



**2019年10月3-9日
Athabasca (Canada)訪問レポート
NIKONカラーカメラ設置**

塩川和夫、稲葉裕大、内藤豪人、Martin Connors, Ian Schofield

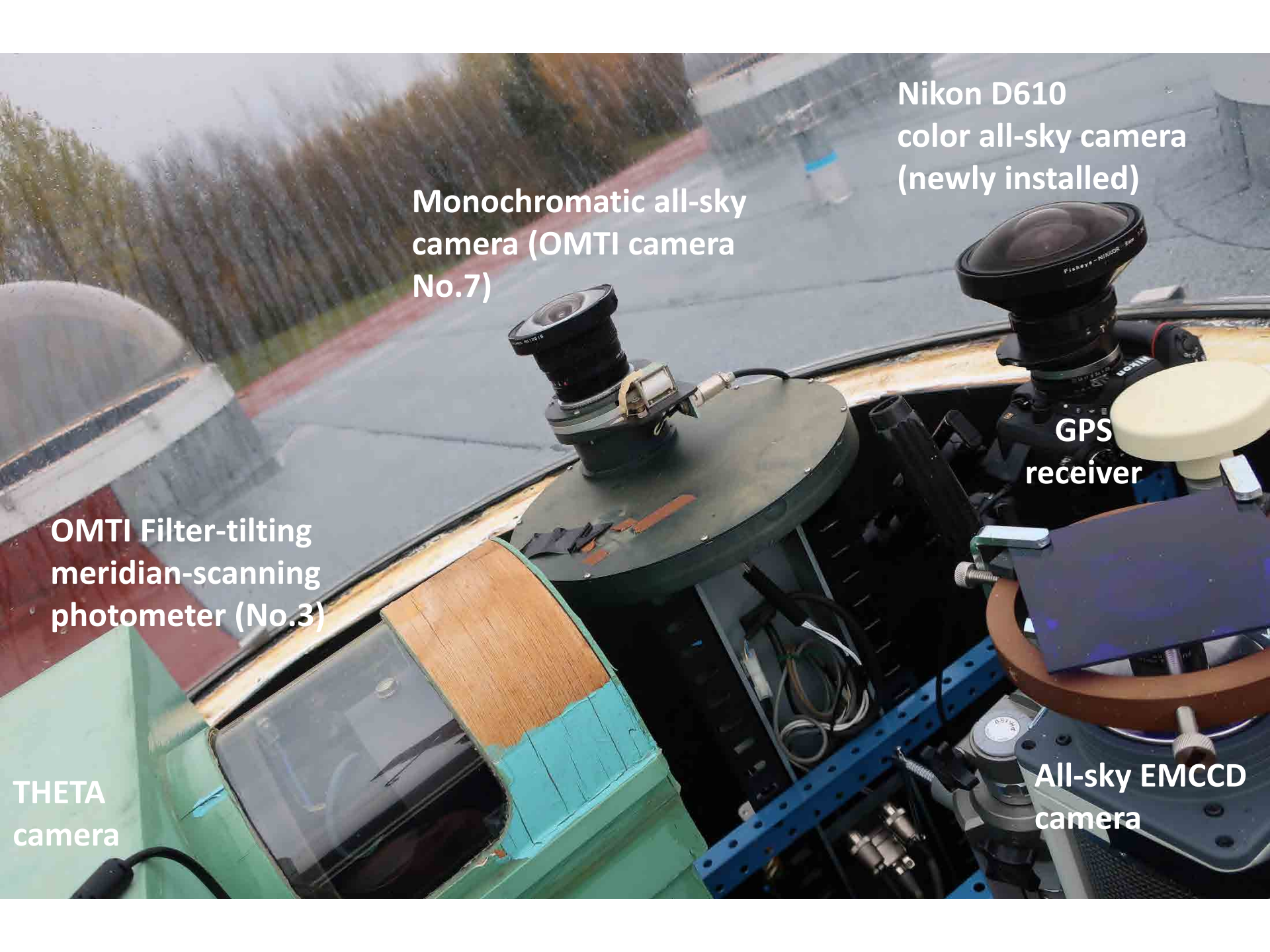
**October 3-9, 2019,
Athabasca (Canada) visit report
Installation of a NIKON color camera**

**Kazuo Shiokawa, Yudai Inaba, Hideto Naito, Martin
Connors, and Ian Schofield**

概要 Abstract

カナダのアサバスカ観測点(AUGSO)に、学生(稲葉・内藤)が開発したNIKON D610カラー全天カメラの自動観測システムを設置し、全天カラー画像の自動定常観測を開始するとともに、旧観測所(AUGO-I)と新観測所(AUGSO)の間でカラー全天カメラによるオーロラの同時観測を行い、2地点観測によるオーロラの高度決定に関する試験データを取得しました。

We have installed a student-developed digital color all-sky camera at AUGSO, Athabasca, Canada, and started routine measurements. We also obtain test data for triangulation of auroral height and location using another all-sky color camera at the old observatory (AUGO-I).



