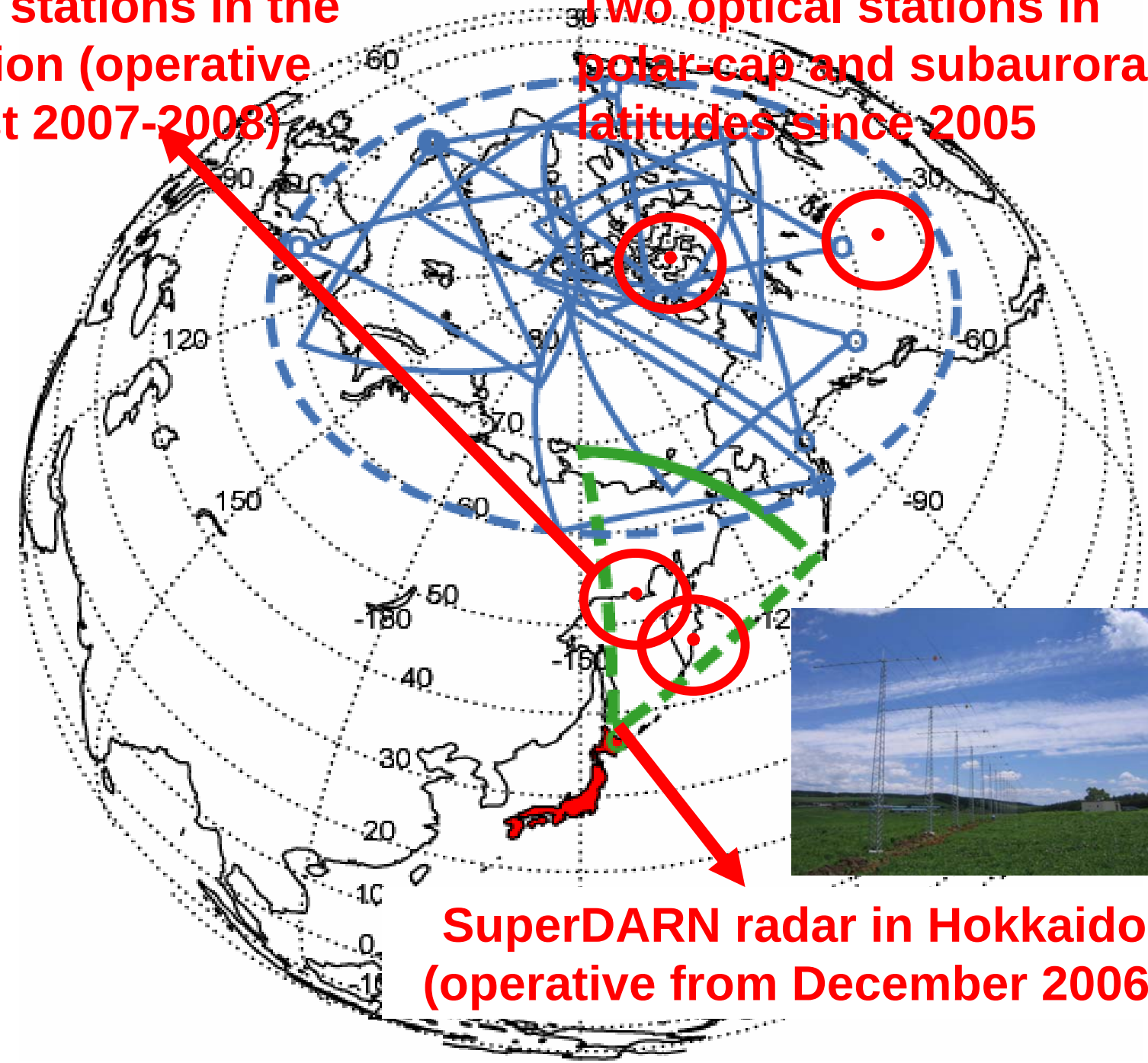
シベリア・カムチャッカでの光学・磁場観測計画

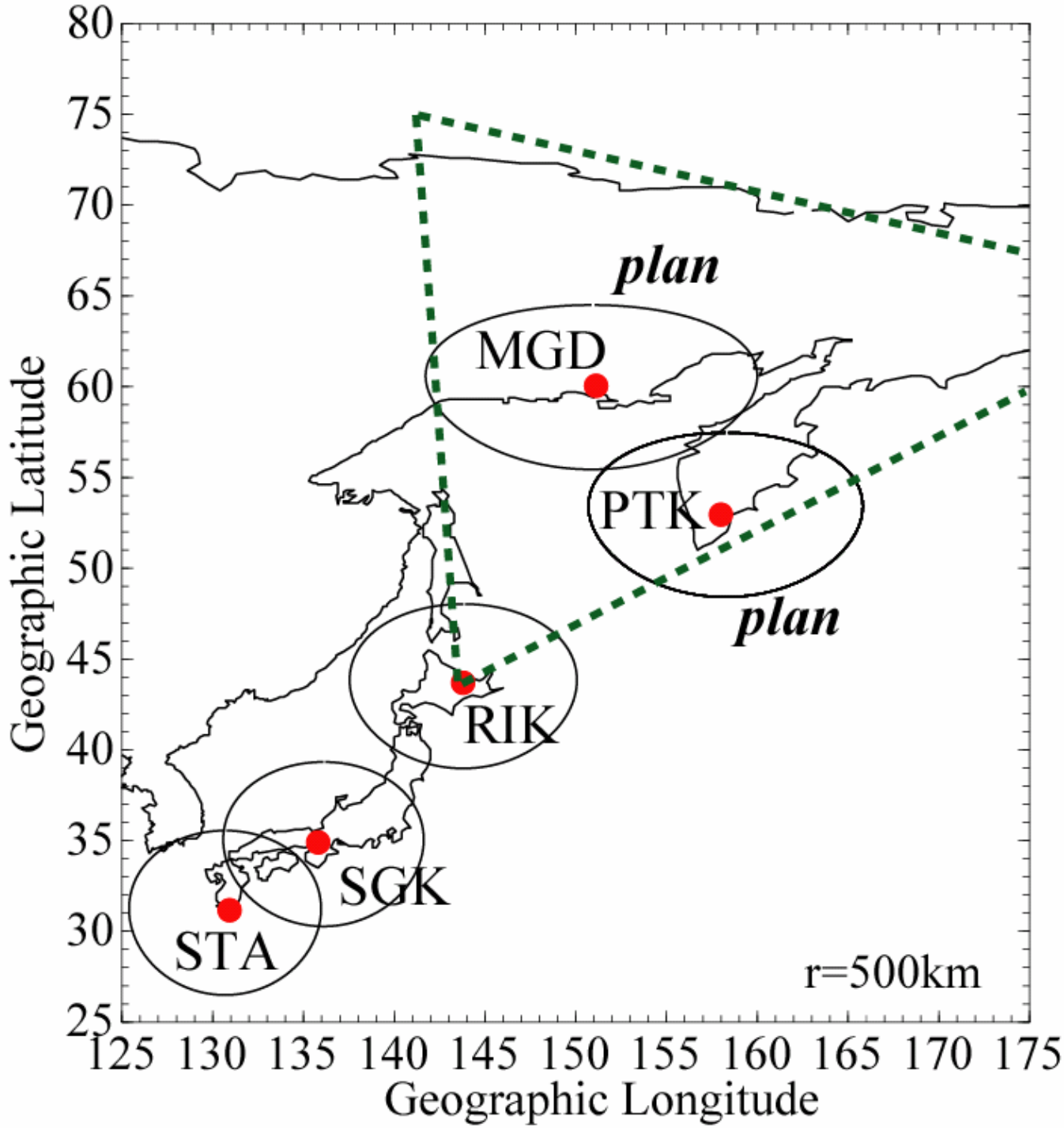
塩川 和夫
(名大STE研)

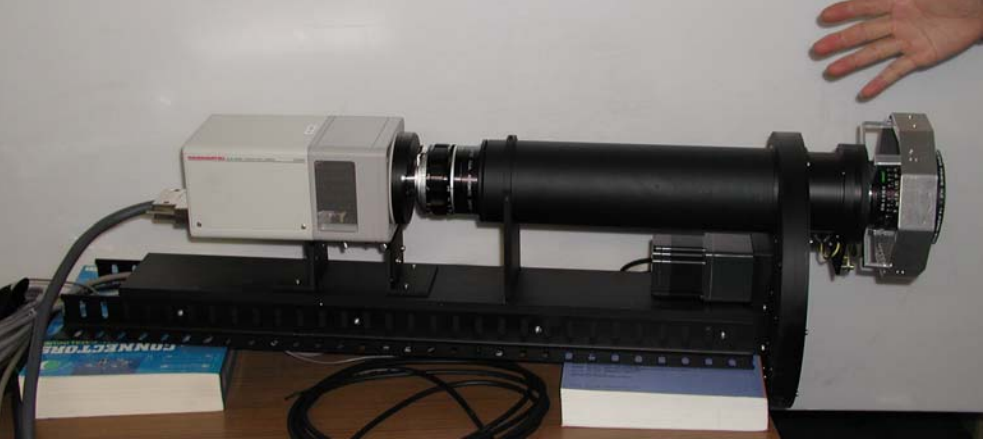
Two optical stations in the far east region (operative from August 2007-2008)

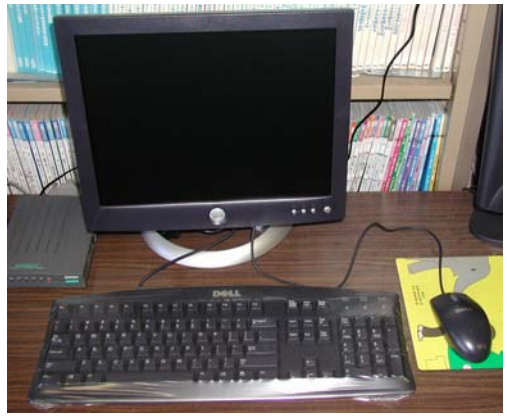
Two optical stations in polar-cap and subauroral latitudes since 2005



SuperDARN radar in Hokkaido (operative from December 2006)


80
75
70
65
60
55
50
45
40
35
30
25
Geographic Latitude
125 130 135 140 145 150 155 160 165 170 175
Geographic Longitude
plan
plan
MGD
PTK
RIK
SGK
STA
r=500km

