|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Bicubic interpolation | SRGAN-1  (50 epochs) | | SRGAN-1  (100 epochs) | | SRGAN-1  (150 epochs) | | SRGAN-1  (200 epochs) | | SRGAN-1  (250 epochs) | | SRGAN-1  (300 epochs) | | SRGAN-1  (350 epochs) | | SRGAN-1  (400 epochs) | |
| RMSE (wind, m/s) | 1,435 | 1,595 | 1,589 | 1,426 | 1,449 | 1,386 | 1,386 | 1,371 | 1,391 | 1,343 | 1,371 | 1,328 | 1,340 | 1,321 | 1,326 | 1,329 | 1,355 |
| RMSE (SLP, hPa) | 0,576 | 0,993 | 0,887 | 0,758 | 0,729 | 0,642 | 0,621 | 0,671 | 0,754 | 0,608 | 0,721 | 0,579 | 0,579 | 0,559 | 0,548 | 0,608 | 0,609 |
| RMSE-95 (m/s) | 1,898 | 2,555 | 2,621 | 2,194 | 2,298 | 2,106 | 2,189 | 2,079 | 2,188 | 2,006 | 2,144 | 1,982 | 2,087 | 1,965 | 2,061 | 1,980 | 2,096 |
| PSNR | 35,159 | 33,365 | 32,287 | 34,389 | 33,289 | 34,711 | 34,210 | 35,147 | 33,612 | 35,590 | 34,182 | 34,962 | 33,777 | 35,351 | 33,594 | 35,177 | 33,504 |

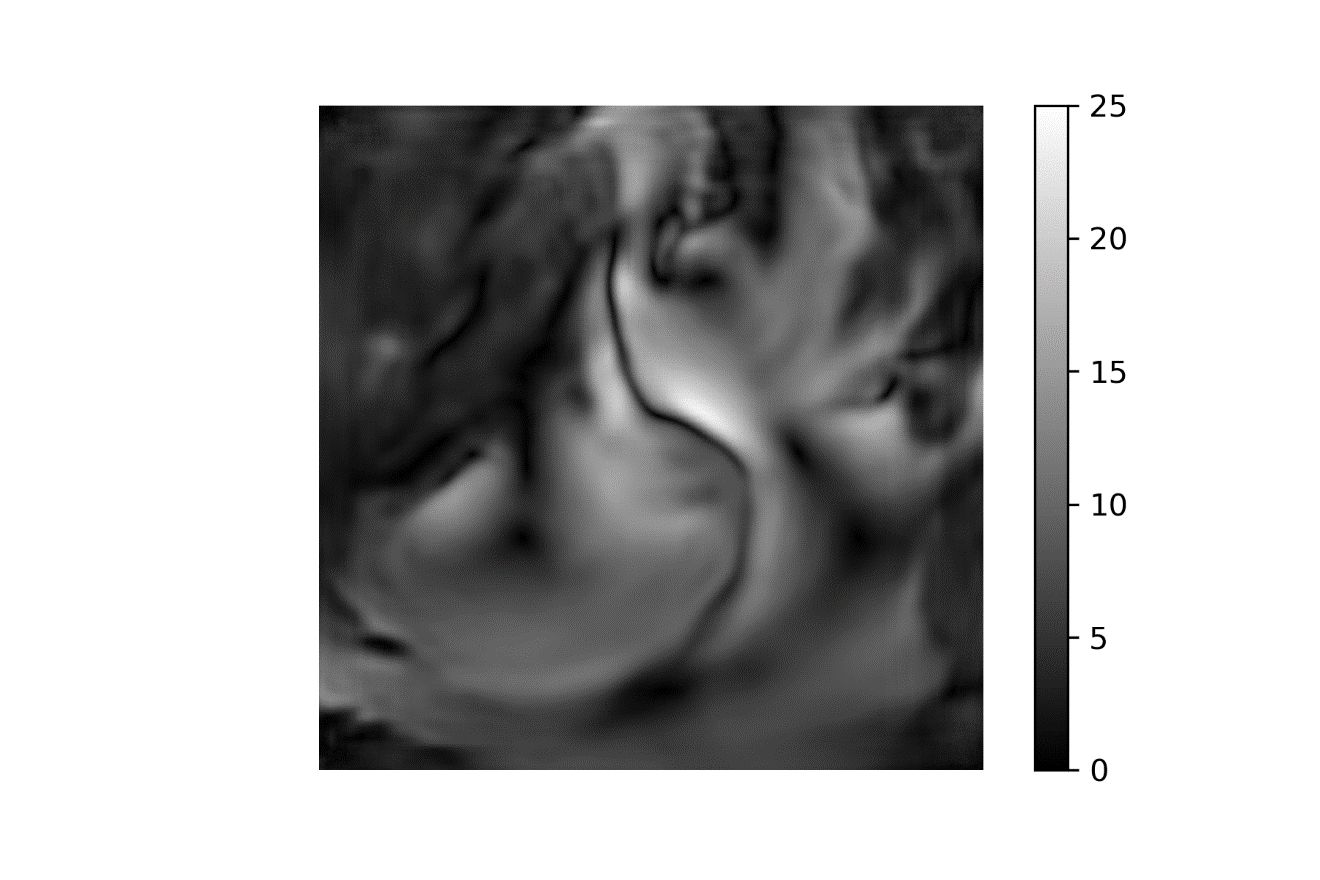
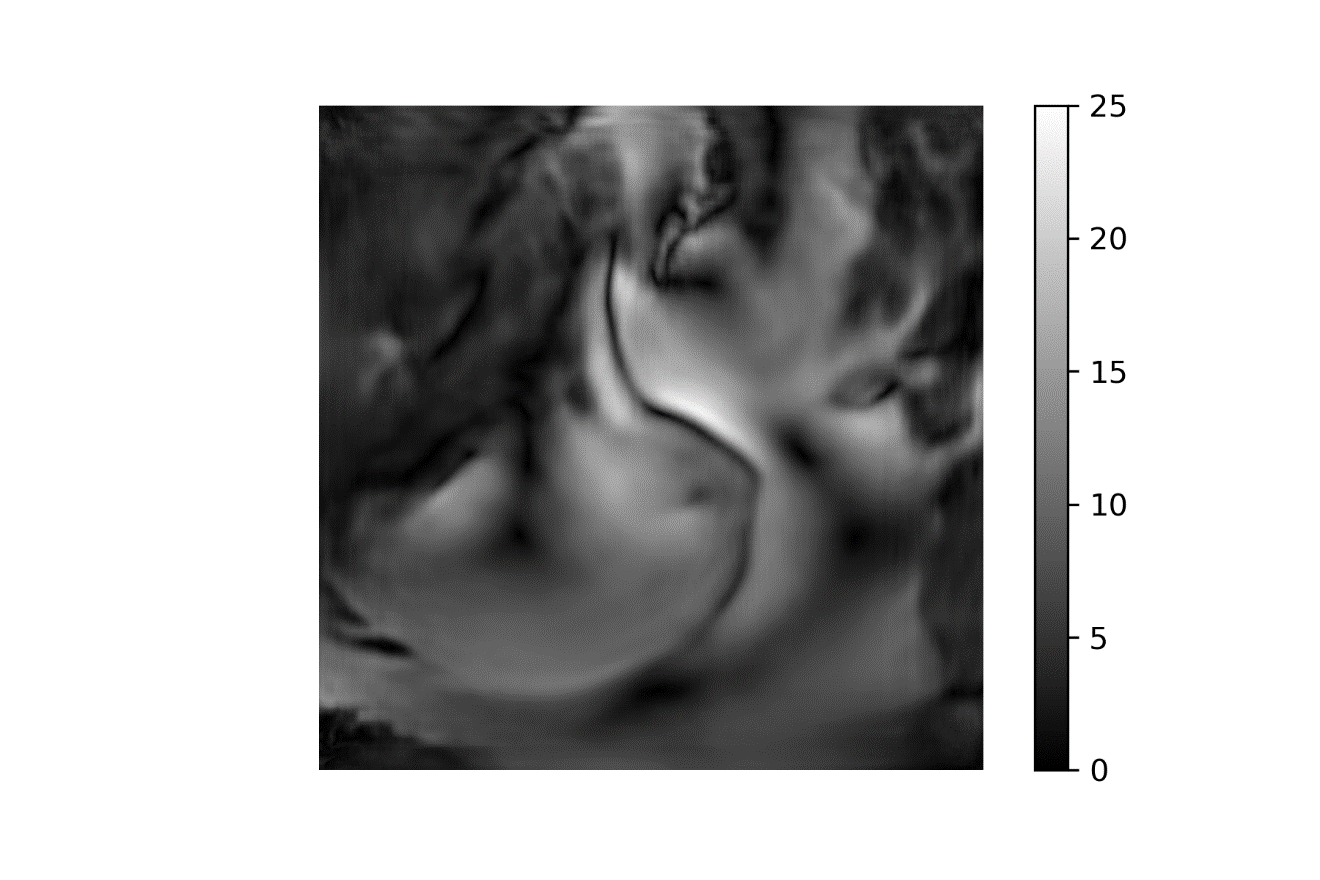
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Bicubic interpolation | CNN  (50 epochs) | | CNN  (100 epochs) | | CNN  (150 epochs) | |  | |  | |  | |  | |
| RMSE (wind, m/s) | 1,435 | 1,520 | 1,517 | 1,410 | 1,442 | 1,369 | 1,374 |  |  |  |  |  |  |  |  |
| RMSE (SLP, hPa) | 0,576 | 0,917 | 0,811 | 0,765 | 0,823 | 0,634 | 0,608 |  |  |  |  |  |  |  |  |
| RMSE-95 (m/s) | 1,898 | 2,391 | 2,466 | 2,155 | 2,183 | 2,081 | 2,163 |  |  |  |  |  |  |  |  |
| PSNR | 35,159 | 34,202 | 32,537 | 34,132 | 34,229 | 34,678 | 33,860 |  |  |  |  |  |  |  |  |

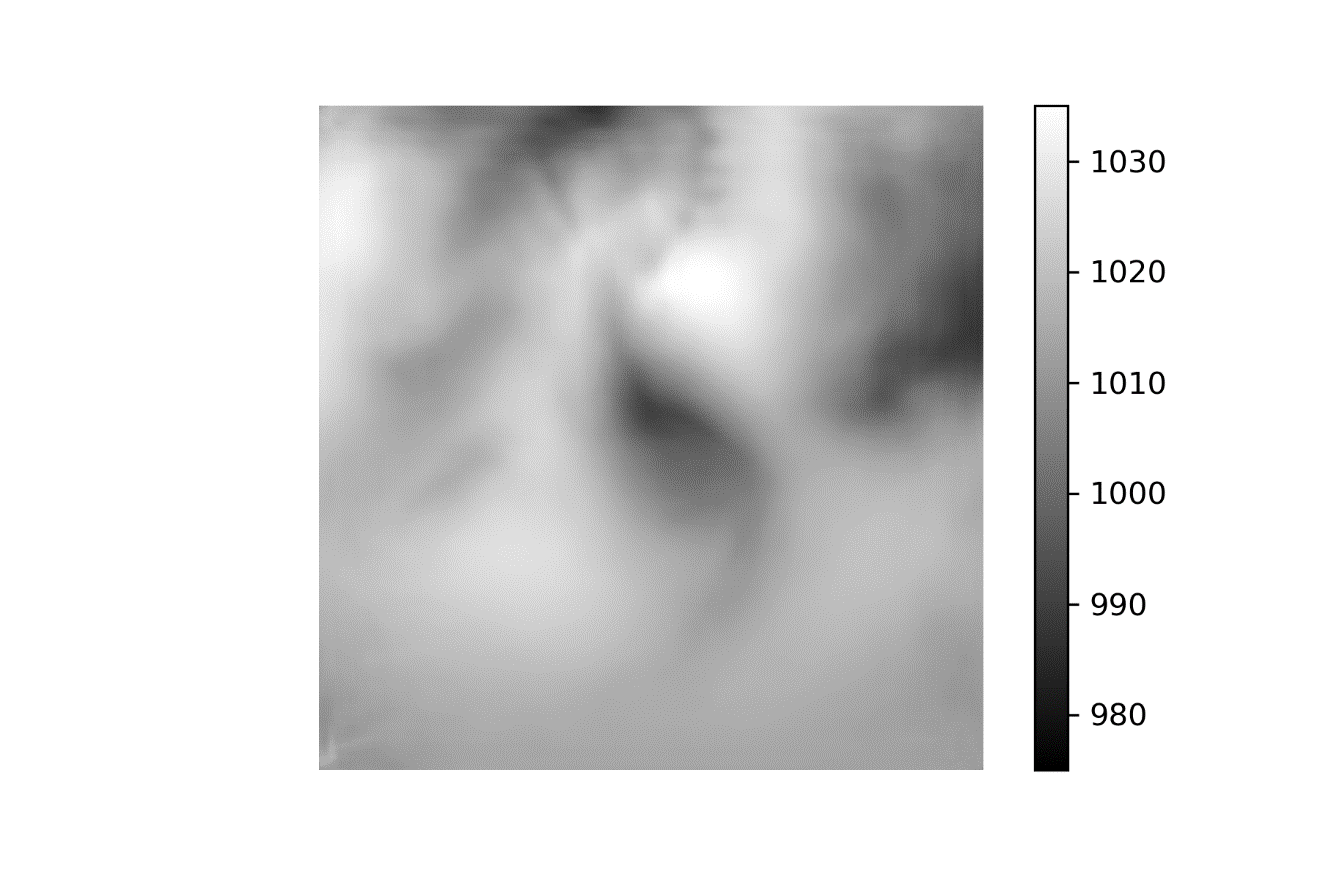
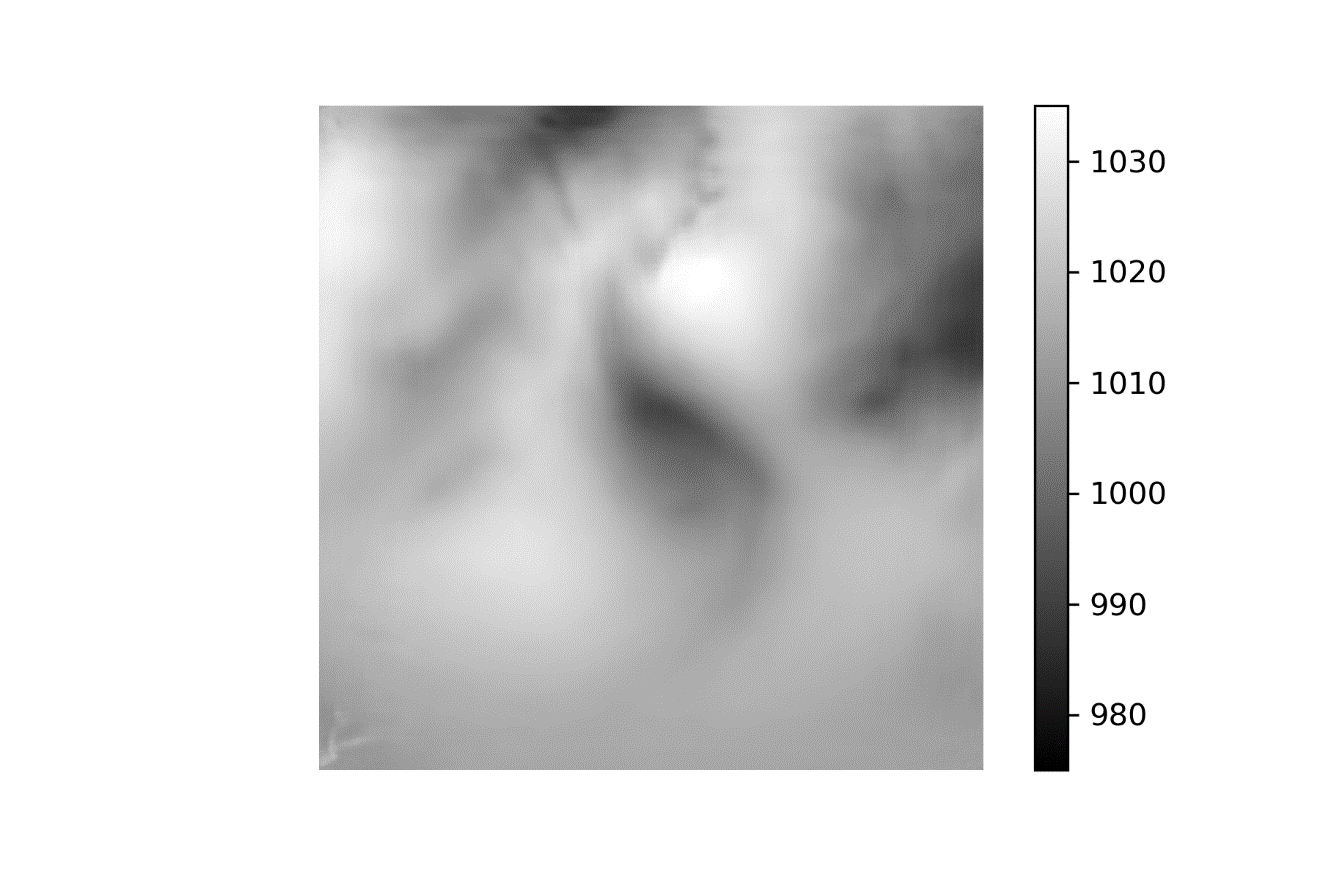
|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Bicubic interpolation | SRGAN-1  (50 epochs) | | CNN  (50 epochs) | | SRGAN-1  (150 epochs) | | CNN  (150 epochs) | | SRGAN-1  (350 epochs) | |
| RMSE (wind, m/s) | 1,435 | 1,595 | 1,589 | 1,520 | 1,517 | 1,386 | 1,386 | 1,369 | 1,374 | 1,321 | 1,326 |
| RMSE (SLP, hPa) | 0,576 | 0,993 | 0,887 | 0,917 | 0,811 | 0,642 | 0,621 | 0,634 | 0,608 | 0,559 | 0,548 |
| RMSE-95 (m/s) | 1,898 | 2,555 | 2,621 | 2,391 | 2,466 | 2,106 | 2,189 | 2,081 | 2,163 | 1,965 | 2,061 |
| PSNR | 35,159 | 33,365 | 32,287 | 34,202 | 32,537 | 34,711 | 34,210 | 34,678 | 33,860 | 35,351 | 33,594 |

