 155580
7548 training loss: 4975.3975
7549 itr: 155590
7550 training loss: 4871.8857
7551 itr: 155600
7552 training loss: 4606.7314
7553 itr: 155610
7554 training loss: 3999.821
7555 itr: 155620
7556 training loss: 4308.383
7557 itr: 155630
7558 training loss: 2984.7214
7559 itr: 155640
7560 training loss: 3946.8484
7561 itr: 155650
```

```
7562 training loss: 3731.061
7563 itr: 155660
7564 training loss: 4763.59
7565 itr: 155670
7566 training loss: 4129.9053
7567 itr: 155680
7568 training loss: 3159.2537
7569 itr: 155690
7570 training loss: 4432.7686
7571 itr: 155700
7572 training loss: 4121.1045
7573 itr: 155710
7574 training loss: 4271.8516
7575 itr: 155720
7576 training loss: 3315.2598
7577 itr: 155730
7578 training loss: 4337.375
7579 itr: 155740
7580 training loss: 2752.877
7581 itr: 155750
7582 training loss: 5594.231
7583 itr: 155760
7584 training loss: 1562.5764
7585 itr: 155770
7586 training loss: 4109.5576
7587 itr: 155780
7588 training loss: 6760.504
7589 itr: 155790
7590 training loss: 5780.744
7591 itr: 155800
7592 training loss: 2386.6665
7593 itr: 155810
7594 training loss: 3402.3608
7595 itr: 155820
7596 training loss: 2951.0664
7597 itr: 155830
7598 training loss: 4834.7607
```

```
7599 itr: 155840
7600 training loss: 4427.0596
7601 itr: 155850
7602 training loss: 3618.6523
7603 itr: 155860
7604 training loss: 5066.895
7605 itr: 155870
7606 training loss: 5275.5186
7607 itr: 155880
7608 training loss: 4624.343
7609 itr: 155890
7610 training loss: 3800.0767
7611 itr: 155900
7612 training loss: 4807.7544
7613 itr: 155910
7614 training loss: 5241.583
7615 itr: 155920
7616 training loss: 1676.0214
7617 itr: 155930
7618 training loss: 3576.6614
7619 itr: 155940
7620 training loss: 5019.697
7621 itr: 155950
7622 training loss: 3137.769
7623 itr: 155960
7624 training loss: 3350.3381
7625 itr: 155970
7626 training loss: 3600.3271
7627 itr: 155980
7628 training loss: 3492.9663
7629 itr: 155990
7630 training loss: 5309.3115
7631 itr: 156000
7632 training loss: 4556.7197
7633 itr: 156010
7634 training loss: 3854.4353
7635 itr: 156020
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7636 training loss: 3813.7534
7637 itr: 156030
7638 training loss: 4107.086
7639 itr: 156040
7640 training loss: 3422.0195
7641 itr: 156050
7642 training loss: 2595.4707
7643 itr: 156060
7644 training loss: 2880.574
7645 itr: 156070
7646 training loss: 4963.947
7647 itr: 156080
7648 training loss: 4759.877
7649 itr: 156090
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7652 training loss: 3603.217
7653 itr: 156110
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7655 itr: 156120
7656 training loss: 4392.807
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7658 training loss: 4514.5605
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7660 training loss: 2291.3145
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7662 training loss: 2126.6948
7663 itr: 156160
7664 training loss: 5529.677
7665 itr: 156170
7666 training loss: 2790.8545
7667 itr: 156180
7668 training loss: 2244.6362
7669 itr: 156190
7670 training loss: 5087.2676
7671 itr: 156200
7672 training loss: 789.853
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7674 training loss: 3362.6252
7675 itr: 156220
7676 training loss: 3752.3503
7677 itr: 156230
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7680 training loss: 4119.166
7681 itr: 156250
7682 training loss: 6363.9966
7683 itr: 156260
7684 training loss: 5336.6904
7685 itr: 156270
7686 training loss: 2807.0845
7687 itr: 156280
7688 training loss: 3539.9644
7689 itr: 156290
7690 training loss: 4416.2446
7691 itr: 156300
7692 training loss: 2831.9263
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7694 training loss: 5649.285
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7696 training loss: 4799.5107
7697 itr: 156330
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7701 itr: 156350
7702 training loss: 3606.1646
7703 itr: 156360
7704 training loss: 2119.6763
7705 itr: 156370
7706 training loss: 5025.006
7707 itr: 156380
7708 training loss: 2302.3547
7709 itr: 156390
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7722 training loss: 4332.4336
7723 itr: 156460
7724 training loss: 5899.0166
7725 itr: 156470
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7728 training loss: 4368.63
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7738 training loss: 4332.166
7739 itr: 156540
7740 training loss: 5713.7134
7741 itr: 156550
7742 training loss: 3341.5042
7743 itr: 156560
7744 training loss: 4580.4873
7745 itr: 156570
7746 training loss: 5138.0938
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7750 training loss: 1670.1747
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7757 itr: 156630
7758 training loss: 3167.1367
7759 itr: 156640
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7761 itr: 156650
7762 training loss: 3383.63
7763 itr: 156660
7764 training loss: 4109.697
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7766 training loss: 4121.52
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7773 itr: 156710
7774 training loss: 6697.6714
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7776 training loss: 3206.044
7777 itr: 156730
7778 training loss: 4293.839
7779 itr: 156740
7780 training loss: 563.8496
7781 itr: 156750
7782 training loss: 1832.6366
7783 itr: 156760
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7785 itr: 156770
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7787 itr: 156780
7788 training loss: 3518.6338
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7790 training loss: 4979.2017
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7793 itr: 156810
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7795 itr: 156820
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7797 itr: 156830
7798 training loss: 4074.039
7799 itr: 156840
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7803 itr: 156860
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7805 itr: 156870
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7809 itr: 156890
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7820 training loss: 2692.191
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7825 itr: 156970
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7832 training loss: 1527.0596
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7855 itr: 157120
7856 training loss: 5857.893
7857 itr: 157130
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7866 training loss: 3021.315
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7869 itr: 157190
7870 training loss: 5644.599
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7874 training loss: 4217.078
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7885 itr: 157270
7886 training loss: 5811.478
7887 itr: 157280
7888 training loss: 4442.943
7889 itr: 157290
7890 training loss: 4295.922
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7893 itr: 157310
7894 training loss: 2767.5134
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7898 training loss: 2624.9546
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7907 itr: 157380
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7909 itr: 157390
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7922 training loss: 3901.376
7923 itr: 157460
7924 training loss: 4147.8374
7925 itr: 157470
7926 training loss: 5245.098
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7928 training loss: 5101.9297
7929 itr: 157490
7930 training loss: 3679.0571
7931 itr: 157500
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7942 training loss: 2293.5325
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7944 training loss: 4136.9575
7945 itr: 157570
7946 training loss: 1963.3788
7947 itr: 157580
7948 training loss: 2843.982
7949 itr: 157590
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7957 itr: 157630
7958 training loss: 5069.73
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7962 training loss: 3940.248
7963 itr: 157660
7964 training loss: 4639.3154
7965 itr: 157670
7966 training loss: 2693.5137
7967 itr: 157680
7968 training loss: 3752.0652
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7973 itr: 157710
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7982 training loss: 2953.6296
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7986 training loss: 2553.9692
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7998 training loss: 3766.424
7999 itr: 157840
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8003 itr: 157860
8004 training loss: 4921.556
8005 itr: 157870
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8007 itr: 157880
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8009 itr: 157890
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8016 training loss: 5490.079
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8018 training loss: 6114.6963
8019 itr: 157940
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8021 itr: 157950
8022 training loss: 3030.6638
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8024 training loss: 2503.265
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8026 training loss: 3058.1204
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8030 training loss: 1994.3291
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8032 training loss: 4933.672
8033 itr: 158010
8034 training loss: 2595.1873
8035 itr: 158020
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8038 training loss: 4578.3555
8039 itr: 158040
8040 training loss: 1920.3881
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8042 training loss: 3987.8384
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8056 training loss: 5748.023
8057 itr: 158130
8058 training loss: 5016.6284
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8060 training loss: 4502.2036
8061 itr: 158150
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8064 training loss: 4330.378
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8066 training loss: 6031.3315
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8069 itr: 158190
8070 training loss: 5628.2637
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8072 training loss: 4356.8403
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8075 itr: 158220
8076 training loss: 2379.4797
8077 itr: 158230
8078 training loss: 3112.315
8079 itr: 158240
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8092 training loss: 2740.4326
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8098 training loss: 5032.8794
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8116 training loss: 3865.7153
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8133 itr: 158510
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8153 itr: 158610
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8158 training loss: 3767.762
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8167 itr: 158680
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8178 training loss: 3238.1714
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8190 training loss: 3475.3066
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8225 itr: 158970
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8227 itr: 158980
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8262 training loss: 3161.4585
8263 itr: 159160
8264 training loss: 5771.769
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8270 training loss: 6286.7163
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8301 itr: 159350
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8375 itr: 159720
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8377 itr: 159730
8378 training loss: 3689.0967
8379 itr: 159740
8380 training loss: 2989.975
8381 itr: 159750
8382 training loss: 4858.4834
8383 itr: 159760
8384 training loss: 3174.658
8385 itr: 159770
8386 training loss: 4609.4707
8387 itr: 159780
8388 training loss: 3181.2517
8389 itr: 159790
8390 training loss: 2440.3352
8391 itr: 159800
8392 training loss: 3619.3772
8393 itr: 159810
8394 training loss: 3981.2017
8395 itr: 159820
8396 training loss: 4160.28
8397 itr: 159830
8398 training loss: 3644.6606
8399 itr: 159840
8400 training loss: 3053.8518
8401 itr: 159850
8402 training loss: 2457.867
8403 itr: 159860
8404 training loss: 3036.7393
8405 itr: 159870
8406 training loss: 1526.1368
8407 itr: 159880
8408 training loss: 2569.1052
8409 itr: 159890
8410 training loss: 2270.921
8411 itr: 159900
8412 training loss: 3578.4504
```

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8413 itr: 159910
8414 training loss: 2712.4268
8415 itr: 159920
8416 training loss: 1084.8337
8417 itr: 159930
8418 training loss: 5296.1426
8419 itr: 159940
8420 training loss: 6092.09
8421 itr: 159950
8422 training loss: 2681.1104
8423 itr: 159960
8424 training loss: 3108.362
8425 itr: 159970
8426 training loss: 6119.215
8427 itr: 159980
8428 training loss: 2229.9514
8429 itr: 159990
8430 training loss: 2816.1958
8431 itr: 160000
8432 training loss: 4108.881
8433 test...
8434 mse per seq: 8888.04930891814
8435 605.8457134388111
8436 694.4455285248933
8437 766.0804372716833
8438 811.1617772137678
8439 883.0252253214518
8440 985.60857518514
8441 1003.3906643478958
8442 1020.2795791625977
8443 1042.5531959533691
8444 1075.6586124985306
8445 psnr per frame: 17.405355
8446 18.77591
8447 18.222733
8448 17.912708
8449 17.683664
```

8450	17.437433
8451	16.921562
8452	16.848799
8453	16.786592
8454	16.757383
8455	16.70678
8456	fmae per frame: 1849.71
8457	1481.5248
8458	1606.8928
8459	1710.852
8460	1772.0092
8461	1855.9917
8462	1980.2684
8463	1999.7954
8464	2012.8217
8465	2027.1982
8466	2049.7441
8467	ssim per frame: 0.79827416
8468	0.82856107
8469	0.8164069
8470	0.8088783
8471	0.80383104
8472	0.7987487
8473	0.7874324
8474	0.7858862
8475	0.78504676
8476	0.7834714
8477	0.78447884
8478	sharpness per frame: 254.87593
8479	254.88889
8480	255.0
8481	255.0
8482	255.0
8483	254.98148
8484	254.83333
8485	254.90277
8486	254.76389

```
8487 254.55556
8488 254.83333
8489 saved to checkpoints/radar_predrnn_pp
8490 itr: 160010
8491 training loss: 2181.2065
8492 itr: 160020
8493 training loss: 5945.387
8494 itr: 160030
8495 training loss: 2975.5142
8496 itr: 160040
8497 training loss: 4311.525
8498 itr: 160050
8499 training loss: 1866.7278
8500 itr: 160060
8501 training loss: 3366.5054
8502 itr: 160070
8503 training loss: 4969.21
8504 itr: 160080
8505 training loss: 3359.1807
8506 itr: 160090
8507 training loss: 3773.9756
8508 itr: 160100
8509 training loss: 3034.1567
8510 itr: 160110
8511 training loss: 5992.5596
8512 itr: 160120
8513 training loss: 1624.0455
8514 itr: 160130
8515 training loss: 4061.6418
8516 itr: 160140
8517 training loss: 3304.2175
8518 itr: 160150
8519 training loss: 2378.156
8520 itr: 160160
8521 training loss: 3991.374
8522 itr: 160170
8523 training loss: 3808.2612
```

```
8524 itr: 160180
8525 training loss: 3733.734
8526 itr: 160190
8527 training loss: 2988.877
8528 itr: 160200
8529 training loss: 4921.613
8530 itr: 160210
8531 training loss: 5670.6997
8532 itr: 160220
8533 training loss: 2584.121
8534 itr: 160230
8535 training loss: 2832.2522
8536 itr: 160240
8537 training loss: 5152.8325
8538 itr: 160250
8539 training loss: 4185.0386
8540 itr: 160260
8541 training loss: 2700.2595
8542 itr: 160270
8543 training loss: 3448.5127
8544 itr: 160280
8545 training loss: 3812.4587
8546 itr: 160290
8547 training loss: 4290.4126
8548 itr: 160300
8549 training loss: 4581.4023
8550 itr: 160310
8551 training loss: 3894.2266
8552 itr: 160320
8553 training loss: 4675.577
8554 itr: 160330
8555 training loss: 3945.7551
8556 itr: 160340
8557 training loss: 3028.7322
8558 itr: 160350
8559 training loss: 2663.3398
8560 itr: 160360
```



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8561 training loss: 5192.97
8562 itr: 160370
8563 training loss: 5367.534
8564 itr: 160380
8565 training loss: 4027.4395
8566 itr: 160390
8567 training loss: 2945.2153
8568 itr: 160400
8569 training loss: 3804.594
8570 itr: 160410
8571 training loss: 2598.2222
8572 itr: 160420
8573 training loss: 2736.636
8574 itr: 160430
8575 training loss: 1610.3394
8576 itr: 160440
8577 training loss: 5566.5527
8578 itr: 160450
8579 training loss: 4526.337
8580 itr: 160460
8581 training loss: 5076.5923
8582 itr: 160470
8583 training loss: 5524.206
8584 itr: 160480
8585 training loss: 2108.6262
8586 itr: 160490
8587 training loss: 3497.3298
8588 itr: 160500
8589 training loss: 4803.558
8590 itr: 160510
8591 training loss: 3695.2178
8592 itr: 160520
8593 training loss: 3690.3909
8594 itr: 160530
8595 training loss: 3319.2007
8596 itr: 160540
8597 training loss: 4644.0864
```

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8598 itr: 160550
8599 training loss: 2781.2717
8600 itr: 160560
8601 training loss: 3901.9087
8602 itr: 160570
8603 training loss: 2639.7388
8604 itr: 160580
8605 training loss: 4748.7334
8606 itr: 160590
8607 training loss: 4173.767
8608 itr: 160600
8609 training loss: 2798.7148
8610 itr: 160610
8611 training loss: 2666.6863
8612 itr: 160620
8613 training loss: 2033.2484
8614 itr: 160630
8615 training loss: 3603.4956
8616 itr: 160640
8617 training loss: 4039.6282
8618 itr: 160650
8619 training loss: 1936.9896
8620 itr: 160660
8621 training loss: 2507.0845
8622 itr: 160670
8623 training loss: 5124.7554
8624 itr: 160680
8625 training loss: 2613.2542
8626 itr: 160690
8627 training loss: 4977.943
8628 itr: 160700
8629 training loss: 6391.8433
8630 itr: 160710
8631 training loss: 3255.5415
8632 itr: 160720
8633 training loss: 4933.4575
8634 itr: 160730
```

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8635 training loss: 4336.6816
8636 itr: 160740
8637 training loss: 1580.772
8638 itr: 160750
8639 training loss: 4762.7515
8640 itr: 160760
8641 training loss: 2030.041
8642 itr: 160770
8643 training loss: 7218.0938
8644 itr: 160780
8645 training loss: 2308.3857
8646 itr: 160790
8647 training loss: 4330.0376
8648 itr: 160800
8649 training loss: 4224.129
8650 itr: 160810
8651 training loss: 3649.1592
8652 itr: 160820
8653 training loss: 2863.06
8654 itr: 160830
8655 training loss: 3612.3103
8656 itr: 160840
8657 training loss: 3552.5017
8658 itr: 160850
8659 training loss: 1568.5964
8660 itr: 160860
8661 training loss: 1760.1729
8662 itr: 160870
8663 training loss: 3561.853
8664 itr: 160880
8665 training loss: 2128.1042
8666 itr: 160890
8667 training loss: 6011.203
8668 itr: 160900
8669 training loss: 4257.722
8670 itr: 160910
8671 training loss: 6152.1123
```

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8672 itr: 160920
8673 training loss: 4962.7207
8674 itr: 160930
8675 training loss: 2131.162
8676 itr: 160940
8677 training loss: 4773.3936
8678 itr: 160950
8679 training loss: 2267.7686
8680 itr: 160960
8681 training loss: 3951.503
8682 itr: 160970
8683 training loss: 1815.0681
8684 itr: 160980
8685 training loss: 3381.3335
8686 itr: 160990
8687 training loss: 2395.4602
8688 itr: 161000
8689 training loss: 2232.6934
8690 itr: 161010
8691 training loss: 1840.3226
8692 itr: 161020
8693 training loss: 3238.1968
8694 itr: 161030
8695 training loss: 4007.557
8696 itr: 161040
8697 training loss: 2215.8433
8698 itr: 161050
8699 training loss: 4026.6663
8700 itr: 161060
8701 training loss: 2251.361
8702 itr: 161070
8703 training loss: 2965.474
8704 itr: 161080
8705 training loss: 1137.0653
8706 itr: 161090
8707 training loss: 4796.276
8708 itr: 161100
```

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8709 training loss: 6086.6587
8710 itr: 161110
8711 training loss: 2721.4724
8712 itr: 161120
8713 training loss: 2846.8472
8714 itr: 161130
8715 training loss: 3801.9902
8716 itr: 161140
8717 training loss: 3788.829
8718 itr: 161150
8719 training loss: 6851.657
8720 itr: 161160
8721 training loss: 4330.028
8722 itr: 161170
8723 training loss: 5548.873
8724 itr: 161180
8725 training loss: 4592.728
8726 itr: 161190
8727 training loss: 4232.228
8728 itr: 161200
8729 training loss: 5462.3384
8730 itr: 161210
8731 training loss: 6115.1816
8732 itr: 161220
8733 training loss: 4084.6675
8734 itr: 161230
8735 training loss: 3675.1697
8736 itr: 161240
8737 training loss: 2699.5793
8738 itr: 161250
8739 training loss: 2051.5266
8740 itr: 161260
8741 training loss: 3724.9817
8742 itr: 161270
8743 training loss: 5319.123
8744 itr: 161280
8745 training loss: 6227.8823
```

```
8746 itr: 161290
8747 training loss: 3688.2808
8748 itr: 161300
8749 training loss: 5250.46
8750 itr: 161310
8751 training loss: 4609.72
8752 itr: 161320
8753 training loss: 5449.5527
8754 itr: 161330
8755 training loss: 3346.799
8756 itr: 161340
8757 training loss: 2860.9648
8758 itr: 161350
8759 training loss: 3620.4697
8760 itr: 161360
8761 training loss: 3894.5266
8762 itr: 161370
8763 training loss: 3619.255
8764 itr: 161380
8765 training loss: 2935.4749
8766 itr: 161390
8767 training loss: 3629.7017
8768 itr: 161400
8769 training loss: 3257.66
8770 itr: 161410
8771 training loss: 3143.3838
8772 itr: 161420
8773 training loss: 3349.6917
8774 itr: 161430
8775 training loss: 4510.365
8776 itr: 161440
8777 training loss: 3103.8477
8778 itr: 161450
8779 training loss: 3572.3567
8780 itr: 161460
8781 training loss: 2921.7139
8782 itr: 161470
```

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8783 training loss: 5104.991
8784 itr: 161480
8785 training loss: 3178.3855
8786 itr: 161490
8787 training loss: 3486.8564
8788 itr: 161500
8789 training loss: 5173.9365
8790 itr: 161510
8791 training loss: 1543.8136
8792 itr: 161520
8793 training loss: 4126.835
8794 itr: 161530
8795 training loss: 4074.395
8796 itr: 161540
8797 training loss: 4013.2158
8798 itr: 161550
8799 training loss: 2986.6023
8800 itr: 161560
8801 training loss: 1756.435
8802 itr: 161570
8803 training loss: 2263.65
8804 itr: 161580
8805 training loss: 2463.498
8806 itr: 161590
8807 training loss: 2694.3733
8808 itr: 161600
8809 training loss: 4031.111
8810 itr: 161610
8811 training loss: 962.9205
8812 itr: 161620
8813 training loss: 5267.866
8814 itr: 161630
8815 training loss: 3929.512
8816 itr: 161640
8817 training loss: 3299.7737
8818 itr: 161650
8819 training loss: 3201.0303
```

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8820 itr: 161660
8821 training loss: 3523.86
8822 itr: 161670
8823 training loss: 1412.5945
8824 itr: 161680
8825 training loss: 1659.0121
8826 itr: 161690
8827 training loss: 4336.2495
8828 itr: 161700
8829 training loss: 4165.148
8830 itr: 161710
8831 training loss: 3575.458
8832 itr: 161720
8833 training loss: 4521.0884
8834 itr: 161730
8835 training loss: 5758.1514
8836 itr: 161740
8837 training loss: 3405.193
8838 itr: 161750
8839 training loss: 4283.9565
8840 itr: 161760
8841 training loss: 2786.396
8842 itr: 161770
8843 training loss: 4756.3086
8844 itr: 161780
8845 training loss: 6082.1426
8846 itr: 161790
8847 training loss: 2152.5808
8848 itr: 161800
8849 training loss: 2861.6396
8850 itr: 161810
8851 training loss: 2083.395
8852 itr: 161820
8853 training loss: 5543.813
8854 itr: 161830
8855 training loss: 2367.9424
8856 itr: 161840
```



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8857 training loss: 5564.421
8858 itr: 161850
8859 training loss: 3186.3923
8860 itr: 161860
8861 training loss: 3061.5173
8862 itr: 161870
8863 training loss: 2560.2983
8864 itr: 161880
8865 training loss: 2971.5874
8866 itr: 161890
8867 training loss: 4536.6665
8868 itr: 161900
8869 training loss: 1508.2777
8870 itr: 161910
8871 training loss: 2051.8372
8872 itr: 161920
8873 training loss: 4545.3022
8874 itr: 161930
8875 training loss: 5959.168
8876 itr: 161940
8877 training loss: 5966.7085
8878 itr: 161950
8879 training loss: 2395.8127
8880 itr: 161960
8881 training loss: 2490.6057
8882 itr: 161970
8883 training loss: 4069.5674
8884 itr: 161980
8885 training loss: 1673.6229
8886 itr: 161990
8887 training loss: 2683.516
8888 itr: 162000
8889 training loss: 3176.6116
8890 itr: 162010
8891 training loss: 2222.5908
8892 itr: 162020
8893 training loss: 3153.8599
```

```
8894 itr: 162030
8895 training loss: 541.7766
8896 itr: 162040
8897 training loss: 2595.0925
8898 itr: 162050
8899 training loss: 4487.592
8900 itr: 162060
8901 training loss: 5428.536
8902 itr: 162070
8903 training loss: 1452.3064
8904 itr: 162080
8905 training loss: 503.08673
8906 itr: 162090
8907 training loss: 2990.9268
8908 itr: 162100
8909 training loss: 6774.815
8910 itr: 162110
8911 training loss: 4562.4243
8912 itr: 162120
8913 training loss: 1420.2834
8914 itr: 162130
8915 training loss: 5298.1196
8916 itr: 162140
8917 training loss: 4164.0
8918 itr: 162150
8919 training loss: 5122.3745
8920 itr: 162160
8921 training loss: 4755.7324
8922 itr: 162170
8923 training loss: 573.30896
8924 itr: 162180
8925 training loss: 4393.171
8926 itr: 162190
8927 training loss: 4465.8096
8928 itr: 162200
8929 training loss: 3738.7896
8930 itr: 162210
```