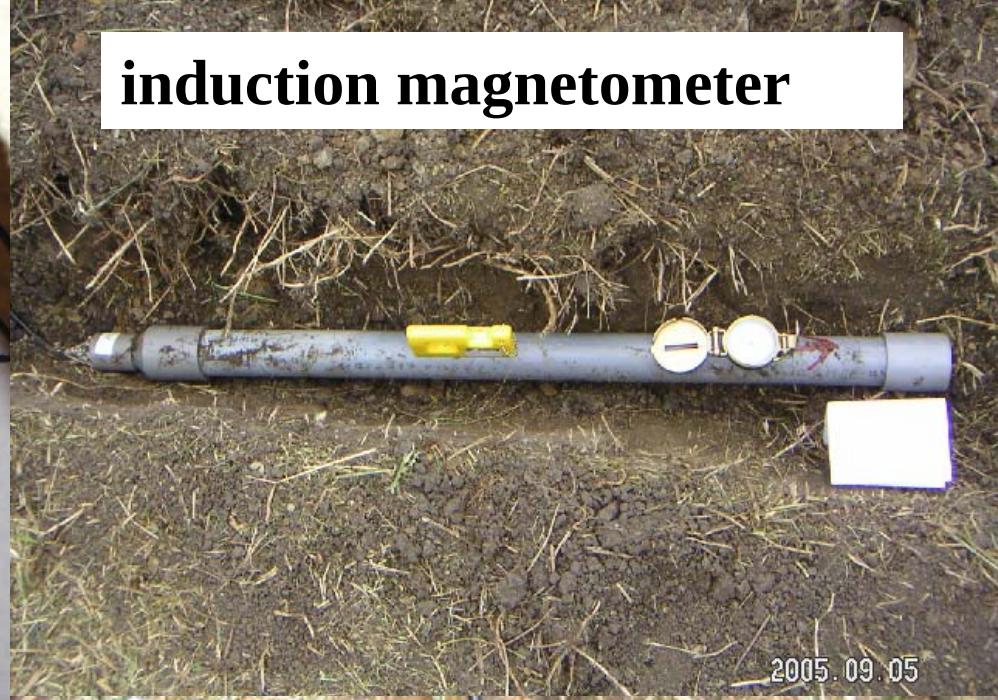





SUNTAC


Panasonic
DVD-RAM
5.2GB

induction magnetometer



Paratunka (PTK, 2007 Autumn- (plan))

(52.9N, 158.3E, 45.8MLAT)

all-sky cooled-CCD imager

557.7nm, 630.0nm, OH-band, 486.1nm, 777.4nm

time resolution: 2 min

induction magnetometer : 64Hz sampling

Magadan (MGD, 2008 Summer- (plan))

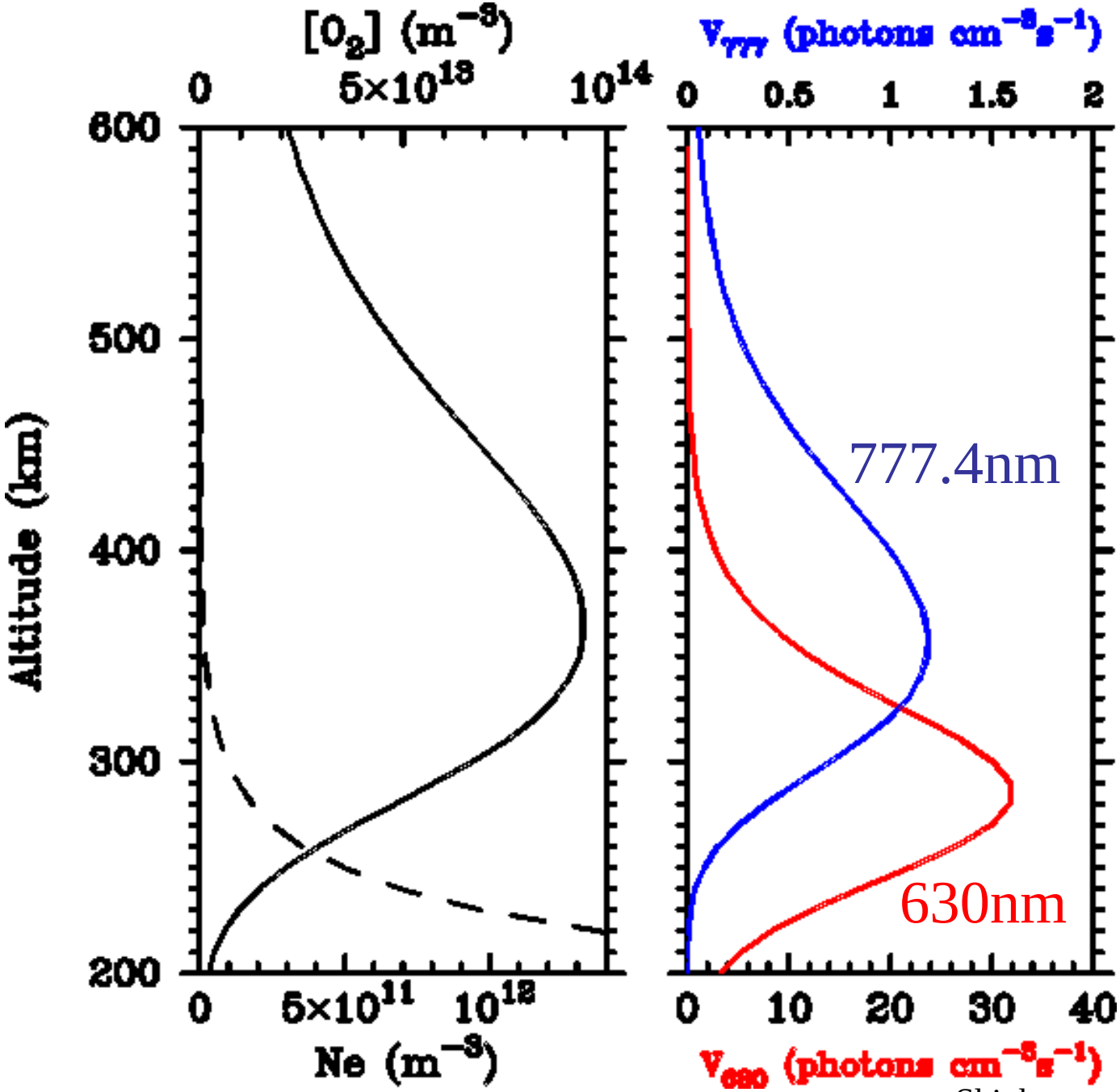
(60.0N, 150.9E, 51.9MLAT)