SRGAN-1 vs CNN

1 Jan 2010

50 epochs

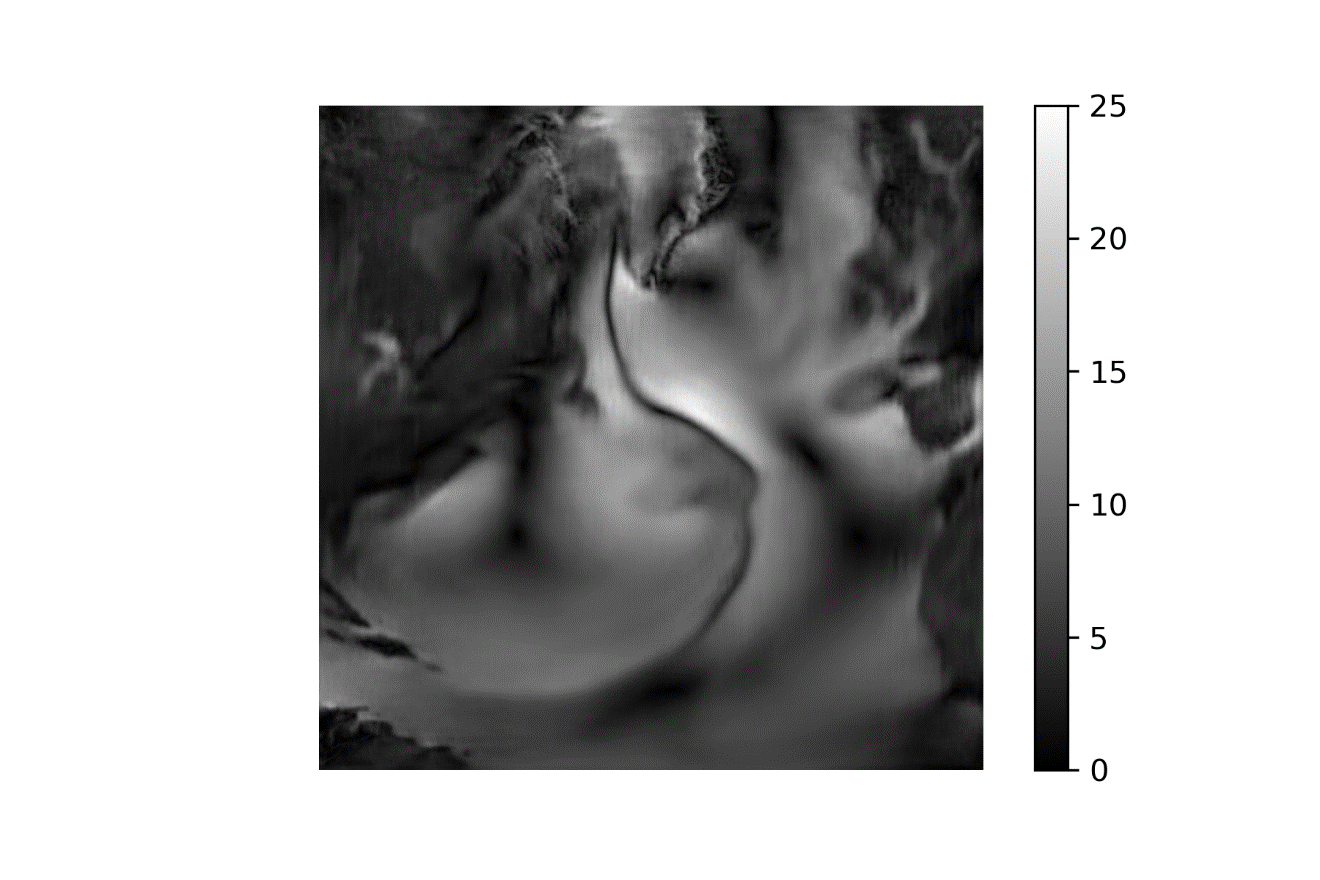
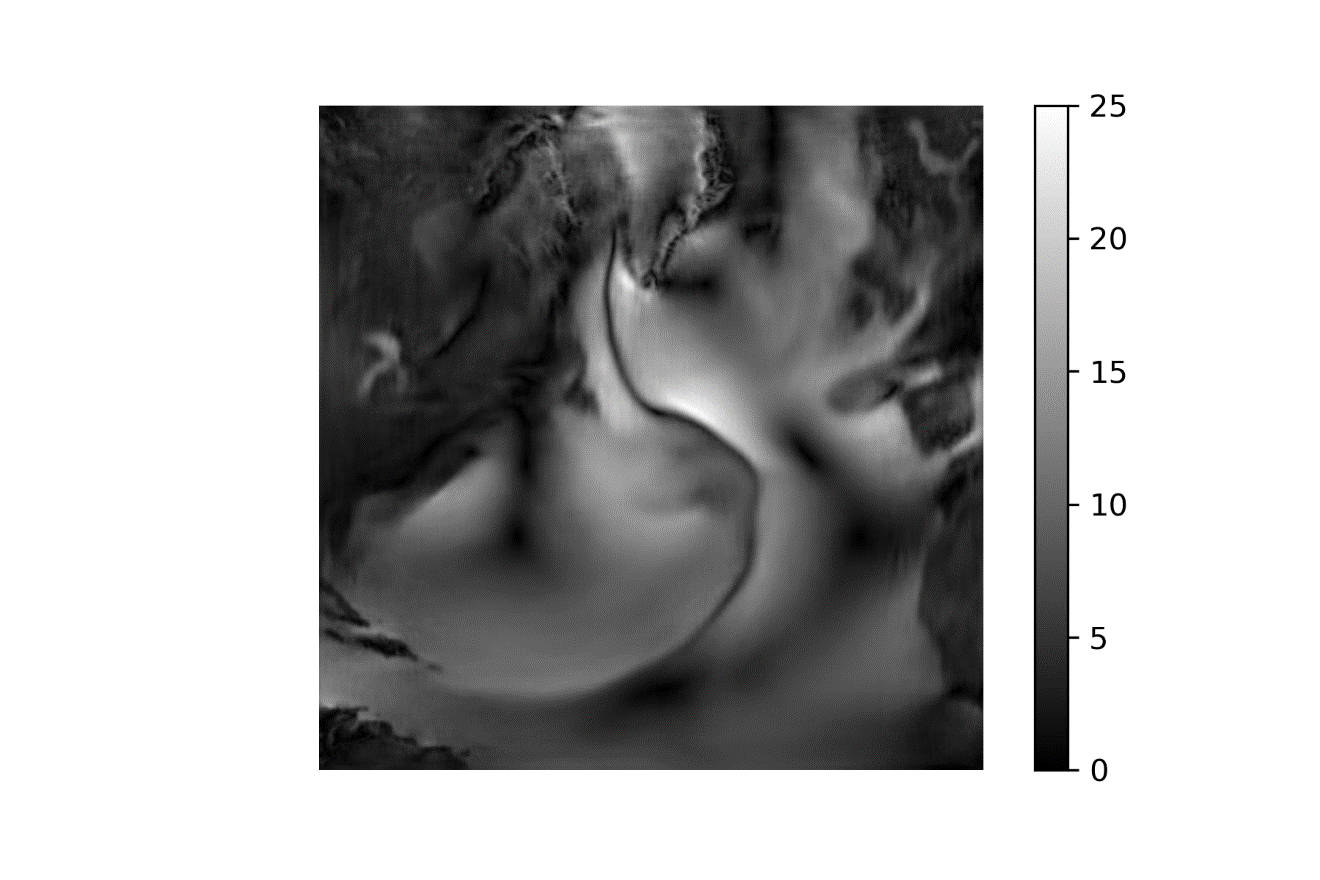
 

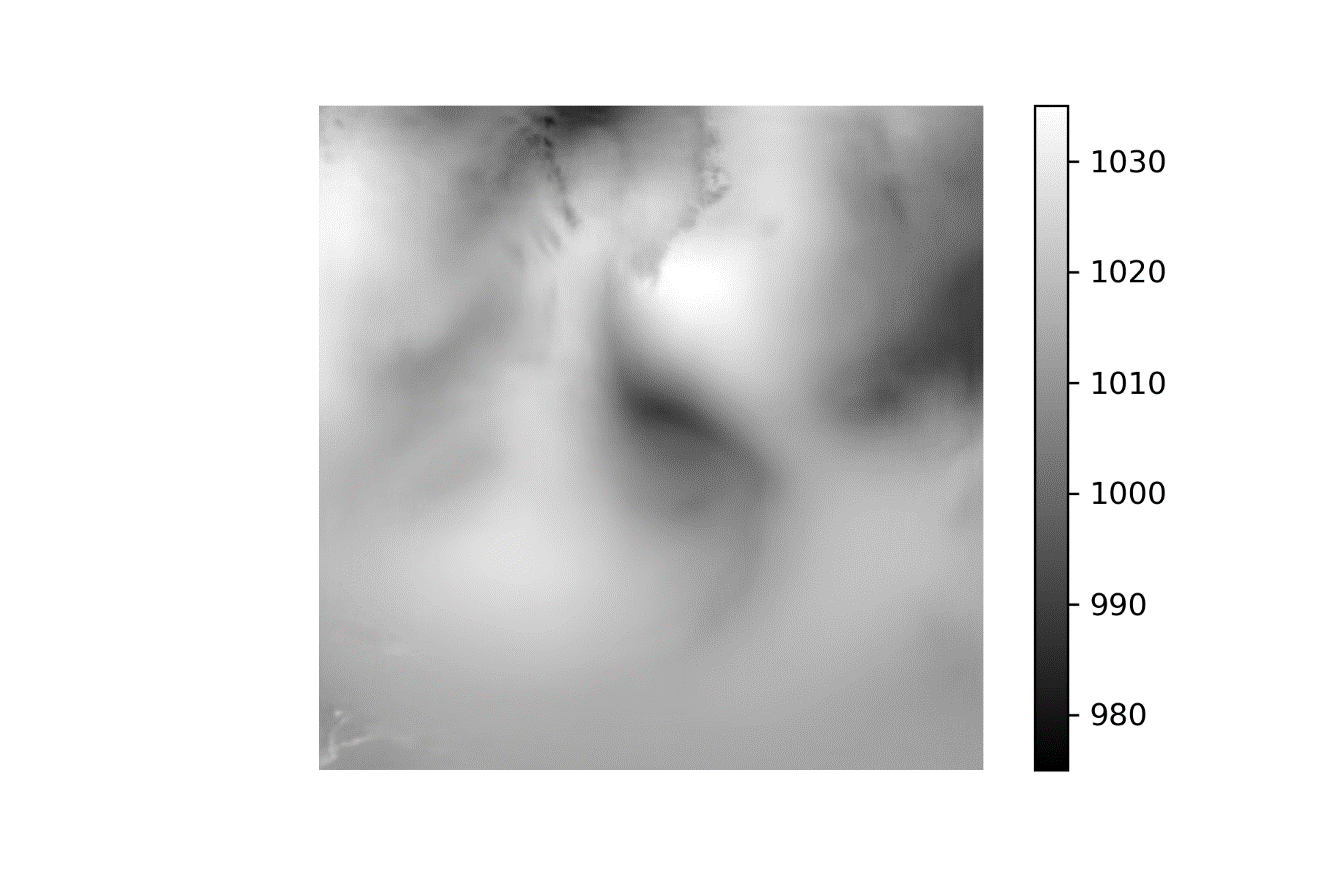
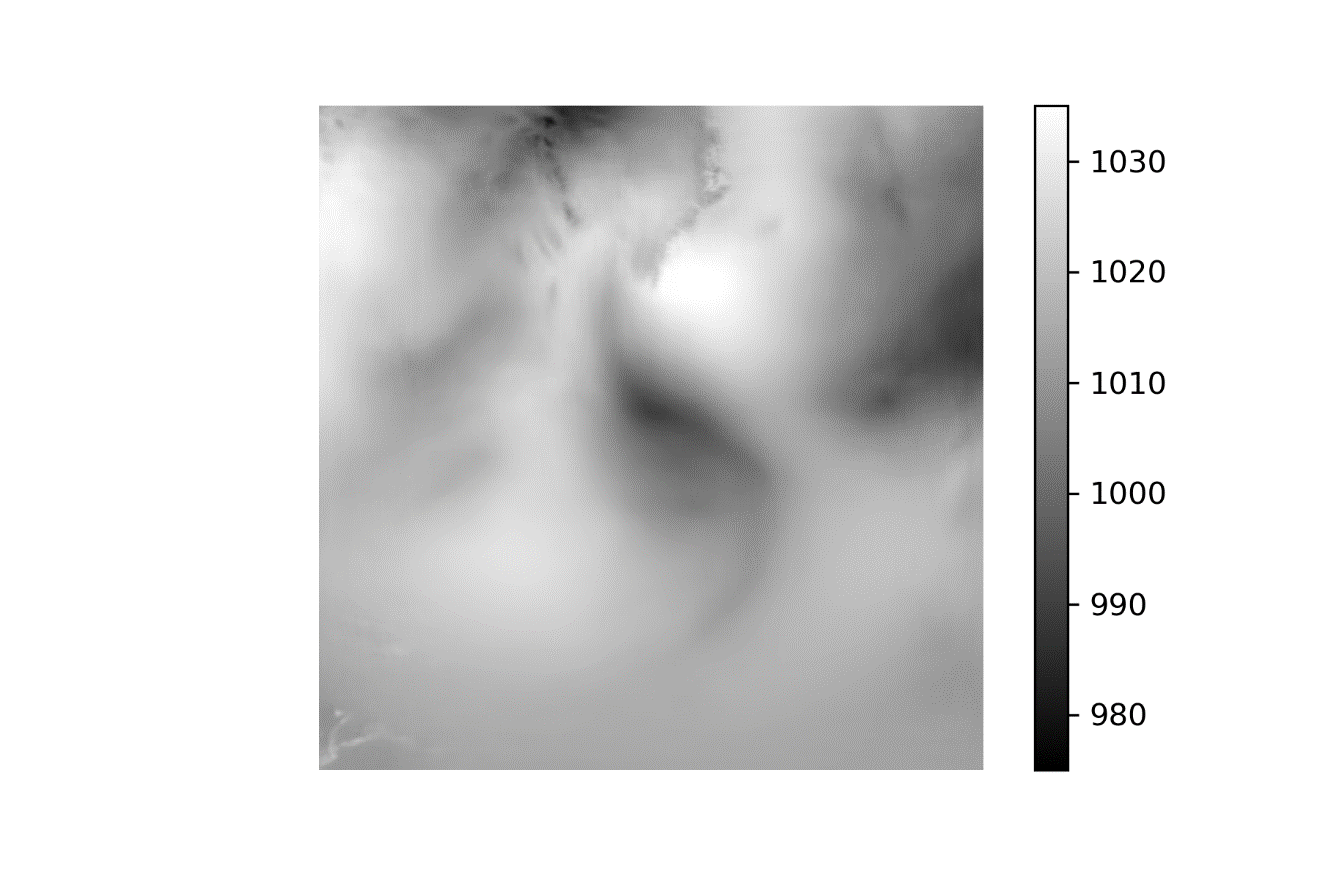
 