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8931 training loss: 2589.0837
8932 itr: 162220
8933 training loss: 2377.699
8934 itr: 162230
8935 training loss: 6127.9604
8936 itr: 162240
8937 training loss: 4424.7495
8938 itr: 162250
8939 training loss: 3207.4773
8940 itr: 162260
8941 training loss: 4966.4595
8942 itr: 162270
8943 training loss: 5051.8887
8944 itr: 162280
8945 training loss: 3704.357
8946 itr: 162290
8947 training loss: 5385.5615
8948 itr: 162300
8949 training loss: 3184.3975
8950 itr: 162310
8951 training loss: 5717.747
8952 itr: 162320
8953 training loss: 4003.3945
8954 itr: 162330
8955 training loss: 4187.7617
8956 itr: 162340
8957 training loss: 2877.4756
8958 itr: 162350
8959 training loss: 4374.5215
8960 itr: 162360
8961 training loss: 4753.4995
8962 itr: 162370
8963 training loss: 3844.2168
8964 itr: 162380
8965 training loss: 3444.3433
8966 itr: 162390
8967 training loss: 1809.3207
```

```
8968 itr: 162400
8969 training loss: 6148.9395
8970 itr: 162410
8971 training loss: 3228.3706
8972 itr: 162420
8973 training loss: 3913.2847
8974 itr: 162430
8975 training loss: 4471.4985
8976 itr: 162440
8977 training loss: 4904.1167
8978 itr: 162450
8979 training loss: 3667.3005
8980 itr: 162460
8981 training loss: 1741.5446
8982 itr: 162470
8983 training loss: 3450.505
8984 itr: 162480
8985 training loss: 6856.435
8986 itr: 162490
8987 training loss: 3148.5337
8988 itr: 162500
8989 training loss: 1260.8295
8990 itr: 162510
8991 training loss: 953.86426
8992 itr: 162520
8993 training loss: 4782.7935
8994 itr: 162530
8995 training loss: 4572.3647
8996 itr: 162540
8997 training loss: 4627.4014
8998 itr: 162550
8999 training loss: 1184.5638
9000 itr: 162560
9001 training loss: 5207.457
9002 itr: 162570
9003 training loss: 3679.6226
9004 itr: 162580
```

```
9005 training loss: 3843.6833
9006 itr: 162590
9007 training loss: 3742.815
9008 itr: 162600
9009 training loss: 3062.1382
9010 itr: 162610
9011 training loss: 879.97253
9012 itr: 162620
9013 training loss: 3785.5764
9014 itr: 162630
9015 training loss: 5007.6875
9016 itr: 162640
9017 training loss: 4220.137
9018 itr: 162650
9019 training loss: 1670.8772
9020 itr: 162660
9021 training loss: 1377.0413
9022 itr: 162670
9023 training loss: 5200.208
9024 itr: 162680
9025 training loss: 4199.8438
9026 itr: 162690
9027 training loss: 5100.635
9028 itr: 162700
9029 training loss: 2903.5596
9030 itr: 162710
9031 training loss: 5222.881
9032 itr: 162720
9033 training loss: 3419.4243
9034 itr: 162730
9035 training loss: 4712.954
9036 itr: 162740
9037 training loss: 3932.8064
9038 itr: 162750
9039 training loss: 2547.145
9040 itr: 162760
9041 training loss: 3869.4302
```

```
9042 itr: 162770
9043 training loss: 4389.9165
9044 itr: 162780
9045 training loss: 2367.1804
9046 itr: 162790
9047 training loss: 6336.6895
9048 itr: 162800
9049 training loss: 3292.8672
9050 itr: 162810
9051 training loss: 3465.907
9052 itr: 162820
9053 training loss: 4168.4165
9054 itr: 162830
9055 training loss: 3945.1404
9056 itr: 162840
9057 training loss: 4856.4326
9058 itr: 162850
9059 training loss: 7593.7593
9060 itr: 162860
9061 training loss: 2303.027
9062 itr: 162870
9063 training loss: 5357.5527
9064 itr: 162880
9065 training loss: 3966.4094
9066 itr: 162890
9067 training loss: 5300.193
9068 itr: 162900
9069 training loss: 4695.396
9070 itr: 162910
9071 training loss: 6340.4634
9072 itr: 162920
9073 training loss: 2005.5896
9074 itr: 162930
9075 training loss: 1664.6207
9076 itr: 162940
9077 training loss: 4525.86
9078 itr: 162950
```

```
9079 training loss: 4748.8364
9080 itr: 162960
9081 training loss: 4310.792
9082 itr: 162970
9083 training loss: 2097.8977
9084 itr: 162980
9085 training loss: 2317.298
9086 itr: 162990
9087 training loss: 3557.6475
9088 itr: 163000
9089 training loss: 3253.8198
9090 itr: 163010
9091 training loss: 2632.1174
9092 itr: 163020
9093 training loss: 1024.9048
9094 itr: 163030
9095 training loss: 3502.0125
9096 itr: 163040
9097 training loss: 5779.607
9098 itr: 163050
9099 training loss: 5672.0293
9100 itr: 163060
9101 training loss: 5224.3423
9102 itr: 163070
9103 training loss: 5438.582
9104 itr: 163080
9105 training loss: 2430.2131
9106 itr: 163090
9107 training loss: 5809.7188
9108 itr: 163100
9109 training loss: 2885.0442
9110 itr: 163110
9111 training loss: 1386.4767
9112 itr: 163120
9113 training loss: 4512.186
9114 itr: 163130
9115 training loss: 1844.6047
```

```
9116 itr: 163140
9117 training loss: 3978.2485
9118 itr: 163150
9119 training loss: 3772.5684
9120 itr: 163160
9121 training loss: 3381.3818
9122 itr: 163170
9123 training loss: 5018.753
9124 itr: 163180
9125 training loss: 2936.1567
9126 itr: 163190
9127 training loss: 5452.3
9128 itr: 163200
9129 training loss: 3657.589
9130 itr: 163210
9131 training loss: 2217.7336
9132 itr: 163220
9133 training loss: 3402.6392
9134 itr: 163230
9135 training loss: 7265.9297
9136 itr: 163240
9137 training loss: 3951.8223
9138 itr: 163250
9139 training loss: 5630.673
9140 itr: 163260
9141 training loss: 1233.6285
9142 itr: 163270
9143 training loss: 2545.1675
9144 itr: 163280
9145 training loss: 3834.2532
9146 itr: 163290
9147 training loss: 2562.8206
9148 itr: 163300
9149 training loss: 2815.9924
9150 itr: 163310
9151 training loss: 4162.4194
9152 itr: 163320
```



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9153 training loss: 5240.4043
9154 itr: 163330
9155 training loss: 3830.768
9156 itr: 163340
9157 training loss: 5385.332
9158 itr: 163350
9159 training loss: 6304.908
9160 itr: 163360
9161 training loss: 3652.3064
9162 itr: 163370
9163 training loss: 3152.8308
9164 itr: 163380
9165 training loss: 4980.17
9166 itr: 163390
9167 training loss: 3974.3032
9168 itr: 163400
9169 training loss: 3800.8267
9170 itr: 163410
9171 training loss: 3984.1472
9172 itr: 163420
9173 training loss: 3336.0996
9174 itr: 163430
9175 training loss: 2754.6511
9176 itr: 163440
9177 training loss: 3592.9946
9178 itr: 163450
9179 training loss: 5688.875
9180 itr: 163460
9181 training loss: 2676.0312
9182 itr: 163470
9183 training loss: 2341.7297
9184 itr: 163480
9185 training loss: 1842.1078
9186 itr: 163490
9187 training loss: 2185.9072
9188 itr: 163500
9189 training loss: 3501.2197
```

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9190 itr: 163510
9191 training loss: 3821.221
9192 itr: 163520
9193 training loss: 6484.3086
9194 itr: 163530
9195 training loss: 4881.4033
9196 itr: 163540
9197 training loss: 2262.8777
9198 itr: 163550
9199 training loss: 3337.3347
9200 itr: 163560
9201 training loss: 2009.6069
9202 itr: 163570
9203 training loss: 4284.077
9204 itr: 163580
9205 training loss: 4312.1177
9206 itr: 163590
9207 training loss: 2866.397
9208 itr: 163600
9209 training loss: 3009.7366
9210 itr: 163610
9211 training loss: 3996.7268
9212 itr: 163620
9213 training loss: 2767.9893
9214 itr: 163630
9215 training loss: 4178.805
9216 itr: 163640
9217 training loss: 3991.0527
9218 itr: 163650
9219 training loss: 3820.6677
9220 itr: 163660
9221 training loss: 3967.9502
9222 itr: 163670
9223 training loss: 1552.83
9224 itr: 163680
9225 training loss: 5208.304
9226 itr: 163690
```

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9227 training loss: 3691.176
9228 itr: 163700
9229 training loss: 4907.435
9230 itr: 163710
9231 training loss: 5027.918
9232 itr: 163720
9233 training loss: 5784.8535
9234 itr: 163730
9235 training loss: 1612.811
9236 itr: 163740
9237 training loss: 5051.43
9238 itr: 163750
9239 training loss: 4618.8354
9240 itr: 163760
9241 training loss: 3754.2144
9242 itr: 163770
9243 training loss: 2670.433
9244 itr: 163780
9245 training loss: 4116.787
9246 itr: 163790
9247 training loss: 2938.546
9248 itr: 163800
9249 training loss: 3815.265
9250 itr: 163810
9251 training loss: 5069.533
9252 itr: 163820
9253 training loss: 3989.172
9254 itr: 163830
9255 training loss: 2840.9795
9256 itr: 163840
9257 training loss: 2156.4624
9258 itr: 163850
9259 training loss: 2909.7888
9260 itr: 163860
9261 training loss: 6541.3325
9262 itr: 163870
9263 training loss: 1771.3995
```

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9264 itr: 163880
9265 training loss: 3946.559
9266 itr: 163890
9267 training loss: 3839.6287
9268 itr: 163900
9269 training loss: 3063.342
9270 itr: 163910
9271 training loss: 886.8201
9272 itr: 163920
9273 training loss: 3236.2847
9274 itr: 163930
9275 training loss: 4438.8477
9276 itr: 163940
9277 training loss: 3716.5195
9278 itr: 163950
9279 training loss: 2092.2722
9280 itr: 163960
9281 training loss: 3360.0166
9282 itr: 163970
9283 training loss: 5573.947
9284 itr: 163980
9285 training loss: 3539.0073
9286 itr: 163990
9287 training loss: 4895.6777
9288 itr: 164000
9289 training loss: 3609.6345
9290 itr: 164010
9291 training loss: 3378.9568
9292 itr: 164020
9293 training loss: 5105.4736
9294 itr: 164030
9295 training loss: 1962.1865
9296 itr: 164040
9297 training loss: 4054.6409
9298 itr: 164050
9299 training loss: 3738.6875
9300 itr: 164060
```

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9301 training loss: 2852.4712
9302 itr: 164070
9303 training loss: 3179.1533
9304 itr: 164080
9305 training loss: 3664.8833
9306 itr: 164090
9307 training loss: 4926.0215
9308 itr: 164100
9309 training loss: 4992.8423
9310 itr: 164110
9311 training loss: 4961.338
9312 itr: 164120
9313 training loss: 2796.2458
9314 itr: 164130
9315 training loss: 2208.8635
9316 itr: 164140
9317 training loss: 3080.1418
9318 itr: 164150
9319 training loss: 3166.1309
9320 itr: 164160
9321 training loss: 3594.5945
9322 itr: 164170
9323 training loss: 2188.1484
9324 itr: 164180
9325 training loss: 5463.6143
9326 itr: 164190
9327 training loss: 4846.4463
9328 itr: 164200
9329 training loss: 5462.3613
9330 itr: 164210
9331 training loss: 4610.666
9332 itr: 164220
9333 training loss: 4342.509
9334 itr: 164230
9335 training loss: 4195.5054
9336 itr: 164240
9337 training loss: 3395.5276
```

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9338 itr: 164250
9339 training loss: 2247.296
9340 itr: 164260
9341 training loss: 3043.03
9342 itr: 164270
9343 training loss: 4910.8105
9344 itr: 164280
9345 training loss: 4822.2446
9346 itr: 164290
9347 training loss: 5226.76
9348 itr: 164300
9349 training loss: 5289.186
9350 itr: 164310
9351 training loss: 4049.75
9352 itr: 164320
9353 training loss: 4586.7173
9354 itr: 164330
9355 training loss: 3729.3276
9356 itr: 164340
9357 training loss: 3145.8252
9358 itr: 164350
9359 training loss: 2879.3381
9360 itr: 164360
9361 training loss: 4107.484
9362 itr: 164370
9363 training loss: 1908.4022
9364 itr: 164380
9365 training loss: 1445.297
9366 itr: 164390
9367 training loss: 4575.725
9368 itr: 164400
9369 training loss: 2949.7278
9370 itr: 164410
9371 training loss: 3102.416
9372 itr: 164420
9373 training loss: 4659.628
9374 itr: 164430
```

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9375 training loss: 4161.7812
9376 itr: 164440
9377 training loss: 3915.96
9378 itr: 164450
9379 training loss: 3580.6287
9380 itr: 164460
9381 training loss: 4385.1865
9382 itr: 164470
9383 training loss: 4865.199
9384 itr: 164480
9385 training loss: 3193.6292
9386 itr: 164490
9387 training loss: 3102.343
9388 itr: 164500
9389 training loss: 3306.2349
9390 itr: 164510
9391 training loss: 4949.7905
9392 itr: 164520
9393 training loss: 1076.8561
9394 itr: 164530
9395 training loss: 4142.86
9396 itr: 164540
9397 training loss: 5385.41
9398 itr: 164550
9399 training loss: 3967.0996
9400 itr: 164560
9401 training loss: 2867.8438
9402 itr: 164570
9403 training loss: 3248.0894
9404 itr: 164580
9405 training loss: 2953.2778
9406 itr: 164590
9407 training loss: 2735.6406
9408 itr: 164600
9409 training loss: 2590.977
9410 itr: 164610
9411 training loss: 3659.3877
```

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9412 itr: 164620
9413 training loss: 3361.7651
9414 itr: 164630
9415 training loss: 1670.5651
9416 itr: 164640
9417 training loss: 1550.4355
9418 itr: 164650
9419 training loss: 5851.3945
9420 itr: 164660
9421 training loss: 4109.5615
9422 itr: 164670
9423 training loss: 1183.8917
9424 itr: 164680
9425 training loss: 2746.3457
9426 itr: 164690
9427 training loss: 2475.5767
9428 itr: 164700
9429 training loss: 2203.1887
9430 itr: 164710
9431 training loss: 836.55066
9432 itr: 164720
9433 training loss: 2933.8367
9434 itr: 164730
9435 training loss: 2116.126
9436 itr: 164740
9437 training loss: 4863.778
9438 itr: 164750
9439 training loss: 2172.608
9440 itr: 164760
9441 training loss: 759.37463
9442 itr: 164770
9443 training loss: 2310.633
9444 itr: 164780
9445 training loss: 3266.6814
9446 itr: 164790
9447 training loss: 2916.6235
9448 itr: 164800
```



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9449 training loss: 4240.039
9450 itr: 164810
9451 training loss: 5480.231
9452 itr: 164820
9453 training loss: 5449.243
9454 itr: 164830
9455 training loss: 1403.12
9456 itr: 164840
9457 training loss: 5516.2505
9458 itr: 164850
9459 training loss: 1872.923
9460 itr: 164860
9461 training loss: 3158.2659
9462 itr: 164870
9463 training loss: 4954.1274
9464 itr: 164880
9465 training loss: 3252.4377
9466 itr: 164890
9467 training loss: 4011.3606
9468 itr: 164900
9469 training loss: 4753.9487
9470 itr: 164910
9471 training loss: 5250.6494
9472 itr: 164920
9473 training loss: 3314.9875
9474 itr: 164930
9475 training loss: 4288.6465
9476 itr: 164940
9477 training loss: 4972.088
9478 itr: 164950
9479 training loss: 1918.0505
9480 itr: 164960
9481 training loss: 3124.3865
9482 itr: 164970
9483 training loss: 1294.7063
9484 itr: 164980
9485 training loss: 3598.0942
```

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9486 itr: 164990
9487 training loss: 4353.718
9488 itr: 165000
9489 training loss: 5347.217
9490 test...
9491 mse per seq: 9218.40762117174
9492 605.7649916189688
9493 698.1761775546604
9494 776.4196894610369
9495 831.2009617840803
9496 911.5922330220541
9497 1019.1722489816171
9498 1050.6930491129558
9499 1078.1859650788483
9500 1104.8891795123066
9501 1142.3131250452113
9502 psnr per frame: 17.303436
9503 18.768955
9504 18.209831
9505 17.869377
9506 17.615156
9507 17.355516
9508 16.813545
9509 16.706497
9510 16.609459
9511 16.560177
9512 16.52584
9513 fmae per frame: 1860.932
9514 1464.8002
9515 1593.9253
9516 1705.3878
9517 1771.6964
9518 1864.8948
9519 1988.7355
9520 2021.8423
9521 2045.9736
9522 2061.996
```

```
9523 2090.068
9524 ssim per frame: 0.79586756
9525 0.8266019
9526 0.81489396
9527 0.8071821
9528 0.80183744
9529 0.796864
9530 0.7852014
9531 0.78324306
9532 0.7819888
9533 0.7802287
9534 0.78063416
9535 sharpness per frame: 254.91899
9536 255.0
9537 254.9537
9538 255.0
9539 255.0
9540 254.9537
9541 254.84259
9542 254.91203
9543 254.91203
9544 254.86574
9545 254.75
9546 saved to checkpoints/radar_predrnn_pp
9547 itr: 165010
9548 training loss: 2612.714
9549 itr: 165020
9550 training loss: 4025.165
9551 itr: 165030
9552 training loss: 3421.5938
9553 itr: 165040
9554 training loss: 4032.5757
9555 itr: 165050
9556 training loss: 2659.8823
9557 itr: 165060
9558 training loss: 3289.2588
9559 itr: 165070
```

```
9560 training loss: 4445.5913
9561 itr: 165080
9562 training loss: 2134.3433
9563 itr: 165090
9564 training loss: 1300.744
9565 itr: 165100
9566 training loss: 3573.3293
9567 itr: 165110
9568 training loss: 2854.7705
9569 itr: 165120
9570 training loss: 3055.9658
9571 itr: 165130
9572 training loss: 1182.605
9573 itr: 165140
9574 training loss: 2796.7078
9575 itr: 165150
9576 training loss: 3500.1042
9577 itr: 165160
9578 training loss: 1220.574
9579 itr: 165170
9580 training loss: 4116.393
9581 itr: 165180
9582 training loss: 3075.2627
9583 itr: 165190
9584 training loss: 6713.7227
9585 itr: 165200
9586 training loss: 4186.263
9587 itr: 165210
9588 training loss: 2640.147
9589 itr: 165220
9590 training loss: 4553.4766
9591 itr: 165230
9592 training loss: 5955.4966
9593 itr: 165240
9594 training loss: 4070.5366
9595 itr: 165250
9596 training loss: 2431.4075
```

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9597 itr: 165260
9598 training loss: 4579.2583
9599 itr: 165270
9600 training loss: 3476.8364
9601 itr: 165280
9602 training loss: 3263.8936
9603 itr: 165290
9604 training loss: 3043.209
9605 itr: 165300
9606 training loss: 3454.6719
9607 itr: 165310
9608 training loss: 3774.957
9609 itr: 165320
9610 training loss: 4666.3394
9611 itr: 165330
9612 training loss: 1580.9264
9613 itr: 165340
9614 training loss: 4842.803
9615 itr: 165350
9616 training loss: 3618.6401
9617 itr: 165360
9618 training loss: 2662.667
9619 itr: 165370
9620 training loss: 2288.352
9621 itr: 165380
9622 training loss: 4828.0625
9623 itr: 165390
9624 training loss: 4699.797
9625 itr: 165400
9626 training loss: 4149.2437
9627 itr: 165410
9628 training loss: 713.4276
9629 itr: 165420
9630 training loss: 3177.438
9631 itr: 165430
9632 training loss: 1414.8765
9633 itr: 165440
```

```
9634 training loss: 4322.7827
9635 itr: 165450
9636 training loss: 3377.175
9637 itr: 165460
9638 training loss: 3859.7043
9639 itr: 165470
9640 training loss: 2143.0015
9641 itr: 165480
9642 training loss: 6339.4624
9643 itr: 165490
9644 training loss: 3863.0676
9645 itr: 165500
9646 training loss: 4249.1914
9647 itr: 165510
9648 training loss: 2072.6604
9649 itr: 165520
9650 training loss: 2557.548
9651 itr: 165530
9652 training loss: 1782.6709
9653 itr: 165540
9654 training loss: 3138.6821
9655 itr: 165550
9656 training loss: 4757.3203
9657 itr: 165560
9658 training loss: 6733.2974
9659 itr: 165570
9660 training loss: 2043.3931
9661 itr: 165580
9662 training loss: 5830.8813
9663 itr: 165590
9664 training loss: 4001.8638
9665 itr: 165600
9666 training loss: 5610.836
9667 itr: 165610
9668 training loss: 3609.5986
9669 itr: 165620
9670 training loss: 4078.1162
```

```
9671 itr: 165630
9672 training loss: 4120.185
9673 itr: 165640
9674 training loss: 3624.4548
9675 itr: 165650
9676 training loss: 2707.0908
9677 itr: 165660
9678 training loss: 4002.1157
9679 itr: 165670
9680 training loss: 3369.6301
9681 itr: 165680
9682 training loss: 5134.3296
9683 itr: 165690
9684 training loss: 5281.288
9685 itr: 165700
9686 training loss: 4078.3296
9687 itr: 165710
9688 training loss: 2500.1433
9689 itr: 165720
9690 training loss: 4734.6157
9691 itr: 165730
9692 training loss: 3034.6724
9693 itr: 165740
9694 training loss: 5210.922
9695 itr: 165750
9696 training loss: 3987.0981
9697 itr: 165760
9698 training loss: 3968.4204
9699 itr: 165770
9700 training loss: 3878.0112
9701 itr: 165780
9702 training loss: 3687.4612
9703 itr: 165790
9704 training loss: 4680.2505
9705 itr: 165800
9706 training loss: 4621.8257
9707 itr: 165810
```

```
9708 training loss: 4893.237
9709 itr: 165820
9710 training loss: 3823.6758
9711 itr: 165830
9712 training loss: 2495.7197
9713 itr: 165840
9714 training loss: 4041.4878
9715 itr: 165850
9716 training loss: 3882.0828
9717 itr: 165860
9718 training loss: 4213.012
9719 itr: 165870
9720 training loss: 3791.3987
9721 itr: 165880
9722 training loss: 4106.2437
9723 itr: 165890
9724 training loss: 3876.8323
9725 itr: 165900
9726 training loss: 5183.468
9727 itr: 165910
9728 training loss: 4850.2915
9729 itr: 165920
9730 training loss: 4051.6074
9731 itr: 165930
9732 training loss: 4223.207
9733 itr: 165940
9734 training loss: 5098.921
9735 itr: 165950
9736 training loss: 3458.9922
9737 itr: 165960
9738 training loss: 4235.9272
9739 itr: 165970
9740 training loss: 1723.335
9741 itr: 165980
9742 training loss: 1883.1454
9743 itr: 165990
9744 training loss: 5652.811
```



