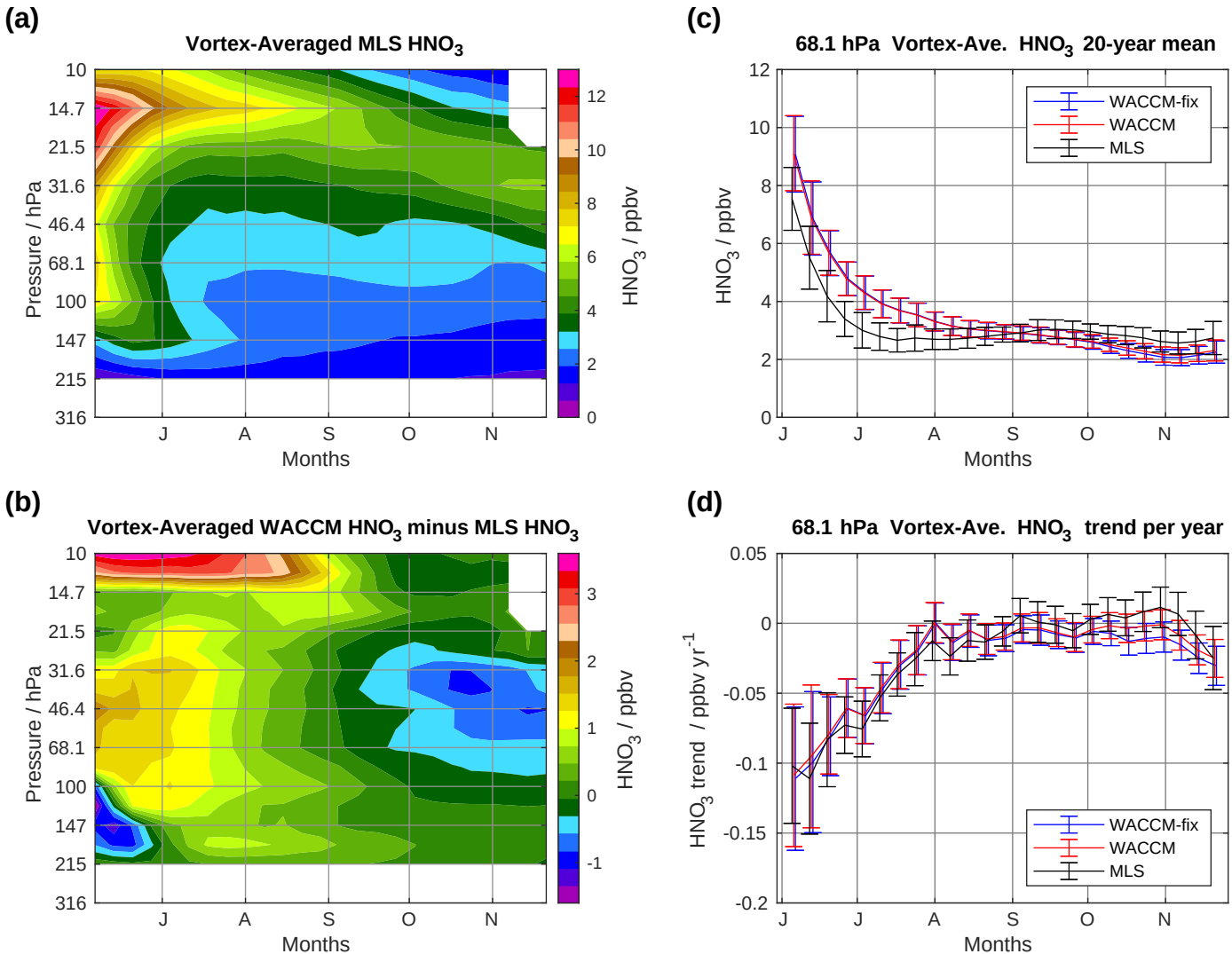
(a)
Vortex-Averaged MLS HNO3
Pressure / hPa
10
14.7
21.5
31.6
46.4
68.1
100
147
215
316
J
A
S
O
N
Months
12
10
8
6
4
2
0
HNO3 / ppbv
(b)
Vortex-Averaged WACCM HNO3 minus MLS HNO3
Pressure / hPa
Months
3
2
1
0
-1
HNO3 / ppbv
(c)
68.1 hPa Vortex-Ave. HNO3 20-year mean
HNO3 / ppbv
WACCM-fix
WACCM
MLS
(d)
68.1 hPa Vortex-Ave. HNO3 trend per year
HNO3 trend / ppbv yr-1
0.05
0
-0.05
-0.1
-0.15
-0.2