SRGAN-1 vs CNN

1 Jan 2010

150 epochs

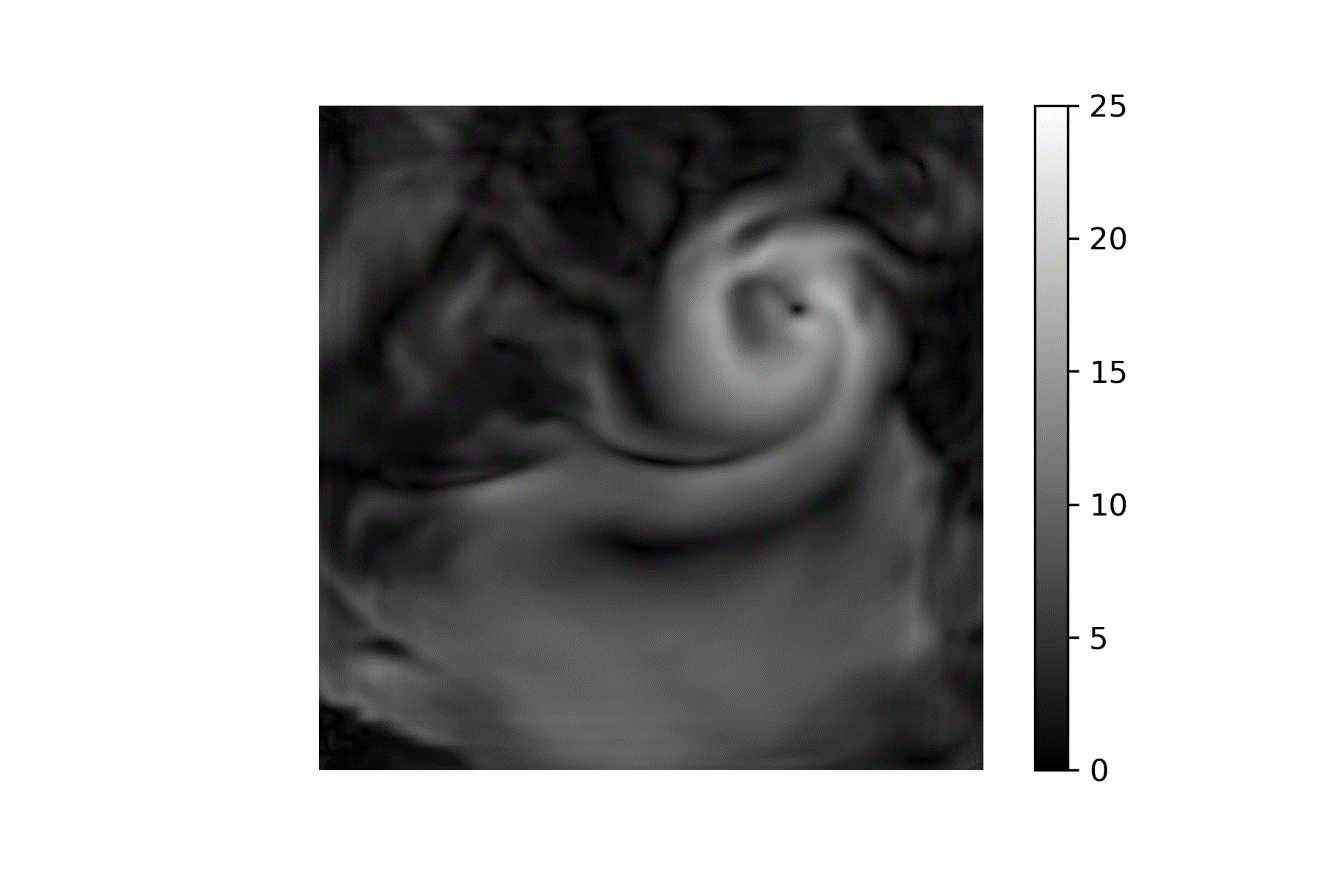
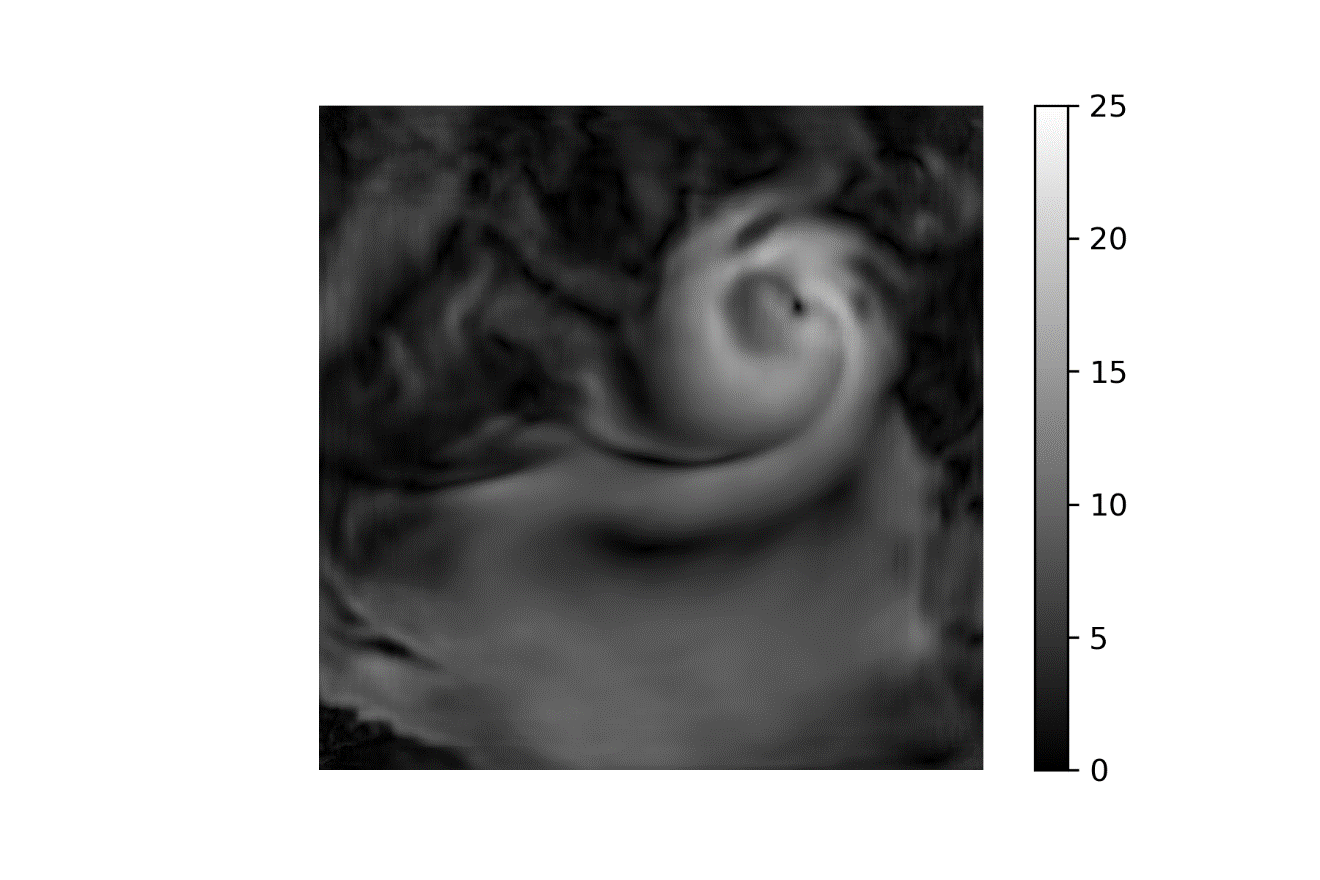
 

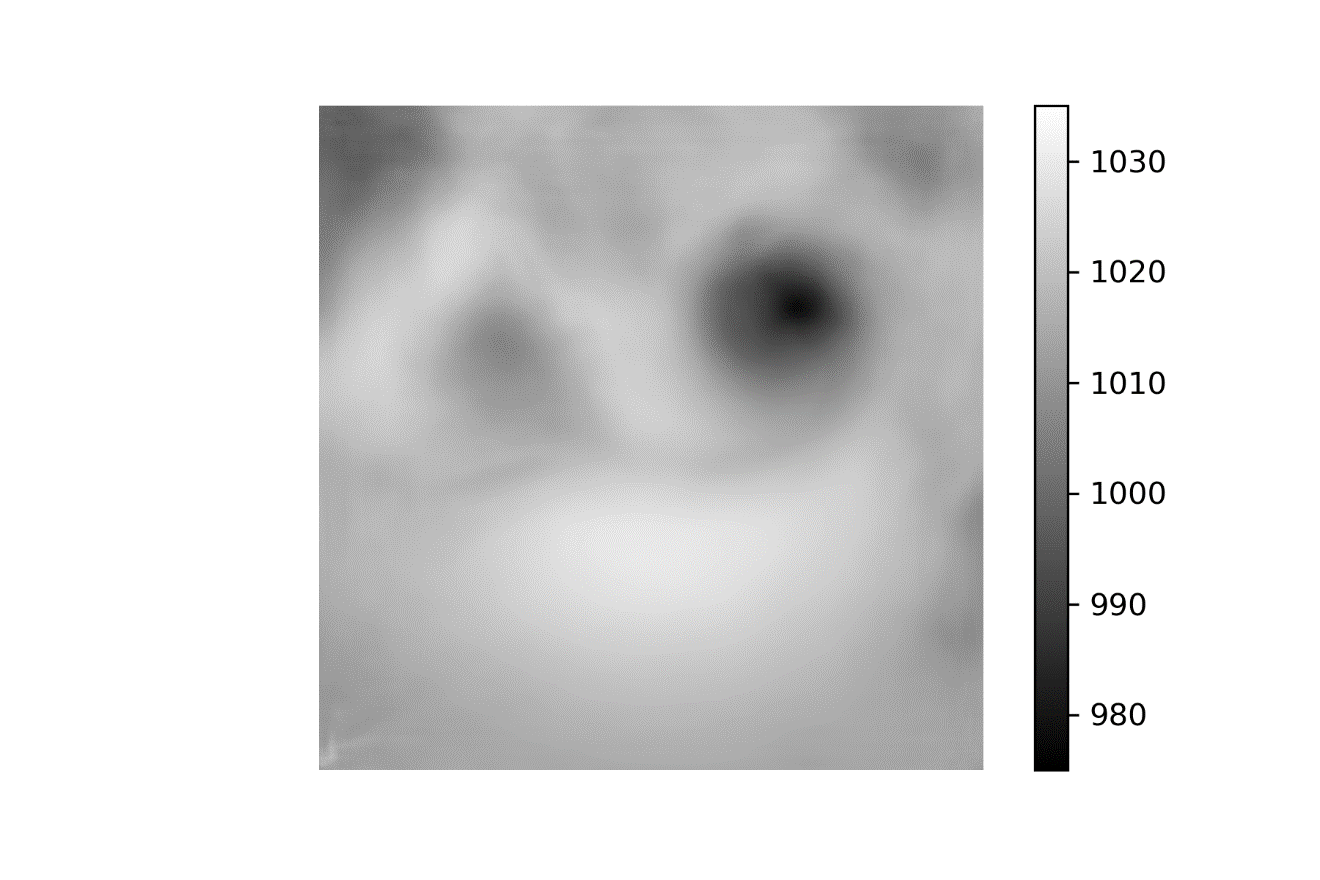
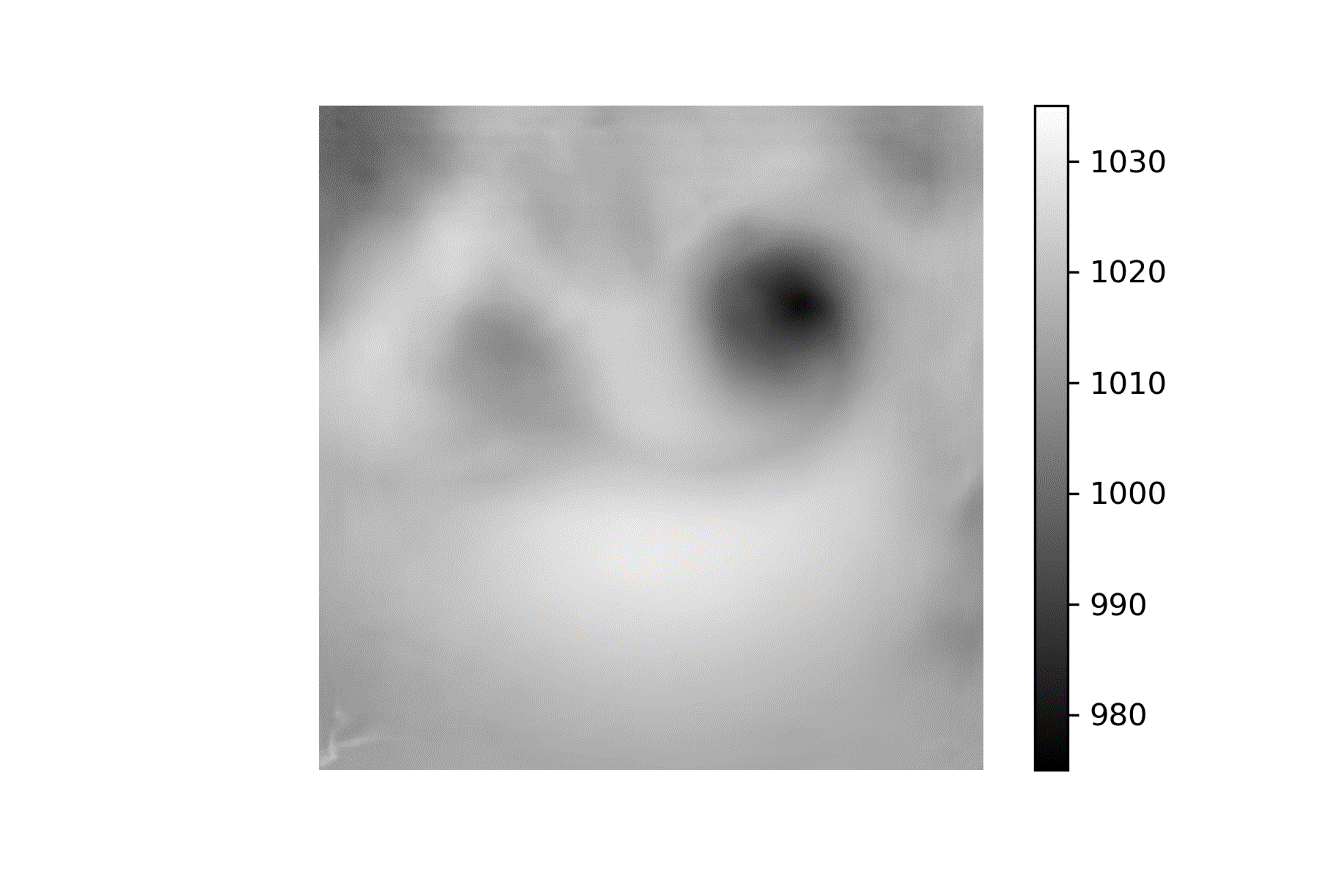
 

