1 Diffusion model robustness test

Diffusion models has uncertainty in its nature. To ensure that our implementation has stable results we run inference 5 times for each experiment and check statistical significance of differences with Mann–Whitney test. Results are presented for example with sea ice concentration case as natural data (Table 1) and KTH case as media data (Table 2). P-value of pairwise tests show insignificance of differences what confirm the robustness of the model.

Table 1: Sea ice concentration forecasting metrics of diffusion model of 5 times run inference with p-value statistic

Prehistory	**Forecast**	Run №	**MAE**	**MSE**	**SSIM**	**PSNR**
104	52	1	0,04188	0,01017	0,76949	19,95004
		2	0,04188	0,01017	0,76956	19,95379
		3	0,04189	0,01016	0,76942	19,95454
		4	0,04188	0,01017	0,76957	19,95463
		5	0,04186	0,01016	0,76944	19,95901
p-value	**0,91**	**mean**	**0,04188**	**0,01017**	**0,76950**	**19,95440**
26	52	1	0,04369	0,01195	0,76802	19,29151
		2	0,04368	0,01194	0,76817	19,29560
		3	0,04365	0,01192	0,76823	19,29948
		4	0,04357	0,01188	0,76826	19,31768
		5	0,04364	0,01192	0,76823	19,30061
p-value	**0,97**	**mean**	**0,04365**	**0,01192**	**0,76818**	**19,30098**
26	2	1	0,02834	0,00532	0,81921	23,05293
		2	0,02827	0,00530	0,81897	23,05704
		3	0,02839	0,00538	0,81854	22,99640
		4	0,02823	0,00530	0,81937	23,07087
		5	0,02831	0,00534	0,81936	23,01891
p-value	**1**	**mean**	**0,02831**	**0,00533**	**0,81909**	**23,03923**
52	2	1	0,02666	0,00515	0,83380	23,13987
		2	0,02672	0,00518	0,83337	23,11056
		3	0,02655	0,00509	0,83346	23,17341
		4	0,02667	0,00515	0,83278	23,13596
		5	0,02647	0,00504	0,83432	23,22610
p-value	**1**	**mean**	**0,02661**	**0,00512**	**0,83355**	**23,15718**

Table 2: KTH forecasting metrics of diffusion model of 5 times run inference with p-value statistic

Prehistory	**Forecast**	Run №	**MAE**	**MSE**	**SSIM**	**PSNR**
10	10	1	0,03620	0,00424	0,71011	24,53641
		2	0,03635	0,00431	0,70952	24,48288
		3	0,03641	0,00434	0,70890	24,46422
		4	0,03630	0,00430	0,70975	24,50271
		5	0,03624	0,00427	0,70984	24,52303
p-value	**1,00**	**mean**	**0,03630**	**0,00429**	**0,70962**	**24,50185**
10	2	1	0,02645	0,00219	0,74758	27,25573
		2	0,02636	0,00218	0,74784	27,26434
		3	0,02633	0,00218	0,74829	27,28312
		4	0,02633	0,00217	0,74808	27,28087
		5	0,02640	0,00218	0,74793	27,28054
p-value	**1,00**	**mean**	**0,02637**	**0,00218**	**0,74794**	**27,27292**

2 Loop video convergence

To ensure that all three CNN models, each using a different number of input frames, are trained effectively over 90000 epochs, we created a convergence plot showing the MSE loss on the training set for each epoch (see Figure 1). The plot reveals that the models with 2 and 4 input frames reach a plateau in their performance, while the model with 8 input frames (corresponding to the periodicity of the data) shows a tendency for the loss to increase.