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9745 itr: 166000
9746 training loss: 1330.898
9747 itr: 166010
9748 training loss: 4805.8
9749 itr: 166020
9750 training loss: 4758.585
9751 itr: 166030
9752 training loss: 4281.9287
9753 itr: 166040
9754 training loss: 4248.242
9755 itr: 166050
9756 training loss: 3672.906
9757 itr: 166060
9758 training loss: 4323.076
9759 itr: 166070
9760 training loss: 6594.005
9761 itr: 166080
9762 training loss: 4417.244
9763 itr: 166090
9764 training loss: 2736.7842
9765 itr: 166100
9766 training loss: 2451.5964
9767 itr: 166110
9768 training loss: 5680.2397
9769 itr: 166120
9770 training loss: 6924.851
9771 itr: 166130
9772 training loss: 6868.6177
9773 itr: 166140
9774 training loss: 10400.811
9775 itr: 166150
9776 training loss: 7853.9775
9777 itr: 166160
9778 training loss: 10904.4795
9779 itr: 166170
9780 training loss: 8399.448
9781 itr: 166180
```

```
9782 training loss: 9236.492
9783 itr: 166190
9784 training loss: 17006.09
9785 itr: 166200
9786 training loss: 8732.798
9787 itr: 166210
9788 training loss: 8716.056
9789 itr: 166220
9790 training loss: 2235.9424
9791 itr: 166230
9792 training loss: 5314.366
9793 itr: 166240
9794 training loss: 9628.211
9795 itr: 166250
9796 training loss: 9508.089
9797 itr: 166260
9798 training loss: 9523.608
9799 itr: 166270
9800 training loss: 7274.3364
9801 itr: 166280
9802 training loss: 1002.2655
9803 itr: 166290
9804 training loss: 994.9695
9805 itr: 166300
9806 training loss: 6277.058
9807 itr: 166310
9808 training loss: 7052.4897
9809 itr: 166320
9810 training loss: 3459.8772
9811 itr: 166330
9812 training loss: 5670.81
9813 itr: 166340
9814 training loss: 4525.306
9815 itr: 166350
9816 training loss: 3945.2847
9817 itr: 166360
9818 training loss: 5228.884
```

```
9819 itr: 166370
9820 training loss: 8047.415
9821 itr: 166380
9822 training loss: 6557.067
9823 itr: 166390
9824 training loss: 5048.6533
9825 itr: 166400
9826 training loss: 4853.2197
9827 itr: 166410
9828 training loss: 5121.2036
9829 itr: 166420
9830 training loss: 2360.016
9831 itr: 166430
9832 training loss: 3865.0742
9833 itr: 166440
9834 training loss: 3949.537
9835 itr: 166450
9836 training loss: 5200.988
9837 itr: 166460
9838 training loss: 4708.5674
9839 itr: 166470
9840 training loss: 2626.6484
9841 itr: 166480
9842 training loss: 4947.811
9843 itr: 166490
9844 training loss: 5131.946
9845 itr: 166500
9846 training loss: 6049.313
9847 itr: 166510
9848 training loss: 2202.2495
9849 itr: 166520
9850 training loss: 4630.564
9851 itr: 166530
9852 training loss: 6323.0645
9853 itr: 166540
9854 training loss: 1978.2184
9855 itr: 166550
```

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9856 training loss: 3762.5447
9857 itr: 166560
9858 training loss: 7204.795
9859 itr: 166570
9860 training loss: 5091.8506
9861 itr: 166580
9862 training loss: 3003.1206
9863 itr: 166590
9864 training loss: 3807.3657
9865 itr: 166600
9866 training loss: 5043.5225
9867 itr: 166610
9868 training loss: 3074.145
9869 itr: 166620
9870 training loss: 6331.7026
9871 itr: 166630
9872 training loss: 6581.374
9873 itr: 166640
9874 training loss: 1543.0339
9875 itr: 166650
9876 training loss: 6720.481
9877 itr: 166660
9878 training loss: 4872.8486
9879 itr: 166670
9880 training loss: 6309.7456
9881 itr: 166680
9882 training loss: 3679.1611
9883 itr: 166690
9884 training loss: 7829.248
9885 itr: 166700
9886 training loss: 2336.5303
9887 itr: 166710
9888 training loss: 834.05115
9889 itr: 166720
9890 training loss: 6164.271
9891 itr: 166730
9892 training loss: 3268.2163
```

```
9893 itr: 166740
9894 training loss: 5682.6763
9895 itr: 166750
9896 training loss: 6226.152
9897 itr: 166760
9898 training loss: 6237.1357
9899 itr: 166770
9900 training loss: 4781.164
9901 itr: 166780
9902 training loss: 4017.0183
9903 itr: 166790
9904 training loss: 1326.6635
9905 itr: 166800
9906 training loss: 3253.841
9907 itr: 166810
9908 training loss: 1578.2484
9909 itr: 166820
9910 training loss: 2945.1182
9911 itr: 166830
9912 training loss: 1659.8047
9913 itr: 166840
9914 training loss: 4384.2935
9915 itr: 166850
9916 training loss: 5305.2856
9917 itr: 166860
9918 training loss: 4687.3877
9919 itr: 166870
9920 training loss: 2642.2688
9921 itr: 166880
9922 training loss: 5519.3804
9923 itr: 166890
9924 training loss: 2590.2815
9925 itr: 166900
9926 training loss: 5289.417
9927 itr: 166910
9928 training loss: 3498.6003
9929 itr: 166920
```

```
9930 training loss: 6069.373
9931 itr: 166930
9932 training loss: 5272.05
9933 itr: 166940
9934 training loss: 4056.7227
9935 itr: 166950
9936 training loss: 2243.8103
9937 itr: 166960
9938 training loss: 4271.0547
9939 itr: 166970
9940 training loss: 3135.8945
9941 itr: 166980
9942 training loss: 4314.0254
9943 itr: 166990
9944 training loss: 4483.1636
9945 itr: 167000
9946 training loss: 2717.2085
9947 itr: 167010
9948 training loss: 3110.4277
9949 itr: 167020
9950 training loss: 2675.7107
9951 itr: 167030
9952 training loss: 2683.018
9953 itr: 167040
9954 training loss: 1735.4868
9955 itr: 167050
9956 training loss: 2842.661
9957 itr: 167060
9958 training loss: 5316.3936
9959 itr: 167070
9960 training loss: 1690.7416
9961 itr: 167080
9962 training loss: 6000.152
9963 itr: 167090
9964 training loss: 2415.521
9965 itr: 167100
9966 training loss: 2911.3027
```

```
9967 itr: 167110
9968 training loss: 3593.3018
9969 itr: 167120
9970 training loss: 3266.6135
9971 itr: 167130
9972 training loss: 5510.778
9973 itr: 167140
9974 training loss: 3083.022
9975 itr: 167150
9976 training loss: 2471.581
9977 itr: 167160
9978 training loss: 3536.824
9979 itr: 167170
9980 training loss: 2711.8953
9981 itr: 167180
9982 training loss: 4457.0464
9983 itr: 167190
9984 training loss: 4762.9546
9985 itr: 167200
9986 training loss: 5181.7856
9987 itr: 167210
9988 training loss: 3581.9976
9989 itr: 167220
9990 training loss: 7079.794
9991 itr: 167230
9992 training loss: 2551.552
9993 itr: 167240
9994 training loss: 3499.1343
9995 itr: 167250
9996 training loss: 2551.329
9997 itr: 167260
9998 training loss: 1740.0437
9999 itr: 167270
10000 training loss: 4903.153
10001 itr: 167280
10002 training loss: 5543.425
10003 itr: 167290
```

```
10004 training loss: 3863.0361
10005 itr: 167300
10006 training loss: 1960.3025
10007 itr: 167310
10008 training loss: 4631.3467
10009 itr: 167320
10010 training loss: 1605.8789
10011 itr: 167330
10012 training loss: 5259.2393
10013 itr: 167340
10014 training loss: 3718.0579
10015 itr: 167350
10016 training loss: 1276.1882
10017 itr: 167360
10018 training loss: 2916.301
10019 itr: 167370
10020 training loss: 2040.2454
10021 itr: 167380
10022 training loss: 4946.443
10023 itr: 167390
10024 training loss: 4274.29
10025 itr: 167400
10026 training loss: 2779.1458
10027 itr: 167410
10028 training loss: 4898.2534
10029 itr: 167420
10030 training loss: 4683.727
10031 itr: 167430
10032 training loss: 4579.521
10033 itr: 167440
10034 training loss: 5337.997
10035 itr: 167450
10036 training loss: 3724.6968
10037 itr: 167460
10038 training loss: 4012.1003
10039 itr: 167470
10040 training loss: 3695.7644
```



```
10041 itr: 167480
10042 training loss: 3012.4158
10043 itr: 167490
10044 training loss: 4224.205
10045 itr: 167500
10046 training loss: 4427.477
10047 itr: 167510
10048 training loss: 3116.5693
10049 itr: 167520
10050 training loss: 2809.4153
10051 itr: 167530
10052 training loss: 4382.3994
10053 itr: 167540
10054 training loss: 5518.14
10055 itr: 167550
10056 training loss: 5210.6226
10057 itr: 167560
10058 training loss: 4356.156
10059 itr: 167570
10060 training loss: 2272.268
10061 itr: 167580
10062 training loss: 4067.549
10063 itr: 167590
10064 training loss: 2361.2605
10065 itr: 167600
10066 training loss: 3603.763
10067 itr: 167610
10068 training loss: 4378.754
10069 itr: 167620
10070 training loss: 5000.583
10071 itr: 167630
10072 training loss: 4134.014
10073 itr: 167640
10074 training loss: 4456.196
10075 itr: 167650
10076 training loss: 2001.0564
10077 itr: 167660
```

10078 training loss: 4403.9575
10079 itr: 167670
10080 training loss: 4228.8633
10081 itr: 167680
10082 training loss: 3554.9385
10083 itr: 167690
10084 training loss: 3776.3696
10085 itr: 167700
10086 training loss: 3019.4448
10087 itr: 167710
10088 training loss: 2503.1375
10089 itr: 167720
10090 training loss: 5491.732
10091 itr: 167730
10092 training loss: 2952.9634
10093 itr: 167740
10094 training loss: 3616.0112
10095 itr: 167750
10096 training loss: 3378.7632
10097 itr: 167760
10098 training loss: 3722.9255
10099 itr: 167770
10100 training loss: 2825.7368
10101 itr: 167780
10102 training loss: 4264.513
10103 itr: 167790
10104 training loss: 1876.5431
10105 itr: 167800
10106 training loss: 5748.7856
10107 itr: 167810
10108 training loss: 3152.5576
10109 itr: 167820
10110 training loss: 5154.624
10111 itr: 167830
10112 training loss: 3031.5105
10113 itr: 167840
10114 training loss: 3126.949

```
10115 itr: 167850
10116 training loss: 6822.6025
10117 itr: 167860
10118 training loss: 4885.9966
10119 itr: 167870
10120 training loss: 3394.156
10121 itr: 167880
10122 training loss: 4197.073
10123 itr: 167890
10124 training loss: 3795.959
10125 itr: 167900
10126 training loss: 3215.1921
10127 itr: 167910
10128 training loss: 2777.916
10129 itr: 167920
10130 training loss: 2686.6064
10131 itr: 167930
10132 training loss: 2973.2412
10133 itr: 167940
10134 training loss: 3883.12
10135 itr: 167950
10136 training loss: 2975.1836
10137 itr: 167960
10138 training loss: 2981.0254
10139 itr: 167970
10140 training loss: 3417.159
10141 itr: 167980
10142 training loss: 3811.143
10143 itr: 167990
10144 training loss: 2773.5117
10145 itr: 168000
10146 training loss: 2404.452
10147 itr: 168010
10148 training loss: 3633.1765
10149 itr: 168020
10150 training loss: 1330.3066
10151 itr: 168030
```

10152 training loss: 2565.5608
10153 itr: 168040
10154 training loss: 3662.8677
10155 itr: 168050
10156 training loss: 2696.9814
10157 itr: 168060
10158 training loss: 3139.2107
10159 itr: 168070
10160 training loss: 4346.797
10161 itr: 168080
10162 training loss: 5063.442
10163 itr: 168090
10164 training loss: 4585.977
10165 itr: 168100
10166 training loss: 3710.9536
10167 itr: 168110
10168 training loss: 3827.8616
10169 itr: 168120
10170 training loss: 3986.02
10171 itr: 168130
10172 training loss: 1716.2424
10173 itr: 168140
10174 training loss: 2110.8794
10175 itr: 168150
10176 training loss: 916.9803
10177 itr: 168160
10178 training loss: 5511.627
10179 itr: 168170
10180 training loss: 5638.257
10181 itr: 168180
10182 training loss: 3583.5212
10183 itr: 168190
10184 training loss: 2498.9285
10185 itr: 168200
10186 training loss: 4870.626
10187 itr: 168210
10188 training loss: 3893.7817

```
10189 itr: 168220
10190 training loss: 1005.4252
10191 itr: 168230
10192 training loss: 3035.938
10193 itr: 168240
10194 training loss: 2217.1658
10195 itr: 168250
10196 training loss: 901.31323
10197 itr: 168260
10198 training loss: 3262.2336
10199 itr: 168270
10200 training loss: 3781.1187
10201 itr: 168280
10202 training loss: 3446.7021
10203 itr: 168290
10204 training loss: 3397.3313
10205 itr: 168300
10206 training loss: 3459.435
10207 itr: 168310
10208 training loss: 3393.7007
10209 itr: 168320
10210 training loss: 3389.1255
10211 itr: 168330
10212 training loss: 4762.692
10213 itr: 168340
10214 training loss: 3367.708
10215 itr: 168350
10216 training loss: 3374.9897
10217 itr: 168360
10218 training loss: 4157.834
10219 itr: 168370
10220 training loss: 4559.413
10221 itr: 168380
10222 training loss: 1835.9275
10223 itr: 168390
10224 training loss: 5171.928
10225 itr: 168400
```

10226 training loss: 2581.0364
10227 itr: 168410
10228 training loss: 4084.7974
10229 itr: 168420
10230 training loss: 3706.8442
10231 itr: 168430
10232 training loss: 1033.1066
10233 itr: 168440
10234 training loss: 4346.9663
10235 itr: 168450
10236 training loss: 4956.981
10237 itr: 168460
10238 training loss: 3624.8052
10239 itr: 168470
10240 training loss: 3295.192
10241 itr: 168480
10242 training loss: 3870.8218
10243 itr: 168490
10244 training loss: 2753.8672
10245 itr: 168500
10246 training loss: 4303.9272
10247 itr: 168510
10248 training loss: 4509.38
10249 itr: 168520
10250 training loss: 3894.081
10251 itr: 168530
10252 training loss: 2703.1318
10253 itr: 168540
10254 training loss: 3357.1475
10255 itr: 168550
10256 training loss: 5911.3213
10257 itr: 168560
10258 training loss: 2581.1086
10259 itr: 168570
10260 training loss: 4603.8657
10261 itr: 168580
10262 training loss: 3149.2178

```
10263 itr: 168590
10264 training loss: 4370.407
10265 itr: 168600
10266 training loss: 3083.8733
10267 itr: 168610
10268 training loss: 2672.4446
10269 itr: 168620
10270 training loss: 4483.2954
10271 itr: 168630
10272 training loss: 2821.496
10273 itr: 168640
10274 training loss: 4890.4355
10275 itr: 168650
10276 training loss: 4985.921
10277 itr: 168660
10278 training loss: 3996.0452
10279 itr: 168670
10280 training loss: 4590.5757
10281 itr: 168680
10282 training loss: 4799.125
10283 itr: 168690
10284 training loss: 3348.3103
10285 itr: 168700
10286 training loss: 1520.1807
10287 itr: 168710
10288 training loss: 4270.4707
10289 itr: 168720
10290 training loss: 3675.4734
10291 itr: 168730
10292 training loss: 2691.4587
10293 itr: 168740
10294 training loss: 426.02252
10295 itr: 168750
10296 training loss: 4047.651
10297 itr: 168760
10298 training loss: 4542.615
10299 itr: 168770
```

10300 training loss: 5467.423
10301 itr: 168780
10302 training loss: 4992.429
10303 itr: 168790
10304 training loss: 3642.379
10305 itr: 168800
10306 training loss: 2986.7021
10307 itr: 168810
10308 training loss: 5337.739
10309 itr: 168820
10310 training loss: 3087.2542
10311 itr: 168830
10312 training loss: 4282.993
10313 itr: 168840
10314 training loss: 2972.0916
10315 itr: 168850
10316 training loss: 2717.8728
10317 itr: 168860
10318 training loss: 2424.0115
10319 itr: 168870
10320 training loss: 4231.6094
10321 itr: 168880
10322 training loss: 2399.719
10323 itr: 168890
10324 training loss: 4387.249
10325 itr: 168900
10326 training loss: 3374.0815
10327 itr: 168910
10328 training loss: 5415.721
10329 itr: 168920
10330 training loss: 2177.901
10331 itr: 168930
10332 training loss: 2926.9722
10333 itr: 168940
10334 training loss: 660.7629
10335 itr: 168950
10336 training loss: 5053.0728


```
10337 itr: 168960
10338 training loss: 2465.8003
10339 itr: 168970
10340 training loss: 2321.0078
10341 itr: 168980
10342 training loss: 2894.0278
10343 itr: 168990
10344 training loss: 3955.624
10345 itr: 169000
10346 training loss: 2054.5186
10347 itr: 169010
10348 training loss: 2108.5352
10349 itr: 169020
10350 training loss: 4346.9316
10351 itr: 169030
10352 training loss: 5040.4536
10353 itr: 169040
10354 training loss: 5896.4746
10355 itr: 169050
10356 training loss: 3956.5146
10357 itr: 169060
10358 training loss: 3569.8691
10359 itr: 169070
10360 training loss: 3614.282
10361 itr: 169080
10362 training loss: 3626.0583
10363 itr: 169090
10364 training loss: 2137.8464
10365 itr: 169100
10366 training loss: 2983.0586
10367 itr: 169110
10368 training loss: 5101.073
10369 itr: 169120
10370 training loss: 3791.8657
10371 itr: 169130
10372 training loss: 2594.9023
10373 itr: 169140
```

10374 training loss: 4035.7363
10375 itr: 169150
10376 training loss: 5207.963
10377 itr: 169160
10378 training loss: 4052.3892
10379 itr: 169170
10380 training loss: 3993.7112
10381 itr: 169180
10382 training loss: 2633.9048
10383 itr: 169190
10384 training loss: 2814.3718
10385 itr: 169200
10386 training loss: 2427.8728
10387 itr: 169210
10388 training loss: 4345.775
10389 itr: 169220
10390 training loss: 3161.418
10391 itr: 169230
10392 training loss: 3377.0464
10393 itr: 169240
10394 training loss: 1914.095
10395 itr: 169250
10396 training loss: 1446.9761
10397 itr: 169260
10398 training loss: 1228.952
10399 itr: 169270
10400 training loss: 4463.8755
10401 itr: 169280
10402 training loss: 2456.5737
10403 itr: 169290
10404 training loss: 4751.1504
10405 itr: 169300
10406 training loss: 4623.3496
10407 itr: 169310
10408 training loss: 5722.383
10409 itr: 169320
10410 training loss: 3595.2822

```
10411 itr: 169330
10412 training loss: 4972.5693
10413 itr: 169340
10414 training loss: 4635.925
10415 itr: 169350
10416 training loss: 6223.1084
10417 itr: 169360
10418 training loss: 5100.532
10419 itr: 169370
10420 training loss: 5557.276
10421 itr: 169380
10422 training loss: 3711.4048
10423 itr: 169390
10424 training loss: 3425.9448
10425 itr: 169400
10426 training loss: 3527.478
10427 itr: 169410
10428 training loss: 3775.774
10429 itr: 169420
10430 training loss: 5928.902
10431 itr: 169430
10432 training loss: 2591.3901
10433 itr: 169440
10434 training loss: 6729.5767
10435 itr: 169450
10436 training loss: 3083.5315
10437 itr: 169460
10438 training loss: 1371.2162
10439 itr: 169470
10440 training loss: 1973.0238
10441 itr: 169480
10442 training loss: 3268.3577
10443 itr: 169490
10444 training loss: 3556.394
10445 itr: 169500
10446 training loss: 4145.123
10447 itr: 169510
```