SRGAN-1 vs CNN

1 Jul 2010

50 epochs

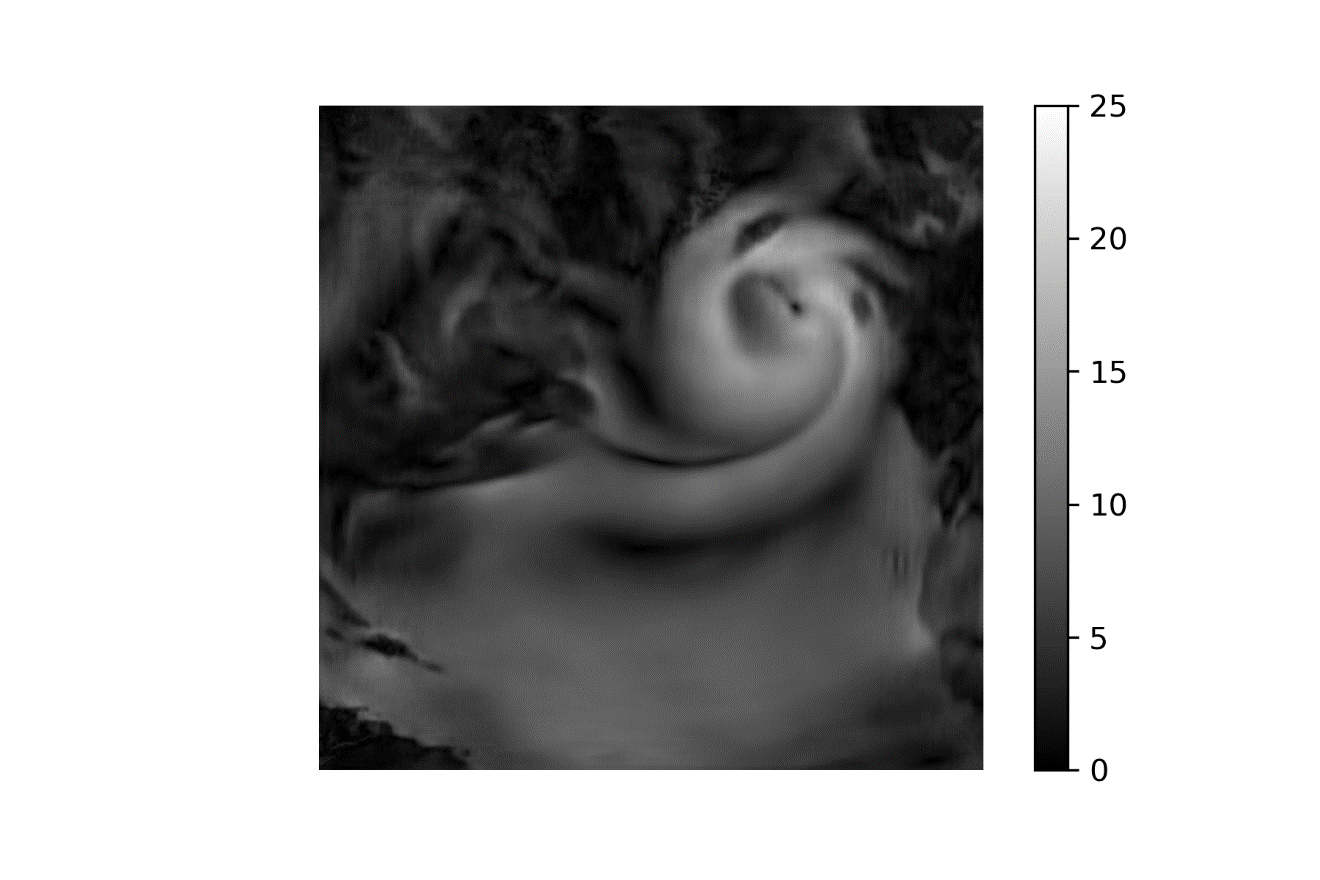
 

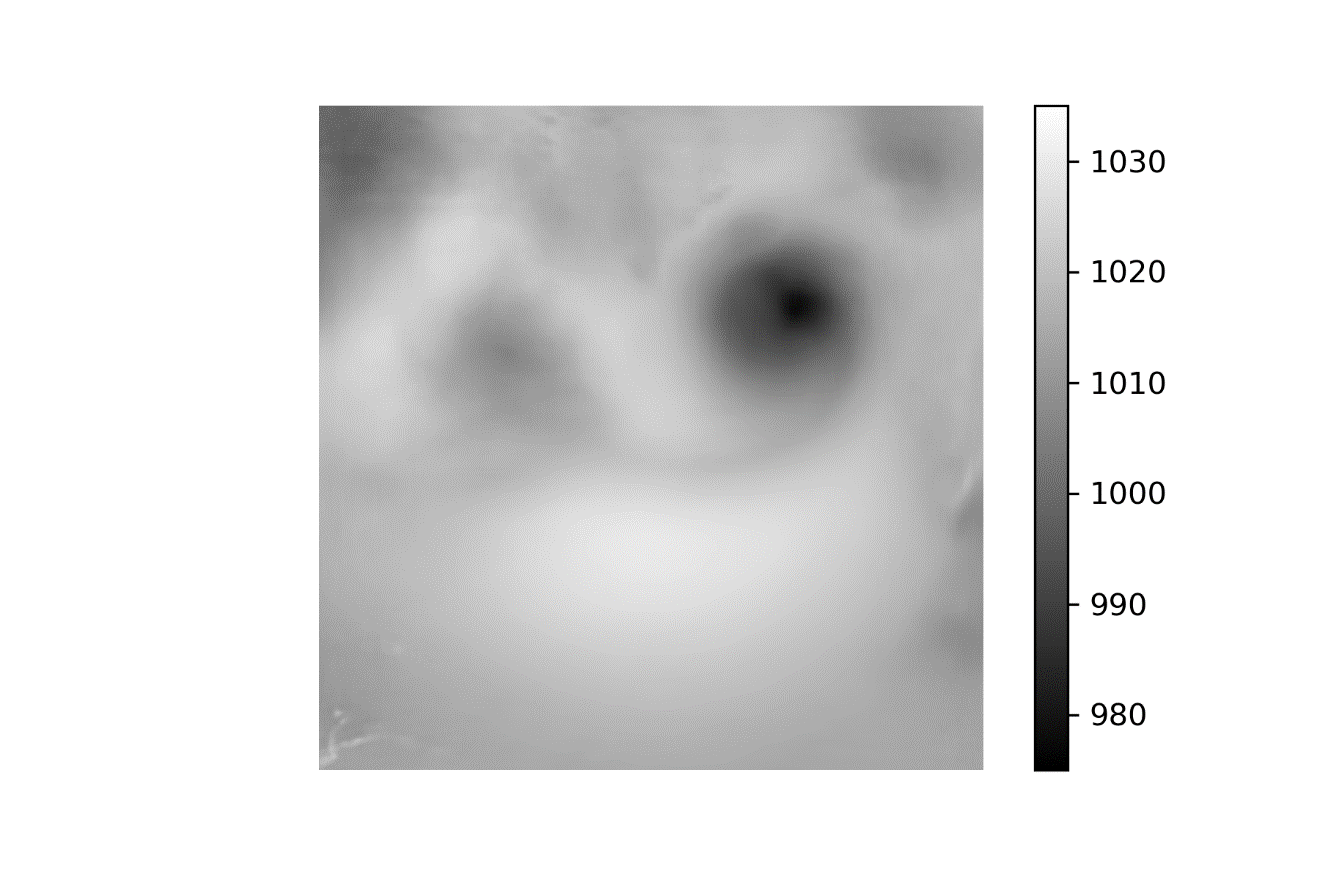
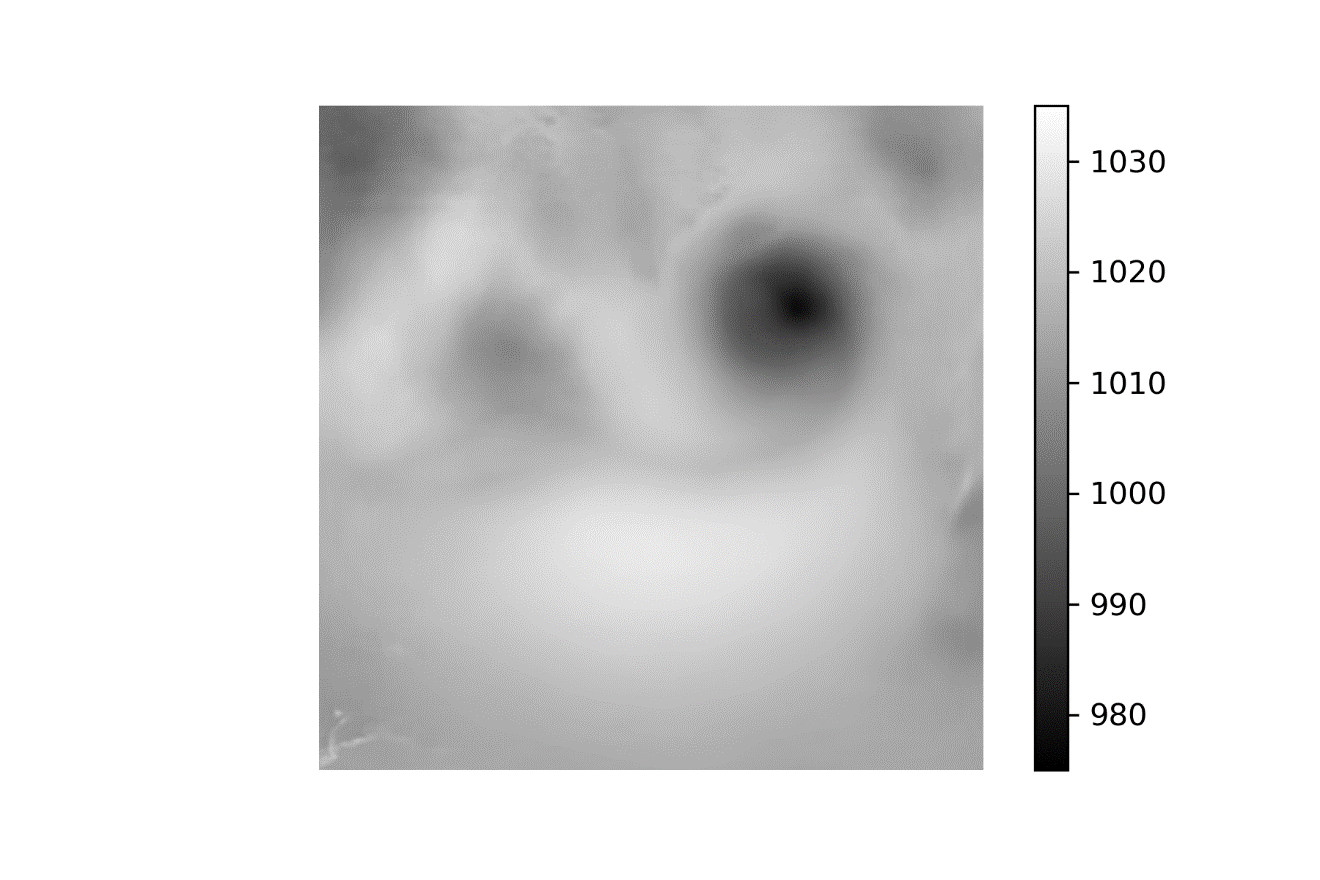
 