all-sky cooled-CCD imager

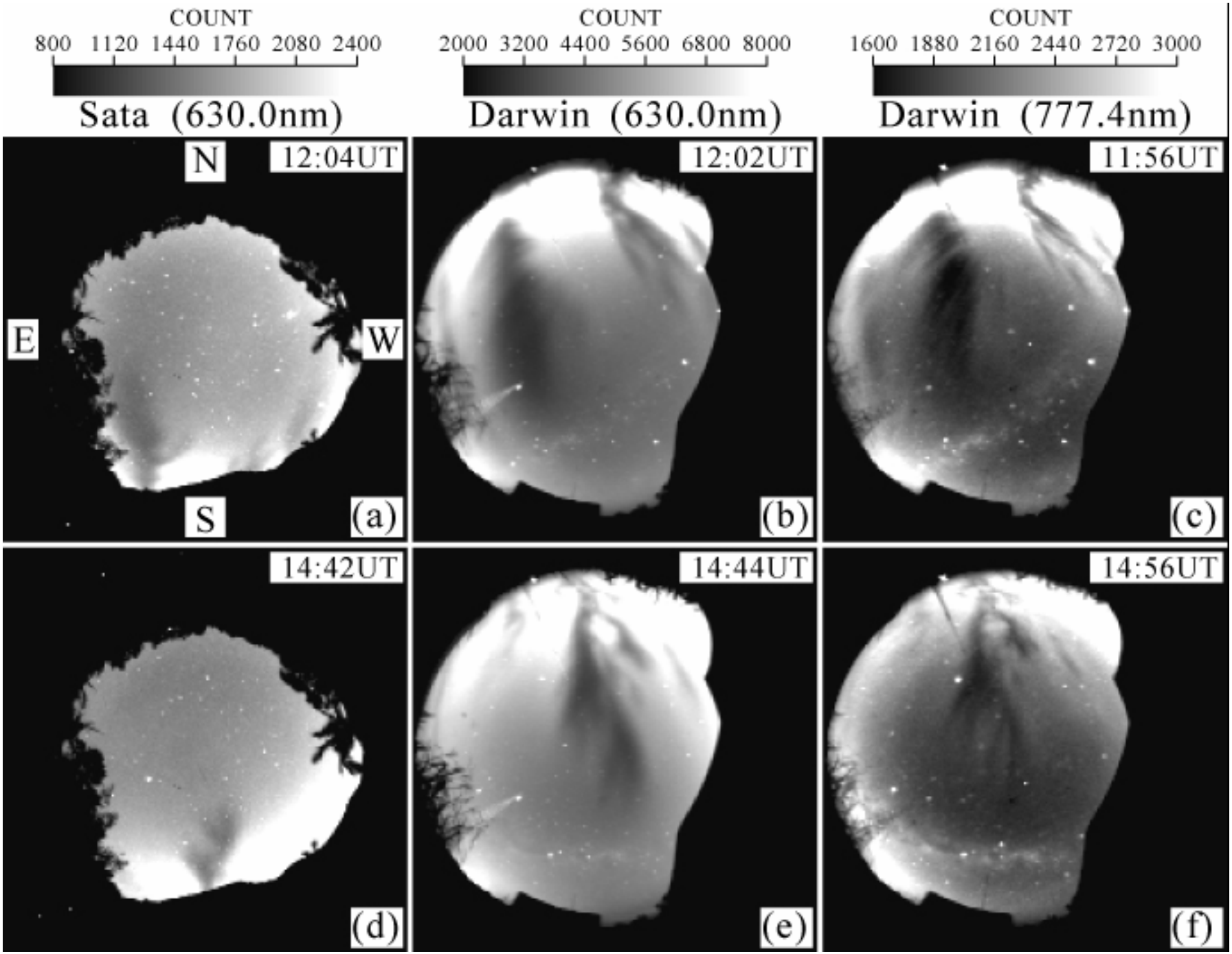
557.7nm, 630.0nm, OH-band, 486.1nm, 777.4nm