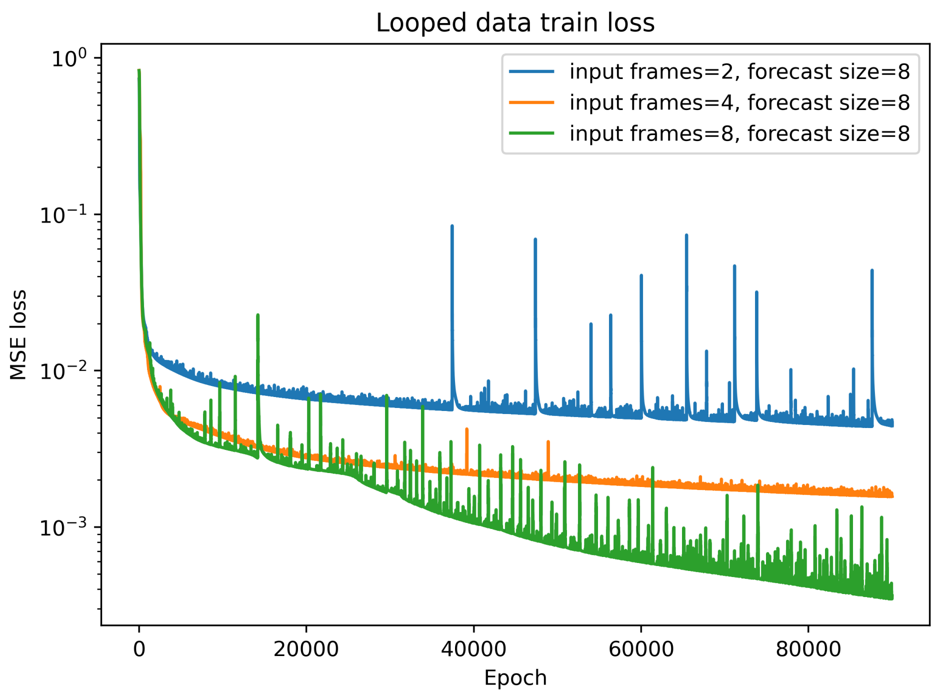

Figure 1: Convergence plot of CNN models with different input frames number

3 Detailed metrics on WeatherBench datasets

In paper we provide mean MAE metrics for variables of WeatherBench benchmark with 5 degrees spatial resolution. Size of each image in benchmark is static - 32x64 pixels. Ranges of datasets values in natural units are presented in Table 3, so metrics can be compared with real values of parameters. Detailed values of MAE, MSE, SSIM, PSNR for single levels variables are presented in Table 4 and for each level for multi-level variables are in Table 5.

Table 3: Datasets used for experiments

Dataset	sea ice concentration OSISAF	2m temperature	geopotential	toa incident solar radiation	total cloud cover	total precipitation	10m u component of wind	10m v component of wind	relative humidity*	temperature*	potential vorticity*	specific humidity*
Values range	0 - 1	195 - 315 K	43515 - 59044 $m^2 s^{-2}$	0 - 5050590 J*m^{-2}	0 - 1	0 - 0.03 m	-27 - 30 m/s	-24 - 26 m/s	-4 - 162 %	179 - 319 K	-0.0002- 0.0002 K*$m^2/kg * s$	0 - 0.02

* variables with pressure levels

Table 4: Metrics of CNN model for WeatherBench datasets with different input frames number and forecast horizon

(input frames, forecast) Parameter name	MAE	MSE	MAE normalized	MSE normalized	SSIM	PSNR
(26, 52)_2m_temperature	1,382	2,607	0,126	0,022	0,879	28,358
(104, 52)_2m_temperature	1,340	2,452	0,122	0,020	0,886	28,880
(52, 2)_2m_temperature	1,362	2,410	0,124	0,020	0,920	29,361
(26, 2)_2m_temperature	1,270	2,248	0,116	0,019	0,899	29,456
(26, 52)_geopotential_500	21,079	622,088	0,169	0,040	0,853	23,406