10448 training loss: 2677.3713
10449 itr: 169520
10450 training loss: 6195.3936
10451 itr: 169530
10452 training loss: 5027.0327
10453 itr: 169540
10454 training loss: 3265.855
10455 itr: 169550
10456 training loss: 3050.5625
10457 itr: 169560
10458 training loss: 4228.0796
10459 itr: 169570
10460 training loss: 5688.04
10461 itr: 169580
10462 training loss: 4122.257
10463 itr: 169590
10464 training loss: 5363.3525
10465 itr: 169600
10466 training loss: 2533.6072
10467 itr: 169610
10468 training loss: 2121.4766
10469 itr: 169620
10470 training loss: 4932.383
10471 itr: 169630
10472 training loss: 4332.2227
10473 itr: 169640
10474 training loss: 3448.7935
10475 itr: 169650
10476 training loss: 2494.7668
10477 itr: 169660
10478 training loss: 2212.3525
10479 itr: 169670
10480 training loss: 1844.4165
10481 itr: 169680
10482 training loss: 3436.5146
10483 itr: 169690
10484 training loss: 5218.6484

```
10485 itr: 169700
10486 training loss: 4621.2886
10487 itr: 169710
10488 training loss: 4455.9434
10489 itr: 169720
10490 training loss: 2900.871
10491 itr: 169730
10492 training loss: 4928.1978
10493 itr: 169740
10494 training loss: 6182.1064
10495 itr: 169750
10496 training loss: 2268.9438
10497 itr: 169760
10498 training loss: 2666.3323
10499 itr: 169770
10500 training loss: 3572.6814
10501 itr: 169780
10502 training loss: 4402.5527
10503 itr: 169790
10504 training loss: 1735.7096
10505 itr: 169800
10506 training loss: 2063.5317
10507 itr: 169810
10508 training loss: 3390.2058
10509 itr: 169820
10510 training loss: 2676.8037
10511 itr: 169830
10512 training loss: 6192.427
10513 itr: 169840
10514 training loss: 3704.2974
10515 itr: 169850
10516 training loss: 2579.8198
10517 itr: 169860
10518 training loss: 3424.0293
10519 itr: 169870
10520 training loss: 2891.144
10521 itr: 169880
```

```
10522 training loss: 4107.4917
10523 itr: 169890
10524 training loss: 4726.1787
10525 itr: 169900
10526 training loss: 2221.3445
10527 itr: 169910
10528 training loss: 4698.8647
10529 itr: 169920
10530 training loss: 3719.6887
10531 itr: 169930
10532 training loss: 2733.511
10533 itr: 169940
10534 training loss: 5812.7847
10535 itr: 169950
10536 training loss: 5806.4014
10537 itr: 169960
10538 training loss: 4915.287
10539 itr: 169970
10540 training loss: 4557.117
10541 itr: 169980
10542 training loss: 3875.2354
10543 itr: 169990
10544 training loss: 4059.4268
10545 itr: 170000
10546 training loss: 3640.9846
10547 test...
10548 mse per seq: 8954.284277456778
10549 607.8321092393663
10550 701.6166220770942
10551 775.080462137858
10552 824.5017636617025
10553 888.2780962343569
10554 988.1406052200882
10555 1000.522684874358
10556 1026.394199230053
10557 1053.2152348271122
10558 1088.7024999547887
```

```
10559 psnr per frame: 17.333124
10560 18.76002
10561 18.171963
10562 17.849888
10563 17.599398
10564 17.372671
10565 16.866987
10566 16.781406
10567 16.693226
10568 16.641476
10569 16.594187
10570 fmae per frame: 1836.4846
10571 1454.0461
10572 1588.956
10573 1699.7654
10574 1764.6206
10575 1844.0773
10576 1965.2828
10577 1981.0314
10578 2002.0933
10579 2019.1068
10580 2045.8667
10581 ssim per frame: 0.7922549
10582 0.8231797
10583 0.8112334
10584 0.80330586
10585 0.79764515
10586 0.7927956
10587 0.7814952
10588 0.77989274
10589 0.77857816
10590 0.7770068
10591 0.7774167
10592 sharpness per frame: 254.92593
10593 254.95833
10594 254.9537
10595 255.0
```

```
10596 255.0
10597 255.0
10598 254.94908
10599 254.93518
10600 254.94444
10601 254.87962
10602 254.63889
10603 saved to checkpoints/radar_predrnn_pp
10604 itr: 170010
10605 training loss: 5168.575
10606 itr: 170020
10607 training loss: 5949.191
10608 itr: 170030
10609 training loss: 2095.2407
10610 itr: 170040
10611 training loss: 2638.7327
10612 itr: 170050
10613 training loss: 3416.8232
10614 itr: 170060
10615 training loss: 3229.183
10616 itr: 170070
10617 training loss: 4679.5513
10618 itr: 170080
10619 training loss: 6520.6045
10620 itr: 170090
10621 training loss: 5692.478
10622 itr: 170100
10623 training loss: 5253.8486
10624 itr: 170110
10625 training loss: 1152.2969
10626 itr: 170120
10627 training loss: 4718.0522
10628 itr: 170130
10629 training loss: 4754.004
10630 itr: 170140
10631 training loss: 2619.0576
10632 itr: 170150
```



```
10633 training loss: 5794.5264
10634 itr: 170160
10635 training loss: 6496.729
10636 itr: 170170
10637 training loss: 3768.7007
10638 itr: 170180
10639 training loss: 3107.9194
10640 itr: 170190
10641 training loss: 4955.4927
10642 itr: 170200
10643 training loss: 4796.4404
10644 itr: 170210
10645 training loss: 3926.8804
10646 itr: 170220
10647 training loss: 2586.5137
10648 itr: 170230
10649 training loss: 2914.6335
10650 itr: 170240
10651 training loss: 4991.773
10652 itr: 170250
10653 training loss: 1873.9231
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10669 training loss: 2967.2488
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11405 training loss: 3297.3257
11406 itr: 174020
11407 training loss: 4708.443
11408 itr: 174030
11409 training loss: 2485.0234

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11410 itr: 174040
11411 training loss: 3707.2153
11412 itr: 174050
11413 training loss: 3539.2834
11414 itr: 174060
11415 training loss: 4600.7085
11416 itr: 174070
11417 training loss: 4146.493
11418 itr: 174080
11419 training loss: 4568.3105
11420 itr: 174090
11421 training loss: 4247.856
11422 itr: 174100
11423 training loss: 3327.0698
11424 itr: 174110
11425 training loss: 2072.5918
11426 itr: 174120
11427 training loss: 3782.5078
11428 itr: 174130
11429 training loss: 3574.3486
11430 itr: 174140
11431 training loss: 5449.7397
11432 itr: 174150
11433 training loss: 5665.2944
11434 itr: 174160
11435 training loss: 5141.4746
11436 itr: 174170
11437 training loss: 3274.1736
11438 itr: 174180
11439 training loss: 1957.8955
11440 itr: 174190
11441 training loss: 2273.1755
11442 itr: 174200
11443 training loss: 4023.4004
11444 itr: 174210
11445 training loss: 3534.6826
11446 itr: 174220
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11447 training loss: 2268.4229
11448 itr: 174230
11449 training loss: 3339.4988
11450 itr: 174240
11451 training loss: 4256.8384
11452 itr: 174250
11453 training loss: 2033.6606
11454 itr: 174260
11455 training loss: 7088.6836
11456 itr: 174270
11457 training loss: 2811.9756
11458 itr: 174280
11459 training loss: 4108.966
11460 itr: 174290
11461 training loss: 3119.0056
11462 itr: 174300
11463 training loss: 3804.8965
11464 itr: 174310
11465 training loss: 4856.27
11466 itr: 174320
11467 training loss: 2318.3174
11468 itr: 174330
11469 training loss: 4145.9976
11470 itr: 174340
11471 training loss: 4252.1294
11472 itr: 174350
11473 training loss: 1919.5676
11474 itr: 174360
11475 training loss: 2504.1746
11476 itr: 174370
11477 training loss: 2395.8806
11478 itr: 174380
11479 training loss: 4358.122
11480 itr: 174390
11481 training loss: 4421.3936
11482 itr: 174400
11483 training loss: 5496.049

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11484 itr: 174410
11485 training loss: 746.8249
11486 itr: 174420
11487 training loss: 4190.337
11488 itr: 174430
11489 training loss: 3251.249
11490 itr: 174440
11491 training loss: 4231.718
11492 itr: 174450
11493 training loss: 2593.489
11494 itr: 174460
11495 training loss: 4211.624
11496 itr: 174470
11497 training loss: 6310.2993
11498 itr: 174480
11499 training loss: 3900.1638
11500 itr: 174490
11501 training loss: 4498.0337
11502 itr: 174500
11503 training loss: 4179.985
11504 itr: 174510
11505 training loss: 4840.959
11506 itr: 174520
11507 training loss: 5136.4775
11508 itr: 174530
11509 training loss: 4088.955
11510 itr: 174540
11511 training loss: 4514.2075
11512 itr: 174550
11513 training loss: 1950.2195
11514 itr: 174560
11515 training loss: 3276.2937
11516 itr: 174570
11517 training loss: 5150.5356
11518 itr: 174580
11519 training loss: 2974.6082
11520 itr: 174590
```


11521 training loss: 2053.7578
11522 itr: 174600
11523 training loss: 3445.9507
11524 itr: 174610
11525 training loss: 3069.5715
11526 itr: 174620
11527 training loss: 1750.4923
11528 itr: 174630
11529 training loss: 4605.2725
11530 itr: 174640
11531 training loss: 3889.447
11532 itr: 174650
11533 training loss: 3479.5872
11534 itr: 174660
11535 training loss: 4465.893
11536 itr: 174670
11537 training loss: 5163.389
11538 itr: 174680
11539 training loss: 3244.1555
11540 itr: 174690
11541 training loss: 3926.9087
11542 itr: 174700
11543 training loss: 5223.3345
11544 itr: 174710
11545 training loss: 3903.373
11546 itr: 174720
11547 training loss: 3452.298
11548 itr: 174730
11549 training loss: 3620.4875
11550 itr: 174740
11551 training loss: 2914.7412
11552 itr: 174750
11553 training loss: 4032.9067
11554 itr: 174760
11555 training loss: 2229.6755
11556 itr: 174770
11557 training loss: 4475.776

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11558 itr: 174780
11559 training loss: 4630.872
11560 itr: 174790
11561 training loss: 3461.9624
11562 itr: 174800
11563 training loss: 3575.5798
11564 itr: 174810
11565 training loss: 5241.286
11566 itr: 174820
11567 training loss: 3464.4968
11568 itr: 174830
11569 training loss: 2332.2292
11570 itr: 174840
11571 training loss: 2222.1414
11572 itr: 174850
11573 training loss: 4088.645
11574 itr: 174860
11575 training loss: 2886.5298
11576 itr: 174870
11577 training loss: 2531.8494
11578 itr: 174880
11579 training loss: 2179.1467
11580 itr: 174890
11581 training loss: 4425.1533
11582 itr: 174900
11583 training loss: 3116.449
11584 itr: 174910
11585 training loss: 4092.281
11586 itr: 174920
11587 training loss: 3591.5388
11588 itr: 174930
11589 training loss: 2311.3047
11590 itr: 174940
11591 training loss: 1446.7412
11592 itr: 174950
11593 training loss: 3513.0674
11594 itr: 174960
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11595 training loss: 3585.5315
11596 itr: 174970
11597 training loss: 4568.193
11598 itr: 174980
11599 training loss: 4062.2935
11600 itr: 174990
11601 training loss: 4196.572
11602 itr: 175000
11603 training loss: 4944.293
11604 test...
11605 mse per seq: 8776.56011002152
11606 604.6920383594654
11607 691.0475599500868
11608 759.5036830195675
11609 799.1053507769549
11610 862.2443539654768
11611 971.8028238084581
11612 985.8238141095197
11613 1005.4716248688875
11614 1029.5053007337783
11615 1067.3635604293258
11616 psnr per frame: 17.408384
11617 18.778511
11618 18.226212
11619 17.913157
11620 17.701597
11621 17.467941
11622 16.927898
11623 16.856325
11624 16.786314
11625 16.74063
11626 16.685263
11627 fmae per frame: 1812.0902
11628 1458.4802
11629 1585.7046
11630 1690.1384
11631 1740.4188
```

```
11632 1812.9943
11633 1937.5409
11634 1951.85
11635 1963.8904
11636 1975.7073
11637 2004.1787
11638 ssim per frame: 0.79639673
11639 0.82587016
11640 0.8140368
11641 0.80661446
11642 0.8016701
11643 0.79704887
11644 0.7857227
11645 0.78433955
11646 0.78363013
11647 0.7823044
11648 0.78273046
11649 sharpness per frame: 254.9639
11650 255.0
11651 255.0
11652 255.0
11653 255.0
11654 255.0
11655 254.99538
11656 254.875
11657 255.0
11658 255.0
11659 254.76852
11660 saved to checkpoints/radar_predrnn_pp
11661 itr: 175010
11662 training loss: 2924.919
11663 itr: 175020
11664 training loss: 3942.023
11665 itr: 175030
11666 training loss: 5692.6
11667 itr: 175040
11668 training loss: 2673.0352
```

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11669 itr: 175050
11670 training loss: 4308.253
11671 itr: 175060
11672 training loss: 3419.8303
11673 itr: 175070
11674 training loss: 4766.898
11675 itr: 175080
11676 training loss: 4770.525
11677 itr: 175090
11678 training loss: 5157.4985
11679 itr: 175100
11680 training loss: 2737.8328
11681 itr: 175110
11682 training loss: 3336.0334
11683 itr: 175120
11684 training loss: 1960.2024
11685 itr: 175130
11686 training loss: 3820.6216
11687 itr: 175140
11688 training loss: 3266.2815
11689 itr: 175150
11690 training loss: 2424.294
11691 itr: 175160
11692 training loss: 3047.8413
11693 itr: 175170
11694 training loss: 4127.954
11695 itr: 175180
11696 training loss: 2124.17
11697 itr: 175190
11698 training loss: 4330.2505
11699 itr: 175200
11700 training loss: 5144.254
11701 itr: 175210
11702 training loss: 2896.0645
11703 itr: 175220
11704 training loss: 4794.6157
11705 itr: 175230
```

11706 training loss: 4772.2637
11707 itr: 175240
11708 training loss: 2418.7734
11709 itr: 175250
11710 training loss: 3741.5671
11711 itr: 175260
11712 training loss: 3267.7012
11713 itr: 175270
11714 training loss: 3236.3335
11715 itr: 175280
11716 training loss: 5039.1904
11717 itr: 175290
11718 training loss: 2130.983
11719 itr: 175300
11720 training loss: 2500.5981
11721 itr: 175310
11722 training loss: 4121.068
11723 itr: 175320
11724 training loss: 3827.789
11725 itr: 175330
11726 training loss: 2338.225
11727 itr: 175340
11728 training loss: 3308.799
11729 itr: 175350
11730 training loss: 3134.4277
11731 itr: 175360
11732 training loss: 3723.8457
11733 itr: 175370
11734 training loss: 3372.6418
11735 itr: 175380
11736 training loss: 4312.2725
11737 itr: 175390
11738 training loss: 2830.108
11739 itr: 175400
11740 training loss: 4697.7007
11741 itr: 175410
11742 training loss: 4091.4692

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11743 itr: 175420
11744 training loss: 2492.2805
11745 itr: 175430
11746 training loss: 2851.2634
11747 itr: 175440
11748 training loss: 2192.8586
11749 itr: 175450
11750 training loss: 3057.2554
11751 itr: 175460
11752 training loss: 4359.3843
11753 itr: 175470
11754 training loss: 3559.6821
11755 itr: 175480
11756 training loss: 5406.3066
11757 itr: 175490
11758 training loss: 3994.6558
11759 itr: 175500
11760 training loss: 5726.5083
11761 itr: 175510
11762 training loss: 4846.6426
11763 itr: 175520
11764 training loss: 3478.8625
11765 itr: 175530
11766 training loss: 3403.913
11767 itr: 175540
11768 training loss: 2864.9412
11769 itr: 175550
11770 training loss: 2977.6821
11771 itr: 175560
11772 training loss: 6859.9053
11773 itr: 175570
11774 training loss: 5189.874
11775 itr: 175580
11776 training loss: 5773.879
11777 itr: 175590
11778 training loss: 2824.512
11779 itr: 175600
```

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11780 training loss: 5391.5264
11781 itr: 175610
11782 training loss: 1649.5978
11783 itr: 175620
11784 training loss: 4013.7178
11785 itr: 175630
11786 training loss: 4705.357
11787 itr: 175640
11788 training loss: 2395.737
11789 itr: 175650
11790 training loss: 3519.1648
11791 itr: 175660
11792 training loss: 3592.6548
11793 itr: 175670
11794 training loss: 4005.7427
11795 itr: 175680
11796 training loss: 5511.3267
11797 itr: 175690
11798 training loss: 5805.833
11799 itr: 175700
11800 training loss: 6002.001
11801 itr: 175710
11802 training loss: 4811.92
11803 itr: 175720
11804 training loss: 5879.3447
11805 itr: 175730
11806 training loss: 3844.6875
11807 itr: 175740
11808 training loss: 4981.901
11809 itr: 175750
11810 training loss: 3734.4136
11811 itr: 175760
11812 training loss: 5941.455
11813 itr: 175770
11814 training loss: 1844.2693
11815 itr: 175780
11816 training loss: 3587.5215
```



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11817 itr: 175790
11818 training loss: 3495.141
11819 itr: 175800
11820 training loss: 2829.272
11821 itr: 175810
11822 training loss: 3529.6921
11823 itr: 175820
11824 training loss: 3118.953
11825 itr: 175830
11826 training loss: 5024.5176
11827 itr: 175840
11828 training loss: 3535.195
11829 itr: 175850
11830 training loss: 2084.6948
11831 itr: 175860
11832 training loss: 2304.532
11833 itr: 175870
11834 training loss: 4996.0176
11835 itr: 175880
11836 training loss: 3072.0642
11837 itr: 175890
11838 training loss: 3516.417
11839 itr: 175900
11840 training loss: 4819.0356
11841 itr: 175910
11842 training loss: 4903.808
11843 itr: 175920
11844 training loss: 5911.1016
11845 itr: 175930
11846 training loss: 4232.1797
11847 itr: 175940
11848 training loss: 5542.9683
11849 itr: 175950
11850 training loss: 2749.877
11851 itr: 175960
11852 training loss: 4847.97
11853 itr: 175970
```

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11854 training loss: 5371.3774
11855 itr: 175980
11856 training loss: 1562.0149
11857 itr: 175990
11858 training loss: 3699.1104
11859 itr: 176000
11860 training loss: 2875.9546
11861 itr: 176010
11862 training loss: 2423.7527
11863 itr: 176020
11864 training loss: 2427.4746
11865 itr: 176030
11866 training loss: 5938.7256
11867 itr: 176040
11868 training loss: 2867.955
11869 itr: 176050
11870 training loss: 3233.8623
11871 itr: 176060
11872 training loss: 3597.4282
11873 itr: 176070
11874 training loss: 4263.382
11875 itr: 176080
11876 training loss: 3956.5095
11877 itr: 176090
11878 training loss: 4202.961
11879 itr: 176100
11880 training loss: 3934.1538
11881 itr: 176110
11882 training loss: 4295.527
11883 itr: 176120
11884 training loss: 5569.172
11885 itr: 176130
11886 training loss: 2262.1118
11887 itr: 176140
11888 training loss: 4398.824
11889 itr: 176150
11890 training loss: 3606.4724
```

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11891 itr: 176160
11892 training loss: 1638.9418
11893 itr: 176170
11894 training loss: 4007.014
11895 itr: 176180
11896 training loss: 1490.2014
11897 itr: 176190
11898 training loss: 2986.9075
11899 itr: 176200
11900 training loss: 4250.3164
11901 itr: 176210
11902 training loss: 630.8013
11903 itr: 176220
11904 training loss: 2018.9807
11905 itr: 176230
11906 training loss: 5478.3936
11907 itr: 176240
11908 training loss: 1929.7888
11909 itr: 176250
11910 training loss: 6016.9243
11911 itr: 176260
11912 training loss: 3708.1396
11913 itr: 176270
11914 training loss: 5185.2
11915 itr: 176280
11916 training loss: 2623.6633
11917 itr: 176290
11918 training loss: 4777.64
11919 itr: 176300
11920 training loss: 4746.675
11921 itr: 176310
11922 training loss: 6093.6953
11923 itr: 176320
11924 training loss: 3313.5906
11925 itr: 176330
11926 training loss: 2501.852
11927 itr: 176340
```

11928 training loss: 4121.69
11929 itr: 176350
11930 training loss: 3016.5276
11931 itr: 176360
11932 training loss: 3851.0632
11933 itr: 176370
11934 training loss: 2387.6328
11935 itr: 176380
11936 training loss: 2115.916
11937 itr: 176390
11938 training loss: 2908.732
11939 itr: 176400
11940 training loss: 2631.0073
11941 itr: 176410
11942 training loss: 3460.8096
11943 itr: 176420
11944 training loss: 6443.7695
11945 itr: 176430
11946 training loss: 4360.1123
11947 itr: 176440
11948 training loss: 2864.577
11949 itr: 176450
11950 training loss: 3871.3464
11951 itr: 176460
11952 training loss: 6870.7188
11953 itr: 176470
11954 training loss: 3029.2573
11955 itr: 176480
11956 training loss: 5113.5083
11957 itr: 176490
11958 training loss: 1698.039
11959 itr: 176500
11960 training loss: 2077.6536
11961 itr: 176510
11962 training loss: 3599.3137
11963 itr: 176520
11964 training loss: 2627.0898

11965 itr: 176530
11966 training loss: 2924.046
11967 itr: 176540
11968 training loss: 5354.5938
11969 itr: 176550
11970 training loss: 3967.5745
11971 itr: 176560
11972 training loss: 4457.943
11973 itr: 176570
11974 training loss: 2854.9956
11975 itr: 176580
11976 training loss: 5352.2476
11977 itr: 176590
11978 training loss: 3835.0405
11979 itr: 176600
11980 training loss: 4662.6777
11981 itr: 176610
11982 training loss: 2828.8613
11983 itr: 176620
11984 training loss: 1444.8561
11985 itr: 176630
11986 training loss: 3440.2861
11987 itr: 176640
11988 training loss: 2619.0767
11989 itr: 176650
11990 training loss: 2387.8057
11991 itr: 176660
11992 training loss: 2860.0483
11993 itr: 176670
11994 training loss: 3307.9197
11995 itr: 176680
11996 training loss: 3022.2268
11997 itr: 176690
11998 training loss: 3322.8604
11999 itr: 176700
12000 training loss: 3262.358
12001 itr: 176710

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12002 training loss: 4045.322
12003 itr: 176720
12004 training loss: 4513.076
12005 itr: 176730
12006 training loss: 3760.1125
12007 itr: 176740
12008 training loss: 3250.213
12009 itr: 176750
12010 training loss: 4561.4766
12011 itr: 176760
12012 training loss: 5993.0137
12013 itr: 176770
12014 training loss: 2181.9226
12015 itr: 176780
12016 training loss: 7578.875
12017 itr: 176790
12018 training loss: 3113.6057
12019 itr: 176800
12020 training loss: 4975.4434
12021 itr: 176810
12022 training loss: 3388.8376
12023 itr: 176820
12024 training loss: 2723.5344
12025 itr: 176830
12026 training loss: 2119.5083
12027 itr: 176840
12028 training loss: 4002.0107
12029 itr: 176850
12030 training loss: 5991.707
12031 itr: 176860
12032 training loss: 4384.4673
12033 itr: 176870
12034 training loss: 3880.7393
12035 itr: 176880
12036 training loss: 2658.3755
12037 itr: 176890
12038 training loss: 2866.9048
```