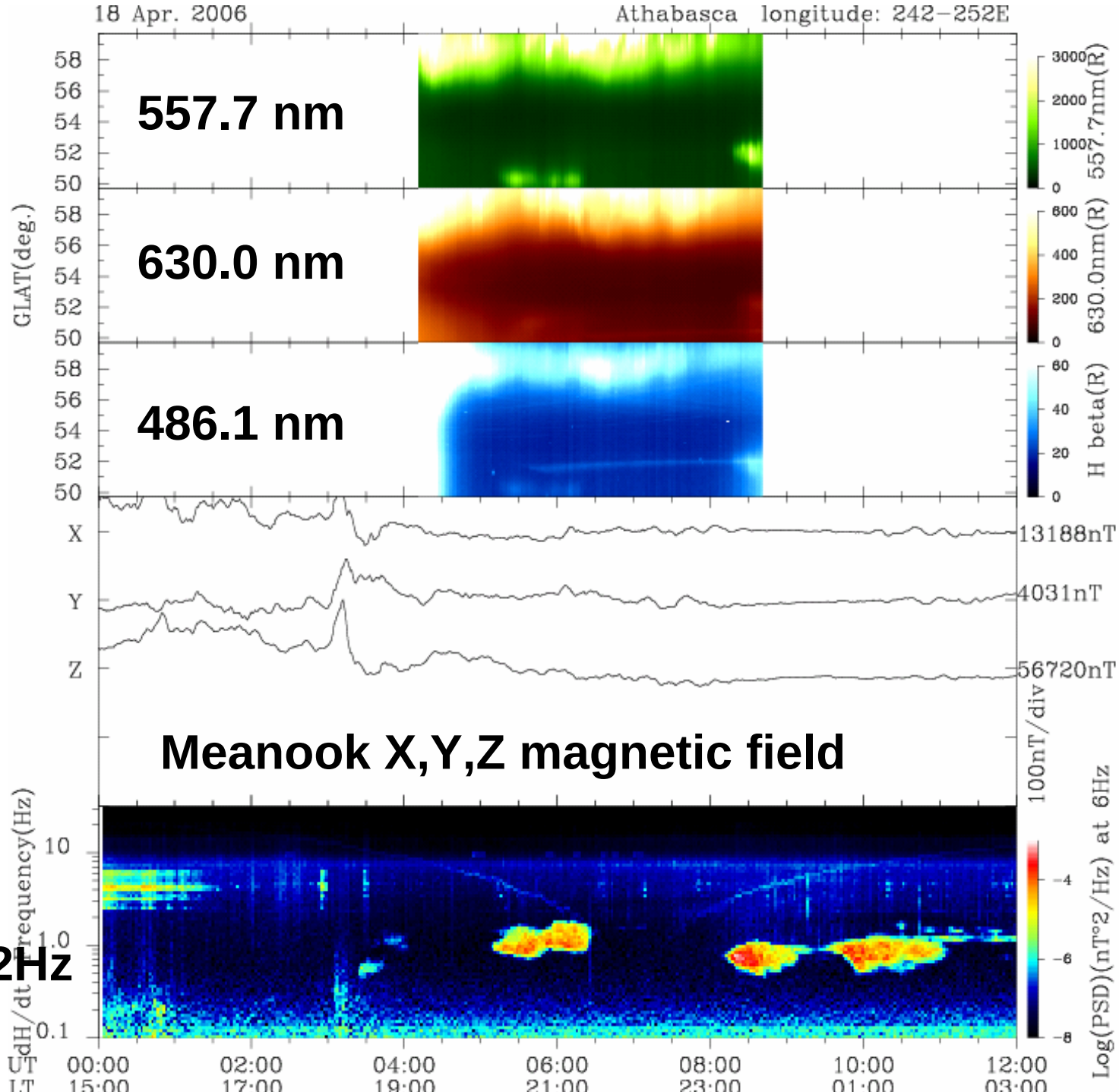
time resolution: 2 min

induction magnetometer : 64Hz sampling



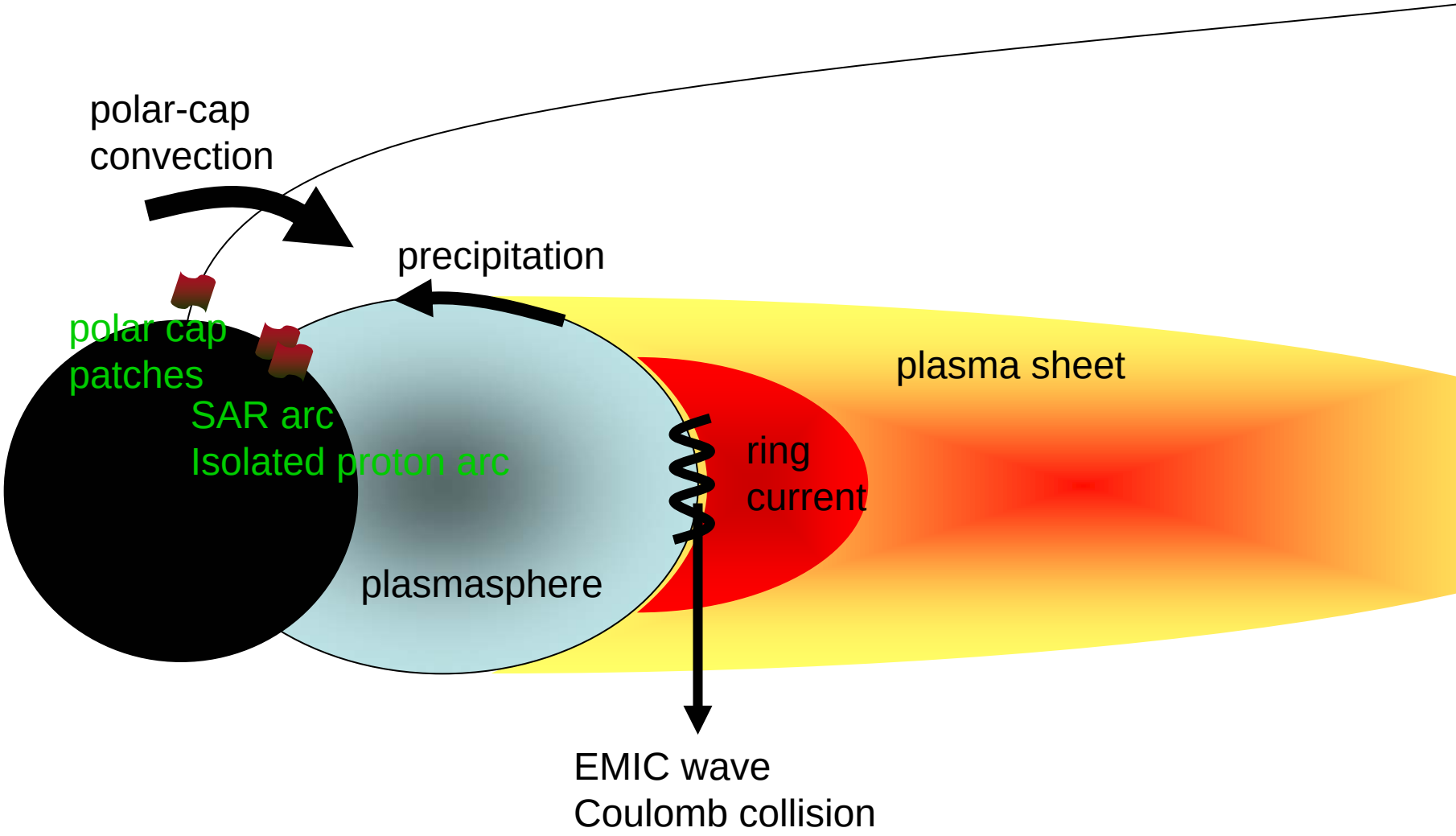
Shiokawa et al. (JGR, 2003)