SRGAN-1 vs CNN

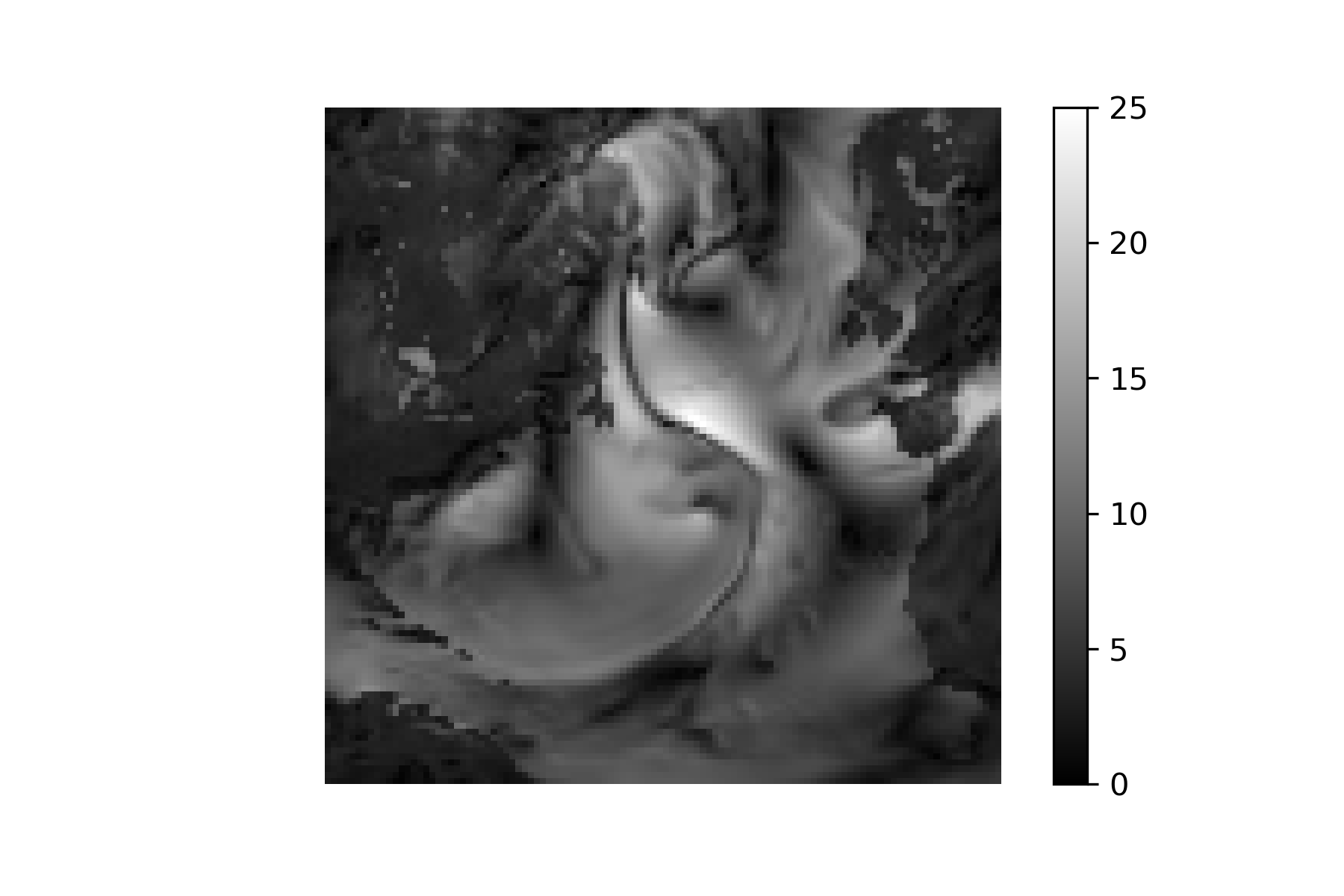
1 Jul 2010

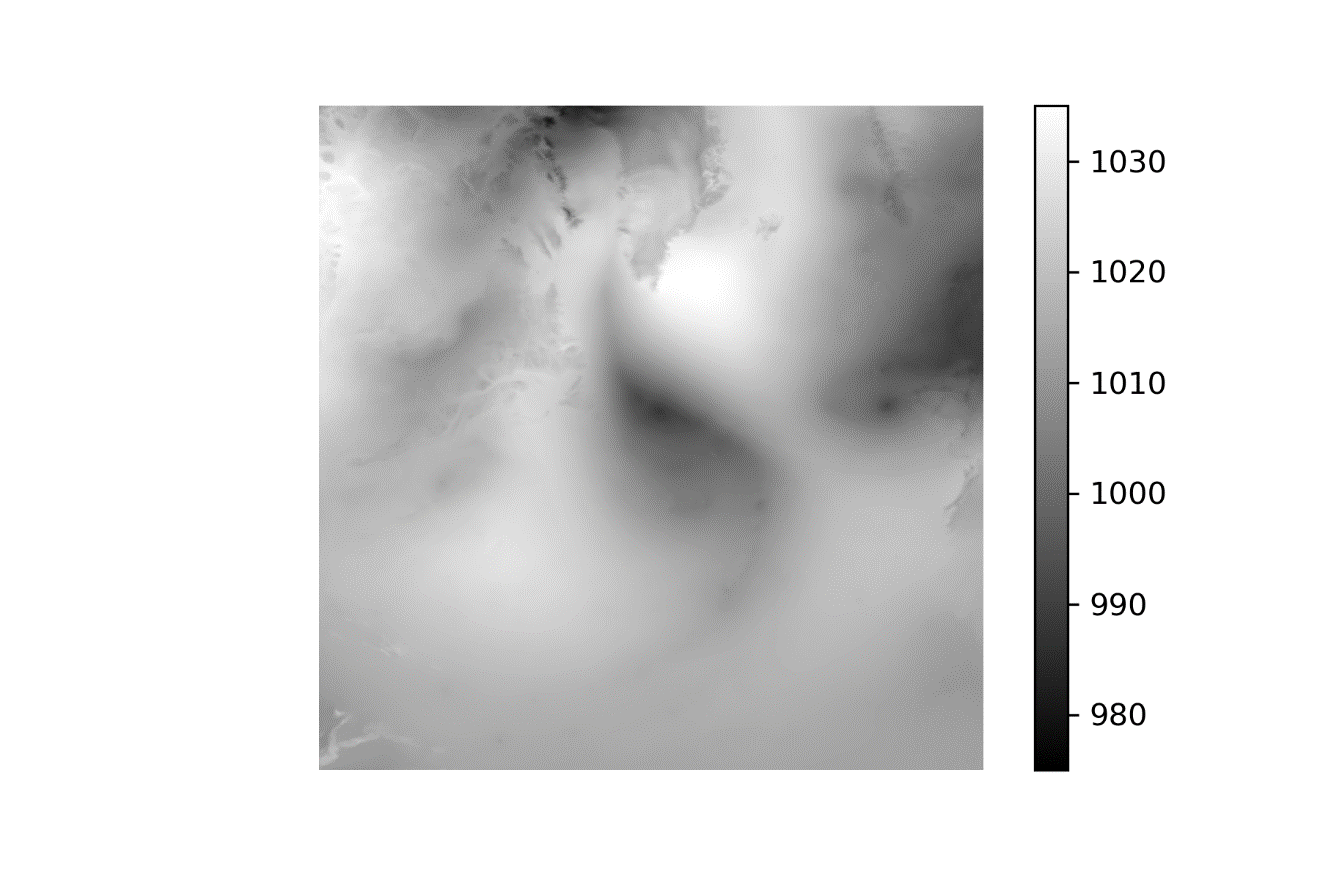
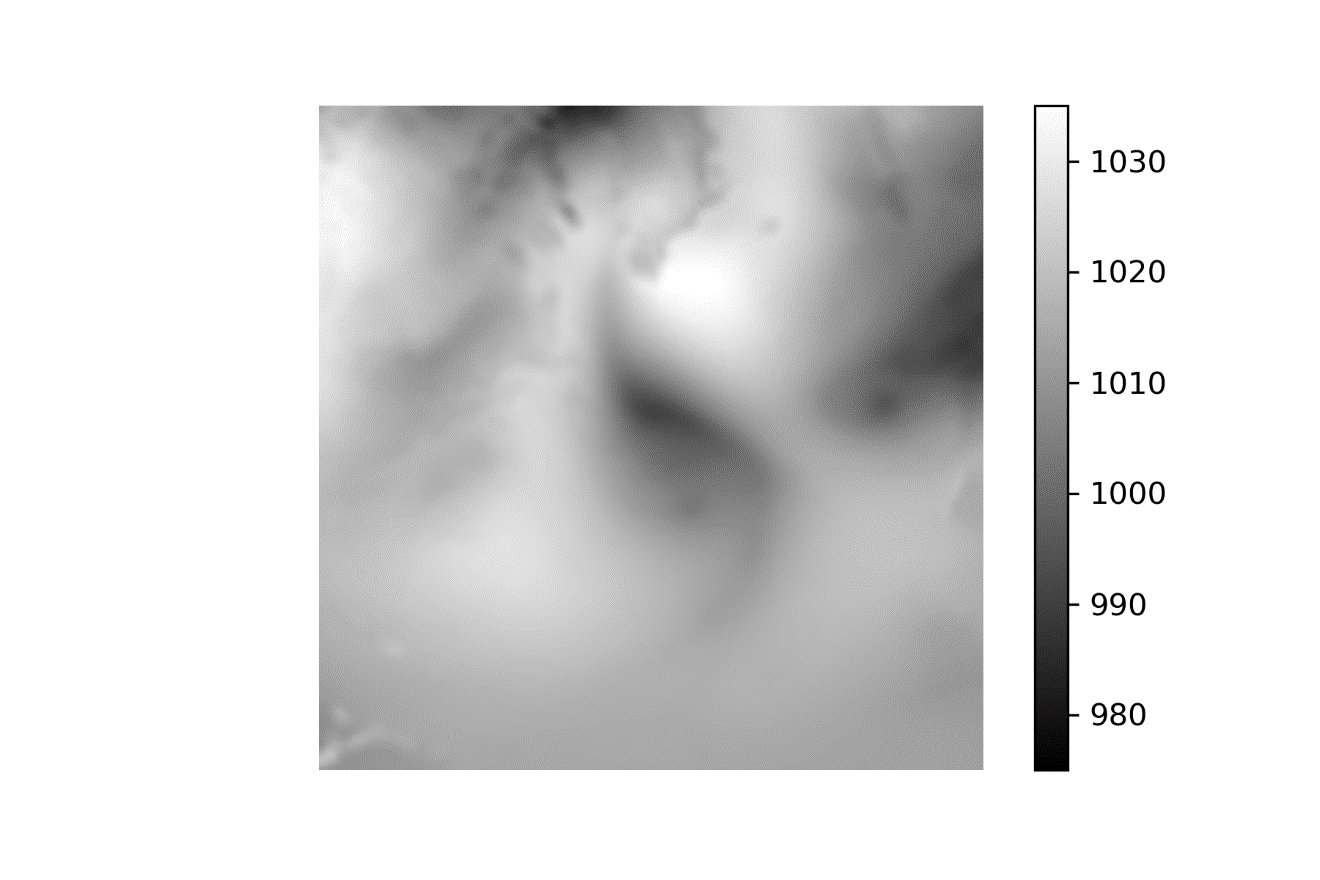
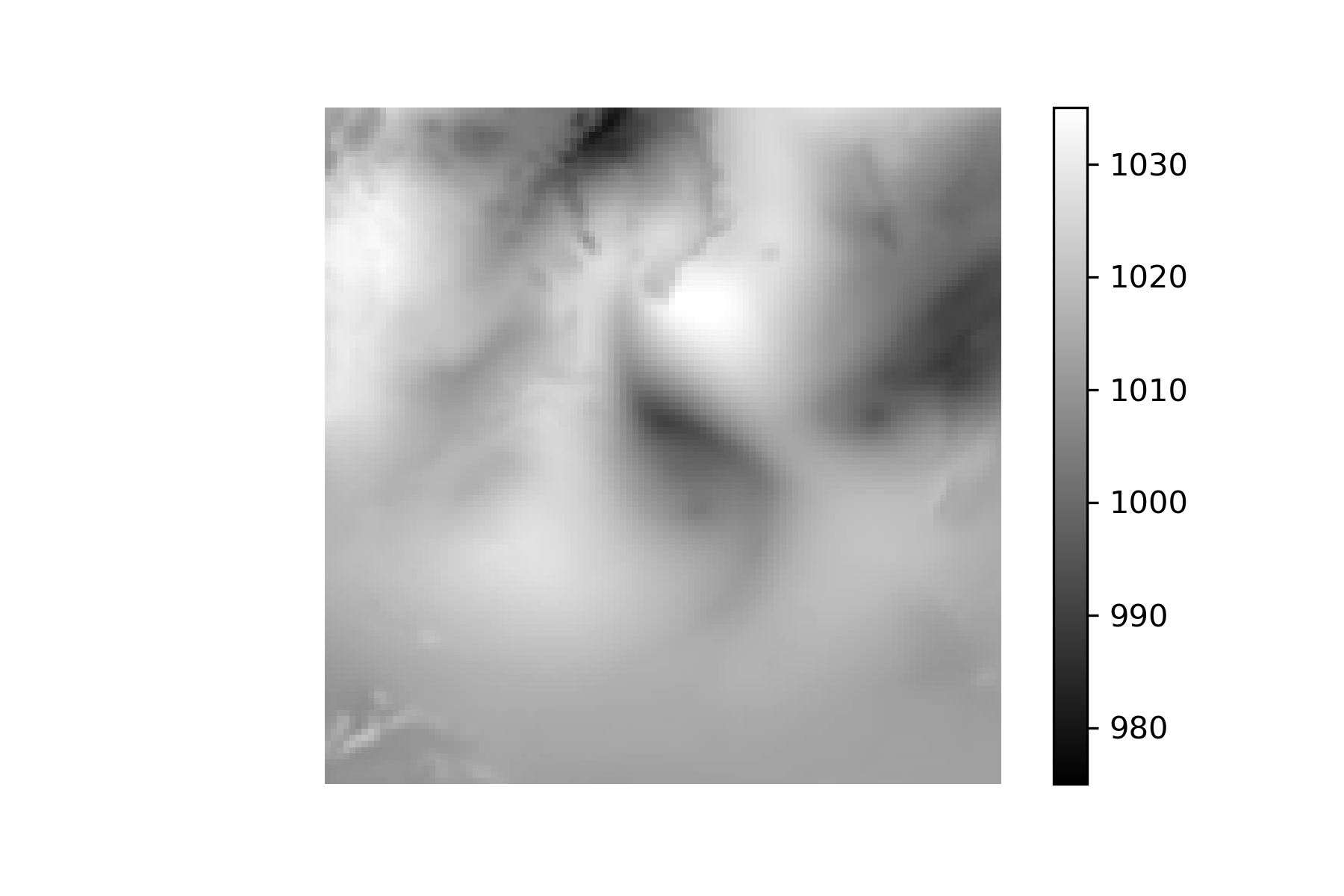
150 epochs

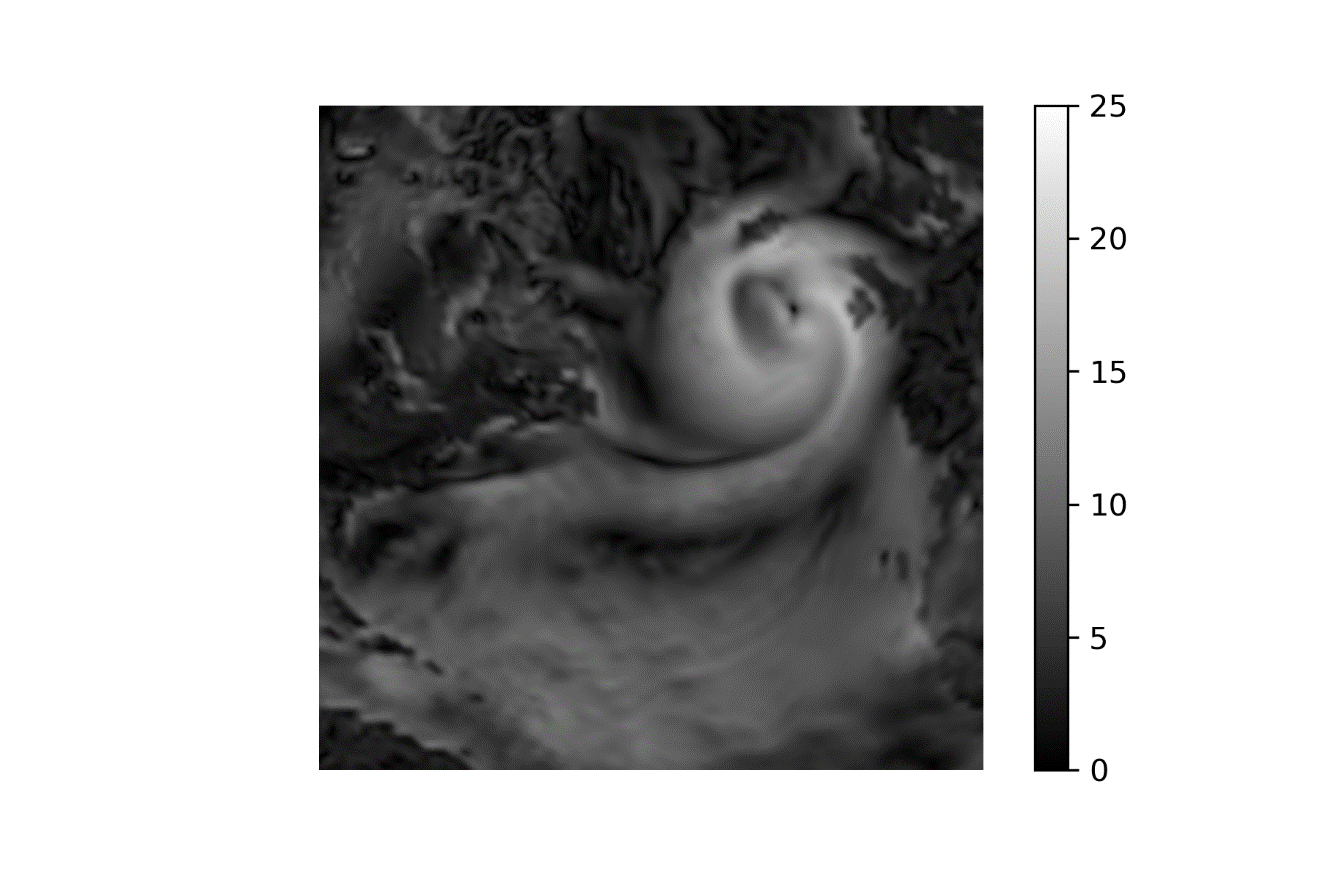
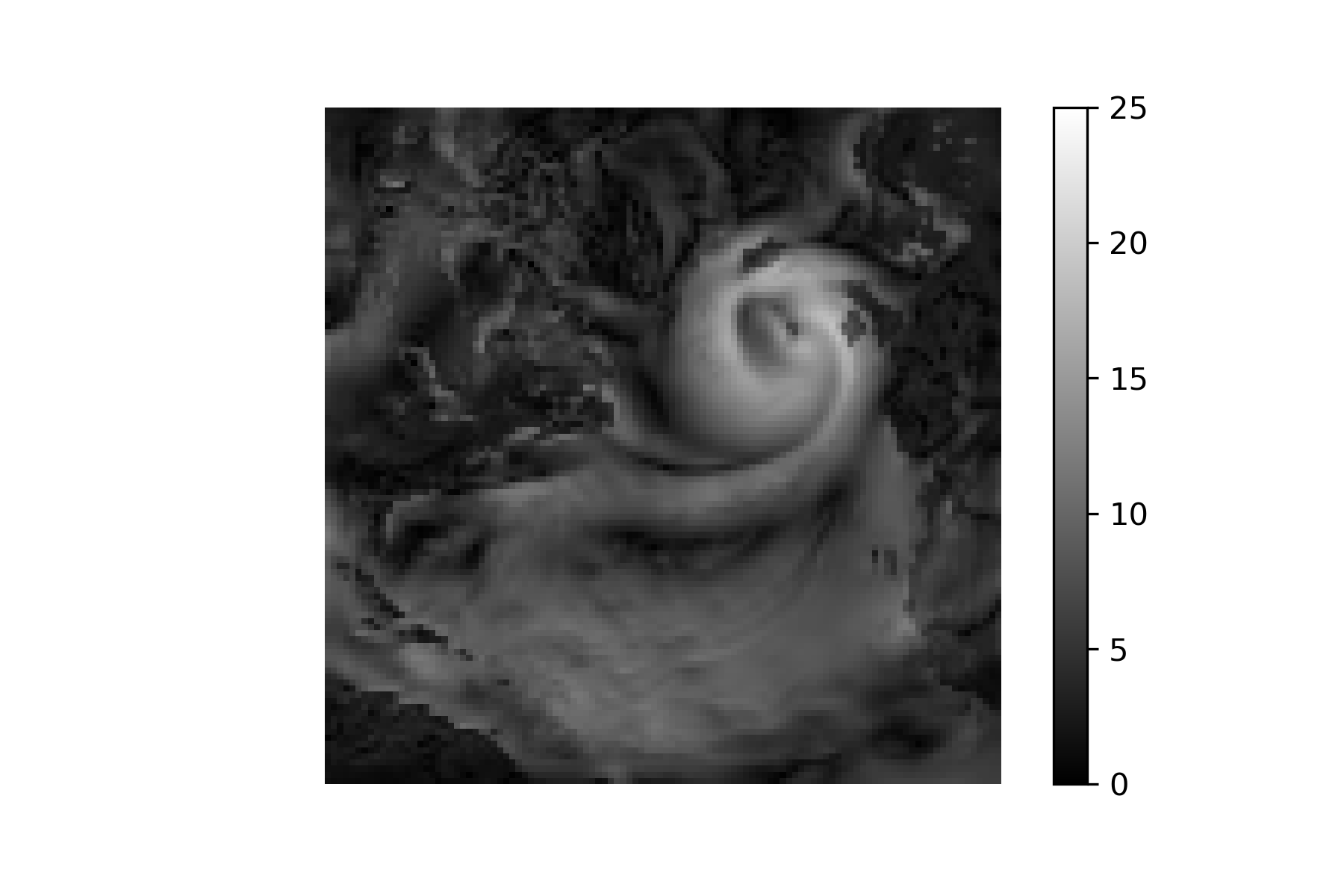
 