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12039 itr: 176900
12040 training loss: 3843.391
12041 itr: 176910
12042 training loss: 2710.8032
12043 itr: 176920
12044 training loss: 4374.2173
12045 itr: 176930
12046 training loss: 3459.6707
12047 itr: 176940
12048 training loss: 4354.829
12049 itr: 176950
12050 training loss: 4309.313
12051 itr: 176960
12052 training loss: 4833.0913
12053 itr: 176970
12054 training loss: 4736.024
12055 itr: 176980
12056 training loss: 4251.7344
12057 itr: 176990
12058 training loss: 2592.7659
12059 itr: 177000
12060 training loss: 3466.6658
12061 itr: 177010
12062 training loss: 4488.2964
12063 itr: 177020
12064 training loss: 3485.6755
12065 itr: 177030
12066 training loss: 4245.8896
12067 itr: 177040
12068 training loss: 2200.8066
12069 itr: 177050
12070 training loss: 5364.488
12071 itr: 177060
12072 training loss: 1752.9468
12073 itr: 177070
12074 training loss: 7087.858
12075 itr: 177080
```

12076 training loss: 4222.6343
12077 itr: 177090
12078 training loss: 3636.5244
12079 itr: 177100
12080 training loss: 2140.4243
12081 itr: 177110
12082 training loss: 2208.6682
12083 itr: 177120
12084 training loss: 3063.5774
12085 itr: 177130
12086 training loss: 4889.312
12087 itr: 177140
12088 training loss: 3905.762
12089 itr: 177150
12090 training loss: 1548.3728
12091 itr: 177160
12092 training loss: 2708.7297
12093 itr: 177170
12094 training loss: 6537.744
12095 itr: 177180
12096 training loss: 4624.388
12097 itr: 177190
12098 training loss: 2462.4644
12099 itr: 177200
12100 training loss: 5151.638
12101 itr: 177210
12102 training loss: 3369.2046
12103 itr: 177220
12104 training loss: 1994.6876
12105 itr: 177230
12106 training loss: 922.2368
12107 itr: 177240
12108 training loss: 4876.668
12109 itr: 177250
12110 training loss: 3828.356
12111 itr: 177260
12112 training loss: 3418.768

12113 itr: 177270
12114 training loss: 5621.318
12115 itr: 177280
12116 training loss: 1093.6619
12117 itr: 177290
12118 training loss: 4805.219
12119 itr: 177300
12120 training loss: 2988.9424
12121 itr: 177310
12122 training loss: 6296.528
12123 itr: 177320
12124 training loss: 5614.429
12125 itr: 177330
12126 training loss: 5425.8394
12127 itr: 177340
12128 training loss: 2445.8115
12129 itr: 177350
12130 training loss: 4741.3936
12131 itr: 177360
12132 training loss: 3067.579
12133 itr: 177370
12134 training loss: 5462.8516
12135 itr: 177380
12136 training loss: 758.58936
12137 itr: 177390
12138 training loss: 6224.121
12139 itr: 177400
12140 training loss: 2766.1611
12141 itr: 177410
12142 training loss: 3733.8494
12143 itr: 177420
12144 training loss: 3318.9314
12145 itr: 177430
12146 training loss: 2747.839
12147 itr: 177440
12148 training loss: 2583.0159
12149 itr: 177450

12150 training loss: 3709.9468
12151 itr: 177460
12152 training loss: 4375.66
12153 itr: 177470
12154 training loss: 2006.5701
12155 itr: 177480
12156 training loss: 5140.0166
12157 itr: 177490
12158 training loss: 3202.6868
12159 itr: 177500
12160 training loss: 4576.9927
12161 itr: 177510
12162 training loss: 2490.416
12163 itr: 177520
12164 training loss: 6043.557
12165 itr: 177530
12166 training loss: 2496.8416
12167 itr: 177540
12168 training loss: 3269.4722
12169 itr: 177550
12170 training loss: 7068.069
12171 itr: 177560
12172 training loss: 4932.5513
12173 itr: 177570
12174 training loss: 3083.051
12175 itr: 177580
12176 training loss: 4396.2085
12177 itr: 177590
12178 training loss: 3060.3652
12179 itr: 177600
12180 training loss: 3453.4805
12181 itr: 177610
12182 training loss: 3103.437
12183 itr: 177620
12184 training loss: 3093.8303
12185 itr: 177630
12186 training loss: 1929.7296

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12187 itr: 177640
12188 training loss: 4273.5327
12189 itr: 177650
12190 training loss: 2364.2148
12191 itr: 177660
12192 training loss: 2450.1072
12193 itr: 177670
12194 training loss: 5085.353
12195 itr: 177680
12196 training loss: 5377.5293
12197 itr: 177690
12198 training loss: 4941.4463
12199 itr: 177700
12200 training loss: 3493.545
12201 itr: 177710
12202 training loss: 2648.6304
12203 itr: 177720
12204 training loss: 4273.4585
12205 itr: 177730
12206 training loss: 1978.7058
12207 itr: 177740
12208 training loss: 5420.898
12209 itr: 177750
12210 training loss: 2019.9503
12211 itr: 177760
12212 training loss: 4436.915
12213 itr: 177770
12214 training loss: 4603.8657
12215 itr: 177780
12216 training loss: 3215.6672
12217 itr: 177790
12218 training loss: 3986.6035
12219 itr: 177800
12220 training loss: 2314.1904
12221 itr: 177810
12222 training loss: 4690.0703
12223 itr: 177820
```

12224 training loss: 5225.82
12225 itr: 177830
12226 training loss: 2822.1807
12227 itr: 177840
12228 training loss: 4054.827
12229 itr: 177850
12230 training loss: 2053.8064
12231 itr: 177860
12232 training loss: 4492.3423
12233 itr: 177870
12234 training loss: 5729.516
12235 itr: 177880
12236 training loss: 1703.5957
12237 itr: 177890
12238 training loss: 6408.0347
12239 itr: 177900
12240 training loss: 1872.7787
12241 itr: 177910
12242 training loss: 2447.5034
12243 itr: 177920
12244 training loss: 4256.967
12245 itr: 177930
12246 training loss: 1889.1864
12247 itr: 177940
12248 training loss: 2280.1143
12249 itr: 177950
12250 training loss: 2444.3445
12251 itr: 177960
12252 training loss: 3610.018
12253 itr: 177970
12254 training loss: 3520.2192
12255 itr: 177980
12256 training loss: 4737.5576
12257 itr: 177990
12258 training loss: 4890.249
12259 itr: 178000
12260 training loss: 2772.6284

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12261 itr: 178010
12262 training loss: 3245.5435
12263 itr: 178020
12264 training loss: 2059.4744
12265 itr: 178030
12266 training loss: 5404.813
12267 itr: 178040
12268 training loss: 3796.9595
12269 itr: 178050
12270 training loss: 4666.664
12271 itr: 178060
12272 training loss: 2924.5474
12273 itr: 178070
12274 training loss: 3451.745
12275 itr: 178080
12276 training loss: 4136.4126
12277 itr: 178090
12278 training loss: 1981.3691
12279 itr: 178100
12280 training loss: 4324.083
12281 itr: 178110
12282 training loss: 4309.206
12283 itr: 178120
12284 training loss: 5325.1196
12285 itr: 178130
12286 training loss: 4486.4243
12287 itr: 178140
12288 training loss: 3812.69
12289 itr: 178150
12290 training loss: 4979.4014
12291 itr: 178160
12292 training loss: 2918.6953
12293 itr: 178170
12294 training loss: 5627.334
12295 itr: 178180
12296 training loss: 3730.871
12297 itr: 178190
```

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12298 training loss: 3030.7192
12299 itr: 178200
12300 training loss: 3480.2212
12301 itr: 178210
12302 training loss: 3868.9639
12303 itr: 178220
12304 training loss: 2305.8223
12305 itr: 178230
12306 training loss: 3782.1296
12307 itr: 178240
12308 training loss: 4975.22
12309 itr: 178250
12310 training loss: 2416.7754
12311 itr: 178260
12312 training loss: 4991.4272
12313 itr: 178270
12314 training loss: 1508.2491
12315 itr: 178280
12316 training loss: 5117.8843
12317 itr: 178290
12318 training loss: 4548.9014
12319 itr: 178300
12320 training loss: 2735.5645
12321 itr: 178310
12322 training loss: 5521.4062
12323 itr: 178320
12324 training loss: 4273.44
12325 itr: 178330
12326 training loss: 2111.8298
12327 itr: 178340
12328 training loss: 1046.2256
12329 itr: 178350
12330 training loss: 2896.345
12331 itr: 178360
12332 training loss: 3161.1501
12333 itr: 178370
12334 training loss: 1945.4744
```

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12335 itr: 178380
12336 training loss: 1863.9508
12337 itr: 178390
12338 training loss: 5202.9473
12339 itr: 178400
12340 training loss: 5041.6953
12341 itr: 178410
12342 training loss: 4674.883
12343 itr: 178420
12344 training loss: 4139.942
12345 itr: 178430
12346 training loss: 4146.2217
12347 itr: 178440
12348 training loss: 1234.4448
12349 itr: 178450
12350 training loss: 4703.662
12351 itr: 178460
12352 training loss: 2425.529
12353 itr: 178470
12354 training loss: 3750.0933
12355 itr: 178480
12356 training loss: 3950.6719
12357 itr: 178490
12358 training loss: 2719.4365
12359 itr: 178500
12360 training loss: 1707.8145
12361 itr: 178510
12362 training loss: 4293.158
12363 itr: 178520
12364 training loss: 2419.3696
12365 itr: 178530
12366 training loss: 4638.6133
12367 itr: 178540
12368 training loss: 4392.59
12369 itr: 178550
12370 training loss: 2471.2458
12371 itr: 178560
```

12372 training loss: 4976.888
12373 itr: 178570
12374 training loss: 6188.345
12375 itr: 178580
12376 training loss: 3558.5322
12377 itr: 178590
12378 training loss: 3279.0918
12379 itr: 178600
12380 training loss: 4604.028
12381 itr: 178610
12382 training loss: 3640.5583
12383 itr: 178620
12384 training loss: 2599.8892
12385 itr: 178630
12386 training loss: 1244.2755
12387 itr: 178640
12388 training loss: 3401.3022
12389 itr: 178650
12390 training loss: 5778.952
12391 itr: 178660
12392 training loss: 5584.843
12393 itr: 178670
12394 training loss: 3523.3374
12395 itr: 178680
12396 training loss: 5080.5337
12397 itr: 178690
12398 training loss: 1785.7692
12399 itr: 178700
12400 training loss: 3460.8018
12401 itr: 178710
12402 training loss: 1951.5157
12403 itr: 178720
12404 training loss: 3969.605
12405 itr: 178730
12406 training loss: 2980.0278
12407 itr: 178740
12408 training loss: 4041.018


```
12409 itr: 178750
12410 training loss: 5811.625
12411 itr: 178760
12412 training loss: 3466.504
12413 itr: 178770
12414 training loss: 5934.018
12415 itr: 178780
12416 training loss: 1727.529
12417 itr: 178790
12418 training loss: 1337.5623
12419 itr: 178800
12420 training loss: 1374.9309
12421 itr: 178810
12422 training loss: 5837.688
12423 itr: 178820
12424 training loss: 4347.714
12425 itr: 178830
12426 training loss: 3622.586
12427 itr: 178840
12428 training loss: 5601.282
12429 itr: 178850
12430 training loss: 2646.704
12431 itr: 178860
12432 training loss: 3265.7166
12433 itr: 178870
12434 training loss: 2487.262
12435 itr: 178880
12436 training loss: 2475.3987
12437 itr: 178890
12438 training loss: 4074.17
12439 itr: 178900
12440 training loss: 6373.939
12441 itr: 178910
12442 training loss: 2054.8171
12443 itr: 178920
12444 training loss: 5366.5776
12445 itr: 178930
```

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12446 training loss: 2971.0144
12447 itr: 178940
12448 training loss: 4141.6
12449 itr: 178950
12450 training loss: 3510.5015
12451 itr: 178960
12452 training loss: 1837.4558
12453 itr: 178970
12454 training loss: 5268.3193
12455 itr: 178980
12456 training loss: 3913.0007
12457 itr: 178990
12458 training loss: 1089.1523
12459 itr: 179000
12460 training loss: 4215.324
12461 itr: 179010
12462 training loss: 1969.1973
12463 itr: 179020
12464 training loss: 4821.8545
12465 itr: 179030
12466 training loss: 4370.105
12467 itr: 179040
12468 training loss: 4303.092
12469 itr: 179050
12470 training loss: 3166.6504
12471 itr: 179060
12472 training loss: 5351.774
12473 itr: 179070
12474 training loss: 2297.7712
12475 itr: 179080
12476 training loss: 3469.2266
12477 itr: 179090
12478 training loss: 4590.6357
12479 itr: 179100
12480 training loss: 3787.7534
12481 itr: 179110
12482 training loss: 4681.1475
```

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12483 itr: 179120
12484 training loss: 5874.6074
12485 itr: 179130
12486 training loss: 1980.7805
12487 itr: 179140
12488 training loss: 5539.9346
12489 itr: 179150
12490 training loss: 6329.0713
12491 itr: 179160
12492 training loss: 4330.625
12493 itr: 179170
12494 training loss: 968.1997
12495 itr: 179180
12496 training loss: 4954.152
12497 itr: 179190
12498 training loss: 4806.7783
12499 itr: 179200
12500 training loss: 792.4755
12501 itr: 179210
12502 training loss: 4126.9585
12503 itr: 179220
12504 training loss: 3601.7666
12505 itr: 179230
12506 training loss: 3298.3481
12507 itr: 179240
12508 training loss: 4476.271
12509 itr: 179250
12510 training loss: 988.733
12511 itr: 179260
12512 training loss: 4237.079
12513 itr: 179270
12514 training loss: 5347.1875
12515 itr: 179280
12516 training loss: 5075.714
12517 itr: 179290
12518 training loss: 4647.4863
12519 itr: 179300
```

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12520 training loss: 5196.985
12521 itr: 179310
12522 training loss: 3582.564
12523 itr: 179320
12524 training loss: 1752.7345
12525 itr: 179330
12526 training loss: 2942.9744
12527 itr: 179340
12528 training loss: 1465.5457
12529 itr: 179350
12530 training loss: 930.29266
12531 itr: 179360
12532 training loss: 3396.9802
12533 itr: 179370
12534 training loss: 3969.5447
12535 itr: 179380
12536 training loss: 2829.5667
12537 itr: 179390
12538 training loss: 3301.583
12539 itr: 179400
12540 training loss: 4855.457
12541 itr: 179410
12542 training loss: 3934.316
12543 itr: 179420
12544 training loss: 6116.4644
12545 itr: 179430
12546 training loss: 6141.949
12547 itr: 179440
12548 training loss: 6077.3535
12549 itr: 179450
12550 training loss: 2078.5278
12551 itr: 179460
12552 training loss: 4530.2153
12553 itr: 179470
12554 training loss: 2926.7073
12555 itr: 179480
12556 training loss: 1899.7085
```

```
12557 itr: 179490
12558 training loss: 4138.548
12559 itr: 179500
12560 training loss: 4789.856
12561 itr: 179510
12562 training loss: 2542.7114
12563 itr: 179520
12564 training loss: 3208.9702
12565 itr: 179530
12566 training loss: 4576.304
12567 itr: 179540
12568 training loss: 776.43774
12569 itr: 179550
12570 training loss: 5214.8154
12571 itr: 179560
12572 training loss: 4056.418
12573 itr: 179570
12574 training loss: 3526.4
12575 itr: 179580
12576 training loss: 4105.0635
12577 itr: 179590
12578 training loss: 5570.2686
12579 itr: 179600
12580 training loss: 2774.6433
12581 itr: 179610
12582 training loss: 3589.2417
12583 itr: 179620
12584 training loss: 5510.5044
12585 itr: 179630
12586 training loss: 2114.5415
12587 itr: 179640
12588 training loss: 5116.151
12589 itr: 179650
12590 training loss: 2710.098
12591 itr: 179660
12592 training loss: 3698.5278
12593 itr: 179670
```

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12594 training loss: 4621.5605
12595 itr: 179680
12596 training loss: 5577.0376
12597 itr: 179690
12598 training loss: 3982.944
12599 itr: 179700
12600 training loss: 2681.311
12601 itr: 179710
12602 training loss: 2367.022
12603 itr: 179720
12604 training loss: 3830.1562
12605 itr: 179730
12606 training loss: 1762.8309
12607 itr: 179740
12608 training loss: 2887.5964
12609 itr: 179750
12610 training loss: 4386.7207
12611 itr: 179760
12612 training loss: 2711.2031
12613 itr: 179770
12614 training loss: 4900.578
12615 itr: 179780
12616 training loss: 1194.4187
12617 itr: 179790
12618 training loss: 3842.972
12619 itr: 179800
12620 training loss: 2300.2527
12621 itr: 179810
12622 training loss: 2156.6453
12623 itr: 179820
12624 training loss: 5249.0527
12625 itr: 179830
12626 training loss: 6485.8696
12627 itr: 179840
12628 training loss: 3721.7578
12629 itr: 179850
12630 training loss: 3017.5654
```

```
12631 itr: 179860
12632 training loss: 4723.915
12633 itr: 179870
12634 training loss: 4220.283
12635 itr: 179880
12636 training loss: 2706.6523
12637 itr: 179890
12638 training loss: 3231.4841
12639 itr: 179900
12640 training loss: 2812.1777
12641 itr: 179910
12642 training loss: 1983.4105
12643 itr: 179920
12644 training loss: 2606.4033
12645 itr: 179930
12646 training loss: 5706.744
12647 itr: 179940
12648 training loss: 3450.402
12649 itr: 179950
12650 training loss: 4075.3762
12651 itr: 179960
12652 training loss: 1707.2156
12653 itr: 179970
12654 training loss: 3314.5652
12655 itr: 179980
12656 training loss: 2490.6829
12657 itr: 179990
12658 training loss: 3705.3809
12659 itr: 180000
12660 training loss: 3518.867
12661 test...
12662 mse per seq: 9751.23571282846
12663 611.890542348226
12664 714.1969353004738
12665 819.6453115675184
12666 890.8521865562157
12667 978.3370317529749
```

12668	1085.8355630945277
12669	1117.9850608684399
12670	1148.1783266420719
12671	1174.2501773127804
12672	1210.0645773852314
12673	psnr per frame: 17.168854
12674	18.742458
12675	18.140078
12676	17.73887
12677	17.454699
12678	17.166374
12679	16.651333
12680	16.566425
12681	16.463486
12682	16.415684
12683	16.349123
12684	fmae per frame: 1994.8535
12685	1548.2975
12686	1682.3209
12687	1819.0654
12688	1907.0532
12689	2009.5304
12690	2136.8337
12691	2172.916
12692	2201.3042
12693	2221.7114
12694	2249.502
12695	ssim per frame: 0.796017
12696	0.8296557
12697	0.8169952
12698	0.8077962
12699	0.8016799
12700	0.79599977
12701	0.784487
12702	0.78282875
12703	0.7813504
12704	0.7797099


```
12705 0.7796668
12706 sharpness per frame: 254.86714
12707 255.0
12708 255.0
12709 255.0
12710 255.0
12711 254.92592
12712 254.93056
12713 254.94444
12714 254.98611
12715 254.69908
12716 254.18518
12717 saved to checkpoints/radar_predrnn_pp
12718 itr: 180010
12719 training loss: 3377.7917
12720 itr: 180020
12721 training loss: 6423.868
12722 itr: 180030
12723 training loss: 6641.422
12724 itr: 180040
12725 training loss: 4251.194
12726 itr: 180050
12727 training loss: 4240.6787
12728 itr: 180060
12729 training loss: 6118.0513
12730 itr: 180070
12731 training loss: 3007.2544
12732 itr: 180080
12733 training loss: 5238.882
12734 itr: 180090
12735 training loss: 3974.6328
12736 itr: 180100
12737 training loss: 4213.103
12738 itr: 180110
12739 training loss: 2335.0403
12740 itr: 180120
12741 training loss: 5301.3804
```

```
12742 itr: 180130
12743 training loss: 6265.995
12744 itr: 180140
12745 training loss: 2887.3103
12746 itr: 180150
12747 training loss: 1467.8864
12748 itr: 180160
12749 training loss: 2680.7317
12750 itr: 180170
12751 training loss: 4324.9805
12752 itr: 180180
12753 training loss: 3440.158
12754 itr: 180190
12755 training loss: 4417.776
12756 itr: 180200
12757 training loss: 4280.1997
12758 itr: 180210
12759 training loss: 3382.264
12760 itr: 180220
12761 training loss: 3756.6433
12762 itr: 180230
12763 training loss: 3655.6746
12764 itr: 180240
12765 training loss: 3623.6946
12766 itr: 180250
12767 training loss: 4404.7505
12768 itr: 180260
12769 training loss: 2876.6978
12770 itr: 180270
12771 training loss: 2866.942
12772 itr: 180280
12773 training loss: 2727.226
12774 itr: 180290
12775 training loss: 2007.3577
12776 itr: 180300
12777 training loss: 2498.198
12778 itr: 180310
```

```
12779 training loss: 3531.3015
12780 itr: 180320
12781 training loss: 3268.6277
12782 itr: 180330
12783 training loss: 2371.2517
12784 itr: 180340
12785 training loss: 2409.9944
12786 itr: 180350
12787 training loss: 3630.733
12788 itr: 180360
12789 training loss: 3252.295
12790 itr: 180370
12791 training loss: 3083.298
12792 itr: 180380
12793 training loss: 3192.8835
12794 itr: 180390
12795 training loss: 3593.707
12796 itr: 180400
12797 training loss: 3536.3633
12798 itr: 180410
12799 training loss: 1892.7832
12800 itr: 180420
12801 training loss: 2261.084
12802 itr: 180430
12803 training loss: 5418.3174
12804 itr: 180440
12805 training loss: 5531.4805
12806 itr: 180450
12807 training loss: 2316.8684
12808 itr: 180460
12809 training loss: 2799.133
12810 itr: 180470
12811 training loss: 4794.6875
12812 itr: 180480
12813 training loss: 2383.7634
12814 itr: 180490
12815 training loss: 2999.628
```

```
12816 itr: 180500
12817 training loss: 2082.244
12818 itr: 180510
12819 training loss: 4749.129
12820 itr: 180520
12821 training loss: 3994.9219
12822 itr: 180530
12823 training loss: 2348.912
12824 itr: 180540
12825 training loss: 4415.175
12826 itr: 180550
12827 training loss: 5175.449
12828 itr: 180560
12829 training loss: 2444.3228
12830 itr: 180570
12831 training loss: 4348.6113
12832 itr: 180580
12833 training loss: 5249.3145
12834 itr: 180590
12835 training loss: 5610.433
12836 itr: 180600
12837 training loss: 3604.3215
12838 itr: 180610
12839 training loss: 6429.6973
12840 itr: 180620
12841 training loss: 4898.88
12842 itr: 180630
12843 training loss: 4520.616
12844 itr: 180640
12845 training loss: 1582.0176
12846 itr: 180650
12847 training loss: 4891.8438
12848 itr: 180660
12849 training loss: 3587.3613
12850 itr: 180670
12851 training loss: 4873.6934
12852 itr: 180680
```

```
12853 training loss: 5538.3477
12854 itr: 180690
12855 training loss: 1955.1027
12856 itr: 180700
12857 training loss: 5552.062
12858 itr: 180710
12859 training loss: 5630.531
12860 itr: 180720
12861 training loss: 4431.978
12862 itr: 180730
12863 training loss: 3937.1523
12864 itr: 180740
12865 training loss: 4449.2812
12866 itr: 180750
12867 training loss: 3446.4644
12868 itr: 180760
12869 training loss: 5033.512
12870 itr: 180770
12871 training loss: 5282.1855
12872 itr: 180780
12873 training loss: 4109.328
12874 itr: 180790
12875 training loss: 1314.2084
12876 itr: 180800
12877 training loss: 2803.92
12878 itr: 180810
12879 training loss: 3459.389
12880 itr: 180820
12881 training loss: 4955.9316
12882 itr: 180830
12883 training loss: 1680.4546
12884 itr: 180840
12885 training loss: 3000.185
12886 itr: 180850
12887 training loss: 3800.1406
12888 itr: 180860
12889 training loss: 4735.5967
```

```
12890 itr: 180870
12891 training loss: 2808.3809
12892 itr: 180880
12893 training loss: 2964.207
12894 itr: 180890
12895 training loss: 6677.4863
12896 itr: 180900
12897 training loss: 4042.814
12898 itr: 180910
12899 training loss: 4908.7324
12900 itr: 180920
12901 training loss: 2361.6987
12902 itr: 180930
12903 training loss: 6439.5723
12904 itr: 180940
12905 training loss: 3682.8015
12906 itr: 180950
12907 training loss: 3178.3794
12908 itr: 180960
12909 training loss: 4339.535
12910 itr: 180970
12911 training loss: 4451.9053
12912 itr: 180980
12913 training loss: 2494.5798
12914 itr: 180990
12915 training loss: 3017.1084
12916 itr: 181000
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12926 itr: 181050
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12999 training loss: 821.19934
13000 itr: 181420
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13073 training loss: 2694.101
13074 itr: 181790
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13667 training loss: 1847.7676
13668 itr: 184760
13669 training loss: 5017.2725
13670 itr: 184770
13671 training loss: 4515.2026
13672 itr: 184780
13673 training loss: 3861.7324
13674 itr: 184790
13675 training loss: 1404.5499
13676 itr: 184800
13677 training loss: 2322.367
13678 itr: 184810
13679 training loss: 6365.5737
13680 itr: 184820
13681 training loss: 3782.5703
13682 itr: 184830
13683 training loss: 5252.68
13684 itr: 184840
13685 training loss: 2856.1426
13686 itr: 184850
13687 training loss: 5437.2666
13688 itr: 184860
13689 training loss: 2593.0103
13690 itr: 184870
13691 training loss: 5643.434
13692 itr: 184880
13693 training loss: 5123.05
13694 itr: 184890
13695 training loss: 5602.383
13696 itr: 184900
13697 training loss: 6750.675
13698 itr: 184910
13699 training loss: 2580.9214
13700 itr: 184920
13701 training loss: 1726.597
13702 itr: 184930
13703 training loss: 4694.845

