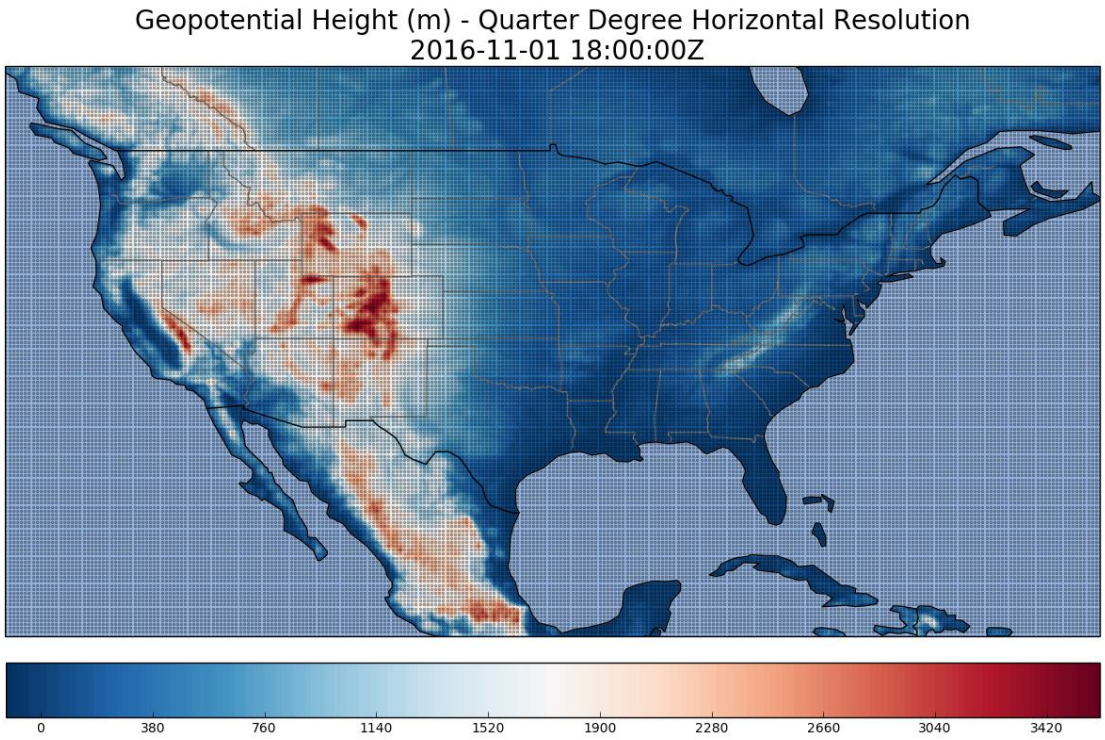
Brief Analysis of Horizontal Resolution

Meteorology 3110

Many thanks to python, siphon, matplotlib, cartopy, metpy, numpy, and thredds for making this happen. Without you, this wouldn’t be possible.