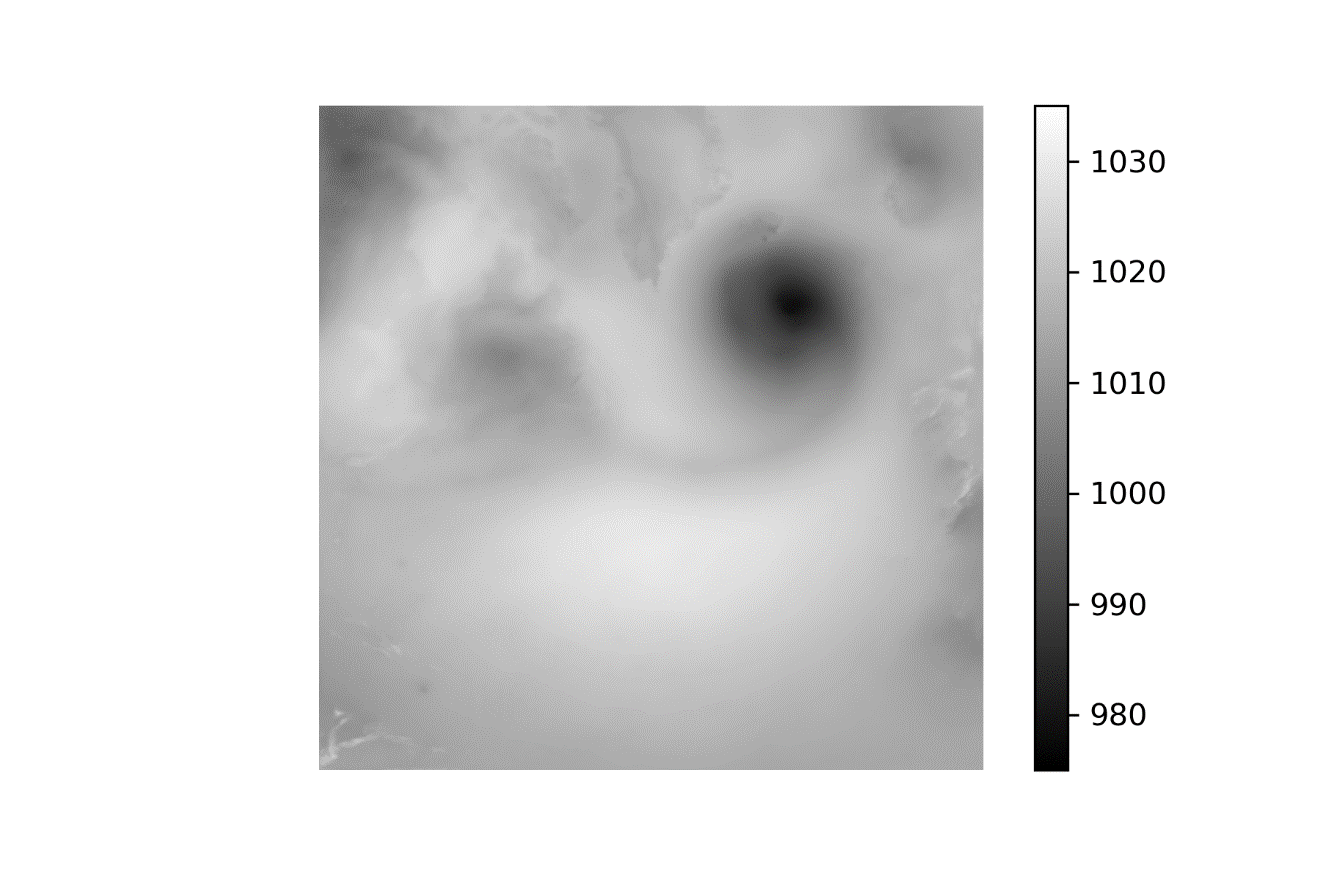
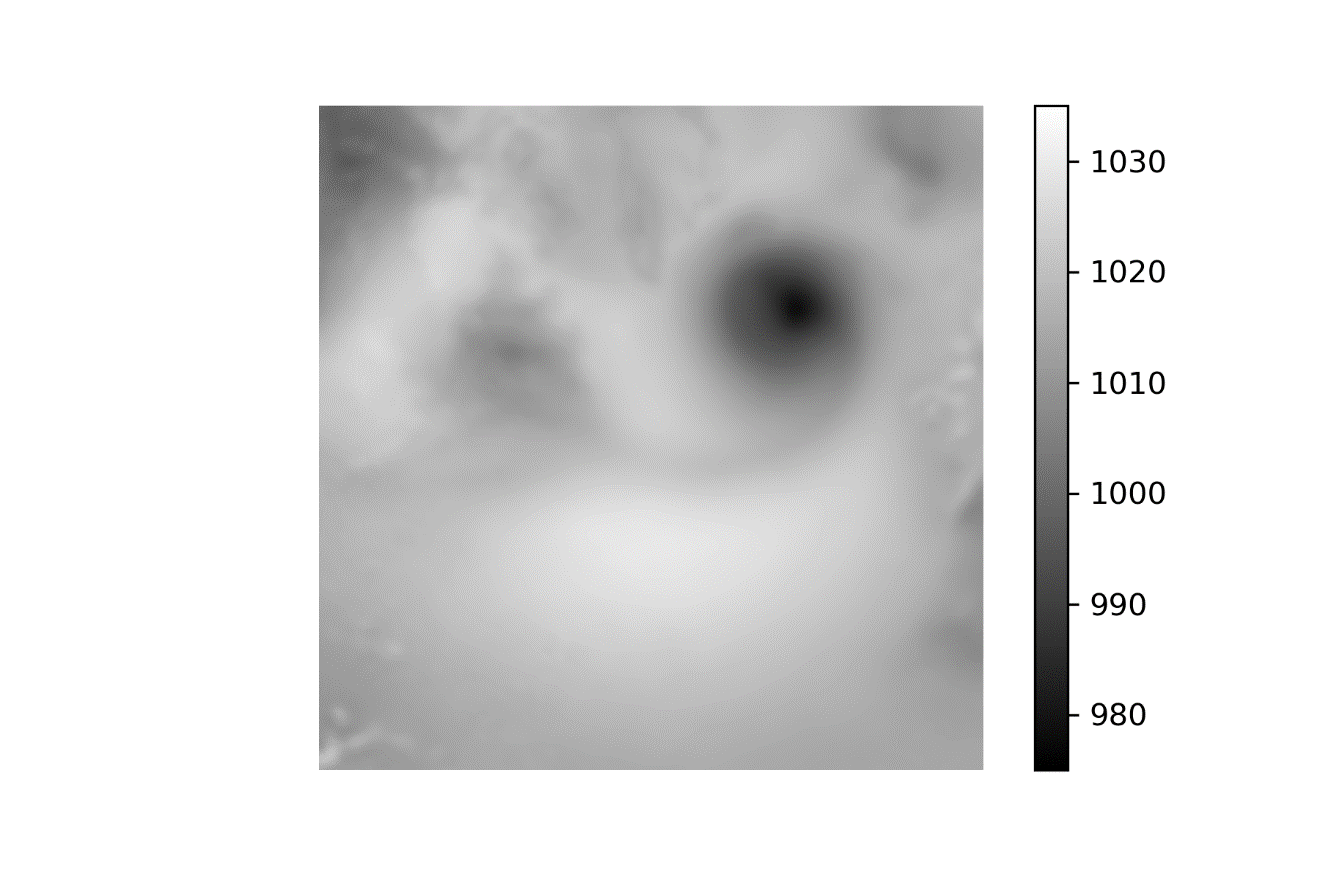
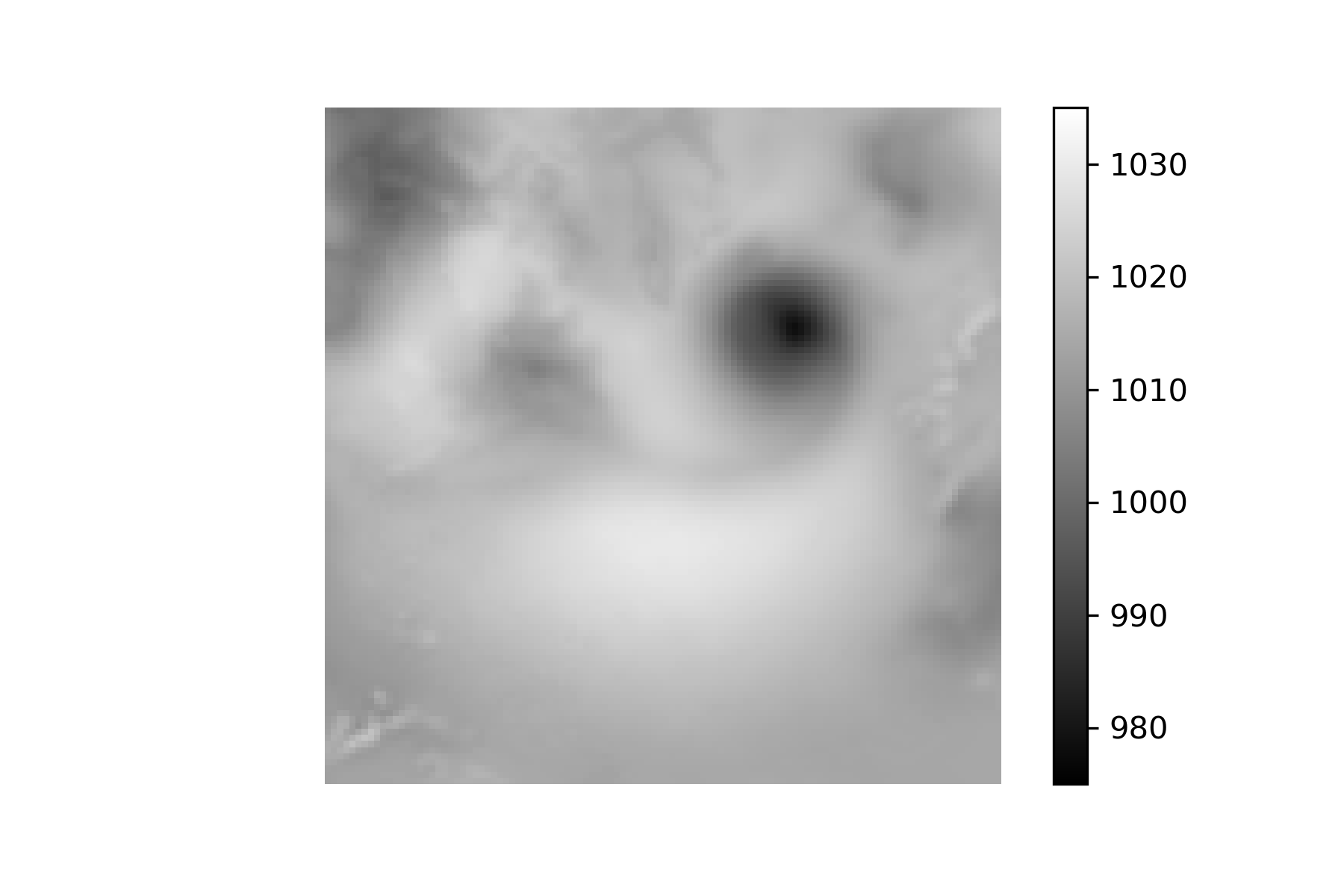
(1 January 2010 Low-Interp-High)