(104, 52)_geopotential_500	21,703	630,836	0,174	0,041	0,856	23,628
(52, 2)_geopotential_500	20,531	604,202	0,165	0,039	0,858	23,490
(26, 2)_geopotential_500	102,051	11137,099	0,819	0,717	0,000	2,745
(26, 52)_toa_incident_solar_radiation	98,475	22945,313	0,044	0,005	0,995	37,726
(104, 52)_toa_incident_solar_radiation	85,019	16840,251	0,038	0,003	0,997	43,676
(52, 2)_toa_incident_solar_radiation	693,251	1114133,350	0,308	0,221	0,315	8,995
(26, 2)_toa_incident_solar_radiation	85,477	16530,483	0,038	0,003	0,998	43,190
(26, 52)_total_cloud_cover	0,366	0,163	0,366	0,163	0,347	13,416
(104, 52)_total_cloud_cover	0,364	0,162	0,364	0,162	0,368	13,460
(52, 2)_total_cloud_cover	0,371	0,170	0,371	0,170	0,341	13,004
(26, 2)_total_cloud_cover	0,365	0,163	0,365	0,163	0,366	13,406
(26, 52)_total_precipitation	0,007	0,00009	0,042	0,003	0,894	45,279
(104, 52)_total_precipitation	0,007	0,00008	0,041	0,003	0,886	45,164
(52, 2)_total_precipitation	0,007	0,00009	0,040	0,003	0,846	44,520
(26, 2)_total_precipitation	0,007	0,00009	0,040	0,003	0,846	44,496
(26, 52)_10m_u_component_of_wind	1,634	3,649	0,215	0,063	0,478	19,285
(104, 52)_10m_u_component_of_wind	1,512	2,967	0,199	0,051	0,515	22,492
(52, 2)_10m_u_component_of_wind	1,546	3,093	0,204	0,054	0,508	22,204
(26, 2)_10m_u_component_of_wind	1,541	3,061	0,203	0,053	0,493	22,345
(26, 52)_10m_v_component_of_wind	1,685	3,584	0,236	0,070	0,301	20,177
(104, 52)_10m_v_component_of_wind	1,547	3,115	0,217	0,061	0,326	20,958
(52, 2)_10m_v_component_of_wind	1,695	3,670	0,238	0,072	0,330	19,732
(26, 2)_10m_v_component_of_wind	1,607	3,320	0,225	0,065	0,327	20,563