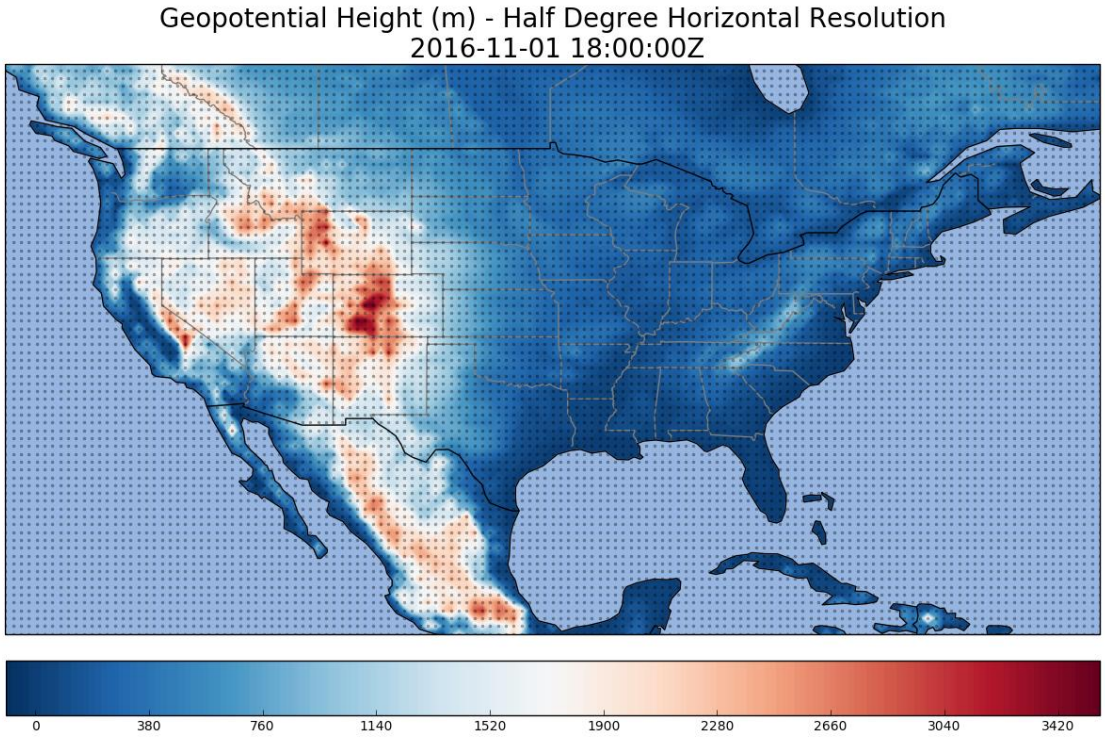
Geopotential Height – GFS

1/4 degree horizontal resolution



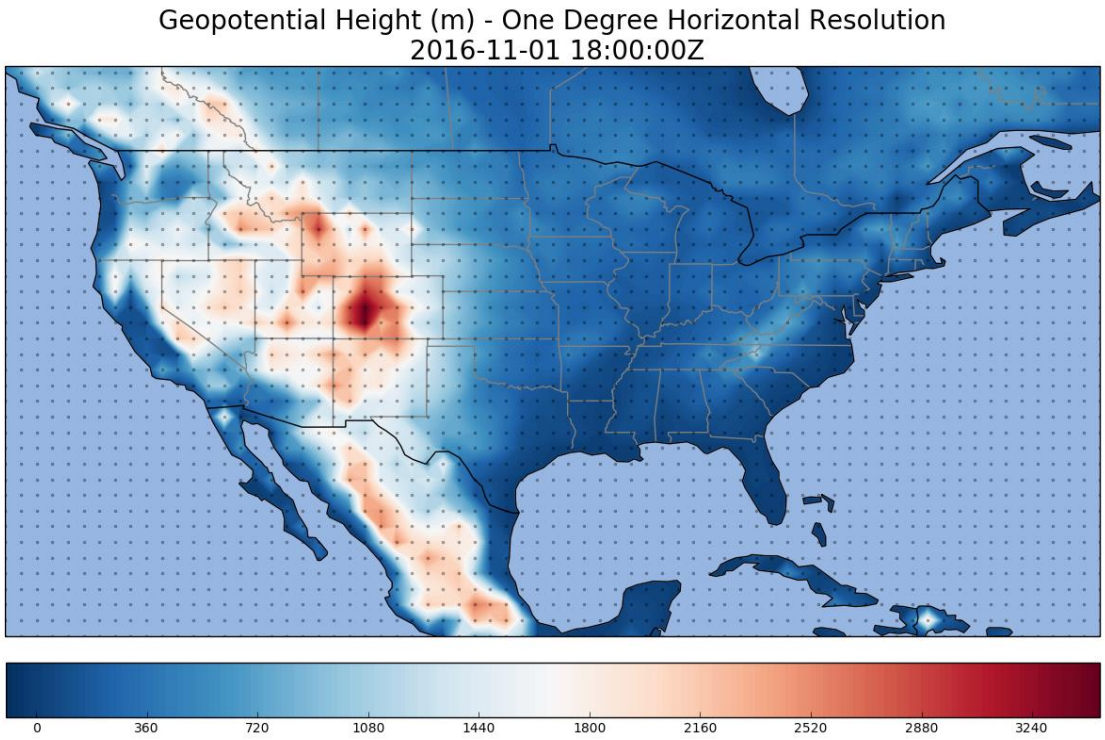
Geopotential Height – GFS

1/2 degree horizontal resolution