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13704 itr: 184940
13705 training loss: 2691.5093
13706 itr: 184950
13707 training loss: 6157.225
13708 itr: 184960
13709 training loss: 3160.1223
13710 itr: 184970
13711 training loss: 4617.143
13712 itr: 184980
13713 training loss: 3981.921
13714 itr: 184990
13715 training loss: 1958.9431
13716 itr: 185000
13717 training loss: 3584.854
13718 test...
13719 mse per seq: 8998.491908744529
13720 607.9499650178133
13721 699.4744986074942
13722 777.8472636187518
13723 823.1533567640516
13724 893.226863861084
13725 993.9670058356392
13726 1015.9164560106066
13727 1034.223217010498
13728 1057.8850966559517
13729 1094.8481853626392
13730 psnr per frame: 17.33102
13731 18.747643
13732 18.18676
13733 17.853287
13734 17.630972
13735 17.380962
13736 16.855722
13737 16.771572
13738 16.684038
13739 16.632664
13740 16.566576
```

```
13741 fmae per frame: 1887.6637
13742 1510.1912
13743 1643.9182
13744 1757.0023
13745 1816.5128
13746 1898.1619
13747 2012.051
13748 2035.2666
13749 2049.2058
13750 2063.2463
13751 2091.081
13752 ssim per frame: 0.7924861
13753 0.8238246
13754 0.8114569
13755 0.8036542
13756 0.79829127
13757 0.79327923
13758 0.7817464
13759 0.7799172
13760 0.77841324
13761 0.776946
13762 0.77733123
13763 sharpness per frame: 254.92314
13764 255.0
13765 255.0
13766 255.0
13767 254.81018
13768 254.86111
13769 254.99074
13770 254.8287
13771 254.88426
13772 254.90741
13773 254.94908
13774 saved to checkpoints/radar_predrnn_pp
13775 itr: 185010
13776 training loss: 4870.9688
13777 itr: 185020
```

13778 training loss: 4221.705
13779 itr: 185030
13780 training loss: 3240.1917
13781 itr: 185040
13782 training loss: 1078.8235
13783 itr: 185050
13784 training loss: 2604.0286
13785 itr: 185060
13786 training loss: 2711.1443
13787 itr: 185070
13788 training loss: 4830.168
13789 itr: 185080
13790 training loss: 2460.9924
13791 itr: 185090
13792 training loss: 3299.4363
13793 itr: 185100
13794 training loss: 2690.824
13795 itr: 185110
13796 training loss: 5041.716
13797 itr: 185120
13798 training loss: 4068.238
13799 itr: 185130
13800 training loss: 2923.9165
13801 itr: 185140
13802 training loss: 1673.1929
13803 itr: 185150
13804 training loss: 4268.177
13805 itr: 185160
13806 training loss: 4134.8105
13807 itr: 185170
13808 training loss: 4673.9824
13809 itr: 185180
13810 training loss: 3637.895
13811 itr: 185190
13812 training loss: 3247.6787
13813 itr: 185200
13814 training loss: 2370.365

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13815 itr: 185210
13816 training loss: 3678.0986
13817 itr: 185220
13818 training loss: 1729.428
13819 itr: 185230
13820 training loss: 1314.0138
13821 itr: 185240
13822 training loss: 4457.7095
13823 itr: 185250
13824 training loss: 2269.0356
13825 itr: 185260
13826 training loss: 2684.478
13827 itr: 185270
13828 training loss: 3660.262
13829 itr: 185280
13830 training loss: 2729.7559
13831 itr: 185290
13832 training loss: 1142.47
13833 itr: 185300
13834 training loss: 3250.2715
13835 itr: 185310
13836 training loss: 3662.0208
13837 itr: 185320
13838 training loss: 1960.1959
13839 itr: 185330
13840 training loss: 3048.317
13841 itr: 185340
13842 training loss: 1589.4668
13843 itr: 185350
13844 training loss: 4448.4375
13845 itr: 185360
13846 training loss: 4203.025
13847 itr: 185370
13848 training loss: 3189.204
13849 itr: 185380
13850 training loss: 3256.4226
13851 itr: 185390
```

13852 training loss: 3096.5544
13853 itr: 185400
13854 training loss: 4015.3008
13855 itr: 185410
13856 training loss: 3447.1973
13857 itr: 185420
13858 training loss: 4537.5073
13859 itr: 185430
13860 training loss: 6113.417
13861 itr: 185440
13862 training loss: 2298.9888
13863 itr: 185450
13864 training loss: 3178.96
13865 itr: 185460
13866 training loss: 4179.3584
13867 itr: 185470
13868 training loss: 2645.8333
13869 itr: 185480
13870 training loss: 1558.4442
13871 itr: 185490
13872 training loss: 5323.073
13873 itr: 185500
13874 training loss: 3095.172
13875 itr: 185510
13876 training loss: 5075.4575
13877 itr: 185520
13878 training loss: 2493.949
13879 itr: 185530
13880 training loss: 4247.7017
13881 itr: 185540
13882 training loss: 2524.7432
13883 itr: 185550
13884 training loss: 4727.1797
13885 itr: 185560
13886 training loss: 1935.1857
13887 itr: 185570
13888 training loss: 2659.716


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13889 itr: 185580
13890 training loss: 5214.1245
13891 itr: 185590
13892 training loss: 1863.8452
13893 itr: 185600
13894 training loss: 2947.577
13895 itr: 185610
13896 training loss: 2896.4497
13897 itr: 185620
13898 training loss: 4829.578
13899 itr: 185630
13900 training loss: 3812.6804
13901 itr: 185640
13902 training loss: 1130.848
13903 itr: 185650
13904 training loss: 3813.0662
13905 itr: 185660
13906 training loss: 5222.88
13907 itr: 185670
13908 training loss: 2729.6655
13909 itr: 185680
13910 training loss: 6307.9585
13911 itr: 185690
13912 training loss: 6667.5312
13913 itr: 185700
13914 training loss: 1659.0137
13915 itr: 185710
13916 training loss: 2988.7905
13917 itr: 185720
13918 training loss: 726.1224
13919 itr: 185730
13920 training loss: 4607.4844
13921 itr: 185740
13922 training loss: 4581.92
13923 itr: 185750
13924 training loss: 4130.9673
13925 itr: 185760
```

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13926 training loss: 2684.5244
13927 itr: 185770
13928 training loss: 2623.7761
13929 itr: 185780
13930 training loss: 1586.7277
13931 itr: 185790
13932 training loss: 4287.9697
13933 itr: 185800
13934 training loss: 3667.3137
13935 itr: 185810
13936 training loss: 2310.0327
13937 itr: 185820
13938 training loss: 3581.673
13939 itr: 185830
13940 training loss: 4439.3867
13941 itr: 185840
13942 training loss: 4355.3384
13943 itr: 185850
13944 training loss: 3690.4397
13945 itr: 185860
13946 training loss: 3180.7976
13947 itr: 185870
13948 training loss: 3349.9634
13949 itr: 185880
13950 training loss: 3220.8208
13951 itr: 185890
13952 training loss: 3256.6113
13953 itr: 185900
13954 training loss: 2911.5334
13955 itr: 185910
13956 training loss: 1669.5398
13957 itr: 185920
13958 training loss: 2935.1775
13959 itr: 185930
13960 training loss: 3659.324
13961 itr: 185940
13962 training loss: 4930.584
```

```
13963 itr: 185950
13964 training loss: 3033.1216
13965 itr: 185960
13966 training loss: 5716.5405
13967 itr: 185970
13968 training loss: 5214.659
13969 itr: 185980
13970 training loss: 4183.583
13971 itr: 185990
13972 training loss: 4449.9243
13973 itr: 186000
13974 training loss: 4268.2666
13975 itr: 186010
13976 training loss: 4294.1934
13977 itr: 186020
13978 training loss: 5428.8315
13979 itr: 186030
13980 training loss: 3341.983
13981 itr: 186040
13982 training loss: 4336.2646
13983 itr: 186050
13984 training loss: 2878.9072
13985 itr: 186060
13986 training loss: 4476.8516
13987 itr: 186070
13988 training loss: 3052.3765
13989 itr: 186080
13990 training loss: 2034.66
13991 itr: 186090
13992 training loss: 3638.8052
13993 itr: 186100
13994 training loss: 3970.2446
13995 itr: 186110
13996 training loss: 4185.6904
13997 itr: 186120
13998 training loss: 1181.9229
13999 itr: 186130
```

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14000 training loss: 4939.284
14001 itr: 186140
14002 training loss: 1871.3308
14003 itr: 186150
14004 training loss: 3735.0227
14005 itr: 186160
14006 training loss: 4532.9556
14007 itr: 186170
14008 training loss: 2693.726
14009 itr: 186180
14010 training loss: 3964.4158
14011 itr: 186190
14012 training loss: 2901.6028
14013 itr: 186200
14014 training loss: 3389.8174
14015 itr: 186210
14016 training loss: 2494.2275
14017 itr: 186220
14018 training loss: 1699.1405
14019 itr: 186230
14020 training loss: 3075.4673
14021 itr: 186240
14022 training loss: 6424.8687
14023 itr: 186250
14024 training loss: 1035.1182
14025 itr: 186260
14026 training loss: 5303.87
14027 itr: 186270
14028 training loss: 4446.196
14029 itr: 186280
14030 training loss: 3974.2268
14031 itr: 186290
14032 training loss: 1697.5424
14033 itr: 186300
14034 training loss: 4987.694
14035 itr: 186310
14036 training loss: 3704.9448
```

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14037 itr: 186320
14038 training loss: 4216.5835
14039 itr: 186330
14040 training loss: 4608.769
14041 itr: 186340
14042 training loss: 4126.536
14043 itr: 186350
14044 training loss: 2682.8682
14045 itr: 186360
14046 training loss: 3754.8752
14047 itr: 186370
14048 training loss: 3480.2766
14049 itr: 186380
14050 training loss: 3299.6465
14051 itr: 186390
14052 training loss: 1957.3354
14053 itr: 186400
14054 training loss: 3995.233
14055 itr: 186410
14056 training loss: 3869.773
14057 itr: 186420
14058 training loss: 2545.559
14059 itr: 186430
14060 training loss: 2559.6396
14061 itr: 186440
14062 training loss: 4082.154
14063 itr: 186450
14064 training loss: 5398.499
14065 itr: 186460
14066 training loss: 2983.5093
14067 itr: 186470
14068 training loss: 5078.47
14069 itr: 186480
14070 training loss: 5327.782
14071 itr: 186490
14072 training loss: 2896.6045
14073 itr: 186500
```

14074 training loss: 2695.4036
14075 itr: 186510
14076 training loss: 2349.1326
14077 itr: 186520
14078 training loss: 5693.898
14079 itr: 186530
14080 training loss: 1732.8843
14081 itr: 186540
14082 training loss: 5038.833
14083 itr: 186550
14084 training loss: 2649.3245
14085 itr: 186560
14086 training loss: 2989.0288
14087 itr: 186570
14088 training loss: 3422.7998
14089 itr: 186580
14090 training loss: 1460.9692
14091 itr: 186590
14092 training loss: 3804.443
14093 itr: 186600
14094 training loss: 4350.2324
14095 itr: 186610
14096 training loss: 4132.712
14097 itr: 186620
14098 training loss: 5468.267
14099 itr: 186630
14100 training loss: 3887.8333
14101 itr: 186640
14102 training loss: 4128.8813
14103 itr: 186650
14104 training loss: 1203.8176
14105 itr: 186660
14106 training loss: 2291.427
14107 itr: 186670
14108 training loss: 1282.772
14109 itr: 186680
14110 training loss: 2415.4736

14111 itr: 186690
14112 training loss: 2583.5137
14113 itr: 186700
14114 training loss: 4869.5615
14115 itr: 186710
14116 training loss: 3645.7773
14117 itr: 186720
14118 training loss: 589.80597
14119 itr: 186730
14120 training loss: 4602.6577
14121 itr: 186740
14122 training loss: 3676.935
14123 itr: 186750
14124 training loss: 3675.6726
14125 itr: 186760
14126 training loss: 4161.51
14127 itr: 186770
14128 training loss: 3818.7646
14129 itr: 186780
14130 training loss: 3895.1362
14131 itr: 186790
14132 training loss: 3734.826
14133 itr: 186800
14134 training loss: 4807.0205
14135 itr: 186810
14136 training loss: 4120.8804
14137 itr: 186820
14138 training loss: 4301.053
14139 itr: 186830
14140 training loss: 3718.5405
14141 itr: 186840
14142 training loss: 2770.07
14143 itr: 186850
14144 training loss: 2775.041
14145 itr: 186860
14146 training loss: 4319.9736
14147 itr: 186870

14148 training loss: 3838.4495
14149 itr: 186880
14150 training loss: 4908.226
14151 itr: 186890
14152 training loss: 4979.642
14153 itr: 186900
14154 training loss: 3416.6975
14155 itr: 186910
14156 training loss: 3522.8997
14157 itr: 186920
14158 training loss: 4266.144
14159 itr: 186930
14160 training loss: 2504.8616
14161 itr: 186940
14162 training loss: 3616.4958
14163 itr: 186950
14164 training loss: 5479.0933
14165 itr: 186960
14166 training loss: 4353.659
14167 itr: 186970
14168 training loss: 4305.4717
14169 itr: 186980
14170 training loss: 2376.031
14171 itr: 186990
14172 training loss: 4282.8594
14173 itr: 187000
14174 training loss: 4582.8374
14175 itr: 187010
14176 training loss: 4642.451
14177 itr: 187020
14178 training loss: 2911.0144
14179 itr: 187030
14180 training loss: 3684.404
14181 itr: 187040
14182 training loss: 2747.3335
14183 itr: 187050
14184 training loss: 4573.9873


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14185 itr: 187060
14186 training loss: 3720.6387
14187 itr: 187070
14188 training loss: 4780.8867
14189 itr: 187080
14190 training loss: 5141.907
14191 itr: 187090
14192 training loss: 5022.889
14193 itr: 187100
14194 training loss: 3383.7832
14195 itr: 187110
14196 training loss: 3975.178
14197 itr: 187120
14198 training loss: 2278.101
14199 itr: 187130
14200 training loss: 5278.9272
14201 itr: 187140
14202 training loss: 5212.8164
14203 itr: 187150
14204 training loss: 4624.299
14205 itr: 187160
14206 training loss: 2388.8032
14207 itr: 187170
14208 training loss: 4382.7397
14209 itr: 187180
14210 training loss: 3583.0256
14211 itr: 187190
14212 training loss: 2657.895
14213 itr: 187200
14214 training loss: 3497.8074
14215 itr: 187210
14216 training loss: 2701.3274
14217 itr: 187220
14218 training loss: 3146.2766
14219 itr: 187230
14220 training loss: 2875.7856
14221 itr: 187240
```

14222 training loss: 1601.9763
14223 itr: 187250
14224 training loss: 3234.184
14225 itr: 187260
14226 training loss: 4593.446
14227 itr: 187270
14228 training loss: 2497.1763
14229 itr: 187280
14230 training loss: 2512.4868
14231 itr: 187290
14232 training loss: 5240.765
14233 itr: 187300
14234 training loss: 3980.1716
14235 itr: 187310
14236 training loss: 3456.2412
14237 itr: 187320
14238 training loss: 5185.9224
14239 itr: 187330
14240 training loss: 3928.2576
14241 itr: 187340
14242 training loss: 3691.5193
14243 itr: 187350
14244 training loss: 2184.8967
14245 itr: 187360
14246 training loss: 2431.591
14247 itr: 187370
14248 training loss: 2894.405
14249 itr: 187380
14250 training loss: 3758.3794
14251 itr: 187390
14252 training loss: 4894.4805
14253 itr: 187400
14254 training loss: 4836.2754
14255 itr: 187410
14256 training loss: 4665.033
14257 itr: 187420
14258 training loss: 3849.8276

```
14259 itr: 187430
14260 training loss: 5509.3467
14261 itr: 187440
14262 training loss: 4992.06
14263 itr: 187450
14264 training loss: 3757.258
14265 itr: 187460
14266 training loss: 3774.608
14267 itr: 187470
14268 training loss: 1805.2523
14269 itr: 187480
14270 training loss: 2544.9346
14271 itr: 187490
14272 training loss: 2662.5232
14273 itr: 187500
14274 training loss: 4711.1567
14275 itr: 187510
14276 training loss: 1892.7086
14277 itr: 187520
14278 training loss: 5005.8755
14279 itr: 187530
14280 training loss: 3759.0752
14281 itr: 187540
14282 training loss: 4292.9316
14283 itr: 187550
14284 training loss: 1634.0082
14285 itr: 187560
14286 training loss: 4542.4497
14287 itr: 187570
14288 training loss: 1234.7656
14289 itr: 187580
14290 training loss: 2722.6997
14291 itr: 187590
14292 training loss: 2289.4333
14293 itr: 187600
14294 training loss: 3039.8816
14295 itr: 187610
```

14296 training loss: 6133.953
14297 itr: 187620
14298 training loss: 4436.015
14299 itr: 187630
14300 training loss: 4022.8872
14301 itr: 187640
14302 training loss: 2208.2747
14303 itr: 187650
14304 training loss: 5100.834
14305 itr: 187660
14306 training loss: 3128.3657
14307 itr: 187670
14308 training loss: 4944.3394
14309 itr: 187680
14310 training loss: 1422.3292
14311 itr: 187690
14312 training loss: 2118.1904
14313 itr: 187700
14314 training loss: 5201.233
14315 itr: 187710
14316 training loss: 2807.344
14317 itr: 187720
14318 training loss: 2642.373
14319 itr: 187730
14320 training loss: 6832.955
14321 itr: 187740
14322 training loss: 2878.322
14323 itr: 187750
14324 training loss: 5167.306
14325 itr: 187760
14326 training loss: 3479.3936
14327 itr: 187770
14328 training loss: 3855.1772
14329 itr: 187780
14330 training loss: 6146.974
14331 itr: 187790
14332 training loss: 6023.869

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14333 itr: 187800
14334 training loss: 2882.7202
14335 itr: 187810
14336 training loss: 3664.6428
14337 itr: 187820
14338 training loss: 2001.4845
14339 itr: 187830
14340 training loss: 3990.1272
14341 itr: 187840
14342 training loss: 3170.2458
14343 itr: 187850
14344 training loss: 4459.767
14345 itr: 187860
14346 training loss: 3441.7417
14347 itr: 187870
14348 training loss: 1766.21
14349 itr: 187880
14350 training loss: 5256.4
14351 itr: 187890
14352 training loss: 3968.989
14353 itr: 187900
14354 training loss: 4204.4536
14355 itr: 187910
14356 training loss: 4098.206
14357 itr: 187920
14358 training loss: 2490.1392
14359 itr: 187930
14360 training loss: 3012.173
14361 itr: 187940
14362 training loss: 4123.9116
14363 itr: 187950
14364 training loss: 3913.143
14365 itr: 187960
14366 training loss: 3336.5728
14367 itr: 187970
14368 training loss: 3688.7114
14369 itr: 187980
```

14370 training loss: 3240.4355
14371 itr: 187990
14372 training loss: 3790.342
14373 itr: 188000
14374 training loss: 2179.4998
14375 itr: 188010
14376 training loss: 4993.4424
14377 itr: 188020
14378 training loss: 4021.4297
14379 itr: 188030
14380 training loss: 2247.862
14381 itr: 188040
14382 training loss: 2271.3298
14383 itr: 188050
14384 training loss: 3151.1768
14385 itr: 188060
14386 training loss: 3637.478
14387 itr: 188070
14388 training loss: 2468.4043
14389 itr: 188080
14390 training loss: 5132.389
14391 itr: 188090
14392 training loss: 3884.2424
14393 itr: 188100
14394 training loss: 2822.7322
14395 itr: 188110
14396 training loss: 4995.1323
14397 itr: 188120
14398 training loss: 6445.906
14399 itr: 188130
14400 training loss: 3496.0544
14401 itr: 188140
14402 training loss: 5901.3804
14403 itr: 188150
14404 training loss: 4443.035
14405 itr: 188160
14406 training loss: 2308.6794

```
14407 itr: 188170
14408 training loss: 3296.6663
14409 itr: 188180
14410 training loss: 3859.335
14411 itr: 188190
14412 training loss: 1730.9695
14413 itr: 188200
14414 training loss: 3176.8435
14415 itr: 188210
14416 training loss: 3168.0554
14417 itr: 188220
14418 training loss: 4362.0195
14419 itr: 188230
14420 training loss: 4201.1045
14421 itr: 188240
14422 training loss: 5224.925
14423 itr: 188250
14424 training loss: 4991.406
14425 itr: 188260
14426 training loss: 4223.1074
14427 itr: 188270
14428 training loss: 2804.5664
14429 itr: 188280
14430 training loss: 2368.488
14431 itr: 188290
14432 training loss: 2223.864
14433 itr: 188300
14434 training loss: 3160.7134
14435 itr: 188310
14436 training loss: 1752.0183
14437 itr: 188320
14438 training loss: 4781.392
14439 itr: 188330
14440 training loss: 3127.817
14441 itr: 188340
14442 training loss: 4597.7393
14443 itr: 188350
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14444 training loss: 2662.6128
14445 itr: 188360
14446 training loss: 3959.3784
14447 itr: 188370
14448 training loss: 3903.9016
14449 itr: 188380
14450 training loss: 4905.158
14451 itr: 188390
14452 training loss: 4716.9897
14453 itr: 188400
14454 training loss: 1498.3441
14455 itr: 188410
14456 training loss: 1812.04
14457 itr: 188420
14458 training loss: 4392.3994
14459 itr: 188430
14460 training loss: 3538.7366
14461 itr: 188440
14462 training loss: 5305.1616
14463 itr: 188450
14464 training loss: 2581.085
14465 itr: 188460
14466 training loss: 1771.8724
14467 itr: 188470
14468 training loss: 4125.645
14469 itr: 188480
14470 training loss: 4293.417
14471 itr: 188490
14472 training loss: 4682.9517
14473 itr: 188500
14474 training loss: 6378.923
14475 itr: 188510
14476 training loss: 3817.5364
14477 itr: 188520
14478 training loss: 3283.3745
14479 itr: 188530
14480 training loss: 3252.3682


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14481 itr: 188540
14482 training loss: 3189.2878
14483 itr: 188550
14484 training loss: 3256.7637
14485 itr: 188560
14486 training loss: 3935.6985
14487 itr: 188570
14488 training loss: 3258.0195
14489 itr: 188580
14490 training loss: 1914.5435
14491 itr: 188590
14492 training loss: 2911.5867
14493 itr: 188600
14494 training loss: 2172.7698
14495 itr: 188610
14496 training loss: 975.9953
14497 itr: 188620
14498 training loss: 5609.5503
14499 itr: 188630
14500 training loss: 2569.3464
14501 itr: 188640
14502 training loss: 2538.417
14503 itr: 188650
14504 training loss: 2898.7776
14505 itr: 188660
14506 training loss: 4878.8394
14507 itr: 188670
14508 training loss: 2988.12
14509 itr: 188680
14510 training loss: 3862.5996
14511 itr: 188690
14512 training loss: 3407.0825
14513 itr: 188700
14514 training loss: 2144.359
14515 itr: 188710
14516 training loss: 4003.4387
14517 itr: 188720
```