Table 5: Metrics of CNN model for WeatherBench datasets by levels with different input frames number and forecast horizon

(input frames, forecast) Parameter name	MAE	MSE	MAE normalized	MSE normalized	SSIM	PSNR
(26, 52)_relative_humidity_100	2,4528	9,3277	0,1928	0,0576	0,7097	20,7980
(104, 52)_relative_humidity_100	2,4351	9,3251	0,1914	0,0576	0,7100	20,8417
(52, 2)_relative_humidity_100	4,3972	30,6388	0,3457	0,1893	0,0550	11,2568
(26, 2)_relative_humidity_100	2,4087	9,1621	0,1894	0,0566	0,7149	20,9312
(26, 52)_relative_humidity_1000	2,6306	8,7376	0,2152	0,0585	0,4408	21,8966
(104, 52)_relative_humidity_1000	2,6101	8,6092	0,2136	0,0576	0,4680	21,9889
(52, 2)_relative_humidity_1000	2,5845	8,4907	0,2115	0,0568	0,4787	22,0509
(26, 2)_relative_humidity_1000	2,5875	8,4896	0,2117	0,0568	0,4664	22,0833
(26, 52)_relative_humidity_150	2,9289	12,3243	0,2324	0,0776	0,5277	18,7322
(104, 52)_relative_humidity_150	2,9890	12,7373	0,2372	0,0802	0,4993	18,5203
(52, 2)_relative_humidity_150	4,5635	30,5595	0,3622	0,1925	0,0205	11,4014
(26, 2)_relative_humidity_150	2,9183	12,3649	0,2316	0,0779	0,5217	18,6358
(26, 52)_relative_humidity_200	4,0403	20,3433	0,3280	0,1341	0,2457	15,1962
(104, 52)_relative_humidity_200	4,0276	20,6450	0,3270	0,1361	0,2363	14,9435
(52, 2)_relative_humidity_200	4,1194	22,3954	0,3345	0,1476	0,2197	13,8959
(26, 2)_relative_humidity_200	5,1456	35,7246	0,4178	0,2355	0,0020	10,0615
(26, 52)_relative_humidity_250	4,6192	25,2417	0,3766	0,1678	0,1729	13,6062
(104, 52)_relative_humidity_250	4,5529	24,9889	0,3712	0,1661	0,1878	13,4702
(52, 2)_relative_humidity_250	4,6784	26,8627	0,3814	0,1786	0,1675	12,7061
(26, 2)_relative_humidity_250	4,5937	25,3244	0,3745	0,1683	0,1879	13,4263
(26, 52)_relative_humidity_300	4,5677	24,8234	0,3738	0,1662	0,1784	13,6455
(104, 52)_relative_humidity_300	4,5474	24,7948	0,3721	0,1660	0,1841	13,6009
(52, 2)_relative_humidity_300	6,3083	47,8283	0,5162	0,3203	0,0001	7,5074
(26, 2)_relative_humidity_300	4,5337	24,6565	0,3710	0,1651	0,1977	13,6403
(26, 52)_relative_humidity_400	4,4102	23,3057	0,3640	0,1587	0,2212	14,0377
(104, 52)_relative_humidity_400	4,4275	23,5354	0,3654	0,1603	0,2199	13,9760
(52, 2)_relative_humidity_400	4,4989	24,5742	0,3713	0,1674	0,2018	13,5203
(26, 2)_relative_humidity_400	4,4210	23,4593	0,3649	0,1598	0,2298	13,9758
(26, 52)_relative_humidity_50	1,0783	2,0144	0,0850	0,0125	0,8944	27,5961
(104, 52)_relative_humidity_50	1,0695	1,9709	0,0843	0,0123	0,8922	27,5601
(52, 2)_relative_humidity_50	1,0054	1,9646	0,0793	0,0122	0,9074	29,7780
(26, 2)_relative_humidity_50	0,9858	1,8429	0,0777	0,0115	0,9162	30,5378
(26, 52)_relative_humidity_500	4,3624	22,8500	0,3711	0,1654	0,2536	13,5986
(104, 52)_relative_humidity_500	4,3701	23,0119	0,3718	0,1665	0,2582	13,5308
(52, 2)_relative_humidity_500	4,4403	23,9920	0,3777	0,1736	0,2327	13,1276
(26, 2)_relative_humidity_500	4,3439	22,8246	0,3695	0,1652	0,2594	13,5456
(26, 52)_relative_humidity_600	4,1395	20,5993	0,3363	0,1359	0,2698	15,2785
(104, 52)_relative_humidity_600	4,1442	20,7113	0,3367	0,1367	0,2741	15,2133
(52, 2)_relative_humidity_600	4,1982	21,3025	0,3411	0,1406	0,2598	14,9692
(26, 2)_relative_humidity_600	4,1415	20,7545	0,3364	0,1370	0,2749	15,1445
(26, 52)_relative_humidity_700	4,1151	20,4550	0,3337	0,1345	0,2865	15,3499
(104, 52)_relative_humidity_700	4,0894	20,3197	0,3316	0,1336	0,3062	15,3293
(52, 2)_relative_humidity_700	4,1422	21,0539	0,3359	0,1384	0,2846	14,9611
(26, 2)_relative_humidity_700	6,5017	49,8610	0,5272	0,3278	0,0000	7,5210
(26, 52)_relative_humidity_850	3,6596	16,6035	0,2972	0,1095	0,2720	16,7833
(104, 52)_relative_humidity_850	3,6455	16,5363	0,2961	0,1091	0,2923	16,7489
(52, 2)_relative_humidity_850	3,6813	16,9929	0,2990	0,1121	0,2712	16,4853
(26, 2)_relative_humidity_850	3,6492	16,5625	0,2964	0,1092	0,2828	16,7760
(26, 52)_relative_humidity_925	2,8909	10,8297	0,2356	0,0719	0,3903	19,3978
(104, 52)_relative_humidity_925	2,8870	10,7983	0,2353	0,0717	0,4077	19,4171
(52, 2)_relative_humidity_925	2,8628	10,7839	0,2333	0,0716	0,3986	19,2703
(26, 2)_relative_humidity_925	2,8899	10,8002	0,2355	0,0717	0,3971	19,4449