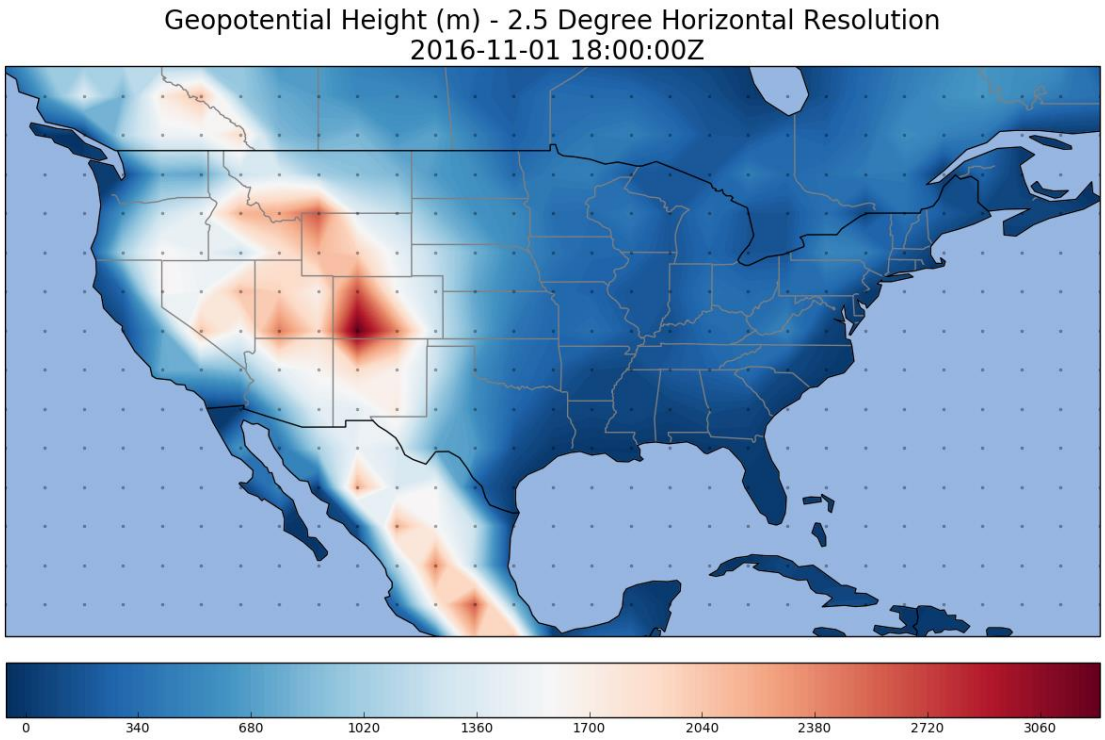
Geopotential Height – GFS

1 degree horizontal resolution

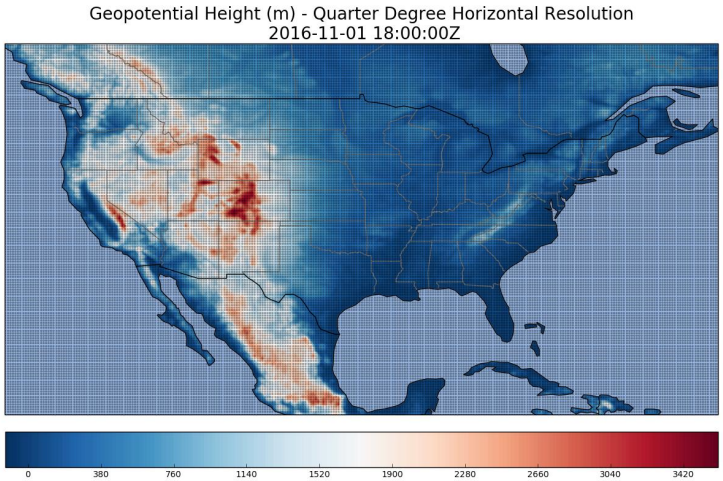


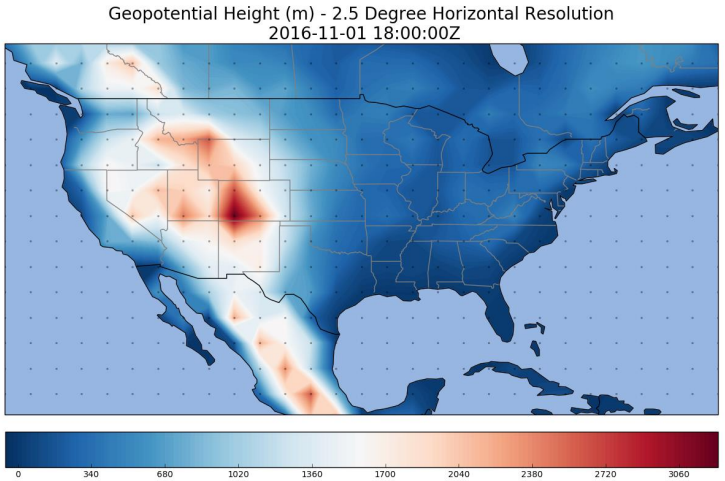
Geopotential Height – GFS

