

Suomi-NPP VIIRS IST vs IceBridge KT-19

Mark Tschudi

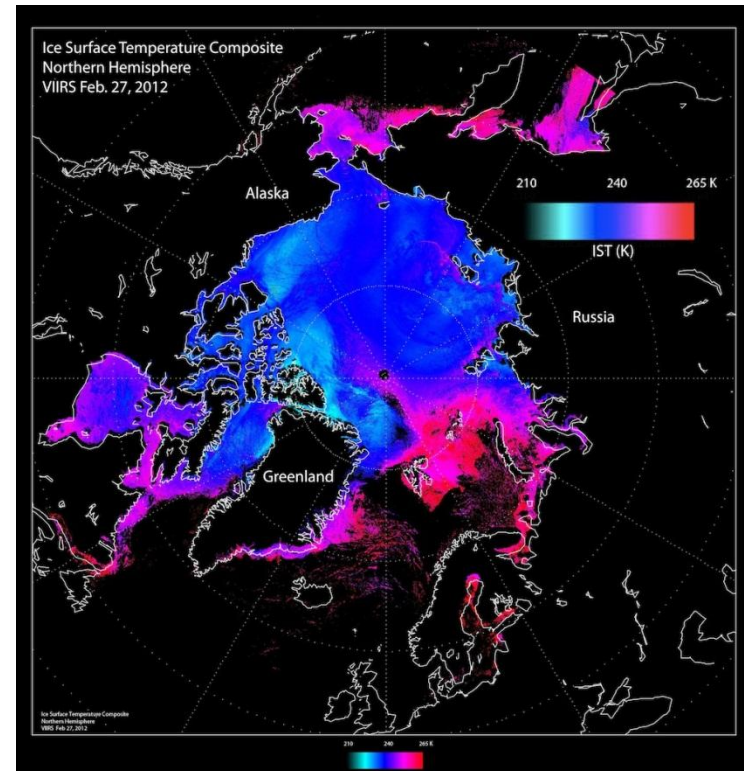
Suomi-NPP VIIRS

- **NPP – National Polar-Orbiting Partnership**
 - Transition from Aqua/Terra/Aura to NPOESS
 - Launched Oct 2011
- **Visible Infrared Imaging Radiometer Suite (VIIRS)**
 - Follow-on to MODIS (similar bands)

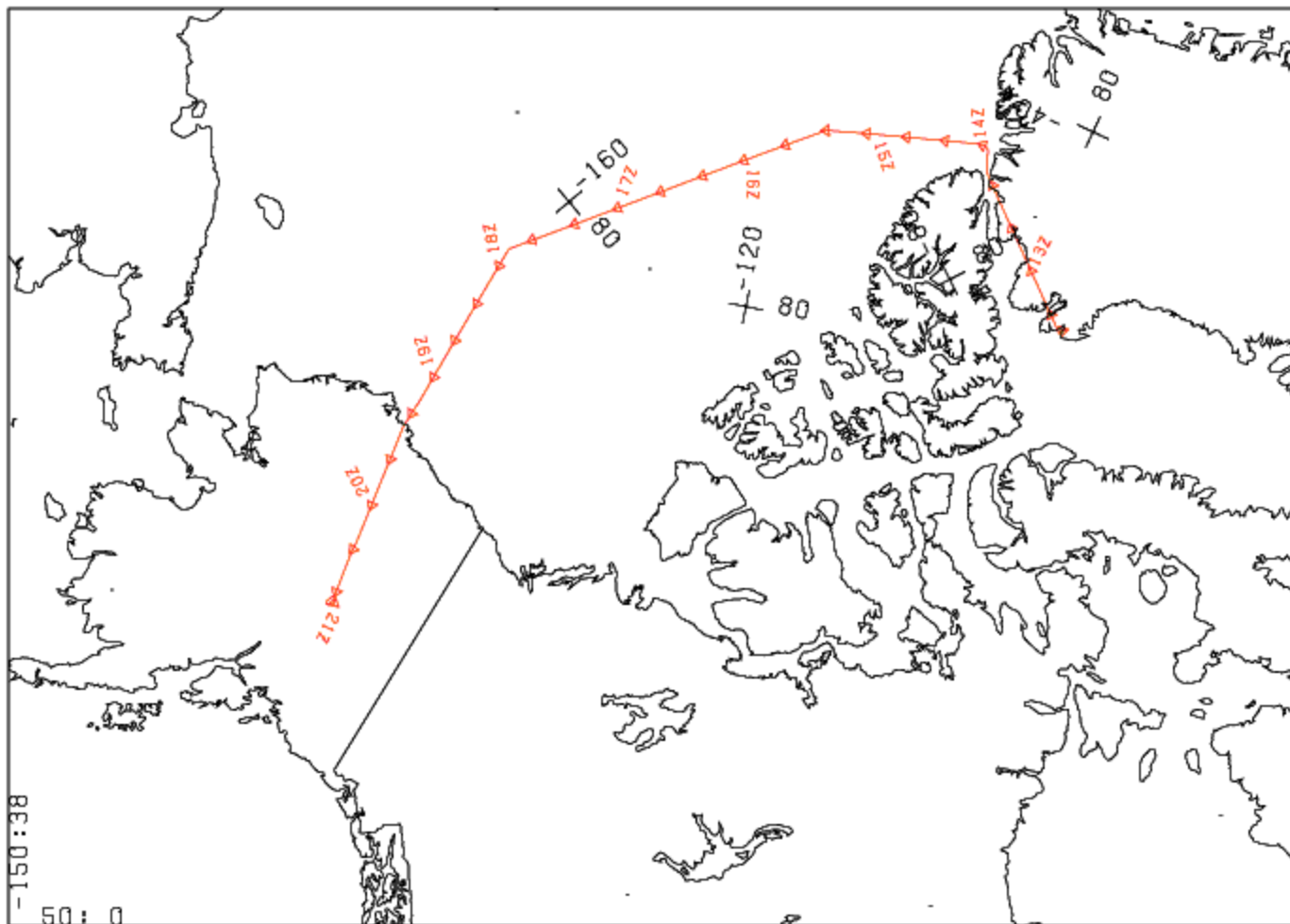


VIIRS Ice Surface Temperature (IST)

- provides a “skin temperature” for sea-ice covered areas
- produced for clear skies both day and night over the oceans
- MODIS IST heritage
- Uses “split window” method with VIIRS channels 11 & 12



Composite of VIIRS IST over the Arctic on 27 February 2012.



FLIGHT 12-426-04 14 MARCH 2012 A/C 426 (P3) ICEBRIDGE (DMS)
 LAMBERT CONFORMAL PROJECTION: SP1 = 61.1 SP2 = 82.4 CM = -107.9 ROTATED BY 0.0
 12:22:17 TO 21:19:44 UT SCALE 1:1.96E+07 TIME TICK EVERY 20.00 MINUTES

KT-19 data vs VIIRS IST

Comparison of VIIRS IST (green) with MODIS IST (red) and skin temperatures measured by aircraft (KT19 on NASA P3, IceBridge), 14 March 2012 (black).

*Mean KT-19 = -33.04 +- 1.14 C
Mean VIIRS = -34.17 +- 1.17 C
Mean MODIS = -33.06 +- 1.11 C*

KT-19 data at NSIDC:

<http://nsidc.org/data/iakst1b.html>