(input frames, forecast) Parameter name	MAE	MSE	MAE normalized	MSE normalized	SSIM	PSNR
(26, 52)_temperature_100	1,4808	2,8137	0,1901	0,0464	0,8213	22,8021
(104, 52)_temperature_100	1,4610	2,7439	0,1876	0,0452	0,8271	23,0684
(52, 2)_temperature_100	1,4194	2,6022	0,1822	0,0429	0,8290	24,0955
(26, 2)_temperature_100	4,5598	23,2751	0,5854	0,3837	0,0003	6,3774
(26, 52)_temperature_1000	1,4002	2,5986	0,1429	0,0271	0,8708	27,0517
(104, 52)_temperature_1000	1,3395	2,4052	0,1367	0,0250	0,8802	27,5460
(52, 2)_temperature_1000	1,2575	2,1598	0,1283	0,0225	0,9029	28,2384
(26, 2)_temperature_1000	1,2823	2,2268	0,1309	0,0232	0,8957	28,1185
(26, 52)_temperature_150	1,4806	2,9007	0,1919	0,0487	0,7125	22,2080
(104, 52)_temperature_150	1,4414	2,7456	0,1868	0,0461	0,7218	22,8719
(52, 2)_temperature_150	1,4081	2,6464	0,1825	0,0444	0,7353	23,2202
(26, 2)_temperature_150	1,4039	2,6132	0,1819	0,0439	0,7329	23,5795
(26, 52)_temperature_200	1,4968	3,0148	0,2060	0,0571	0,4926	20,9459
(104, 52)_temperature_200	1,4652	2,8963	0,2016	0,0548	0,5107	21,3965
(52, 2)_temperature_200	5,3537	30,3027	0,7368	0,5739	0,0001	4,2999
(26, 2)_temperature_200	1,4272	2,7814	0,1964	0,0527	0,5257	21,7175
(26, 52)_temperature_250	1,3923	2,5465	0,1955	0,0502	0,6909	21,9958
(104, 52)_temperature_250	1,3559	2,4362	0,1904	0,0480	0,6962	22,3642
(52, 2)_temperature_250	1,3444	2,4200	0,1888	0,0477	0,7035	22,3211
(26, 2)_temperature_250	1,3297	2,3580	0,1867	0,0465	0,7084	22,6499
(26, 52)_temperature_300	1,3744	2,7053	0,1870	0,0501	0,7965	20,1108
(104, 52)_temperature_300	1,2646	2,0678	0,1721	0,0383	0,8150	25,0153
(52, 2)_temperature_300	1,2710	2,1089	0,1729	0,0390	0,8150	24,7576
(26, 2)_temperature_300	1,2544	2,0533	0,1707	0,0380	0,8197	24,9828
(26, 52)_temperature_400	1,3060	2,2365	0,1767	0,0409	0,8139	24,2007
(104, 52)_temperature_400	1,2766	2,1414	0,1727	0,0392	0,8209	24,6362
(52, 2)_temperature_400	1,3105	2,3150	0,1773	0,0424	0,8035	23,6584
(26, 2)_temperature_400	1,2889	2,2016	0,1744	0,0403	0,8151	24,2463
(26, 52)_temperature_50	1,4208	2,6631	0,1684	0,0374	0,7709	23,7524
(104, 52)_temperature_50	1,3885	2,5513	0,1646	0,0358	0,7813	24,0247
(52, 2)_temperature_50	5,4631	31,8213	0,6474	0,4469	0,0002	6,0485
(26, 2)_temperature_50	1,2836	2,2221	0,1521	0,0312	0,8122	26,0102
(26, 52)_temperature_500	1,3771	2,5012	0,1787	0,0421	0,8121	23,7429
(104, 52)_temperature_500	1,3531	2,4315	0,1756	0,0409	0,8126	23,9778
(52, 2)_temperature_500	5,9158	37,6598	0,7675	0,6339	0,0000	3,8040
(26, 2)_temperature_500	1,3843	2,5163	0,1796	0,0424	0,8129	23,8173
(26, 52)_temperature_600	1,3915	2,5519	0,1510	0,0301	0,8324	26,5327
(104, 52)_temperature_600	1,3758	2,4842	0,1493	0,0293	0,8374	26,8408
(52, 2)_temperature_600	1,3649	2,4572	0,1481	0,0289	0,8419	26,9413
(26, 2)_temperature_600	1,3484	2,4236	0,1464	0,0286	0,8383	26,9952
(26, 52)_temperature_700	1,4226	2,6731	0,1548	0,0317	0,8345	25,9144
(104, 52)_temperature_700	1,3880	2,5629	0,1511	0,0304	0,8392	26,2836
(52, 2)_temperature_700	1,3788	2,5478	0,1501	0,0302	0,8422	26,2873
(26, 2)_temperature_700	1,3655	2,5135	0,1486	0,0298	0,8418	26,3826
(26, 52)_temperature_850	1,5249	3,0229	0,1607	0,0336	0,8105	25,8042
(104, 52)_temperature_850	1,4850	2,8732	0,1565	0,0319	0,8199	26,2645
(52, 2)_temperature_850	7,3345	57,1739	0,7730	0,6351	0,0001	3,8339
(26, 2)_temperature_850	7,3356	57,1962	0,7731	0,6354	0,0001	3,8286
(26, 52)_temperature_925	1,4749	2,8592	0,1540	0,0312	0,8375	26,1606
(104, 52)_temperature_925	1,4377	2,7218	0,1501	0,0297	0,8468	26,6142
(52, 2)_temperature_925	1,4006	2,6266	0,1462	0,0286	0,8608	26,7115
(26, 2)_temperature_925	1,4216	2,6612	0,1484	0,0290	0,8562	26,8135

