

Figure 1. A sample Arctic infrared (~11.0 micron) satellite composite from 11 August 2009 at 0 UTC shows good satellite coverage over the Arctic basin and adjacent mid-latitude regions. Note the colder, white cloud masses and storm systems in the westerly wind belt distinct from the warmer, darker summertime landmasses.

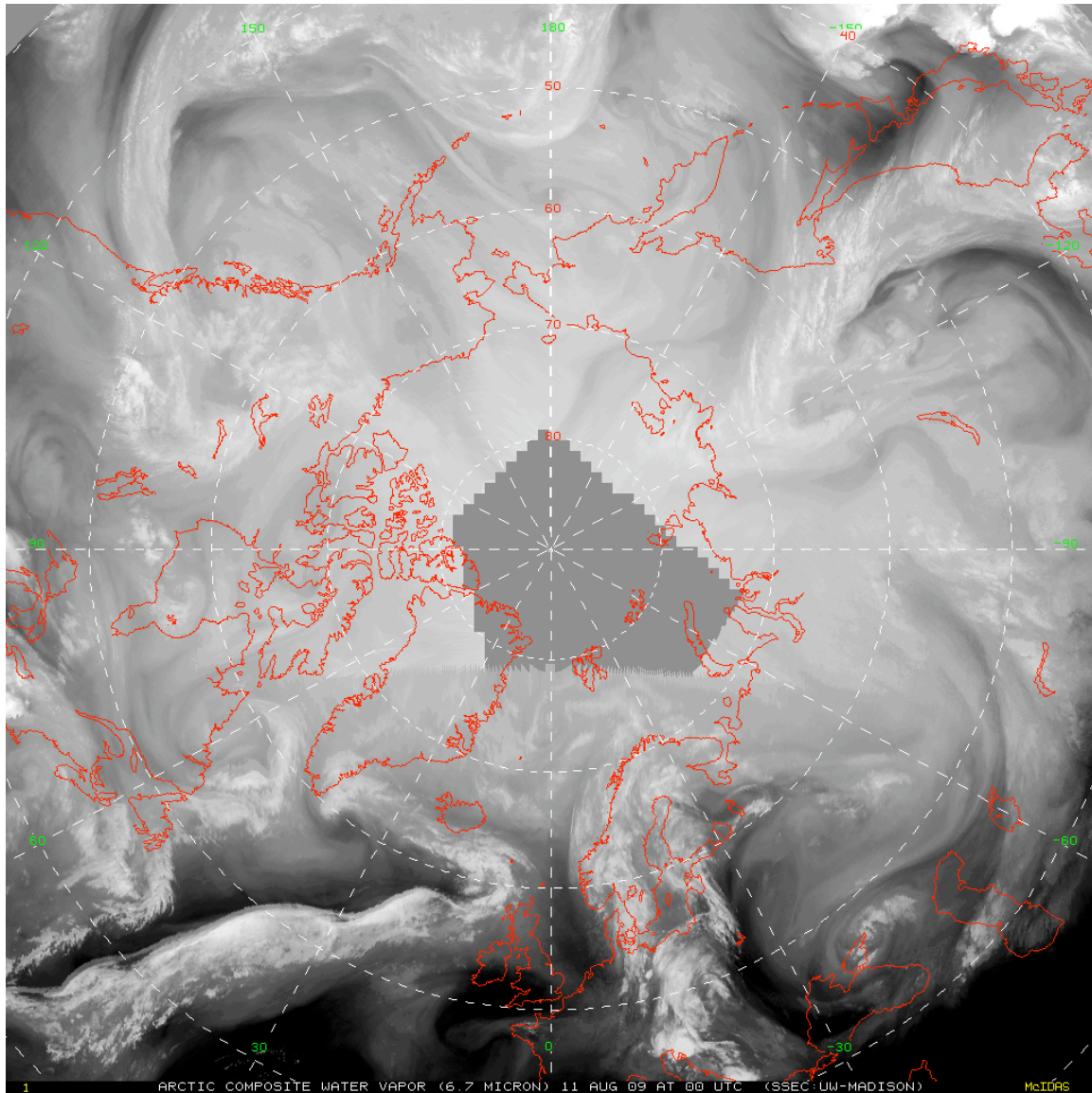


Figure 2. A water vapor channel (~6.7 micron) satellite composite over the Arctic from 11 August 2009 at 0 UTC shows traces of mid-tropospheric water vapor as well as cloud masses. The gray area over a portion of the Arctic basin is an area of missing satellite coverage where no satellite observations met the criteria for inclusion into the composite.

