ATOP Implementation

Anchorage ARTCC Sector “64”

Presented to: CPWG/22

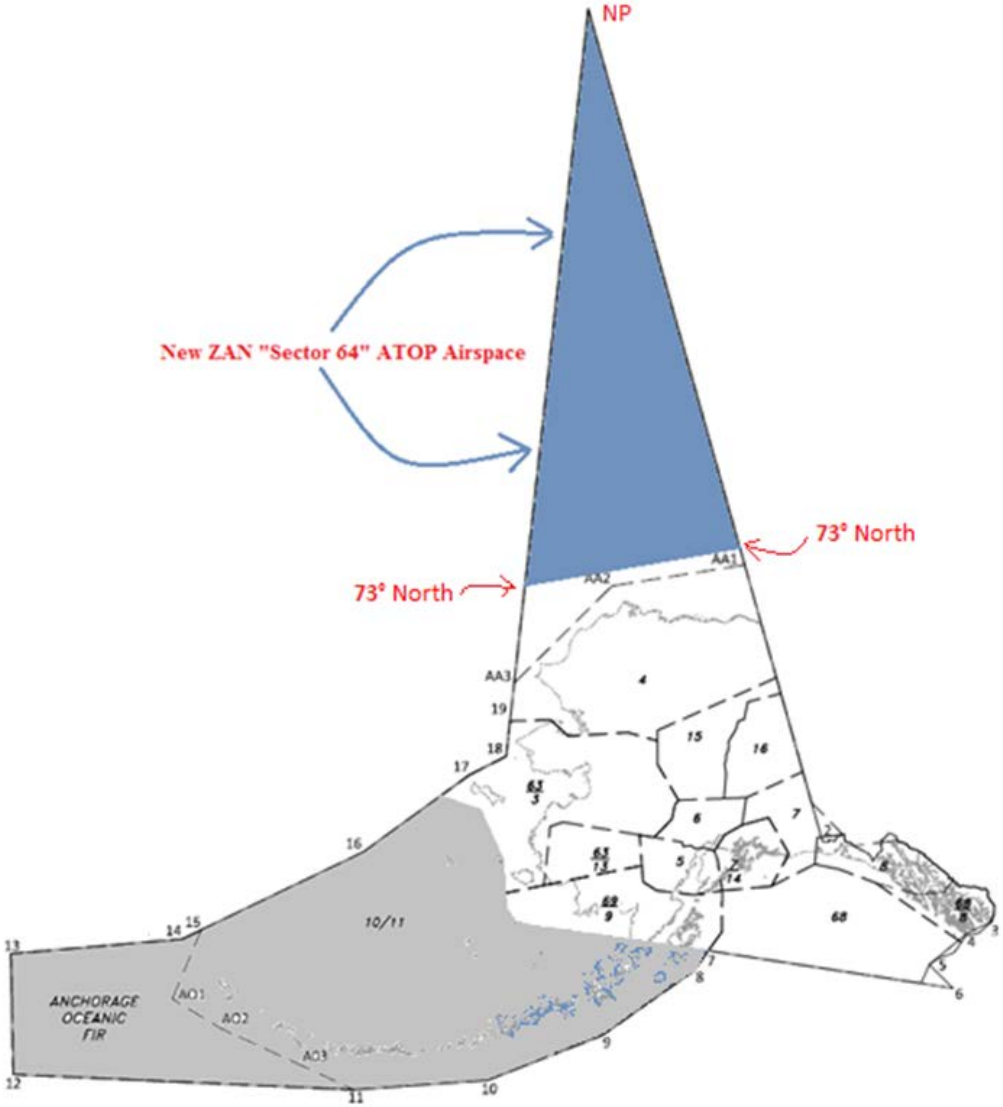
By: Steve Kessler,
Support Manager for Airspace and Procedures,
Anchorage ARTCC

