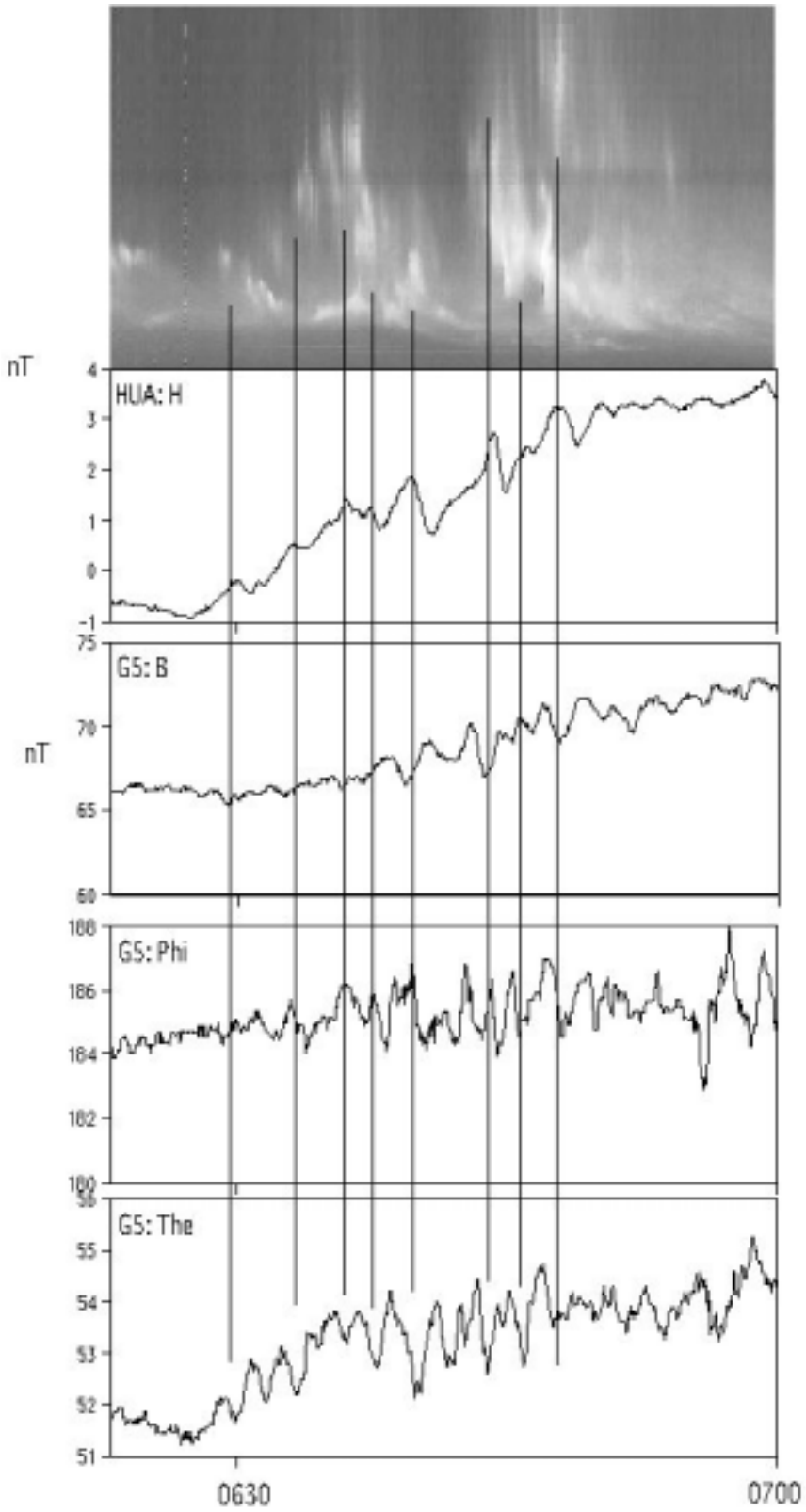
A Pi2 modulation of the auroral structure

Osuke Saka[1]; Kanji Hayashi[2]

[1] KNCT; [2] Non

A correlation between Pi2 waveform at the dip-equator and concurrent auroral developments of specific structure measured by all-sky camera is studied. We found that N-S branches of auroral development can be categorized into two types depending on whether clear Pi2 pulsations are remarked or not at the dip-equator. The correlation found was such that the H component peaks of the Pi2 amplitudes occurred when the auroral NS branch developed in the geomagnetic meridian. If the Pi2 wave can be interpreted as a development of the slow mode wave in the midnight magnetosphere, particles associated with the auroral NS branch can be originated from plasmas responsible for the diamagnetic effects in the midnight magnetosphere.


nT
HUA: H
4
3
2
1
0
-1
G5: B
nT
75
70
65
60
G5: Phi
188
186
184
182
180
G5: The
55
54
53
52
51
0630
0700

17 Jan. 1986