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Preliminary validation of Himawari-8/AHI navigation and calibration

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Himawari-8 features the new 16-band Advanced Himawari Imager (AHI), whose spatial resolution and observation frequency are improved over those of its predecessor MTSAT-series satellites. These improvements will bring unprecedented levels of performance in nowcasting services and short-range weather forecasting systems. In view of the essential nature of navigation and radiometric calibration in fully leveraging the imager's potential, this presentation reports on the current status of navigation and calibration for the AHI. Image navigation is accurate to within 1 km, and band-to-band co-registration has also been validated. Infrared-band calibration is accurate to within 0.2 K with no significant diurnal variation, and is being validated using an approach developed under the GSICS project. Validation approaches are currently being tested for the visible and near-infrared bands. In this study, two of such approaches were compared and found to produce largely consistent results.