(input frames, forecast) Parameter name	MAE	MSE	MAE normalized	MSE normalized	SSIM	PSNR
(26, 52)_potential_vorticity_100	0,0012	0,0000018	0,1369	0,0236	0,8121	29,3306
(104, 52)_potential_vorticity_100	0,0011	0,0000016	0,1277	0,0209	0,8197	29,8562
(52, 2)_potential_vorticity_100	0,0011	0,0000015	0,1227	0,0195	0,8287	30,8561
(26, 2)_potential_vorticity_100	0,0011	0,0000015	0,1253	0,0203	0,8182	30,4912
(26, 52)_potential_vorticity_1000	0,0010	0,0000018	0,0520	0,0045	0,9568	36,4601
(104, 52)_potential_vorticity_1000	0,0010	0,0000017	0,0507	0,0043	0,9579	36,5269
(52, 2)_potential_vorticity_1000	0,0017	0,0000034	0,0845	0,0085	0,9600	36,0066
(26, 2)_potential_vorticity_1000	0,0015	0,0000031	0,0732	0,0078	0,9575	34,4266
(26, 52)_potential_vorticity_150	0,0010	0,0000013	0,1453	0,0284	0,7410	27,4734
(104, 52)_potential_vorticity_150	0,0010	0,0000013	0,1436	0,0278	0,7482	27,5713
(52, 2)_potential_vorticity_150	0,0010	0,0000012	0,1403	0,0266	0,7567	28,0154
(26, 2)_potential_vorticity_150	0,0010	0,0000013	0,1435	0,0272	0,7529	28,0621
(26, 52)_potential_vorticity_200	0,0009	0,0000012	0,1503	0,0325	0,6651	25,8072
(104, 52)_potential_vorticity_200	0,0009	0,0000012	0,1519	0,0330	0,6593	25,6698
(52, 2)_potential_vorticity_200	0,0039	0,0000166	0,6489	0,4517	0,0002	5,9840
(26, 2)_potential_vorticity_200	0,0009	0,0000012	0,1502	0,0322	0,6685	25,7189
(26, 52)_potential_vorticity_250	0,0010	0,0000013	0,1789	0,0433	0,5978	22,7033
(104, 52)_potential_vorticity_250	0,0009	0,0000011	0,1599	0,0364	0,6146	24,1263
(52, 2)_potential_vorticity_250	0,0009	0,0000012	0,1682	0,0380	0,5960	24,2747
(26, 2)_potential_vorticity_250	0,0009	0,0000011	0,1660	0,0373	0,5878	24,3546
(26, 52)_potential_vorticity_300	0,0008	0,0000009	0,1385	0,0276	0,6389	25,8840
(104, 52)_potential_vorticity_300	0,0008	0,0000009	0,1347	0,0268	0,6476	26,0533
(52, 2)_potential_vorticity_300	0,0009	0,0000011	0,1630	0,0335	0,6402	25,4369
(26, 2)_potential_vorticity_300	0,0007	0,0000008	0,1324	0,0261	0,6477	26,2573
(26, 52)_potential_vorticity_400	0,0006	0,0000004	0,1059	0,0149	0,7705	31,3286