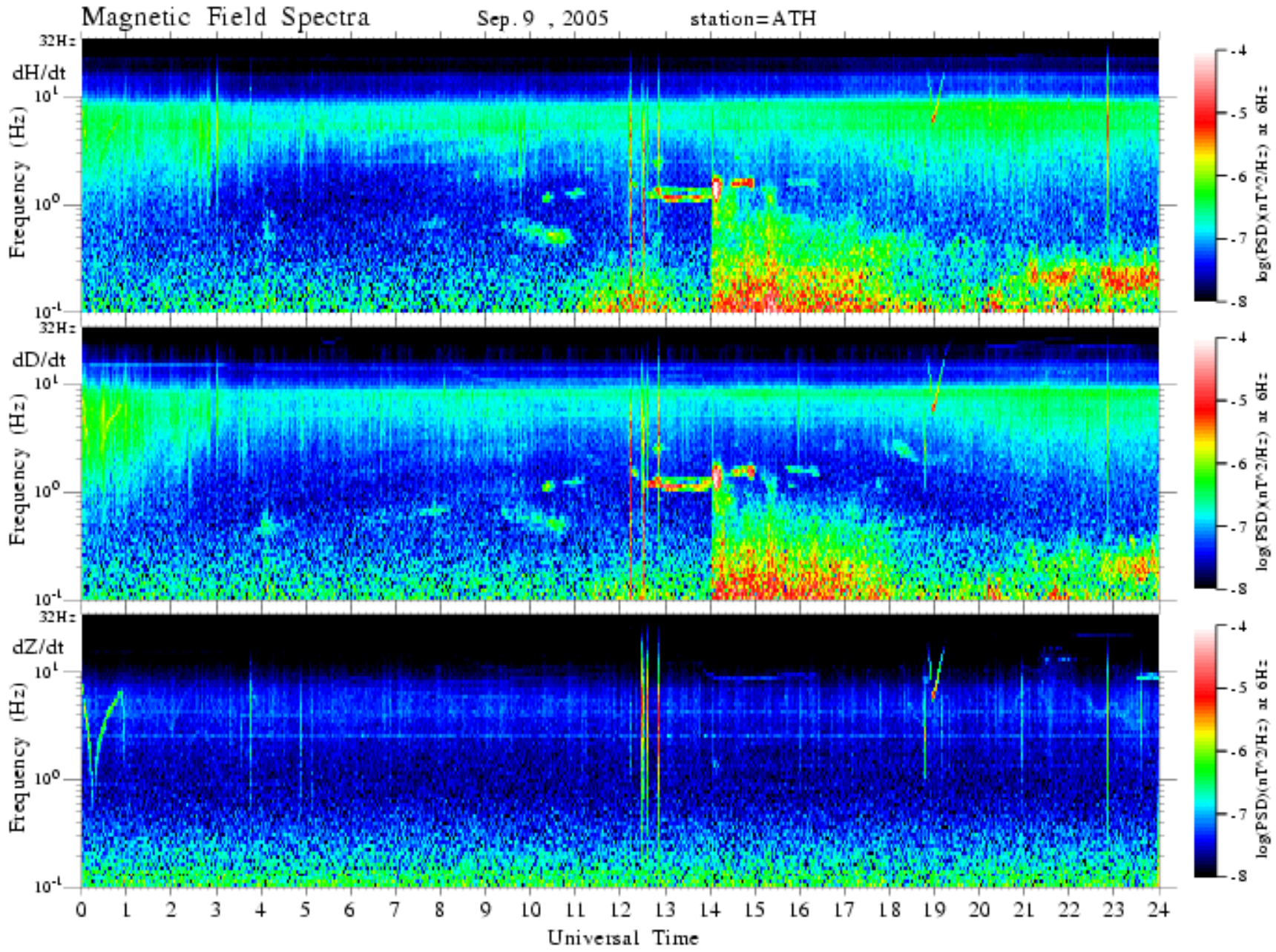

COUNT
800 1120 1440 1760 2080 2400
Sata (630.0nm)
COUNT
2000 3200 4400 5600 6800 8000
Darwin (630.0nm)
COUNT
1600 1880 2160 2440 2720 3000
Darwin (777.4nm)
N
E
W
S
12:04UT
(a)
12:02UT
(b)
11:56UT
(c)
14:42UT
(d)
14:44UT
(e)
14:56UT
(f)

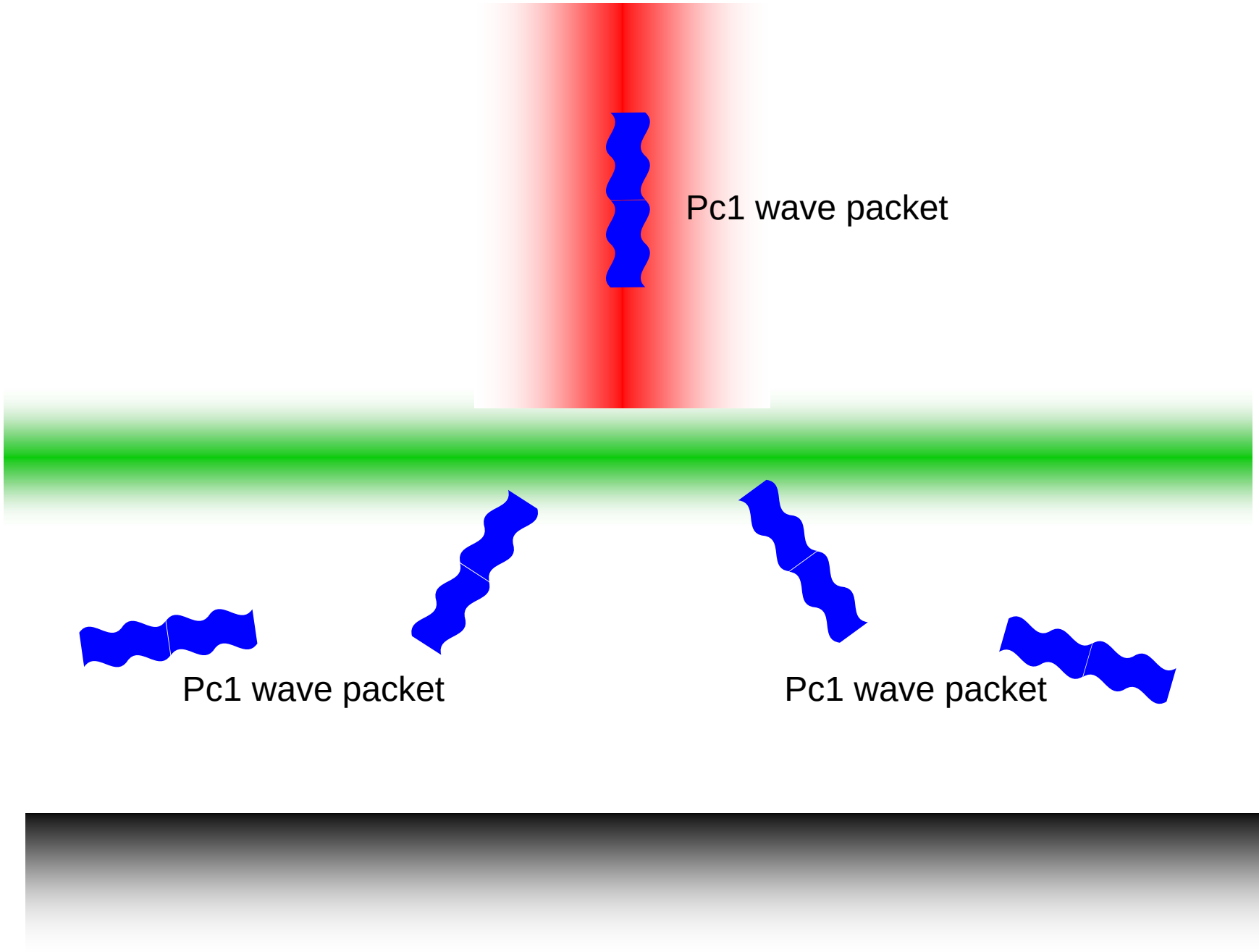

18 Apr. 2006
Athabasca longitude: 242–252E
557.7 nm
630.0 nm
486.1 nm
GLAT(deg.)
557.7nm(R)
630.0nm(R)
H beta(R)
X
Y
Z
13188nT
4031nT
56720nT
Meanook X,Y,Z magnetic field
100nT/div
dH/dt Frequency(Hz)
Log(PSD)(nT^2/Hz) at 6Hz
UT
LT
00:00
02:00
04:00
06:00
08:00
10:00
12:00
15:00
17:00
19:00
21:00
23:00
01:00
03:00

