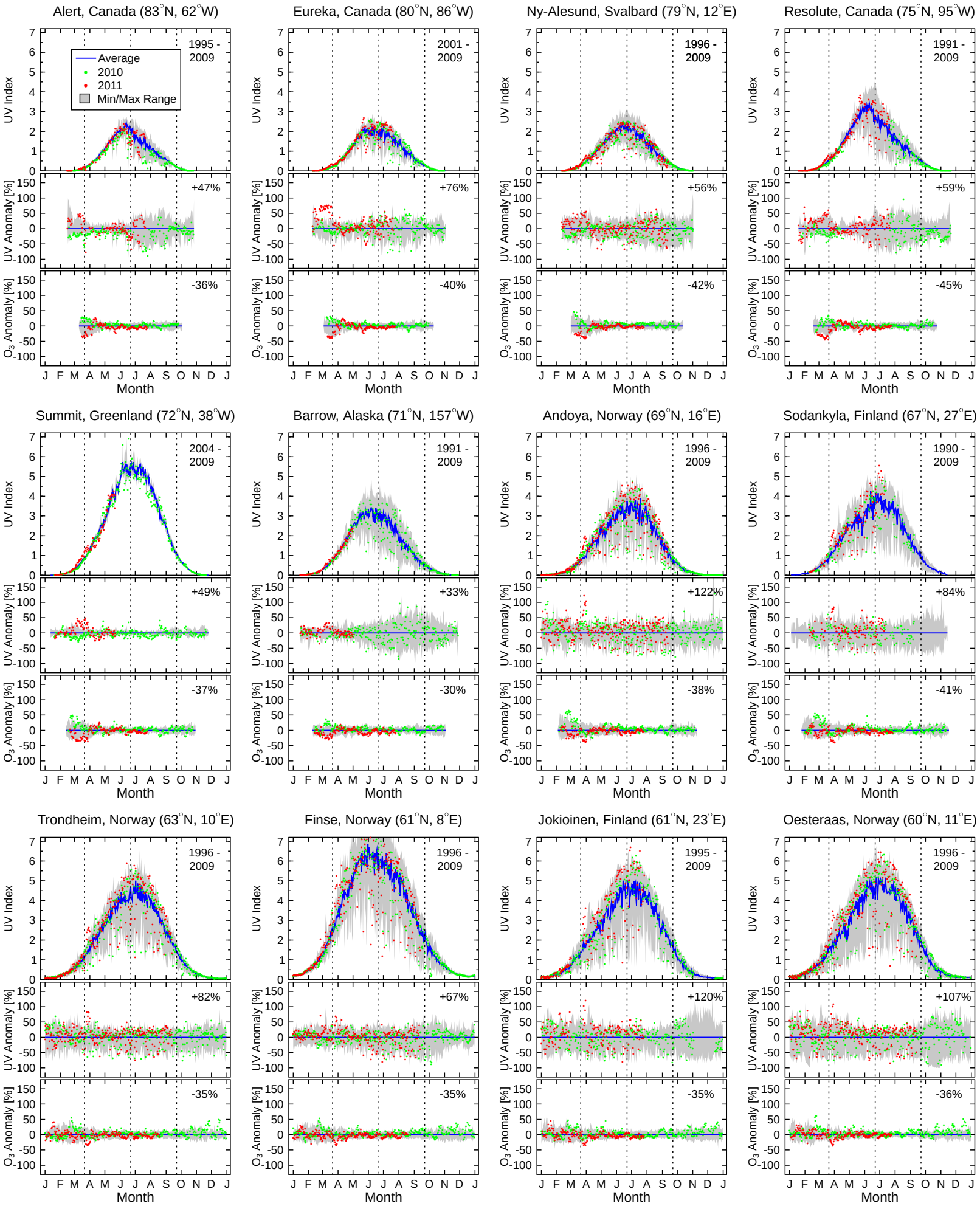
Alert, Canada (83°N, 62°W)
Eureka, Canada (80°N, 86°W)
Ny-Alesund, Svalbard (79°N, 12°E)
Resolute, Canada (75°N, 95°W)
Summit, Greenland (72°N, 38°W)
Barrow, Alaska (71°N, 157°W)
Andoya, Norway (69°N, 16°E)
Sodankyla, Finland (67°N, 27°E)
Trondheim, Norway (63°N, 10°E)
Finse, Norway (61°N, 8°E)
Jokioinen, Finland (61°N, 23°E)
Oesteraas, Norway (60°N, 11°E)
Average
2010
2011
Min/Max Range
1995 - 2009
2001 - 2009
1996 - 2009
1991 - 2009
2004 - 2009
1990 - 2009
+47%
+76%
+56%
+59%
+49%
+33%
+122%
+84%
+82%
+67%
+120%
+107%
-36%
-40%
-42%
-45%
-37%
-30%
-38%
-41%
-35%
-35%
-35%
-36%
UV Index
UV Anomaly [%]
O3 Anomaly [%]
J F M A M J J A S O N D J
Month

Fig. A14. Seasonal variation of the noontime UV Index for 12 Arctic and sub-Arctic sites measured by ground-based radiometers. The upper panel for each site compares the climatological average (blue line) with the measurements in 2010 (green dots) and 2011 (red dots), and historical minima and maxima (shaded range). The latter were calculated from measurements of the periods indicated in the top-right corner of the panel. The center panel shows the anomaly in the UV Index, calculated as the percental departure from the climatological average. The numbers indicate the maximum anomalies for March and April 2011. The bottom panel shows a similar anomaly analysis for total ozone derived from measurements of the following satellites: TOMS/Nimbus7 (1991-1992), TOMS/Meteor3 (1993-1994), TOMS/EarthProbe (1996-2004), and OMI (2005-2011). The shaded range for the ozone data set is based on data of the years 1991–2009 (1996-2009 for Trondheim and Finse). Ozone data are available at http://toms.gsfc.nasa.gov and http://ozoneaq.gsfc.nasa.gov/. Vertical broken lines indicate the times of the vernal and autumnal equinoxes, and the summer solstice.