(104, 52)_potential_vorticity_400	0,0005	0,0000004	0,0978	0,0134	0,7720	31,7065
(52, 2)_potential_vorticity_400	0,0005	0,0000004	0,0955	0,0130	0,7711	31,7662
(26, 2)_potential_vorticity_400	0,0005	0,0000004	0,0985	0,0135	0,7704	31,7498
(26, 52)_potential_vorticity_50	0,0018	0,0000042	0,1188	0,0183	0,8686	30,5054
(104, 52)_potential_vorticity_50	0,0017	0,0000039	0,1148	0,0170	0,8866	30,8113
(52, 2)_potential_vorticity_50	0,0015	0,0000031	0,1003	0,0134	0,8943	33,2051
(26, 2)_potential_vorticity_50	0,0016	0,0000035	0,1069	0,0155	0,8895	31,5246
(26, 52)_potential_vorticity_500	0,0004	0,0000003	0,1086	0,0153	0,7430	32,0365
(104, 52)_potential_vorticity_500	0,0004	0,0000002	0,1050	0,0145	0,7441	32,2661
(52, 2)_potential_vorticity_500	0,0004	0,0000003	0,1093	0,0155	0,7441	31,8443
(26, 2)_potential_vorticity_500	0,0004	0,0000003	0,1077	0,0152	0,7416	31,9108
(26, 52)_potential_vorticity_600	0,0007	0,0000006	0,0359	0,0018	0,9878	42,5838
(104, 52)_potential_vorticity_600	0,0007	0,0000006	0,0371	0,0019	0,9883	42,8646
(52, 2)_potential_vorticity_600	0,0132	0,0001828	0,7184	0,5392	0,0003	4,9883
(26, 2)_potential_vorticity_600	0,0132	0,0001828	0,7184	0,5392	0,0003	4,9884
(26, 52)_potential_vorticity_700	0,0013	0,0000021	0,0659	0,0051	0,9812	38,6071
(104, 52)_potential_vorticity_700	0,0011	0,0000015	0,0541	0,0037	0,9817	39,0274
(52, 2)_potential_vorticity_700	0,0145	0,0002195	0,7226	0,5455	0,0003	4,8934
(26, 2)_potential_vorticity_700	0,0145	0,0002195	0,7226	0,5455	0,0003	4,8939
(26, 52)_potential_vorticity_850	0,0014	0,0000023	0,0685	0,0057	0,9717	37,3260
(104, 52)_potential_vorticity_850	0,0014	0,0000023	0,0681	0,0057	0,9720	37,4603
(52, 2)_potential_vorticity_850	0,0013	0,0000023	0,0648	0,0056	0,9738	37,9106
(26, 2)_potential_vorticity_850	0,0011	0,0000018	0,0567	0,0045	0,9722	38,0138
(26, 52)_potential_vorticity_925	0,0013	0,0000022	0,0652	0,0054	0,9644	37,0040
(104, 52)_potential_vorticity_925	0,0010	0,0000015	0,0480	0,0037	0,9652	37,3322
(52, 2)_potential_vorticity_925	0,0011	0,0000019	0,0572	0,0047	0,9670	37,6992
(26, 2)_potential_vorticity_925	0,0015	0,0000028	0,0735	0,0069	0,9657	35,1537