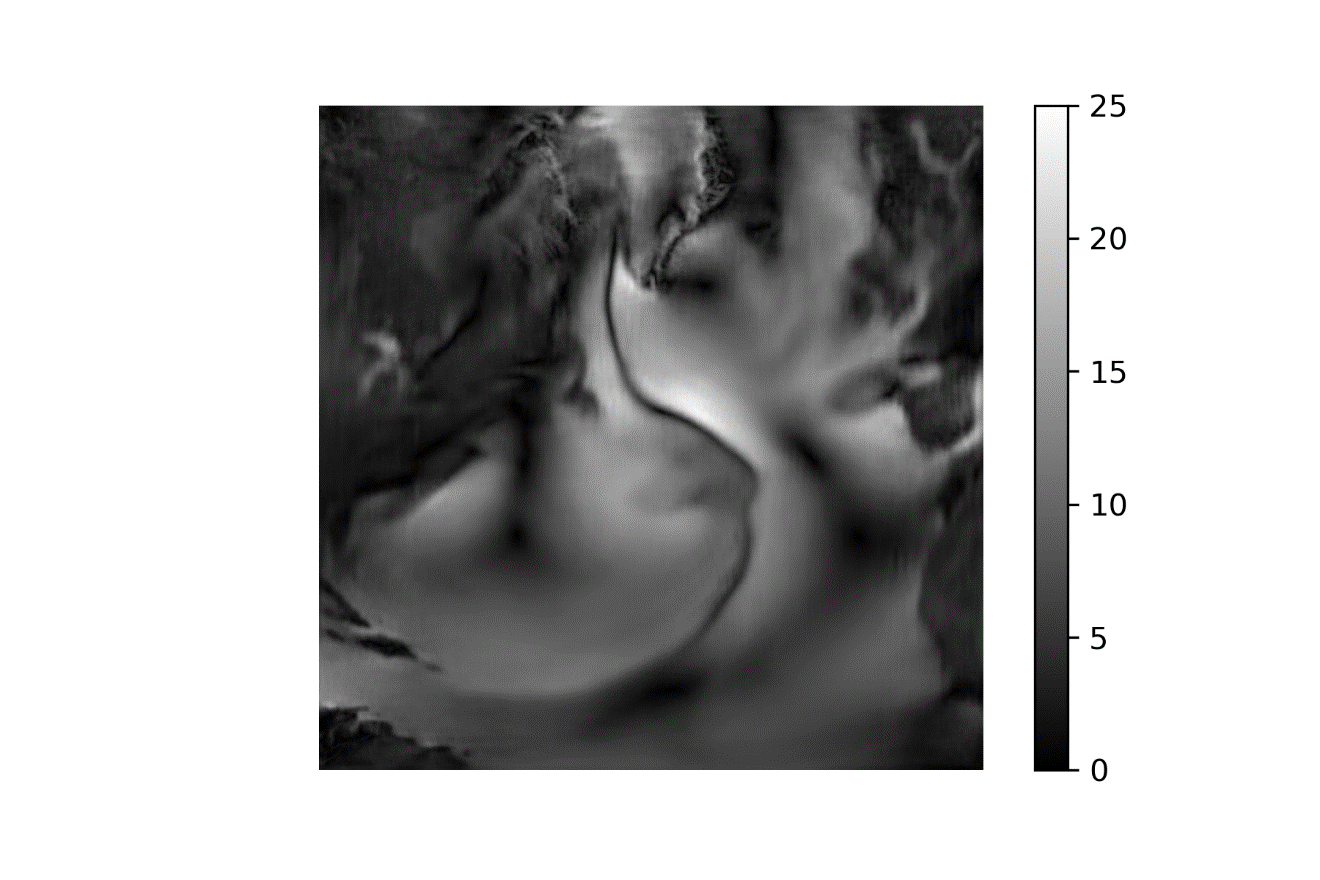
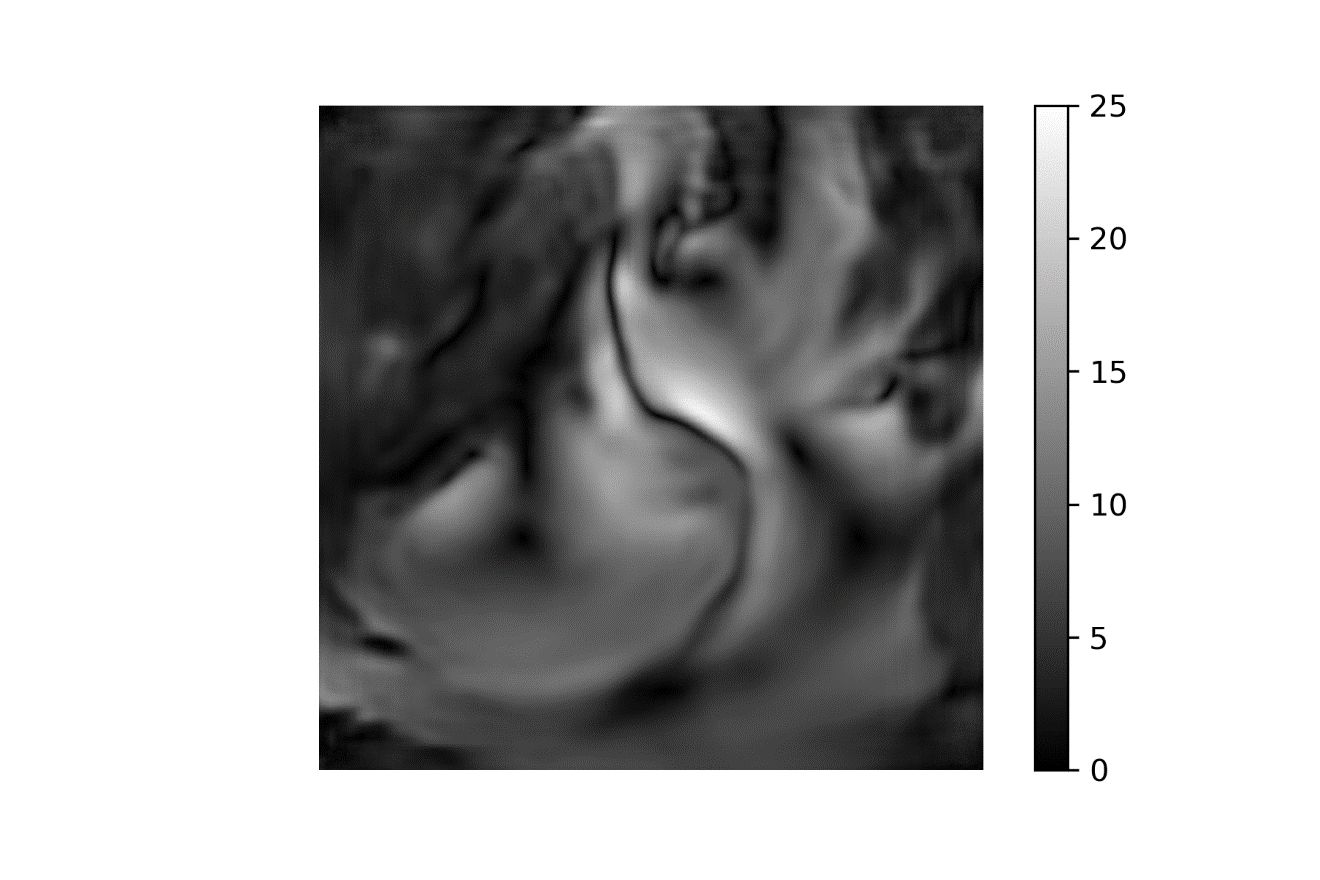


(1 Jul 2010 Low-Interp-High)



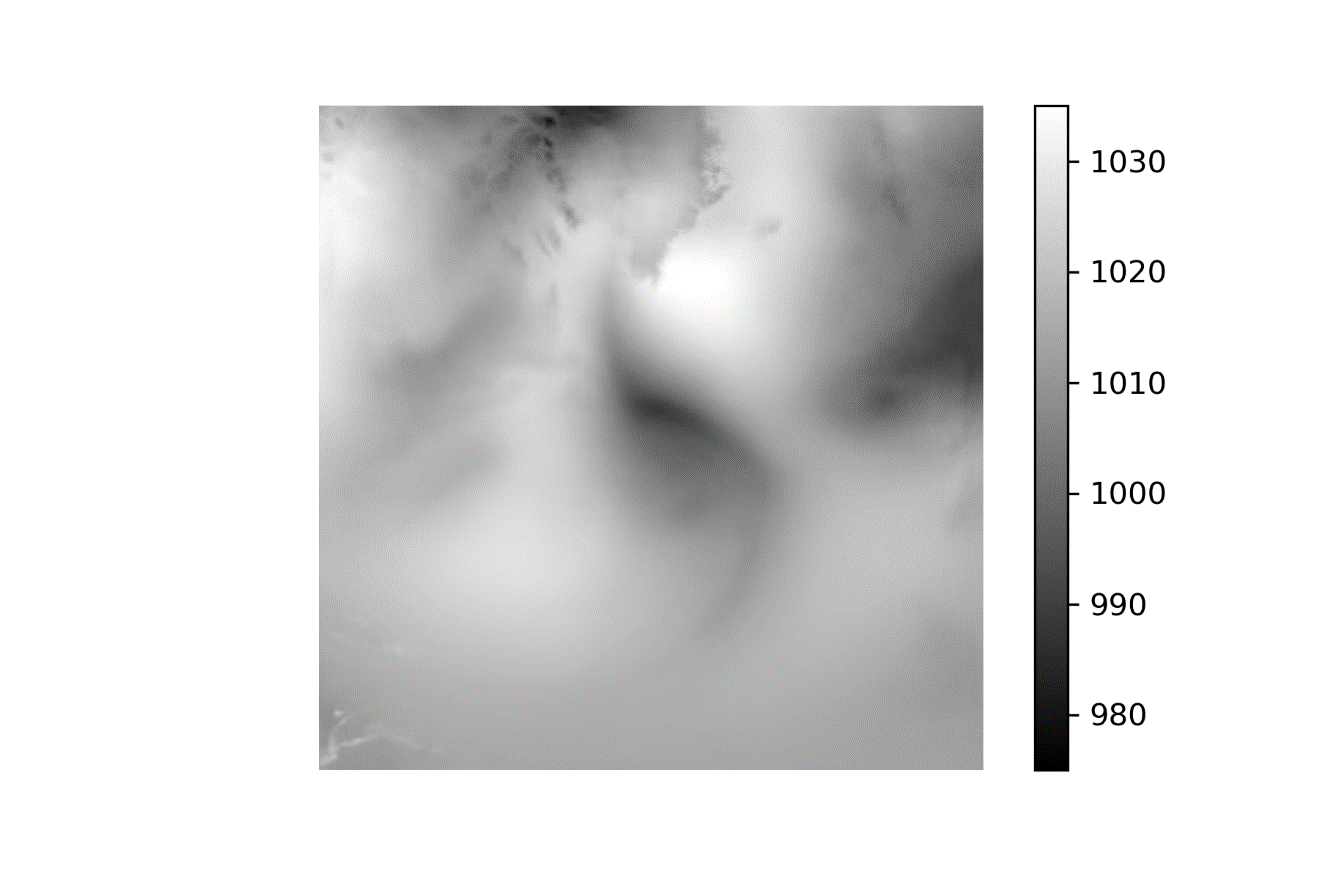
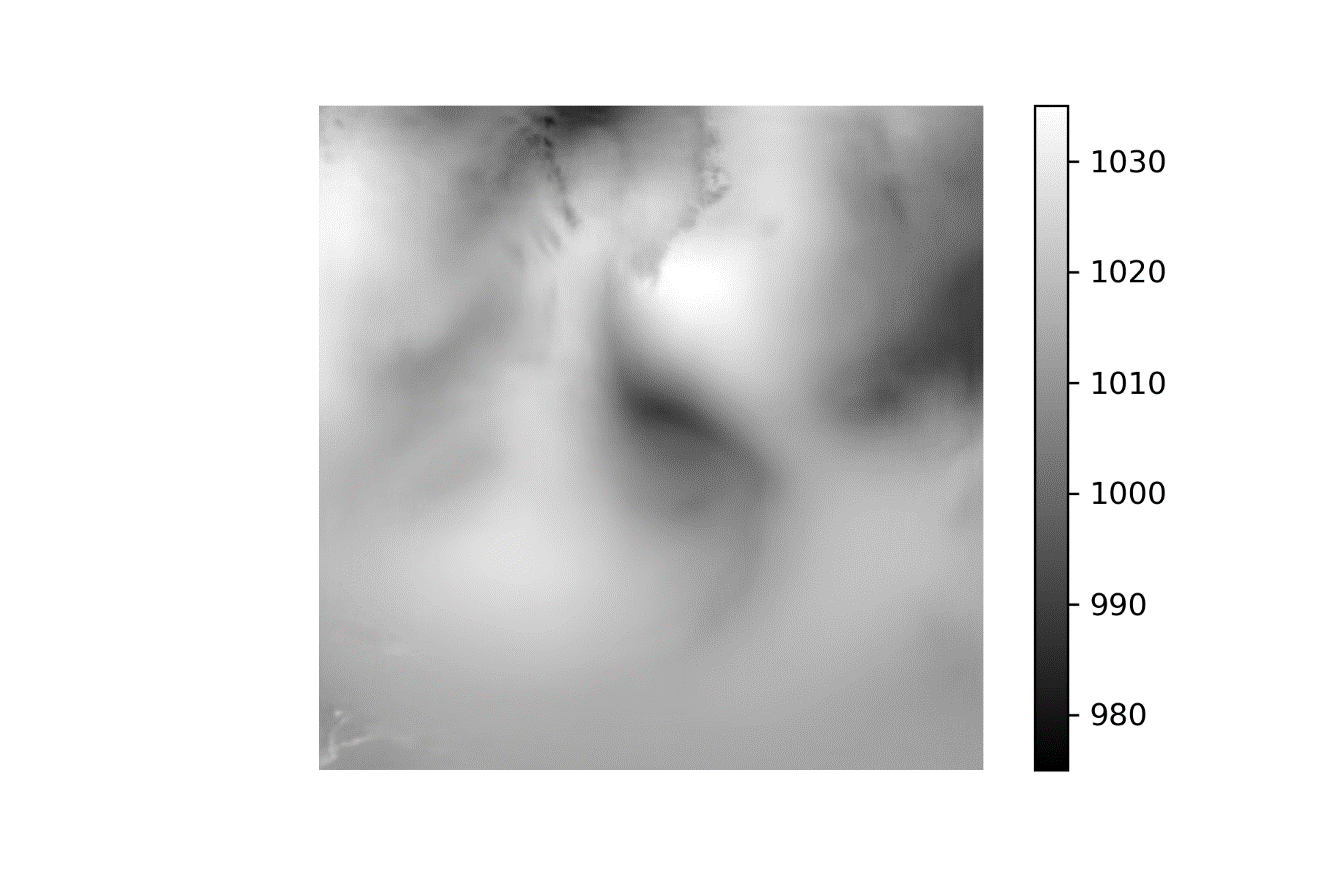
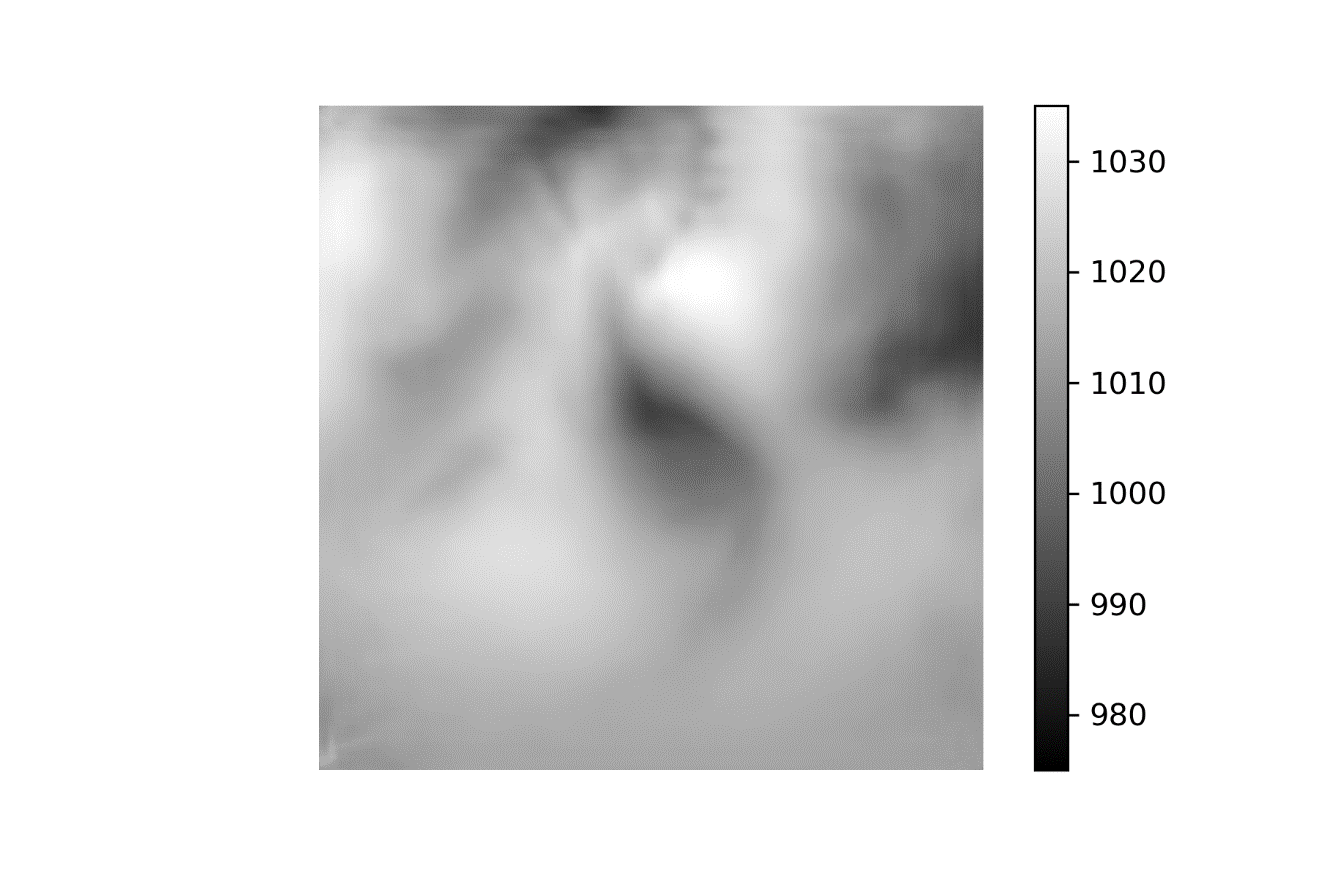