14518 training loss: 3349.3909
14519 itr: 188730
14520 training loss: 3901.3
14521 itr: 188740
14522 training loss: 3442.2893
14523 itr: 188750
14524 training loss: 3277.7773
14525 itr: 188760
14526 training loss: 3429.8528
14527 itr: 188770
14528 training loss: 3434.1733
14529 itr: 188780
14530 training loss: 3884.5554
14531 itr: 188790
14532 training loss: 2193.609
14533 itr: 188800
14534 training loss: 2203.8643
14535 itr: 188810
14536 training loss: 3113.5444
14537 itr: 188820
14538 training loss: 2633.0159
14539 itr: 188830
14540 training loss: 3787.9675
14541 itr: 188840
14542 training loss: 3728.6025
14543 itr: 188850
14544 training loss: 4601.3877
14545 itr: 188860
14546 training loss: 4614.14
14547 itr: 188870
14548 training loss: 2917.1338
14549 itr: 188880
14550 training loss: 2263.6807
14551 itr: 188890
14552 training loss: 993.6222
14553 itr: 188900
14554 training loss: 4906.9253

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14555 itr: 188910
14556 training loss: 3616.0518
14557 itr: 188920
14558 training loss: 2800.9546
14559 itr: 188930
14560 training loss: 5087.966
14561 itr: 188940
14562 training loss: 2941.165
14563 itr: 188950
14564 training loss: 3148.3877
14565 itr: 188960
14566 training loss: 2924.4614
14567 itr: 188970
14568 training loss: 3471.5615
14569 itr: 188980
14570 training loss: 2812.0732
14571 itr: 188990
14572 training loss: 5809.023
14573 itr: 189000
14574 training loss: 2969.4988
14575 itr: 189010
14576 training loss: 3647.9246
14577 itr: 189020
14578 training loss: 6147.3384
14579 itr: 189030
14580 training loss: 3671.0806
14581 itr: 189040
14582 training loss: 3832.1802
14583 itr: 189050
14584 training loss: 3406.17
14585 itr: 189060
14586 training loss: 3306.0981
14587 itr: 189070
14588 training loss: 1831.1024
14589 itr: 189080
14590 training loss: 1850.4039
14591 itr: 189090
```

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14592 training loss: 2496.059
14593 itr: 189100
14594 training loss: 3952.7095
14595 itr: 189110
14596 training loss: 4193.493
14597 itr: 189120
14598 training loss: 1946.4026
14599 itr: 189130
14600 training loss: 2482.2854
14601 itr: 189140
14602 training loss: 2982.2644
14603 itr: 189150
14604 training loss: 5401.3047
14605 itr: 189160
14606 training loss: 4572.8706
14607 itr: 189170
14608 training loss: 3040.09
14609 itr: 189180
14610 training loss: 3200.9465
14611 itr: 189190
14612 training loss: 1720.1759
14613 itr: 189200
14614 training loss: 3527.021
14615 itr: 189210
14616 training loss: 3591.7776
14617 itr: 189220
14618 training loss: 1998.2432
14619 itr: 189230
14620 training loss: 5130.5337
14621 itr: 189240
14622 training loss: 3068.4087
14623 itr: 189250
14624 training loss: 2316.3218
14625 itr: 189260
14626 training loss: 4198.668
14627 itr: 189270
14628 training loss: 2961.4321
```

14629 itr: 189280
14630 training loss: 2671.6636
14631 itr: 189290
14632 training loss: 2936.9788
14633 itr: 189300
14634 training loss: 3506.3757
14635 itr: 189310
14636 training loss: 5242.6353
14637 itr: 189320
14638 training loss: 5438.205
14639 itr: 189330
14640 training loss: 3624.9338
14641 itr: 189340
14642 training loss: 3477.1448
14643 itr: 189350
14644 training loss: 4438.7285
14645 itr: 189360
14646 training loss: 2140.2734
14647 itr: 189370
14648 training loss: 1906.862
14649 itr: 189380
14650 training loss: 3911.5754
14651 itr: 189390
14652 training loss: 5929.85
14653 itr: 189400
14654 training loss: 3964.4507
14655 itr: 189410
14656 training loss: 3798.391
14657 itr: 189420
14658 training loss: 3529.7554
14659 itr: 189430
14660 training loss: 5056.74
14661 itr: 189440
14662 training loss: 4687.134
14663 itr: 189450
14664 training loss: 2296.7285
14665 itr: 189460

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14666 training loss: 3009.0388
14667 itr: 189470
14668 training loss: 2114.929
14669 itr: 189480
14670 training loss: 4405.321
14671 itr: 189490
14672 training loss: 3520.367
14673 itr: 189500
14674 training loss: 3403.4211
14675 itr: 189510
14676 training loss: 4123.663
14677 itr: 189520
14678 training loss: 2680.9084
14679 itr: 189530
14680 training loss: 2456.7673
14681 itr: 189540
14682 training loss: 2531.2612
14683 itr: 189550
14684 training loss: 1272.0815
14685 itr: 189560
14686 training loss: 3304.9512
14687 itr: 189570
14688 training loss: 3203.6484
14689 itr: 189580
14690 training loss: 2660.0422
14691 itr: 189590
14692 training loss: 3368.098
14693 itr: 189600
14694 training loss: 5616.5693
14695 itr: 189610
14696 training loss: 5023.9956
14697 itr: 189620
14698 training loss: 4836.2095
14699 itr: 189630
14700 training loss: 2335.669
14701 itr: 189640
14702 training loss: 6231.5386
```

```
14703 itr: 189650
14704 training loss: 4520.1646
14705 itr: 189660
14706 training loss: 5282.3867
14707 itr: 189670
14708 training loss: 4833.8203
14709 itr: 189680
14710 training loss: 3248.0002
14711 itr: 189690
14712 training loss: 1739.2905
14713 itr: 189700
14714 training loss: 4726.645
14715 itr: 189710
14716 training loss: 3223.483
14717 itr: 189720
14718 training loss: 1331.9806
14719 itr: 189730
14720 training loss: 1754.5503
14721 itr: 189740
14722 training loss: 3262.9165
14723 itr: 189750
14724 training loss: 2601.1655
14725 itr: 189760
14726 training loss: 4606.467
14727 itr: 189770
14728 training loss: 4407.4346
14729 itr: 189780
14730 training loss: 4173.0977
14731 itr: 189790
14732 training loss: 3777.1614
14733 itr: 189800
14734 training loss: 3501.3125
14735 itr: 189810
14736 training loss: 2570.2546
14737 itr: 189820
14738 training loss: 3783.028
14739 itr: 189830
```

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14740 training loss: 5052.8193
14741 itr: 189840
14742 training loss: 4241.983
14743 itr: 189850
14744 training loss: 4998.3145
14745 itr: 189860
14746 training loss: 3085.3972
14747 itr: 189870
14748 training loss: 5469.9917
14749 itr: 189880
14750 training loss: 3831.6309
14751 itr: 189890
14752 training loss: 4913.012
14753 itr: 189900
14754 training loss: 5353.83
14755 itr: 189910
14756 training loss: 1795.3977
14757 itr: 189920
14758 training loss: 5378.926
14759 itr: 189930
14760 training loss: 588.9809
14761 itr: 189940
14762 training loss: 2757.7092
14763 itr: 189950
14764 training loss: 2807.6821
14765 itr: 189960
14766 training loss: 3246.4739
14767 itr: 189970
14768 training loss: 5562.0615
14769 itr: 189980
14770 training loss: 1216.4016
14771 itr: 189990
14772 training loss: 2502.191
14773 itr: 190000
14774 training loss: 2896.6873
14775 test...
14776 mse per seq: 9213.035390076813
```


14777	605.9489719249584
14778	698.0905822471336
14779	782.6558620311596
14780	835.4974883750633
14781	912.223624335395
14782	1020.8564017966942
14783	1048.5171979268391
14784	1076.0242318047417
14785	1096.3558270489727
14786	1136.8652025858562
14787	psnr per frame: 17.305447
14788	18.777842
14789	18.209805
14790	17.861937
14791	17.616173
14792	17.351912
14793	16.811855
14794	16.718401
14795	16.609093
14796	16.587984
14797	16.509462
14798	fmae per frame: 1807.7369
14799	1402.0206
14800	1530.9967
14801	1648.8058
14802	1719.2633
14803	1809.9979
14804	1939.295
14805	1971.9391
14806	1998.1604
14807	2012.0056
14808	2044.8853
14809	ssim per frame: 0.79045117
14810	0.8227573
14811	0.81118584
14812	0.8028632
14813	0.79682183

```
14814 0.7913718
14815 0.7797526
14816 0.77716553
14817 0.77532876
14818 0.77379966
14819 0.7734651
14820 sharpness per frame: 254.89815
14821 255.0
14822 255.0
14823 255.0
14824 254.94444
14825 254.8287
14826 254.9537
14827 254.80556
14828 254.8287
14829 254.83333
14830 254.78703
14831 saved to checkpoints/radar_predrnn_pp
14832 itr: 190010
14833 training loss: 2147.9192
14834 itr: 190020
14835 training loss: 4476.593
14836 itr: 190030
14837 training loss: 5831.546
14838 itr: 190040
14839 training loss: 3037.9695
14840 itr: 190050
14841 training loss: 907.1997
14842 itr: 190060
14843 training loss: 3404.8005
14844 itr: 190070
14845 training loss: 5406.8105
14846 itr: 190080
14847 training loss: 5962.923
14848 itr: 190090
14849 training loss: 3265.572
14850 itr: 190100
```

14851 training loss: 4049.4644
14852 itr: 190110
14853 training loss: 4706.329
14854 itr: 190120
14855 training loss: 4214.166
14856 itr: 190130
14857 training loss: 2846.5774
14858 itr: 190140
14859 training loss: 2829.9727
14860 itr: 190150
14861 training loss: 4009.6453
14862 itr: 190160
14863 training loss: 3141.6672
14864 itr: 190170
14865 training loss: 5035.071
14866 itr: 190180
14867 training loss: 6420.1357
14868 itr: 190190
14869 training loss: 4446.3506
14870 itr: 190200
14871 training loss: 3538.9346
14872 itr: 190210
14873 training loss: 5948.509
14874 itr: 190220
14875 training loss: 4086.088
14876 itr: 190230
14877 training loss: 5606.6426
14878 itr: 190240
14879 training loss: 4102.921
14880 itr: 190250
14881 training loss: 3726.904
14882 itr: 190260
14883 training loss: 5835.2783
14884 itr: 190270
14885 training loss: 3338.864
14886 itr: 190280
14887 training loss: 4131.956

```
14888 itr: 190290
14889 training loss: 5083.737
14890 itr: 190300
14891 training loss: 2842.6155
14892 itr: 190310
14893 training loss: 4380.1157
14894 itr: 190320
14895 training loss: 3830.3232
14896 itr: 190330
14897 training loss: 2027.8004
14898 itr: 190340
14899 training loss: 3775.1775
14900 itr: 190350
14901 training loss: 3405.6895
14902 itr: 190360
14903 training loss: 3418.3977
14904 itr: 190370
14905 training loss: 2749.3755
14906 itr: 190380
14907 training loss: 2876.7998
14908 itr: 190390
14909 training loss: 1774.292
14910 itr: 190400
14911 training loss: 2124.2827
14912 itr: 190410
14913 training loss: 3244.616
14914 itr: 190420
14915 training loss: 6266.8145
14916 itr: 190430
14917 training loss: 2238.3064
14918 itr: 190440
14919 training loss: 5035.814
14920 itr: 190450
14921 training loss: 3880.0708
14922 itr: 190460
14923 training loss: 2552.6711
14924 itr: 190470
```

14925 training loss: 3967.5654
14926 itr: 190480
14927 training loss: 2749.2732
14928 itr: 190490
14929 training loss: 3217.2307
14930 itr: 190500
14931 training loss: 3303.0
14932 itr: 190510
14933 training loss: 5736.9683
14934 itr: 190520
14935 training loss: 2124.4426
14936 itr: 190530
14937 training loss: 3929.9104
14938 itr: 190540
14939 training loss: 3503.3608
14940 itr: 190550
14941 training loss: 2960.0056
14942 itr: 190560
14943 training loss: 6282.2183
14944 itr: 190570
14945 training loss: 5262.6836
14946 itr: 190580
14947 training loss: 2889.774
14948 itr: 190590
14949 training loss: 4413.238
14950 itr: 190600
14951 training loss: 3217.9692
14952 itr: 190610
14953 training loss: 5289.9346
14954 itr: 190620
14955 training loss: 3255.0012
14956 itr: 190630
14957 training loss: 1958.0729
14958 itr: 190640
14959 training loss: 2962.7812
14960 itr: 190650
14961 training loss: 1550.6797

```
14962 itr: 190660
14963 training loss: 1555.942
14964 itr: 190670
14965 training loss: 3213.251
14966 itr: 190680
14967 training loss: 4097.2993
14968 itr: 190690
14969 training loss: 3194.2483
14970 itr: 190700
14971 training loss: 2838.3284
14972 itr: 190710
14973 training loss: 4712.7354
14974 itr: 190720
14975 training loss: 4291.7764
14976 itr: 190730
14977 training loss: 3365.2236
14978 itr: 190740
14979 training loss: 4989.085
14980 itr: 190750
14981 training loss: 3461.5671
14982 itr: 190760
14983 training loss: 3203.2046
14984 itr: 190770
14985 training loss: 2882.2817
14986 itr: 190780
14987 training loss: 2845.477
14988 itr: 190790
14989 training loss: 2723.2227
14990 itr: 190800
14991 training loss: 2211.3413
14992 itr: 190810
14993 training loss: 3618.2366
14994 itr: 190820
14995 training loss: 3994.4941
14996 itr: 190830
14997 training loss: 4948.597
14998 itr: 190840
```

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14999 training loss: 5215.258
15000 itr: 190850
15001 training loss: 2761.9731
15002 itr: 190860
15003 training loss: 2780.5505
15004 itr: 190870
15005 training loss: 3266.7175
15006 itr: 190880
15007 training loss: 2911.1665
15008 itr: 190890
15009 training loss: 2933.9458
15010 itr: 190900
15011 training loss: 3437.4163
15012 itr: 190910
15013 training loss: 3999.534
15014 itr: 190920
15015 training loss: 5125.5425
15016 itr: 190930
15017 training loss: 5845.1426
15018 itr: 190940
15019 training loss: 3187.369
15020 itr: 190950
15021 training loss: 5485.182
15022 itr: 190960
15023 training loss: 2822.4739
15024 itr: 190970
15025 training loss: 4137.275
15026 itr: 190980
15027 training loss: 3798.5571
15028 itr: 190990
15029 training loss: 1438.8304
15030 itr: 191000
15031 training loss: 2303.98
15032 itr: 191010
15033 training loss: 3990.5098
15034 itr: 191020
15035 training loss: 2510.6582
```

```
15036 itr: 191030
15037 training loss: 2949.9636
15038 itr: 191040
15039 training loss: 5300.678
15040 itr: 191050
15041 training loss: 2996.021
15042 itr: 191060
15043 training loss: 2076.2092
15044 itr: 191070
15045 training loss: 2377.7498
15046 itr: 191080
15047 training loss: 2783.9211
15048 itr: 191090
15049 training loss: 1330.6156
15050 itr: 191100
15051 training loss: 2819.9421
15052 itr: 191110
15053 training loss: 3167.6602
15054 itr: 191120
15055 training loss: 3463.8984
15056 itr: 191130
15057 training loss: 4308.0645
15058 itr: 191140
15059 training loss: 2452.3076
15060 itr: 191150
15061 training loss: 2244.6309
15062 itr: 191160
15063 training loss: 3209.7703
15064 itr: 191170
15065 training loss: 4471.0435
15066 itr: 191180
15067 training loss: 4424.5728
15068 itr: 191190
15069 training loss: 3197.8296
15070 itr: 191200
15071 training loss: 4005.3752
15072 itr: 191210
```


15073 training loss: 3364.9805
15074 itr: 191220
15075 training loss: 4099.1987
15076 itr: 191230
15077 training loss: 4236.1333
15078 itr: 191240
15079 training loss: 2146.5776
15080 itr: 191250
15081 training loss: 5594.9316
15082 itr: 191260
15083 training loss: 2783.356
15084 itr: 191270
15085 training loss: 3933.2712
15086 itr: 191280
15087 training loss: 3071.6455
15088 itr: 191290
15089 training loss: 2913.0444
15090 itr: 191300
15091 training loss: 3826.913
15092 itr: 191310
15093 training loss: 3658.356
15094 itr: 191320
15095 training loss: 4556.8965
15096 itr: 191330
15097 training loss: 2667.031
15098 itr: 191340
15099 training loss: 3983.9998
15100 itr: 191350
15101 training loss: 3576.3118
15102 itr: 191360
15103 training loss: 3283.6099
15104 itr: 191370
15105 training loss: 3501.546
15106 itr: 191380
15107 training loss: 3093.5032
15108 itr: 191390
15109 training loss: 2224.1335

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15110 itr: 191400
15111 training loss: 2247.5122
15112 itr: 191410
15113 training loss: 5427.8857
15114 itr: 191420
15115 training loss: 4091.5676
15116 itr: 191430
15117 training loss: 3022.5093
15118 itr: 191440
15119 training loss: 1515.5974
15120 itr: 191450
15121 training loss: 3984.8232
15122 itr: 191460
15123 training loss: 1666.8079
15124 itr: 191470
15125 training loss: 2024.6504
15126 itr: 191480
15127 training loss: 2393.5208
15128 itr: 191490
15129 training loss: 5110.654
15130 itr: 191500
15131 training loss: 3245.307
15132 itr: 191510
15133 training loss: 1571.7866
15134 itr: 191520
15135 training loss: 3618.4153
15136 itr: 191530
15137 training loss: 3977.2568
15138 itr: 191540
15139 training loss: 4342.4966
15140 itr: 191550
15141 training loss: 4704.4487
15142 itr: 191560
15143 training loss: 5432.7188
15144 itr: 191570
15145 training loss: 3664.87
15146 itr: 191580
```

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15147 training loss: 1519.1423
15148 itr: 191590
15149 training loss: 5155.227
15150 itr: 191600
15151 training loss: 3540.3267
15152 itr: 191610
15153 training loss: 3509.3352
15154 itr: 191620
15155 training loss: 2785.04
15156 itr: 191630
15157 training loss: 2123.4966
15158 itr: 191640
15159 training loss: 5067.638
15160 itr: 191650
15161 training loss: 3719.3096
15162 itr: 191660
15163 training loss: 3755.3896
15164 itr: 191670
15165 training loss: 4216.429
15166 itr: 191680
15167 training loss: 3856.0835
15168 itr: 191690
15169 training loss: 3522.8022
15170 itr: 191700
15171 training loss: 4554.776
15172 itr: 191710
15173 training loss: 5205.322
15174 itr: 191720
15175 training loss: 3241.877
15176 itr: 191730
15177 training loss: 1404.9167
15178 itr: 191740
15179 training loss: 4160.9033
15180 itr: 191750
15181 training loss: 2960.594
15182 itr: 191760
15183 training loss: 5021.8423
```

```
15184 itr: 191770
15185 training loss: 4985.1323
15186 itr: 191780
15187 training loss: 4830.755
15188 itr: 191790
15189 training loss: 3459.2405
15190 itr: 191800
15191 training loss: 3762.132
15192 itr: 191810
15193 training loss: 4611.044
15194 itr: 191820
15195 training loss: 2608.3716
15196 itr: 191830
15197 training loss: 3090.1187
15198 itr: 191840
15199 training loss: 4403.329
15200 itr: 191850
15201 training loss: 3953.9749
15202 itr: 191860
15203 training loss: 3840.1099
15204 itr: 191870
15205 training loss: 2883.5566
15206 itr: 191880
15207 training loss: 4679.7637
15208 itr: 191890
15209 training loss: 2373.6514
15210 itr: 191900
15211 training loss: 2978.2566
15212 itr: 191910
15213 training loss: 3035.1843
15214 itr: 191920
15215 training loss: 4752.5903
15216 itr: 191930
15217 training loss: 3732.4363
15218 itr: 191940
15219 training loss: 2235.0632
15220 itr: 191950
```

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15221 training loss: 1361.7727
15222 itr: 191960
15223 training loss: 5331.3276
15224 itr: 191970
15225 training loss: 1939.2437
15226 itr: 191980
15227 training loss: 4330.5186
15228 itr: 191990
15229 training loss: 1823.8922
15230 itr: 192000
15231 training loss: 4133.3154
15232 itr: 192010
15233 training loss: 5970.5093
15234 itr: 192020
15235 training loss: 2702.5251
15236 itr: 192030
15237 training loss: 2410.657
15238 itr: 192040
15239 training loss: 3302.705
15240 itr: 192050
15241 training loss: 4491.7646
15242 itr: 192060
15243 training loss: 1972.5127
15244 itr: 192070
15245 training loss: 3813.2832
15246 itr: 192080
15247 training loss: 4010.37
15248 itr: 192090
15249 training loss: 2248.4482
15250 itr: 192100
15251 training loss: 4363.3945
15252 itr: 192110
15253 training loss: 4849.0615
15254 itr: 192120
15255 training loss: 2772.857
15256 itr: 192130
15257 training loss: 2552.7268
```

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15258 itr: 192140
15259 training loss: 2959.7168
15260 itr: 192150
15261 training loss: 4063.3564
15262 itr: 192160
15263 training loss: 4164.831
15264 itr: 192170
15265 training loss: 3332.9167
15266 itr: 192180
15267 training loss: 3500.873
15268 itr: 192190
15269 training loss: 5934.7803
15270 itr: 192200
15271 training loss: 3346.2847
15272 itr: 192210
15273 training loss: 2060.9192
15274 itr: 192220
15275 training loss: 2772.211
15276 itr: 192230
15277 training loss: 2251.6863
15278 itr: 192240
15279 training loss: 2986.3284
15280 itr: 192250
15281 training loss: 3518.8071
15282 itr: 192260
15283 training loss: 2686.9712
15284 itr: 192270
15285 training loss: 4244.872
15286 itr: 192280
15287 training loss: 2665.459
15288 itr: 192290
15289 training loss: 2854.858
15290 itr: 192300
15291 training loss: 4167.943
15292 itr: 192310
15293 training loss: 2792.9373
15294 itr: 192320
```

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15295 training loss: 2826.7217
15296 itr: 192330
15297 training loss: 4158.1606
15298 itr: 192340
15299 training loss: 3508.5247
15300 itr: 192350
15301 training loss: 5084.292
15302 itr: 192360
15303 training loss: 3502.9238
15304 itr: 192370
15305 training loss: 4338.287
15306 itr: 192380
15307 training loss: 2828.4514
15308 itr: 192390
15309 training loss: 3836.7043
15310 itr: 192400
15311 training loss: 2691.8696
15312 itr: 192410
15313 training loss: 2508.067
15314 itr: 192420
15315 training loss: 4342.1484
15316 itr: 192430
15317 training loss: 2081.4338
15318 itr: 192440
15319 training loss: 1453.6189
15320 itr: 192450
15321 training loss: 2151.686
15322 itr: 192460
15323 training loss: 3924.2231
15324 itr: 192470
15325 training loss: 3005.206
15326 itr: 192480
15327 training loss: 2016.1099
15328 itr: 192490
15329 training loss: 2254.2244
15330 itr: 192500
15331 training loss: 4884.9727
```