2.5 degree horizontal resolution



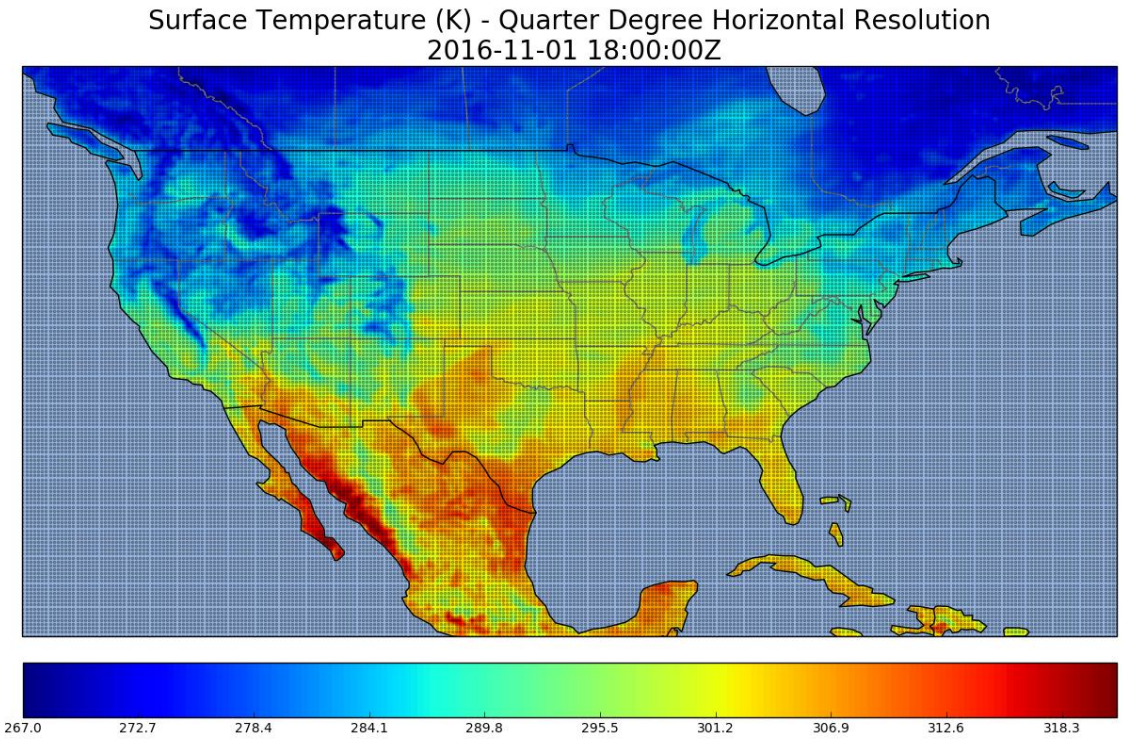
Comparison


Geopotential Height (m) - Quarter Degree Horizontal Resolution
2016-11-01 18:00:00Z
0
380
760
1140
1520
1900
2280
2660
3040
3420