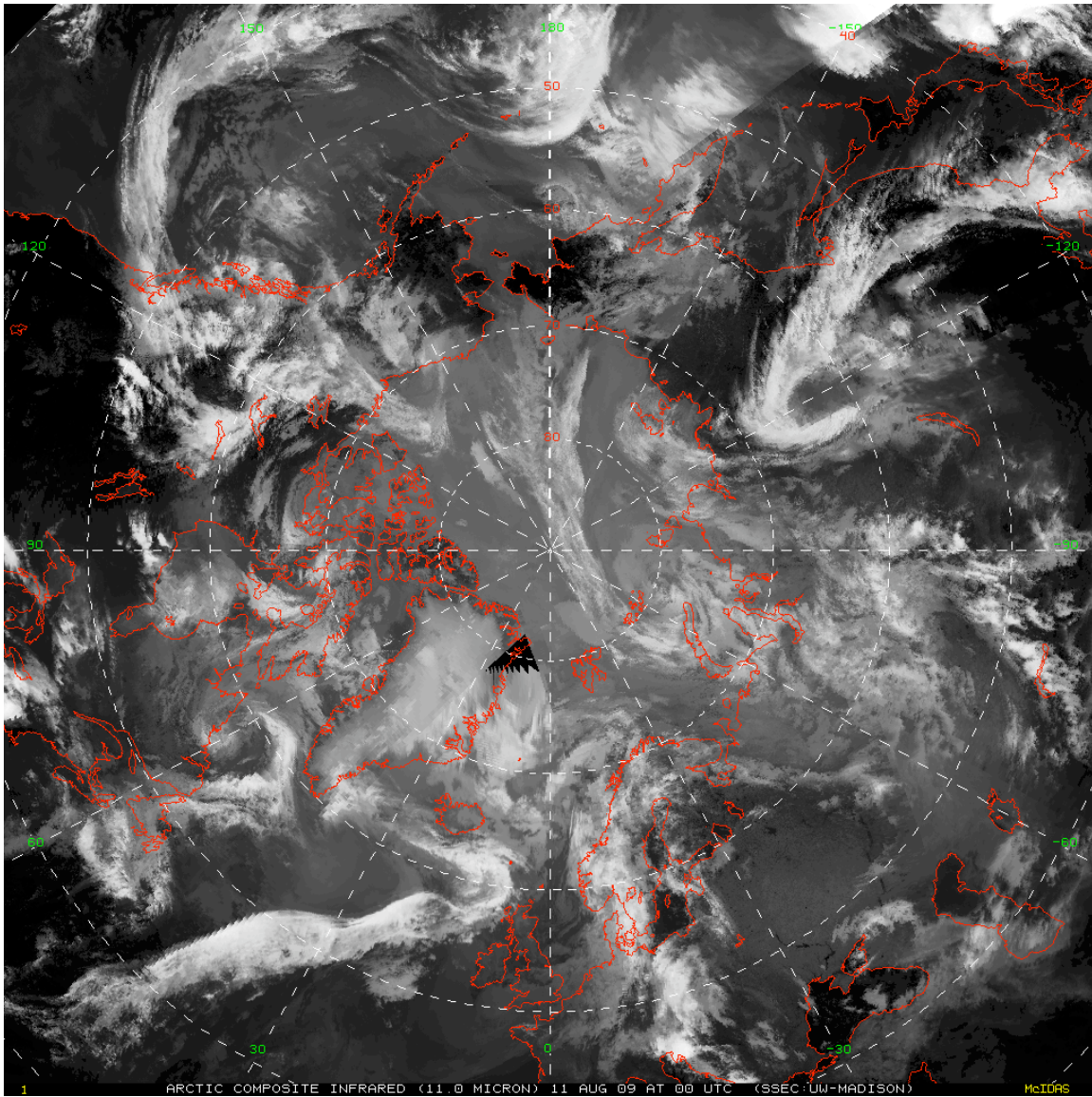


Figure 3. A long-wave infrared (~12.0 micron) Arctic composite satellite image from 11 August 2009 at 0 UTC depicts a coverage much the same as the infrared composite.