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15332 itr: 192510
15333 training loss: 5748.1157
15334 itr: 192520
15335 training loss: 3707.1597
15336 itr: 192530
15337 training loss: 1446.5559
15338 itr: 192540
15339 training loss: 4786.2686
15340 itr: 192550
15341 training loss: 5500.565
15342 itr: 192560
15343 training loss: 3759.3904
15344 itr: 192570
15345 training loss: 4615.903
15346 itr: 192580
15347 training loss: 2198.9563
15348 itr: 192590
15349 training loss: 5792.9873
15350 itr: 192600
15351 training loss: 2763.5974
15352 itr: 192610
15353 training loss: 4809.873
15354 itr: 192620
15355 training loss: 4793.541
15356 itr: 192630
15357 training loss: 5233.041
15358 itr: 192640
15359 training loss: 1092.9033
15360 itr: 192650
15361 training loss: 4355.116
15362 itr: 192660
15363 training loss: 4023.6748
15364 itr: 192670
15365 training loss: 2253.8242
15366 itr: 192680
15367 training loss: 4460.0996
15368 itr: 192690
```



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15369 training loss: 3008.208
15370 itr: 192700
15371 training loss: 600.51135
15372 itr: 192710
15373 training loss: 3636.269
15374 itr: 192720
15375 training loss: 3468.4736
15376 itr: 192730
15377 training loss: 5180.584
15378 itr: 192740
15379 training loss: 5839.8525
15380 itr: 192750
15381 training loss: 3611.8887
15382 itr: 192760
15383 training loss: 3797.3962
15384 itr: 192770
15385 training loss: 3462.149
15386 itr: 192780
15387 training loss: 3288.9485
15388 itr: 192790
15389 training loss: 4764.6396
15390 itr: 192800
15391 training loss: 3358.316
15392 itr: 192810
15393 training loss: 2764.5967
15394 itr: 192820
15395 training loss: 5302.542
15396 itr: 192830
15397 training loss: 4623.693
15398 itr: 192840
15399 training loss: 3090.702
15400 itr: 192850
15401 training loss: 3911.3037
15402 itr: 192860
15403 training loss: 5635.8843
15404 itr: 192870
15405 training loss: 4275.85
```

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15406 itr: 192880
15407 training loss: 5540.537
15408 itr: 192890
15409 training loss: 3281.542
15410 itr: 192900
15411 training loss: 3671.5994
15412 itr: 192910
15413 training loss: 1739.8972
15414 itr: 192920
15415 training loss: 2402.0044
15416 itr: 192930
15417 training loss: 4557.932
15418 itr: 192940
15419 training loss: 4668.6104
15420 itr: 192950
15421 training loss: 5420.7485
15422 itr: 192960
15423 training loss: 3559.4326
15424 itr: 192970
15425 training loss: 3600.9539
15426 itr: 192980
15427 training loss: 3328.1274
15428 itr: 192990
15429 training loss: 3704.9856
15430 itr: 193000
15431 training loss: 4864.7676
15432 itr: 193010
15433 training loss: 2772.8
15434 itr: 193020
15435 training loss: 3039.5244
15436 itr: 193030
15437 training loss: 3136.1113
15438 itr: 193040
15439 training loss: 2830.3267
15440 itr: 193050
15441 training loss: 2701.1465
15442 itr: 193060
```

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15443 training loss: 5400.4756
15444 itr: 193070
15445 training loss: 4832.956
15446 itr: 193080
15447 training loss: 6893.459
15448 itr: 193090
15449 training loss: 748.95
15450 itr: 193100
15451 training loss: 1771.0253
15452 itr: 193110
15453 training loss: 2748.0867
15454 itr: 193120
15455 training loss: 4111.8223
15456 itr: 193130
15457 training loss: 3211.1138
15458 itr: 193140
15459 training loss: 1716.7732
15460 itr: 193150
15461 training loss: 2429.1514
15462 itr: 193160
15463 training loss: 5583.7397
15464 itr: 193170
15465 training loss: 5051.904
15466 itr: 193180
15467 training loss: 5574.3105
15468 itr: 193190
15469 training loss: 3849.7366
15470 itr: 193200
15471 training loss: 2786.6682
15472 itr: 193210
15473 training loss: 2749.5137
15474 itr: 193220
15475 training loss: 3126.7273
15476 itr: 193230
15477 training loss: 3395.65
15478 itr: 193240
15479 training loss: 2980.5596
```

```
15480 itr: 193250
15481 training loss: 5500.277
15482 itr: 193260
15483 training loss: 4155.4644
15484 itr: 193270
15485 training loss: 4584.1406
15486 itr: 193280
15487 training loss: 4040.246
15488 itr: 193290
15489 training loss: 3444.8518
15490 itr: 193300
15491 training loss: 3834.7478
15492 itr: 193310
15493 training loss: 6122.1113
15494 itr: 193320
15495 training loss: 4533.074
15496 itr: 193330
15497 training loss: 5938.8965
15498 itr: 193340
15499 training loss: 2580.138
15500 itr: 193350
15501 training loss: 3083.9944
15502 itr: 193360
15503 training loss: 3815.6694
15504 itr: 193370
15505 training loss: 2342.7334
15506 itr: 193380
15507 training loss: 1929.1671
15508 itr: 193390
15509 training loss: 3886.3643
15510 itr: 193400
15511 training loss: 5617.9805
15512 itr: 193410
15513 training loss: 3616.4346
15514 itr: 193420
15515 training loss: 2830.8716
15516 itr: 193430
```

15517 training loss: 3357.2664
15518 itr: 193440
15519 training loss: 3395.0012
15520 itr: 193450
15521 training loss: 3564.6907
15522 itr: 193460
15523 training loss: 797.7059
15524 itr: 193470
15525 training loss: 3576.3467
15526 itr: 193480
15527 training loss: 1938.87
15528 itr: 193490
15529 training loss: 4360.075
15530 itr: 193500
15531 training loss: 4940.738
15532 itr: 193510
15533 training loss: 5008.1685
15534 itr: 193520
15535 training loss: 3030.589
15536 itr: 193530
15537 training loss: 4511.8643
15538 itr: 193540
15539 training loss: 899.384
15540 itr: 193550
15541 training loss: 3098.962
15542 itr: 193560
15543 training loss: 1711.6136
15544 itr: 193570
15545 training loss: 3894.4556
15546 itr: 193580
15547 training loss: 2443.0396
15548 itr: 193590
15549 training loss: 4862.5894
15550 itr: 193600
15551 training loss: 4868.0176
15552 itr: 193610
15553 training loss: 3166.9346

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15554 itr: 193620
15555 training loss: 3017.0513
15556 itr: 193630
15557 training loss: 3182.4824
15558 itr: 193640
15559 training loss: 3968.3015
15560 itr: 193650
15561 training loss: 5424.1943
15562 itr: 193660
15563 training loss: 3468.563
15564 itr: 193670
15565 training loss: 3496.1658
15566 itr: 193680
15567 training loss: 3409.0107
15568 itr: 193690
15569 training loss: 4975.757
15570 itr: 193700
15571 training loss: 4560.716
15572 itr: 193710
15573 training loss: 3218.2747
15574 itr: 193720
15575 training loss: 4877.8037
15576 itr: 193730
15577 training loss: 878.6046
15578 itr: 193740
15579 training loss: 3598.7708
15580 itr: 193750
15581 training loss: 5086.2095
15582 itr: 193760
15583 training loss: 1833.857
15584 itr: 193770
15585 training loss: 3227.0708
15586 itr: 193780
15587 training loss: 2169.3228
15588 itr: 193790
15589 training loss: 3637.765
15590 itr: 193800
```

```
15591 training loss: 5987.521
15592 itr: 193810
15593 training loss: 1547.8864
15594 itr: 193820
15595 training loss: 2843.4705
15596 itr: 193830
15597 training loss: 2375.7285
15598 itr: 193840
15599 training loss: 3223.3267
15600 itr: 193850
15601 training loss: 3726.7864
15602 itr: 193860
15603 training loss: 3882.0
15604 itr: 193870
15605 training loss: 6333.7227
15606 itr: 193880
15607 training loss: 5037.6216
15608 itr: 193890
15609 training loss: 2376.5176
15610 itr: 193900
15611 training loss: 2628.2227
15612 itr: 193910
15613 training loss: 4494.426
15614 itr: 193920
15615 training loss: 1629.8131
15616 itr: 193930
15617 training loss: 3125.2532
15618 itr: 193940
15619 training loss: 2475.0083
15620 itr: 193950
15621 training loss: 3721.3772
15622 itr: 193960
15623 training loss: 3077.6013
15624 itr: 193970
15625 training loss: 3435.8813
15626 itr: 193980
15627 training loss: 3607.3218
```

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15628 itr: 193990
15629 training loss: 2173.0312
15630 itr: 194000
15631 training loss: 4118.694
15632 itr: 194010
15633 training loss: 4106.0586
15634 itr: 194020
15635 training loss: 3711.4297
15636 itr: 194030
15637 training loss: 3934.648
15638 itr: 194040
15639 training loss: 3403.6406
15640 itr: 194050
15641 training loss: 1802.3911
15642 itr: 194060
15643 training loss: 4137.2627
15644 itr: 194070
15645 training loss: 3169.6438
15646 itr: 194080
15647 training loss: 4898.3003
15648 itr: 194090
15649 training loss: 5485.358
15650 itr: 194100
15651 training loss: 3042.335
15652 itr: 194110
15653 training loss: 4075.3162
15654 itr: 194120
15655 training loss: 1734.2314
15656 itr: 194130
15657 training loss: 4672.829
15658 itr: 194140
15659 training loss: 3039.443
15660 itr: 194150
15661 training loss: 4269.7876
15662 itr: 194160
15663 training loss: 4361.5273
15664 itr: 194170
```


15665 training loss: 5748.6157
15666 itr: 194180
15667 training loss: 2795.363
15668 itr: 194190
15669 training loss: 4660.1885
15670 itr: 194200
15671 training loss: 1971.5757
15672 itr: 194210
15673 training loss: 2504.0234
15674 itr: 194220
15675 training loss: 3665.867
15676 itr: 194230
15677 training loss: 3583.654
15678 itr: 194240
15679 training loss: 3933.4102
15680 itr: 194250
15681 training loss: 4205.626
15682 itr: 194260
15683 training loss: 2689.607
15684 itr: 194270
15685 training loss: 4287.521
15686 itr: 194280
15687 training loss: 3924.29
15688 itr: 194290
15689 training loss: 5042.3115
15690 itr: 194300
15691 training loss: 5064.95
15692 itr: 194310
15693 training loss: 3326.1243
15694 itr: 194320
15695 training loss: 2936.5708
15696 itr: 194330
15697 training loss: 2868.004
15698 itr: 194340
15699 training loss: 3942.117
15700 itr: 194350
15701 training loss: 4851.177

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15702 itr: 194360
15703 training loss: 3568.122
15704 itr: 194370
15705 training loss: 1003.96246
15706 itr: 194380
15707 training loss: 5138.257
15708 itr: 194390
15709 training loss: 3304.5444
15710 itr: 194400
15711 training loss: 5403.279
15712 itr: 194410
15713 training loss: 3761.6965
15714 itr: 194420
15715 training loss: 3584.046
15716 itr: 194430
15717 training loss: 4166.648
15718 itr: 194440
15719 training loss: 5075.157
15720 itr: 194450
15721 training loss: 3158.186
15722 itr: 194460
15723 training loss: 6362.2173
15724 itr: 194470
15725 training loss: 1186.4775
15726 itr: 194480
15727 training loss: 1720.3114
15728 itr: 194490
15729 training loss: 3737.474
15730 itr: 194500
15731 training loss: 3490.8005
15732 itr: 194510
15733 training loss: 4830.829
15734 itr: 194520
15735 training loss: 4067.4878
15736 itr: 194530
15737 training loss: 4706.957
15738 itr: 194540
```

```
15739 training loss: 2900.2126
15740 itr: 194550
15741 training loss: 3294.517
15742 itr: 194560
15743 training loss: 2409.1384
15744 itr: 194570
15745 training loss: 3162.7031
15746 itr: 194580
15747 training loss: 3201.4048
15748 itr: 194590
15749 training loss: 3927.931
15750 itr: 194600
15751 training loss: 2615.5737
15752 itr: 194610
15753 training loss: 3252.5222
15754 itr: 194620
15755 training loss: 3781.1956
15756 itr: 194630
15757 training loss: 6102.5566
15758 itr: 194640
15759 training loss: 4784.6113
15760 itr: 194650
15761 training loss: 2854.7883
15762 itr: 194660
15763 training loss: 1997.7915
15764 itr: 194670
15765 training loss: 2720.2654
15766 itr: 194680
15767 training loss: 4817.9653
15768 itr: 194690
15769 training loss: 4033.4392
15770 itr: 194700
15771 training loss: 1972.6936
15772 itr: 194710
15773 training loss: 3471.8442
15774 itr: 194720
15775 training loss: 3017.388
```

```
15776 itr: 194730
15777 training loss: 3693.4514
15778 itr: 194740
15779 training loss: 2622.4385
15780 itr: 194750
15781 training loss: 2232.622
15782 itr: 194760
15783 training loss: 2607.1267
15784 itr: 194770
15785 training loss: 3606.6968
15786 itr: 194780
15787 training loss: 2604.1023
15788 itr: 194790
15789 training loss: 3669.4138
15790 itr: 194800
15791 training loss: 2918.8633
15792 itr: 194810
15793 training loss: 2381.4656
15794 itr: 194820
15795 training loss: 3708.212
15796 itr: 194830
15797 training loss: 3115.732
15798 itr: 194840
15799 training loss: 4032.004
15800 itr: 194850
15801 training loss: 2049.9624
15802 itr: 194860
15803 training loss: 3090.6184
15804 itr: 194870
15805 training loss: 4110.3955
15806 itr: 194880
15807 training loss: 3237.076
15808 itr: 194890
15809 training loss: 3247.6997
15810 itr: 194900
15811 training loss: 3936.3564
15812 itr: 194910
```

```
15813 training loss: 3786.0352
15814 itr: 194920
15815 training loss: 2394.384
15816 itr: 194930
15817 training loss: 2528.2068
15818 itr: 194940
15819 training loss: 4985.866
15820 itr: 194950
15821 training loss: 5549.7383
15822 itr: 194960
15823 training loss: 3970.9468
15824 itr: 194970
15825 training loss: 4336.3022
15826 itr: 194980
15827 training loss: 1122.1588
15828 itr: 194990
15829 training loss: 4391.978
15830 itr: 195000
15831 training loss: 5496.6216
15832 test...
15833 mse per seq: 9001.843249992087
15834 601.4178719697176
15835 692.4179263644749
15836 770.9804681848597
15837 821.1380592628761
15838 896.3738548843949
15839 1001.0333287274397
15840 1019.9066660139296
15841 1041.302990383572
15842 1059.6359837849934
15843 1097.6361004158302
15844 psnr per frame: 17.366587
15845 18.806831
15846 18.244524
15847 17.90815
15848 17.668154
15849 17.396183
```

15850	16.864904
15851	16.790657
15852	16.702652
15853	16.66934
15854	16.614473
15855	fmae per frame: 1795.5146
15856	1409.0007
15857	1536.8773
15858	1649.4182
15859	1717.0718
15860	1806.9069
15861	1930.5757
15862	1950.0139
15863	1969.4049
15864	1979.0999
15865	2006.7775
15866	ssim per frame: 0.79294485
15867	0.82409644
15868	0.8126177
15869	0.8046964
15870	0.7988436
15871	0.7936214
15872	0.7816814
15873	0.7800725
15874	0.7785819
15875	0.77734375
15876	0.7778934
15877	sharpness per frame: 254.89536
15878	255.0
15879	255.0
15880	254.97685
15881	254.8287
15882	254.77777
15883	255.0
15884	255.0
15885	254.91203
15886	254.76852

```
15887 254.68982
15888 saved to checkpoints/radar_predrnn_pp
15889 itr: 195010
15890 training loss: 4782.5537
15891 itr: 195020
15892 training loss: 3623.1858
15893 itr: 195030
15894 training loss: 2349.8286
15895 itr: 195040
15896 training loss: 3322.5757
15897 itr: 195050
15898 training loss: 4377.3823
15899 itr: 195060
15900 training loss: 6637.7295
15901 itr: 195070
15902 training loss: 3509.0676
15903 itr: 195080
15904 training loss: 3360.208
15905 itr: 195090
15906 training loss: 2839.1829
15907 itr: 195100
15908 training loss: 3260.9705
15909 itr: 195110
15910 training loss: 2683.3447
15911 itr: 195120
15912 training loss: 5885.128
15913 itr: 195130
15914 training loss: 2662.328
15915 itr: 195140
15916 training loss: 3611.3662
15917 itr: 195150
15918 training loss: 4414.0024
15919 itr: 195160
15920 training loss: 1301.2693
15921 itr: 195170
15922 training loss: 5015.4346
15923 itr: 195180
```

```
15924 training loss: 1204.5488
15925 itr: 195190
15926 training loss: 3008.3315
15927 itr: 195200
15928 training loss: 5552.6826
15929 itr: 195210
15930 training loss: 4154.717
15931 itr: 195220
15932 training loss: 5585.065
15933 itr: 195230
15934 training loss: 1326.295
15935 itr: 195240
15936 training loss: 3822.4036
15937 itr: 195250
15938 training loss: 3228.493
15939 itr: 195260
15940 training loss: 4776.623
15941 itr: 195270
15942 training loss: 4592.7773
15943 itr: 195280
15944 training loss: 3246.8896
15945 itr: 195290
15946 training loss: 3757.4688
15947 itr: 195300
15948 training loss: 1797.109
15949 itr: 195310
15950 training loss: 2676.1514
15951 itr: 195320
15952 training loss: 4373.514
15953 itr: 195330
15954 training loss: 3111.068
15955 itr: 195340
15956 training loss: 1512.4496
15957 itr: 195350
15958 training loss: 4756.1353
15959 itr: 195360
15960 training loss: 4273.326
```



```
15961 itr: 195370
15962 training loss: 5878.105
15963 itr: 195380
15964 training loss: 3576.1052
15965 itr: 195390
15966 training loss: 1374.1399
15967 itr: 195400
15968 training loss: 3993.3032
15969 itr: 195410
15970 training loss: 2321.8203
15971 itr: 195420
15972 training loss: 2375.6118
15973 itr: 195430
15974 training loss: 3702.753
15975 itr: 195440
15976 training loss: 2923.006
15977 itr: 195450
15978 training loss: 4030.9463
15979 itr: 195460
15980 training loss: 1376.343
15981 itr: 195470
15982 training loss: 2082.7334
15983 itr: 195480
15984 training loss: 1965.7344
15985 itr: 195490
15986 training loss: 2368.6394
15987 itr: 195500
15988 training loss: 6460.8022
15989 itr: 195510
15990 training loss: 2849.3713
15991 itr: 195520
15992 training loss: 2204.333
15993 itr: 195530
15994 training loss: 2488.9155
15995 itr: 195540
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16775 itr: 199440
16776 training loss: 3164.3723
16777 itr: 199450
16778 training loss: 3006.6497
16779 itr: 199460
16780 training loss: 2692.9268
16781 itr: 199470
16782 training loss: 3220.9497
16783 itr: 199480
16784 training loss: 3376.6
16785 itr: 199490
16786 training loss: 3061.6492
16787 itr: 199500
16788 training loss: 1641.9854
16789 itr: 199510
16790 training loss: 3570.0164
16791 itr: 199520
16792 training loss: 3078.3389
16793 itr: 199530
16794 training loss: 5243.526
16795 itr: 199540
16796 training loss: 6127.0225
16797 itr: 199550
16798 training loss: 3966.9536
16799 itr: 199560
16800 training loss: 4290.2197
16801 itr: 199570
16802 training loss: 6493.4673
16803 itr: 199580
16804 training loss: 3472.5374
16805 itr: 199590
16806 training loss: 2697.142
16807 itr: 199600
16808 training loss: 1912.163
16809 itr: 199610
16810 training loss: 3136.674
16811 itr: 199620
```

16812 training loss: 3335.2288
16813 itr: 199630
16814 training loss: 1688.0903
16815 itr: 199640
16816 training loss: 3685.3652
16817 itr: 199650
16818 training loss: 3077.0994
16819 itr: 199660
16820 training loss: 2694.145
16821 itr: 199670
16822 training loss: 5248.4854
16823 itr: 199680
16824 training loss: 3379.3027
16825 itr: 199690
16826 training loss: 3842.3337
16827 itr: 199700
16828 training loss: 3436.2993
16829 itr: 199710
16830 training loss: 2427.1252
16831 itr: 199720
16832 training loss: 1962.0352
16833 itr: 199730
16834 training loss: 6551.132
16835 itr: 199740
16836 training loss: 2375.364
16837 itr: 199750
16838 training loss: 4923.7686
16839 itr: 199760
16840 training loss: 3674.3513
16841 itr: 199770
16842 training loss: 3600.4873
16843 itr: 199780
16844 training loss: 3301.3335
16845 itr: 199790
16846 training loss: 993.50665
16847 itr: 199800
16848 training loss: 2416.365


```
16849 itr: 199810
16850 training loss: 2686.4924
16851 itr: 199820
16852 training loss: 1871.8976
16853 itr: 199830
16854 training loss: 4011.5928
16855 itr: 199840
16856 training loss: 3478.8655
16857 itr: 199850
16858 training loss: 3357.688
16859 itr: 199860
16860 training loss: 2880.9082
16861 itr: 199870
16862 training loss: 3931.5347
16863 itr: 199880
16864 training loss: 5817.32
16865 itr: 199890
16866 training loss: 2950.315
16867 itr: 199900
16868 training loss: 5670.37
16869 itr: 199910
16870 training loss: 2791.955
16871 itr: 199920
16872 training loss: 4270.401
16873 itr: 199930
16874 training loss: 4085.3818
16875 itr: 199940
16876 training loss: 4341.9946
16877 itr: 199950
16878 training loss: 4735.576
16879 itr: 199960
16880 training loss: 1592.9869
16881 itr: 199970
16882 training loss: 2365.7478
16883 itr: 199980
16884 training loss: 3598.7808
16885 itr: 199990
```

```
16886 training loss: 4905.9556
16887 itr: 200000
16888 training loss: 6063.3457
16889 test...
16890 mse per seq: 9356.196477678088
16891 607.019352806939
16892 702.1741858588325
16893 782.251006797508
16894 837.557568302861
16895 920.6465527569807
16896 1037.0798315825286
16897 1069.231166910242
16898 1100.2972227025914
16899 1127.1049075656467
16900 1172.834682393957
16901 psnr per frame: 17.224148
16902 18.755749
16903 18.170376
16904 17.825794
16905 17.567556
16906 17.278564
16907 16.72495
16908 16.605145
16909 16.500595
16910 16.44706
16911 16.365677
16912 fmae per frame: 1948.139
16913 1542.5033
16914 1671.1508
16915 1783.294
16916 1852.3899
16917 1947.2338
16918 2079.856
16919 2112.1968
16920 2141.0173
16921 2157.1514
16922 2194.597
```

```
16923 ssim per frame: 0.79079705
16924 0.8236107
16925 0.81173164
16926 0.80389607
16927 0.7977649
16928 0.7919938
16929 0.7793542
16930 0.777225
16931 0.7755344
16932 0.7735438
16933 0.77331585
16934 sharpness per frame: 254.76482
16935 254.90741
16936 255.0
16937 254.82408
16938 254.77777
16939 254.58797
16940 254.99538
16941 254.91667
16942 254.76852
16943 254.25
16944 254.62038
16945 saved to checkpoints/radar_predrnn_pp
16946
16947 Process finished with exit code 0
16948
```