APEX Vicarious –Validation/Calibration
The APEX sensor shows some degradation over time and some instability, in particular in 2015-2016.
Aims

- Establish an automated method for vicarious calibration of APEX data for scenes where no ground validation sets exist
- Validate the above method on sites where ground validation exists
Methodology

- Automated Landcover classification on reflectance data
- Spectral means and standard deviations per landcover class
- Check of signatures versus spectral database signatures
- Calculation of landcover specific correction factors at radiance level
- Correction factor spectral smoothing and regression versus radiance ranges
- Application of factors to a time series and analysis of impact of vicarious calibration routine
Requirements & Benefits

- Matlab programming
- Use of existing classification algorithms written in Python
- Use of SPECCHIO spectral database for ground based signature information
- Learn how to assess the radiometric quality of an airborne dataset
- Apply radiative transfer codes (Modtran) and vicarious methods built into ATCOR in a real life scenario
- Learn how to work with time series data
- Learn more about sensor calibration and sensor models
- Learn how to deal with multiple, large data sets
Contact

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