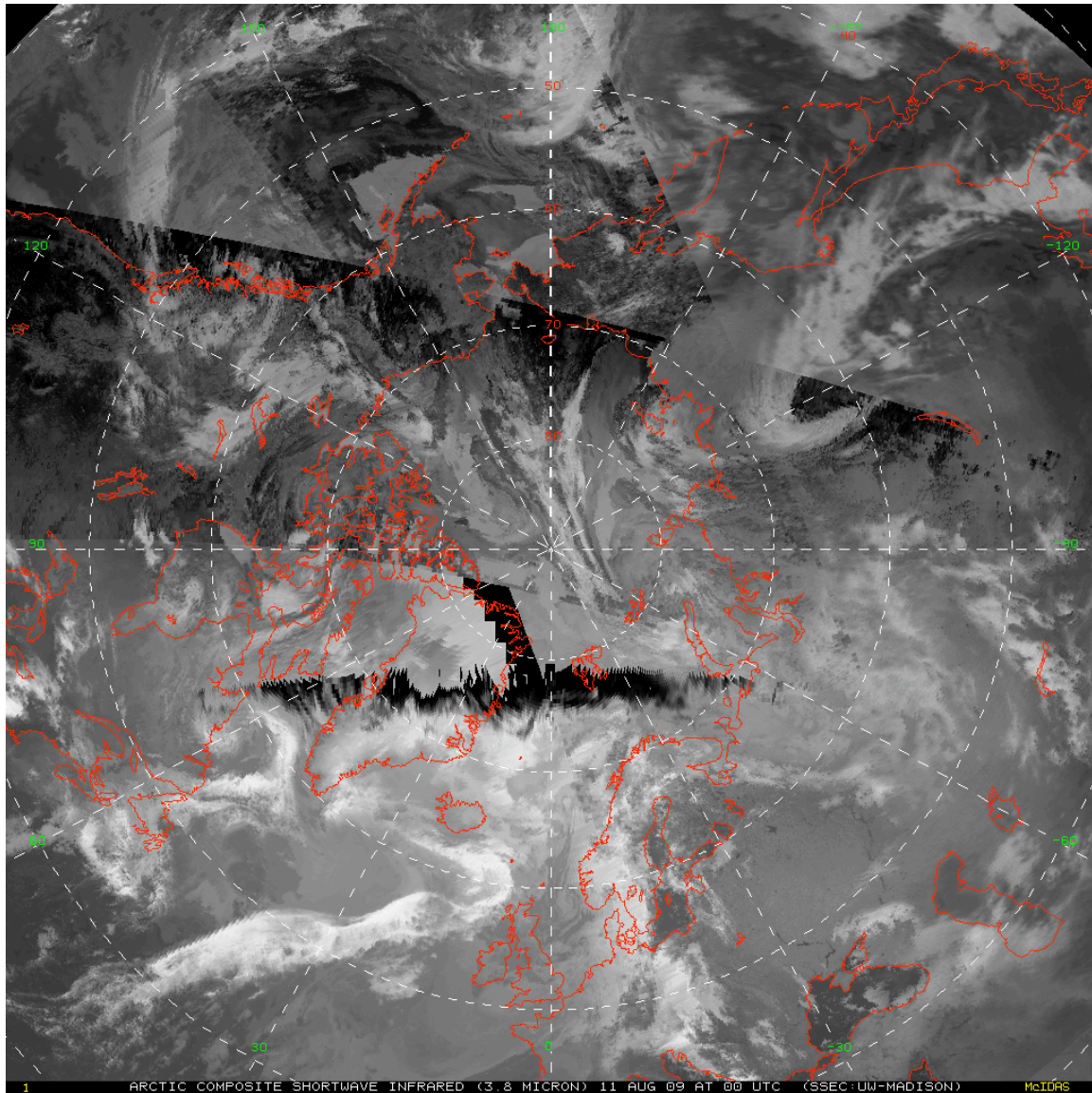


Figure 4. A short-wave infrared (~3.8 microns) Arctic composite from 11 August 2009 at 0 UTC shows the issues in compositing in this only semi-uniform spectral channel. Not all of the contributing satellites have the same peak wavelength as some have 3.7 microns and others have 3.9 microns. Hence, the radiometric returns are slightly different between satellites (e.g. the polar orbiting passes are distinctive from the rest of the composite). Also, some of the geostationary satellites do have some quality challenges in this spectral band (as seen through Greenland and the North Sea).