Geopotential Height (m) - 2.5 Degree Horizontal Resolution
2016-11-01 18:00:00Z
0
340
680
1020
1360
1700
2040
2380
2720
3060

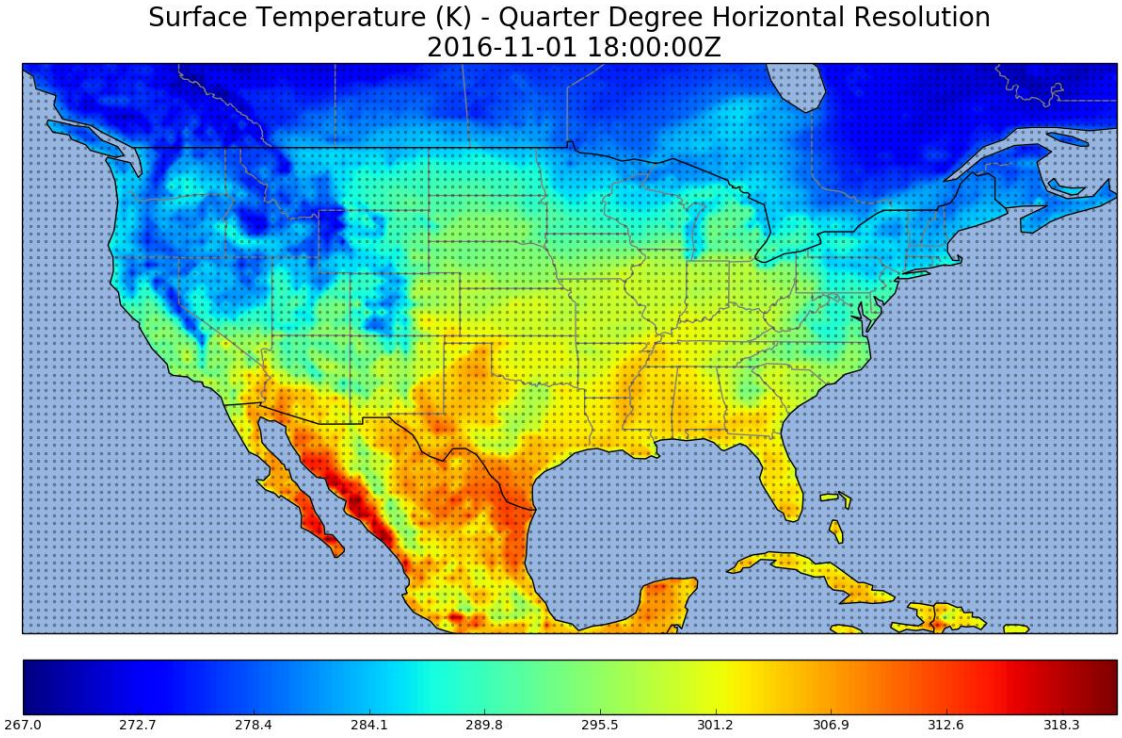
Surface Temperature – GFS

1/4 degree horizontal resolution



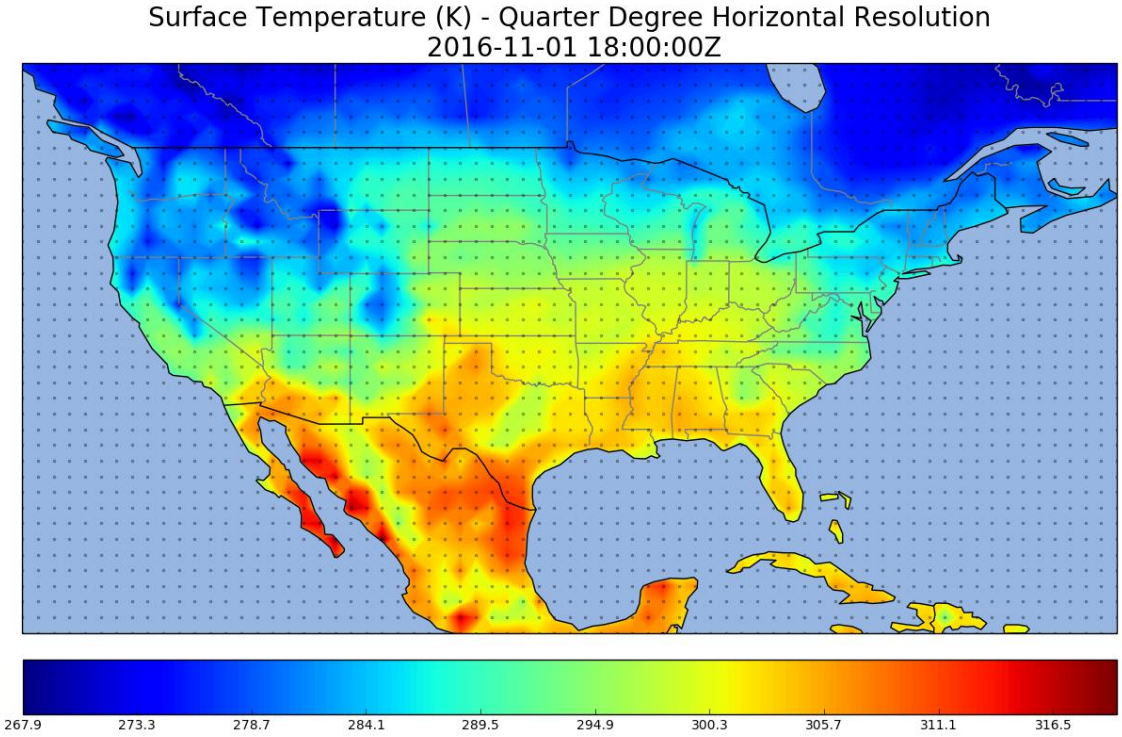
Surface Temperature – GFS