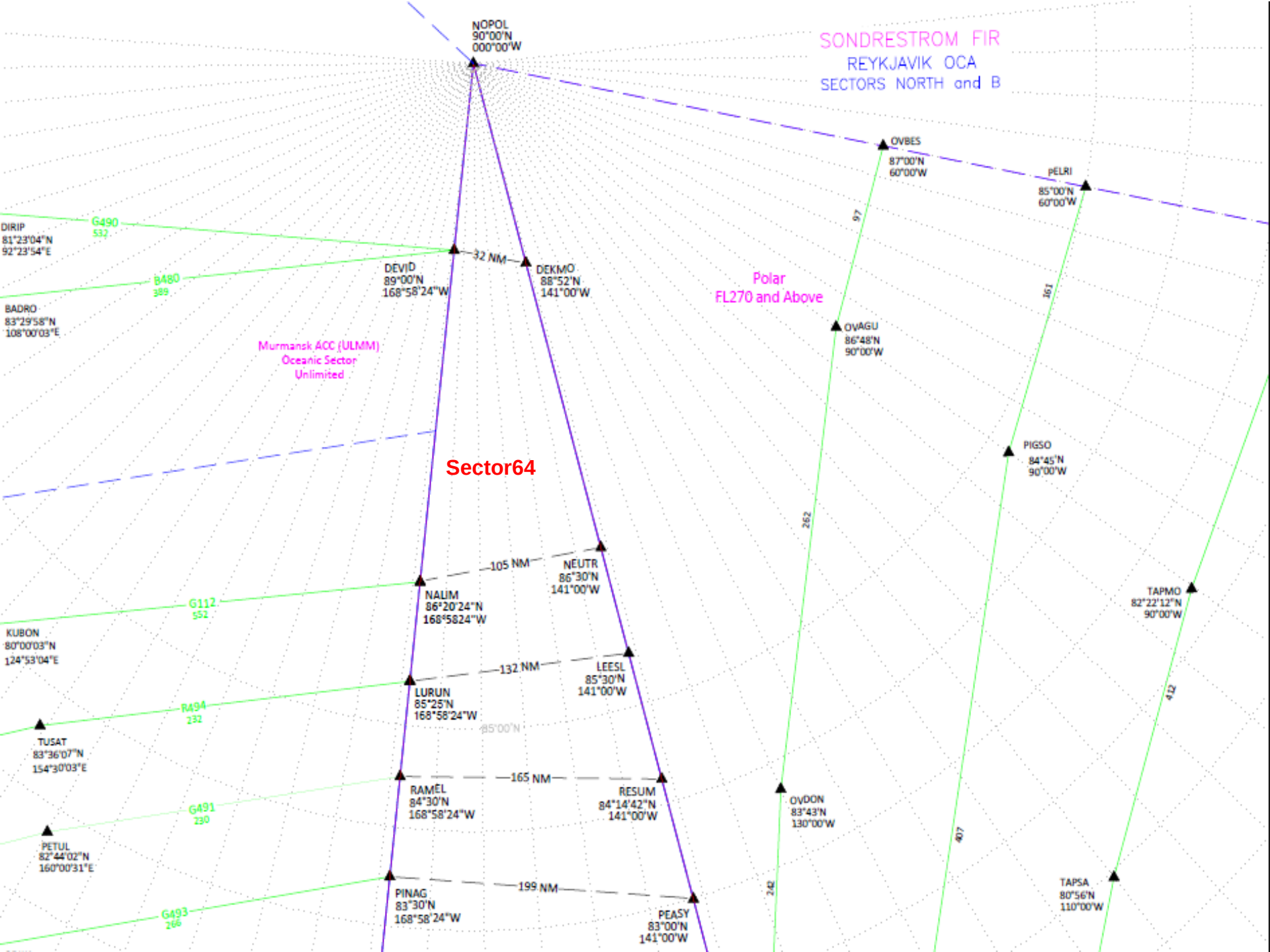
Date: October 25-27, 2016

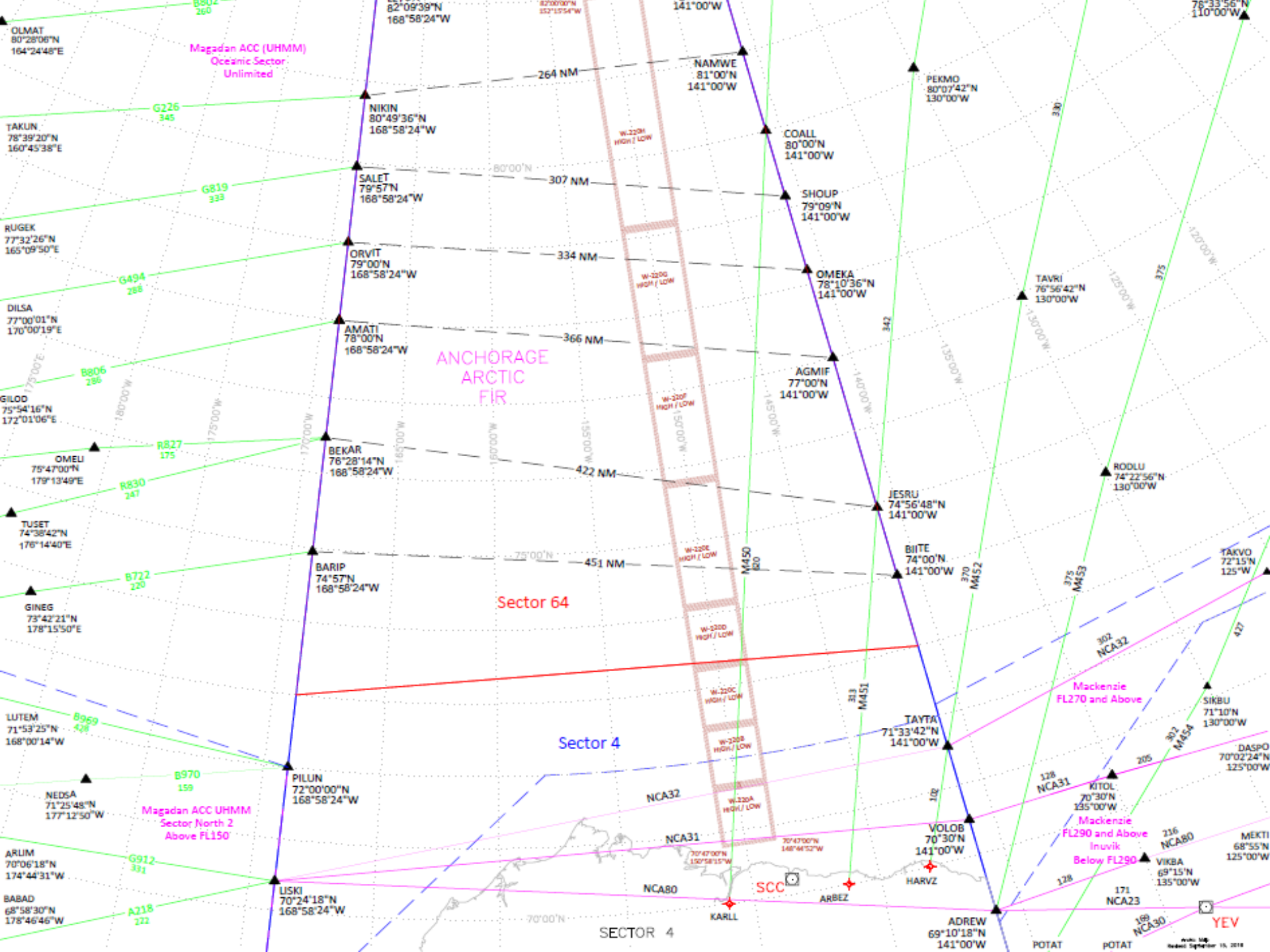
Anchorage ARTCC Sector “64”

For some time now, Anchorage Air Route Traffic Control Center (ZAN ARTCC) has been working to incorporate the airspace of the Anchorage Arctic Flight Information Region (FIR) into the ZAN Advanced Technologies and Oceanic Procedures automation platform, (i.e. ATOP/Ocean 21). Having overcome technical obstacles and designing and implementing collaborative labor-management operational visions, this goal now appears achievable in the very near term.

Anchorage ARTCC Sector “64”




SONDRESTROM FIR
REYKJAVIK OCA
SECTORS NORTH and B
NOPOL
90°00'N
000°00'W
OVBES
87°00'N
60°00'W