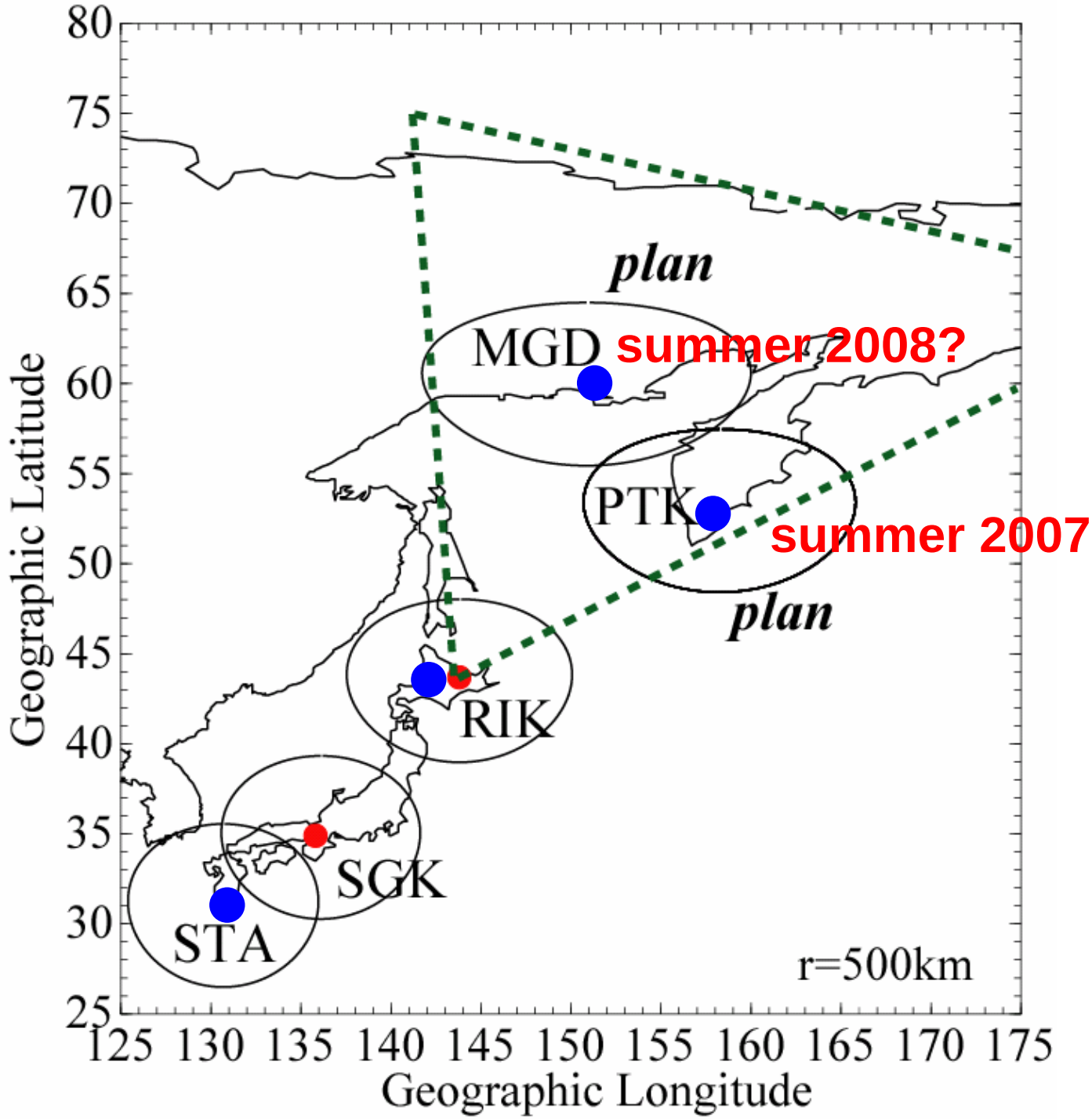
dH/dt 0.1-32Hz

Summary of the observations




Magnetic Field Spectra
Sep. 9 , 2005
station=ATH
dH/dt
dD/dt
dZ/dt
Frequency (Hz)
32Hz
10^1
10^0
10^-1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Universal Time
log(PSD)(nT^2/Hz) at 6Hz
-4
-5
-6
-7
-8


Pc1 wave packet
Pc1 wave packet
Pc1 wave packet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Geographic Latitude
125 130 135 140 145 150 155 160 165 170 175
Geographic Longitude
plan
MGD
summer 2008?
PTK
summer 2007
plan
RIK
SGK
STA
r=500km