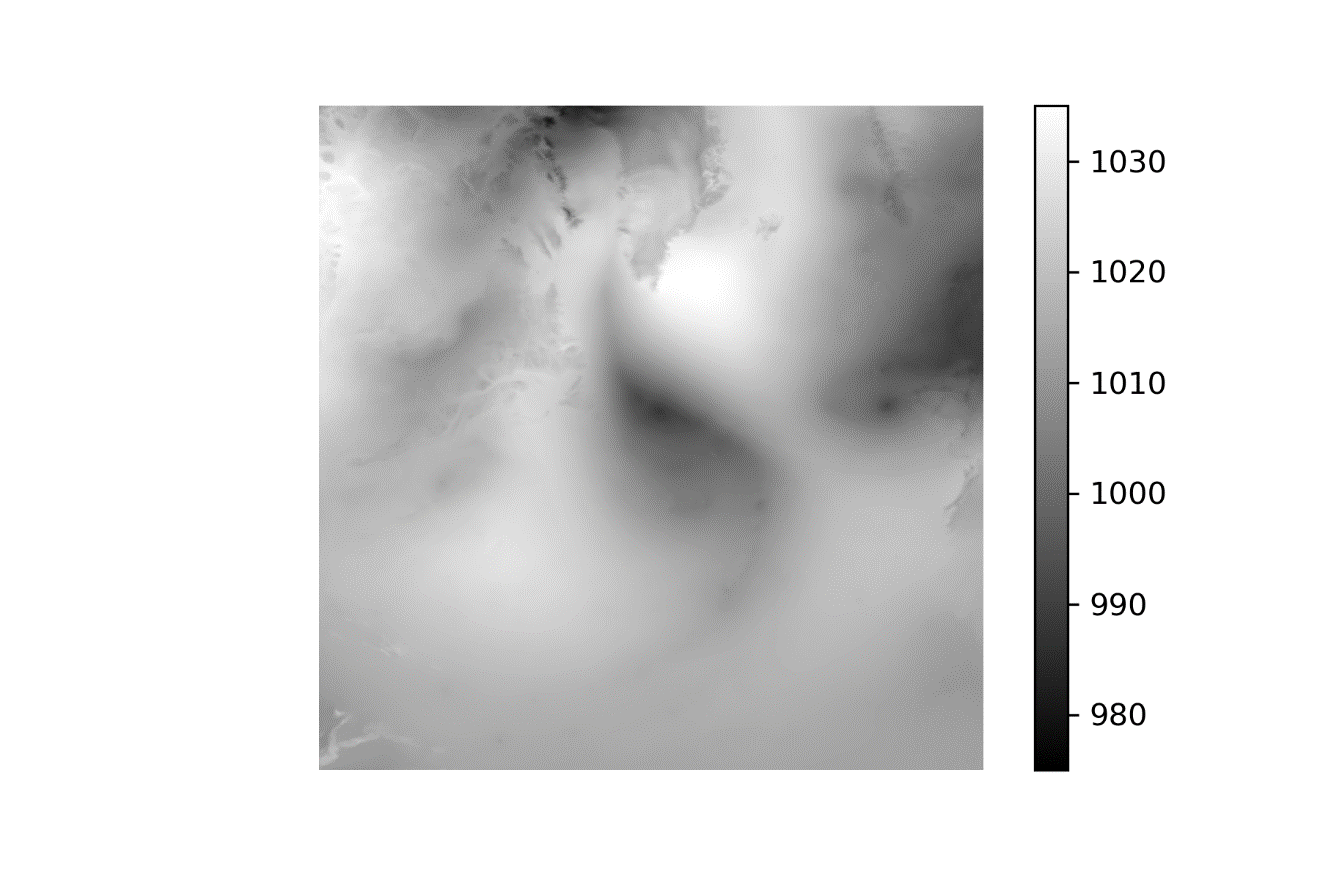
1 Jan 2010 –-SRGAN-1 - 50-150-350-High

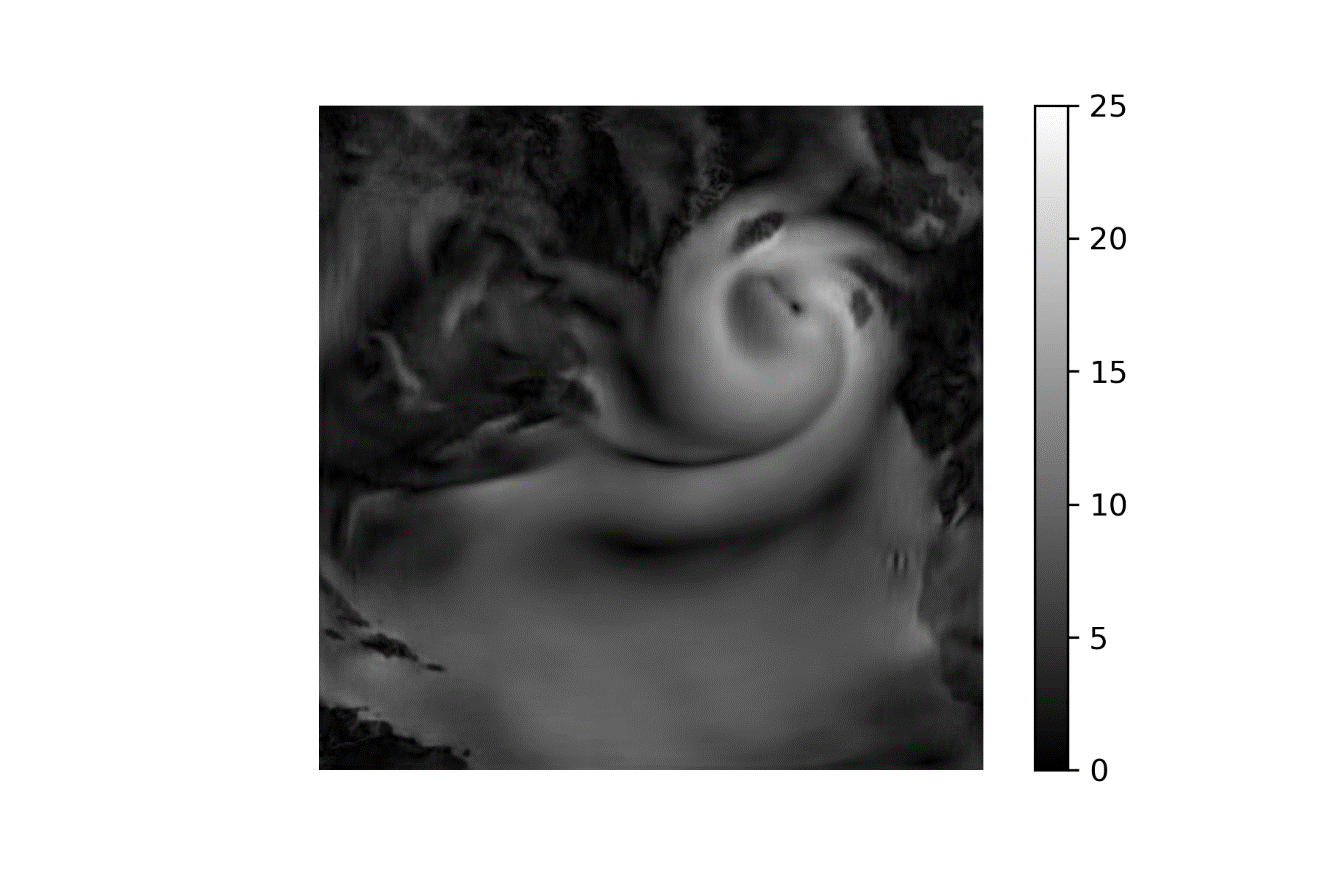
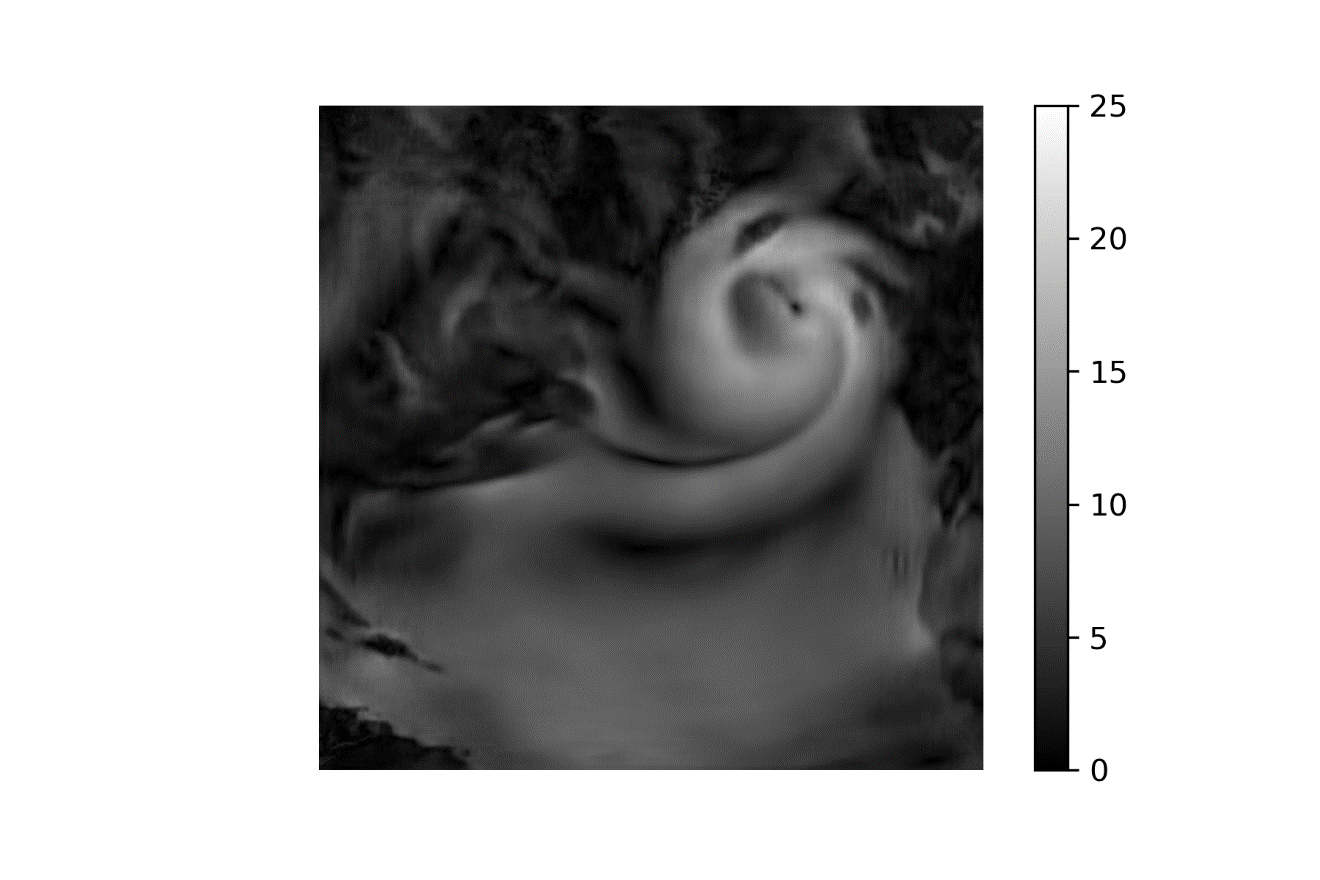
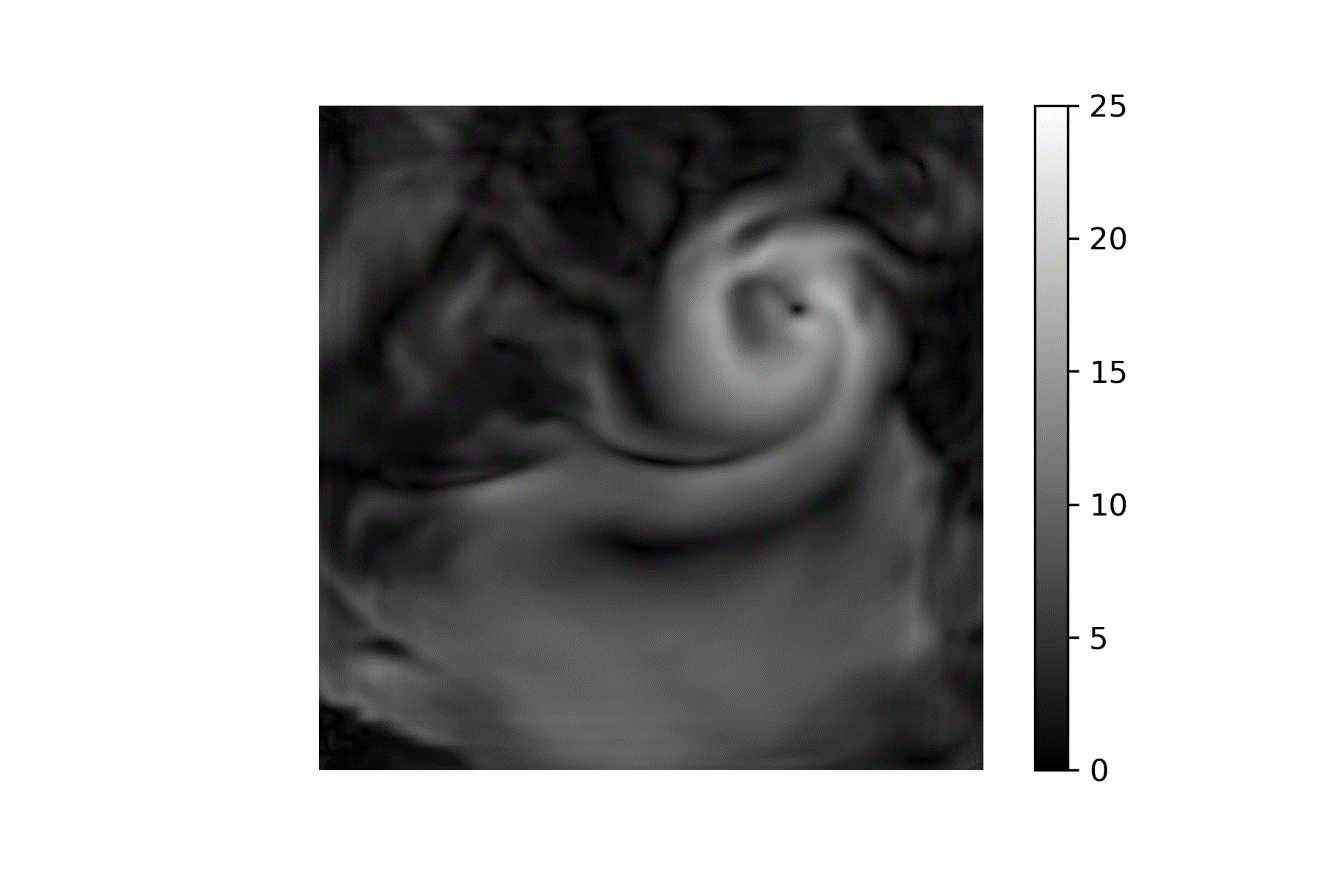


1 Jan 2010 –-SRGAN-1 - 50-150-350-High





1 Jul 2010 –-50-150-350-High





1 Jul 2010 –-50-150-350-High