Nikon D610
color all-sky camera
(newly installed)

Monochromatic all-sky
camera (OMTI camera
No.7)

GPS
receiver

OMTI Filter-tilting
meridian-scanning
photometer (No.3)

All-sky EMCCD
camera

THETA
camera



Induction
magnetometer

EMCCD

OMTI Tilting
photometer

OMTI all-sky
camera No.7

VLF
Windows

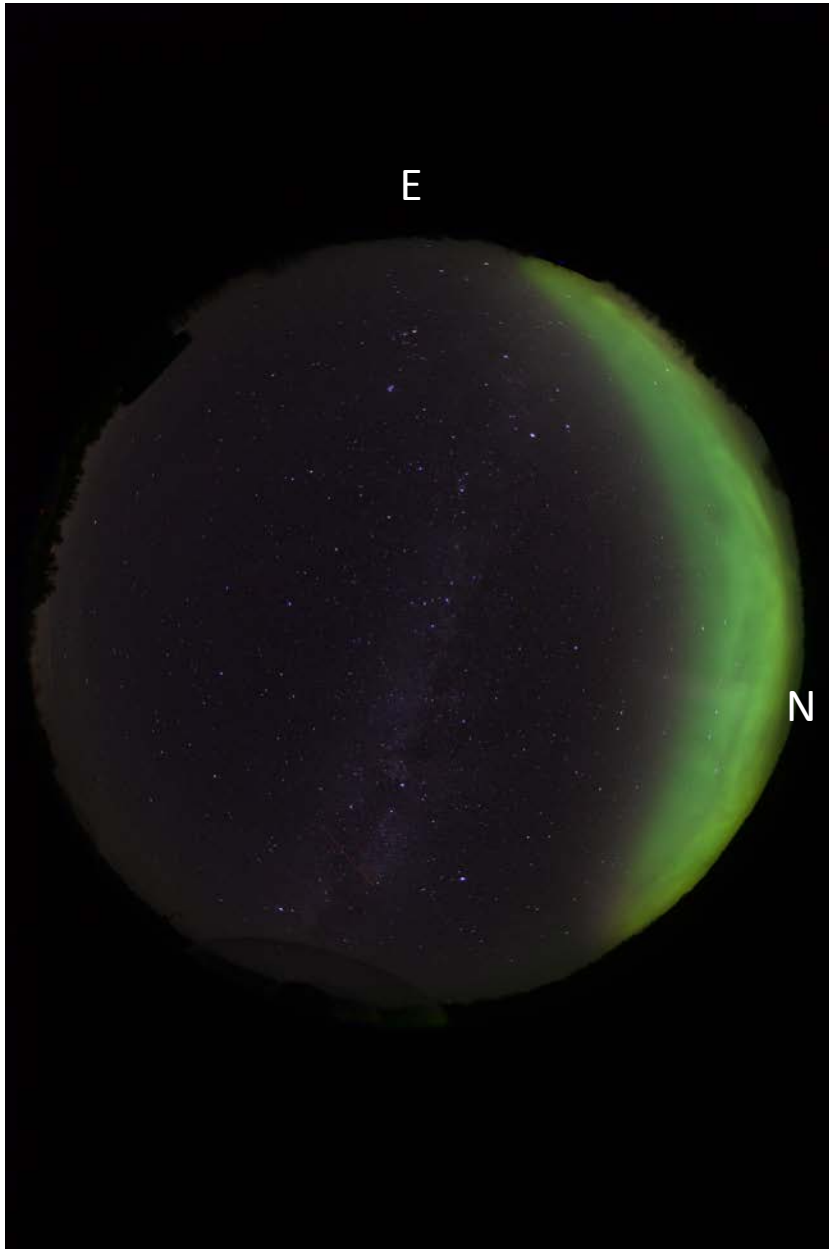
THETA
camera

NIKON D610
color all-sky
camera

VLF
Linux

Computers in the operation room

Test image



- F値 (F value)
2.8
- 露光時間 (Exposure time)
30 sec
- 画質 (image quality)
Fine
- 画像サイズ (image size)
Large

2019/10/04-07:01:15UT
(2019/10/04-01:01:15LT)

2地点カメラによるオーロラの同時観測 triangulation of aurora from two points

オーロラのレイ構造
auroral ray structure

AUGSO

C001_191006064315_0030.jpg at AUGSO, NIKON D610 taken at 06:43:15 UT on Oct. 6, 2019 with a lens NIKON fish-eye NIKKOR, 8mm/F2.8, ISO1600, exposure: 30 s, to the northern sky

オーロラのレイ構造
auroral ray structure

AUGO-I

DSC_5244.JPG at AUGO-I, NIKON D40, taken at 06:43:22UT on Oct. 6, 2019 with a lens NIKON fish-eye NIKKOR, 8mm/F2.8, ISO1600, exposure: 30 s, to the northern sky



LF standard radio receiver (Tohoku Univ.)



Riometer



Induction magnetometer field



VLF antenna

Field Instruments



VLF antenna pre-amplifier

オーロラ Auroras



食事中 Eating



動物たち Animals





塩川和夫
Kazuo Shiokawa

Ian Schofield

Martin Connors

稲葉裕大
Yudai Inaba

内藤豪人
Hideto Naito