(input frames, forecast) Parameter name	MAE	MSE	MAE normalized	MSE normalized	SSIM	PSNR
(26, 52)_specific_humidity_100	0,0008	0,0000008	0,2166	0,0540	0,6482	23,6911
(104, 52)_specific_humidity_100	0,0007	0,0000005	0,1695	0,0353	0,6724	26,8797
(52, 2)_specific_humidity_100	0,0007	0,0000005	0,1716	0,0353	0,6643	27,0228
(26, 2)_specific_humidity_100	0,0006	0,0000005	0,1574	0,0301	0,6856	28,0432
(26, 52)_specific_humidity_1000	0,0297	0,0011564	0,1848	0,0447	0,7929	24,4903
(104, 52)_specific_humidity_1000	0,0290	0,0011141	0,1806	0,0431	0,8029	24,7363
(52, 2)_specific_humidity_1000	0,0291	0,0011223	0,1809	0,0434	0,8016	24,5691
(26, 2)_specific_humidity_1000	0,0287	0,0010849	0,1783	0,0420	0,8105	24,9453
(26, 52)_specific_humidity_150	0,0018	0,0000043	0,2279	0,0673	0,4494	20,5546
(104, 52)_specific_humidity_150	0,0017	0,0000037	0,2163	0,0584	0,5627	21,7363
(52, 2)_specific_humidity_150	0,0019	0,0000049	0,2434	0,0777	0,3655	19,5108
(26, 2)_specific_humidity_150	0,0016	0,0000035	0,2065	0,0558	0,4790	22,0527
(26, 52)_specific_humidity_200	0,0031	0,0000137	0,1705	0,0417	0,5130	24,2282
(104, 52)_specific_humidity_200	0,0031	0,0000131	0,1697	0,0399	0,5407	25,0924
(52, 2)_specific_humidity_200	0,0031	0,0000140	0,1718	0,0426	0,5271	24,0733
(26, 2)_specific_humidity_200	0,0046	0,0000293	0,2544	0,0891	0,0363	18,2987
(26, 52)_specific_humidity_250	0,0056	0,0000458	0,1715	0,0428	0,4781	24,1071
(104, 52)_specific_humidity_250	0,0056	0,0000444	0,1698	0,0415	0,4956	24,5326
(52, 2)_specific_humidity_250	0,0059	0,0000532	0,1816	0,0497	0,4092	22,4612
(26, 2)_specific_humidity_250	0,0056	0,0000463	0,1718	0,0433	0,4762	23,9897
(26, 52)_specific_humidity_300	0,0082	0,0000976	0,1747	0,0441	0,4531	23,8328
(104, 52)_specific_humidity_300	0,0083	0,0000989	0,1763	0,0447	0,4507	23,8559
(52, 2)_specific_humidity_300	0,0088	0,0001145	0,1865	0,0518	0,3891	22,2107
(26, 2)_specific_humidity_300	0,0084	0,0001003	0,1780	0,0454	0,4559	23,6453
(26, 52)_specific_humidity_400	0,0144	0,0002908	0,2002	0,0561	0,3924	22,0153
(104, 52)_specific_humidity_400	0,0144	0,0002925	0,2004	0,0565	0,3921	21,9667
(52, 2)_specific_humidity_400	0,0184	0,0004880	0,2551	0,0942	0,0177	17,1572
(26, 2)_specific_humidity_400	0,0143	0,0002893	0,1989	0,0559	0,3950	21,9232
(26, 52)_specific_humidity_50	0,0004	0,0000002	0,2157	0,0562	0,5638	22,1808
(104, 52)_specific_humidity_50	0,0004	0,0000002	0,2090	0,0546	0,5957	22,0370
(52, 2)_specific_humidity_50	0,0003	0,0000001	0,1450	0,0309	0,7009	25,2099
(26, 2)_specific_humidity_50	0,0003	0,0000001	0,1381	0,0298	0,7192	24,7468
(26, 52)_specific_humidity_500	0,0209	0,0005973	0,2316	0,0733	0,3766	20,0021
(104, 52)_specific_humidity_500	0,0208	0,0005946	0,2306	0,0729	0,3750	20,0068
(52, 2)_specific_humidity_500	0,0271	0,0010580	0,3006	0,1297	0,0064	14,6026
(26, 2)_specific_humidity_500	0,0208	0,0005936	0,2304	0,0728	0,3814	19,9734
(26, 52)_specific_humidity_600	0,0262	0,0009151	0,2430	0,0785	0,3846	19,6976
(104, 52)_specific_humidity_600	0,0260	0,0009047	0,2410	0,0776	0,3840	19,7380
(52, 2)_specific_humidity_600	0,0273	0,0010030	0,2526	0,0861	0,3495	18,6925
(26, 2)_specific_humidity_600	0,0261	0,0009125	0,2419	0,0783	0,3863	19,6586
(26, 52)_specific_humidity_700	0,0305	0,0012279	0,2557	0,0861	0,4058	19,0210
(104, 52)_specific_humidity_700	0,0303	0,0012153	0,2540	0,0852	0,4108	19,0761
(52, 2)_specific_humidity_700	0,0313	0,0013076	0,2619	0,0917	0,3721	18,3067
(26, 2)_specific_humidity_700	0,0303	0,0012161	0,2539	0,0853	0,4107	19,0440
(26, 52)_specific_humidity_850	0,0315	0,0013152	0,2295	0,0696	0,5619	20,7016
(104, 52)_specific_humidity_850	0,0311	0,0012833	0,2261	0,0679	0,5712	20,8793
(52, 2)_specific_humidity_850	0,0318	0,0013461	0,2314	0,0713	0,5516	20,4313
(26, 2)_specific_humidity_850	0,0640	0,0051624	0,4654	0,2733	0,0008	9,8351
(26, 52)_specific_humidity_925	0,0294	0,0011427	0,2034	0,0547	0,7282	22,5877
(104, 52)_specific_humidity_925	0,0291	0,0011213	0,2014	0,0537	0,7396	22,7595
(52, 2)_specific_humidity_925	0,0291	0,0011289	0,2013	0,0540	0,7338	22,5631
(26, 2)_specific_humidity_925	0,0760	0,0071378	0,5258	0,3416	0,0007	8,1838