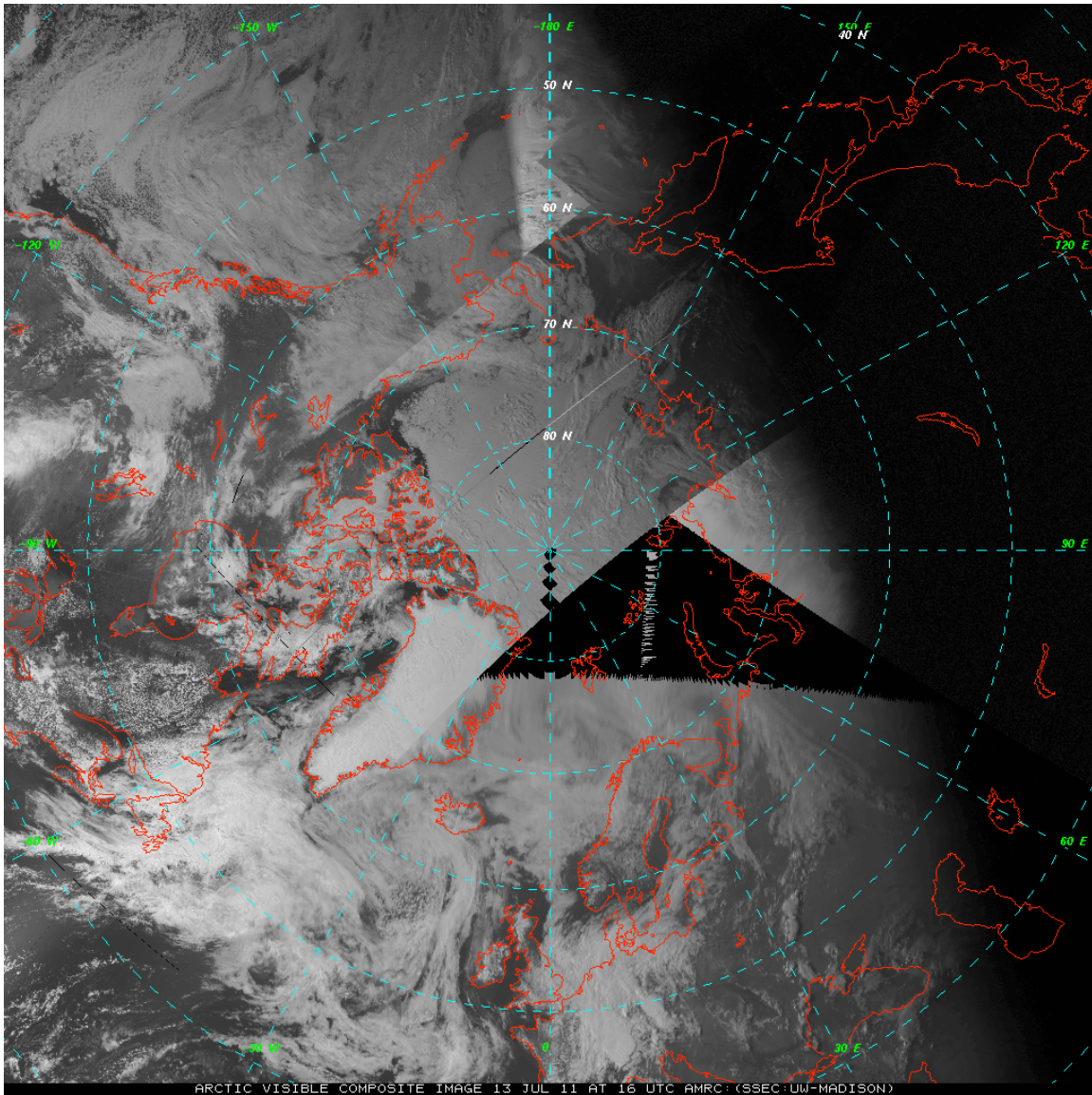


Figure 5. A visible (~0.65 microns) Arctic composite image from 13 July 2011 at 16 UTC shows the sunlight side of the Earth, with storms/clouds, polar ice cap on Greenland, and sea ice depicted.