PELRI
85°00'N
60°00'W
DIRIP
81°23'04"N
92°23'54"E
G490
532
B480
389
BADRO
83°29'58"N
108°00'03"E
32 NM
DEVID
89°00'N
168°58'24"W
DEKMO
88°52'N
141°00'W
Polar
FL270 and Above
OVAGU
86°48'N
90°00'W
Murmansk ACC (ULMM)
Oceanic Sector
Unlimited
Sector64
PIGSO
84°45'N
90°00'W
105 NM
NEUTR
86°30'N
141°00'W
NALIM
86°20'24"N
168°5824"W
G112
551
KUBON
80°00'03"N
124°53'04"E
TAPMO
82°22'12"N
90°00'W
132 NM
LEESL
85°30'N
141°00'W
LURUN
85°25'N
168°58'24"W
R494
232
TUSAT
83°36'07"N
154°30'03"E
165 NM
RAMEL
84°30'N
168°58'24"W
RESUM
84°14'42"N
141°00'W
OVDON
83°43'N
130°00'W
G491
230
PETUL
82°44'02"N
160°00'31"E
199 NM
PINAG
83°30'N
168°58'24"W
PEASY
83°00'N
141°00'W
TAPSA
80°56'N
110°00'W
G493
266
97
161
262
242
407
412