1/2 degree horizontal resolution



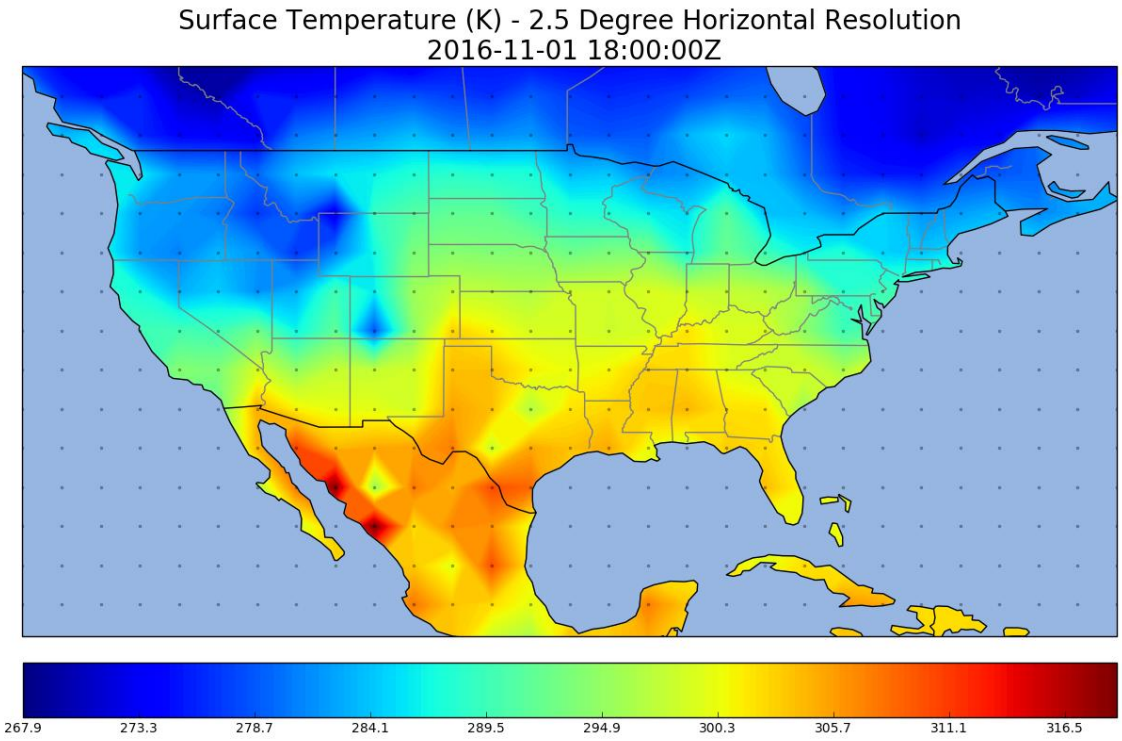
Surface Temperature – GFS

1 degree horizontal resolution

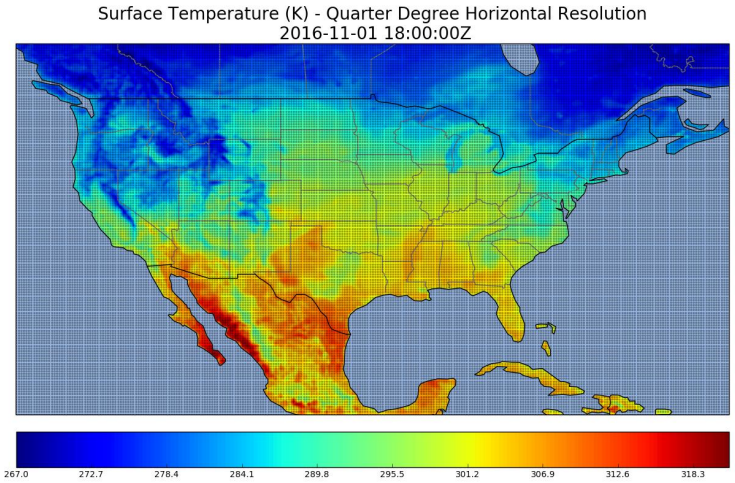


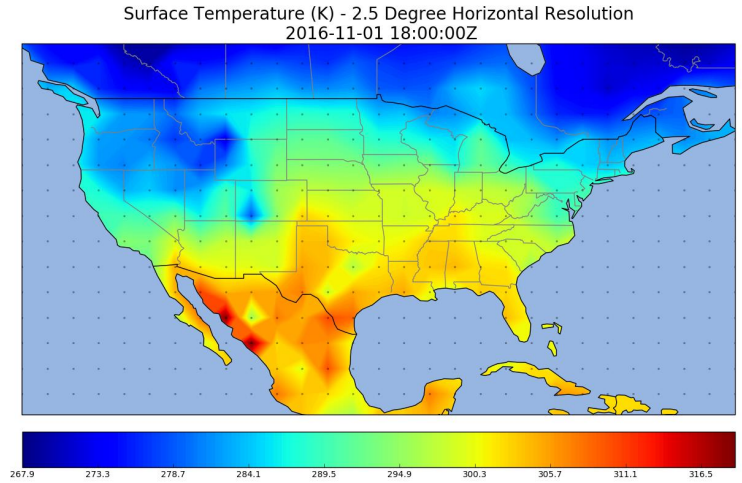
Surface Temperature – GFS

2.5 degree horizontal resolution



Comparison


Surface Temperature (K) - Quarter Degree Horizontal Resolution
2016-11-01 18:00:00Z
267.0
272.7
278.4
284.1
289.8
295.5
301.2
306.9
312.6
318.3


Surface Temperature (K) - 2.5 Degree Horizontal Resolution
2016-11-01 18:00:00Z
267.9
273.3
278.7
284.1
289.5
294.9
300.3
305.7
311.1
316.5