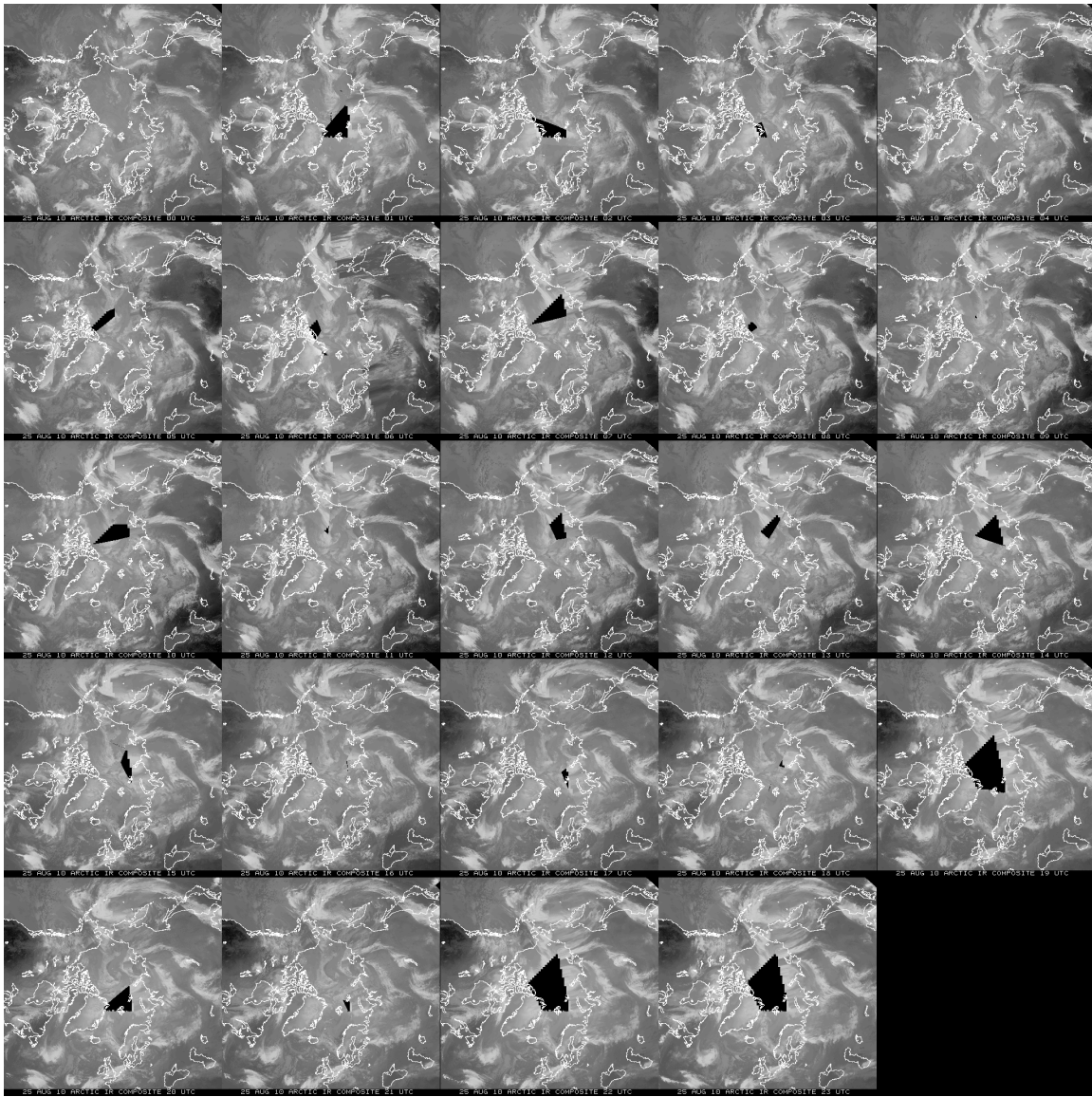


Figure 6. 24 hours of 1-hourly Arctic infrared composites for 25 August 2010.