Magadan ACC (UHMM)
Oceanic Sector
Unlimited
OLMAT
80°28'06"N
164°24'48"E
82°09'39"N
168°58'24"W
141°00'W
78°33'56"N
110°00'W
NAMWE
81°00'N
141°00'W
PEKMO
80°07'42"N
130°00'W
264 NM
NIKIN
80°49'36"N
168°58'24"W
G226
345
TAKUN
78°39'20"N
160°45'38"E
COALL
80°00'N
141°00'W
SALET
79°57'N
168°58'24"W
80°00'N
307 NM
SHOUP
79°09'N
141°00'W
G819
333
RUGEK
77°32'26"N
165°09'50"E
ORVIT
79°00'N
168°58'24"W
334 NM
OMEKA
78°10'36"N
141°00'W
TAVRI
76°56'42"N
130°00'W
G494
288
DILSA
77°00'01"N
170°00'19"E
AMATI
78°00'N
168°58'24"W
366 NM
ANCHORAGE
ARCTIC
FIR
AGMIF
77°00'N
141°00'W
B806
286
GILOD
75°54'16"N
172°01'06"E
R827
175
OMELI
75°47'00"N
179°13'49"E
BEKAR
76°28'14"N
168°58'24"W
422 NM
RODLU
74°22'56"N
130°00'W
R830
247
JESRU
74°56'48"N
141°00'W
TUSET
74°38'42"N
176°14'40"E
BIITE
74°00'N
141°00'W
TAKVO
72°15'N
125°W
B722
220
BARIP
74°57'N
168°58'24"W
75°00'N
451 NM
M450
M452
M453
GINEG
73°42'21"N
178°15'50"E
Sector 64
NCA32
Mackenzie
FL270 and Above
SIKBU
71°10'N
130°00'W
LUTEM
71°53'25"N
168°00'14"W
B969
428
TAYTA
71°33'42"N
141°00'W
M451
M454
Sector 4
DASPO
70°02'24"N
125°00'W
B970
159
PILUN
72°00'00"N
168°58'24"W
NCA32
NCA31
KITOL
70°30'N
135°00'W
NEDSA
71°25'48"N
177°12'50"W
Magadan ACC UHMM
Sector North 2
Above FL150
Mackenzie
FL290 and Above
Inuvik
Below FL290
VOLOB
70°30'N
141°00'W
NCA31
NCA80
MEKTI
68°55'N
125°00'W
ARLIM
70°06'18"N
174°44'31"W
G912
331
VIKBA
69°15'N
135°00'W
HARVZ
SCC
ARBEZ
NCA80
LISKI
70°24'18"N
168°58'24"W
BABAD
68°58'30"N
178°46'46"W
A218
222
KARLL
ADREW
69°10'18"N
141°00'W
NCA23
NCA30
YEV
70°00'N
SECTOR 4
POTAT
POTAT

Anchorage ARTCC Sector “64”

Differences between Current and ATOP Sector 64

Current

- Surveillance
  - Radar below 72º N
  - None above 72º N
- Navigation
  - GNSS / INS
  - No land based
- Communication
  - HF via Nav Canada’s “Gander Radio”
  - CPDLC (dependent on equipage / coverage)
  - SATCOM (dependent on equipage / coverage)
- ATC Separation
  - Vertical – RVSM
  - Lateral – Based on RNAV 10 (RNP-10)
  - Longitudinal – 15’ standard w/out MACH

ATOP/Ocean21

- Surveillance
  - Radar below 72º N
  - ADS-C throughout (depending on aircraft equipage)
- Navigation
  - GNSS / INS
  - No land based
- Communication
  - HF via Nav Canada’s “Gander Radio”
  - CPDLC (dependent on equipage / coverage)
  - SATCOM (dependent on equipage / coverage)
- ATC Separation
  - Vertical – RVSM
  - Lateral – Based on RNAV 10 (RNP-10)
  - Longitudinal – 15’ standard w/out MACH

Anchorage ARTCC Sector “64”

