AICC January 2020
SIKULIAQ Internet At Sea
Metrics

Captive Portal  150MB/Day/Person

Geostationary Orbit (~650ms Latency)
- HSN Uplink  256Kbit
- HSN Downlink  512Kbit (2Mbit Burst)
- HSN Uplink (Expan)  2Mbit (extra charge to Science)
- HSN Down (Expan)  2Mbit (extra charge to Science)
- KA Band Uplink  2Mbit
- KA Band Downlink  4Mbit

SIKULIAQ Load Balances HSN and KA

Low Earth Orbit (~50ms Latency)
- Iridium Certus Uplink  352 Kbit (testing)
- Iridium Certus Down  700 Kbit (testing)
Low Earth Orbit (LEO)
600-2,000 km from the Earth

Geostationary orbit (GEO)
36,000 km from the Earth

Digital TV, mobile and net
telecoms, some monitoring

Earth observation and
monitoring, some telecoms,
navigation

PHOTO from Https://News.BBC.CO.UK.
Issues at High Latitudes Geosynchronous (HSN,KA)

- Low Antenna Angle
- Curvature of the Earth Blocks Access to the Geostationary Constellation at ~ 80 Degrees of Latitude

HiSeasNet C-Band

- Mast Blockage at High Latitudes Due to Pennant Yard Arms

KA Inmarsat

- Suspect Dropped Coverage During Winter in Northern Hemisphere
Inmarsat – Pacific Foot Print

Worldwide Broadband Service

- 89 Ka-Band Beams per satellite
- 50 Mbps download speeds
- Compact antennas and equipment

inmarsat
Global Xpress™
• ONEWEB – "OneWeb brings fiber-like internet for the Arctic in 2020"
• STARLINK - "Starlink is targeting service in the Northern U.S. and Canada in 2020"