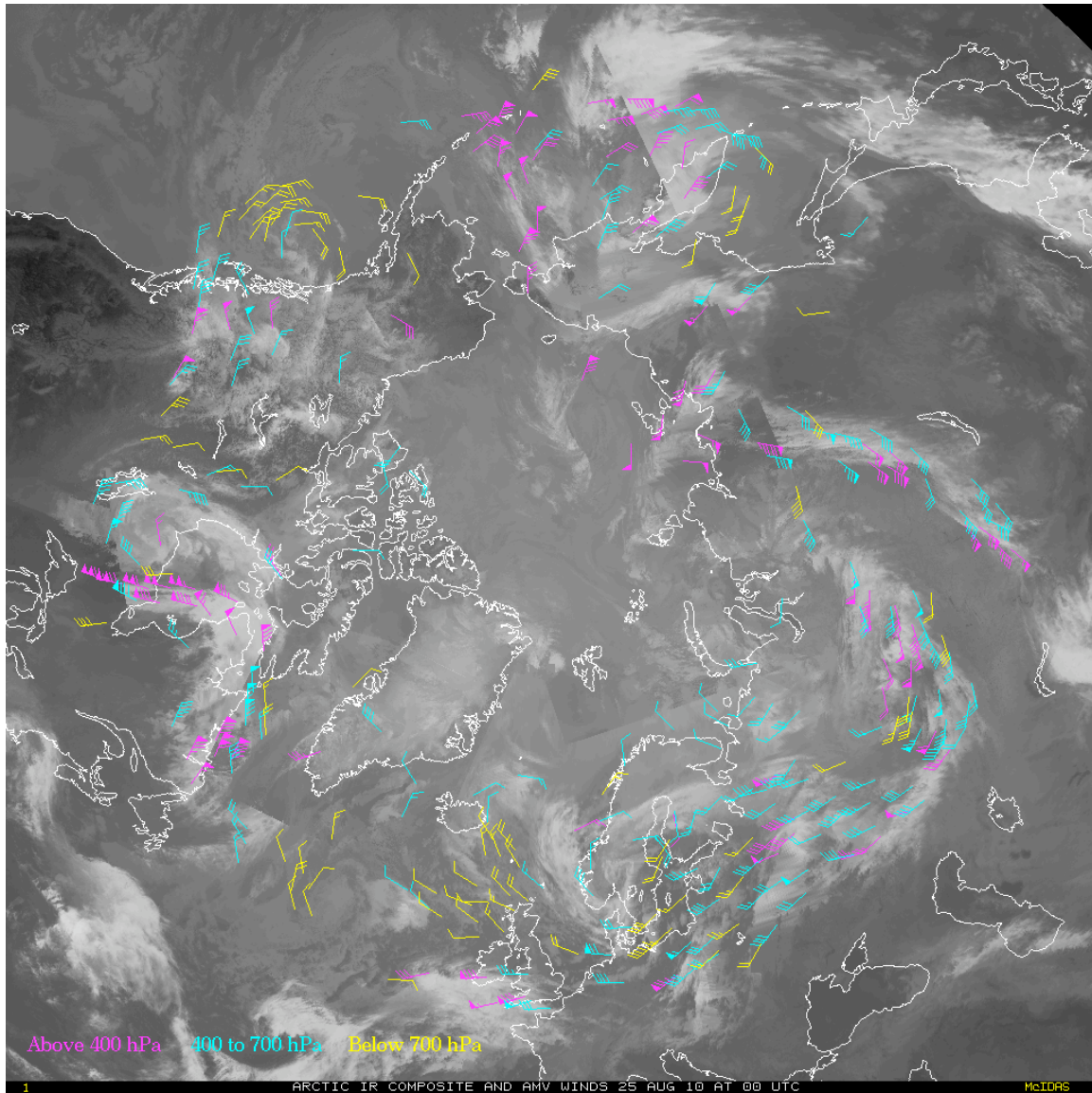


Figure 7. A sample infrared Arctic composite satellite image from 25 August 2010 at 00 UTC with atmospheric motion vectors (AMV) overlaid shows winds at three atmospheric layers: Below 700 hPa, 400 to 700 hPa and above 400 hPa.