CNS Benefits of ATOP & Sector 64

The primary immediate benefits of ATOP / Sector 64 will be *ADS-C surveillance and enhanced Controller tools including electronic situation display, route readout, and conflict probe.*

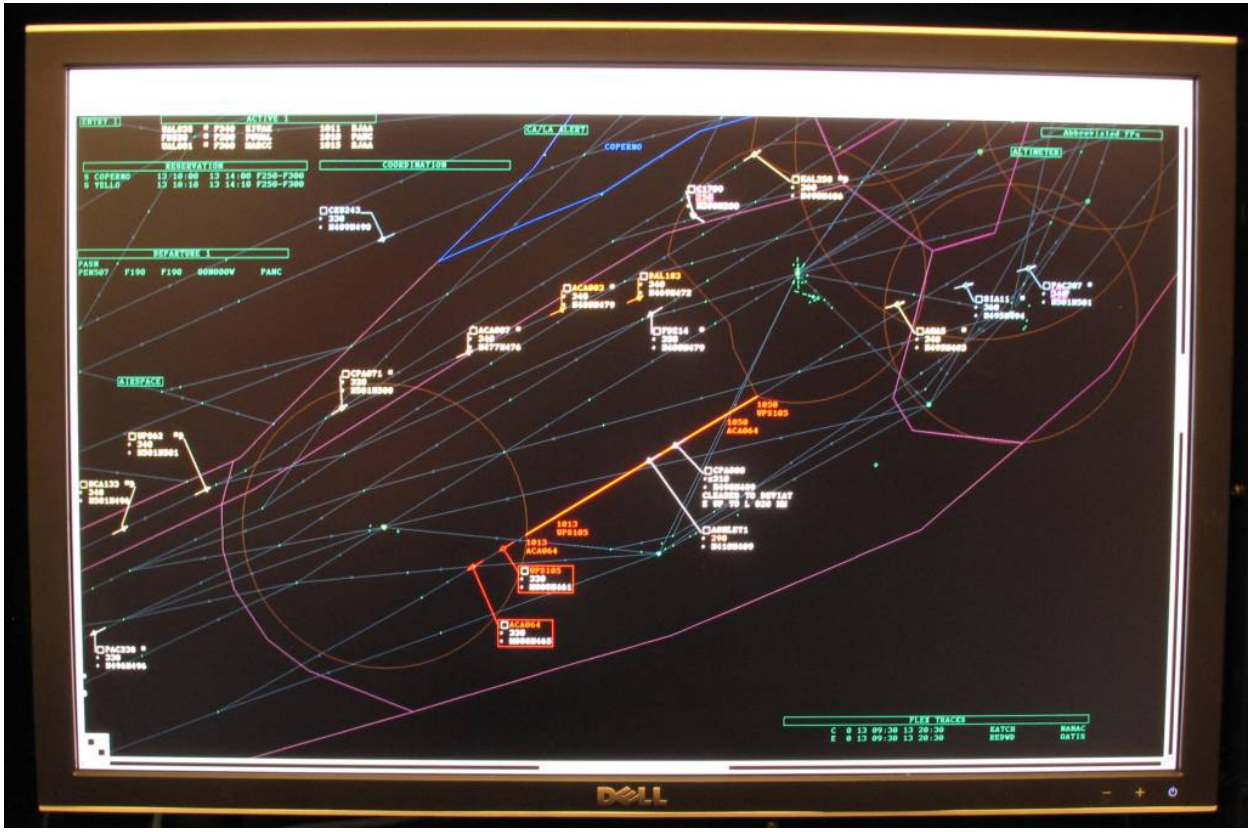
Secondary benefits (future fulfillment) include establishing the technological base for:

- *Advanced ATC Interfacility Data Coordination (AIDC 2.0 / 3.0)*
- *Application of reduced separation minima (ADS-C D50 & 30/30)*
- *Application of new surveillance methodologies (space based ADS-B)*

Anchorage ARTCC Sector “64”

Current

With ATOP/Ocean21



Anchorage ARTCC Sector “64”

- **Implementation Date – TBD**
- **Impacts for airspace users**
  - *Additional Flight Plan filing address (PAZ**N**ZQZX as well as PAZ**A**ZQZX)*
- **Potential benefits for airspace users**
  - Near term
    - Improved Alerting Service
    - Improved access to altitude change
    - Improved routing options
  - Long term
    - Separation minima reduction

Anchorage ARTCC Sector “64”

Questions?