

# ATCOR Summary

**Advantages**

**Limitations**

**Future Improvements**

# 1. Advantages

Feature	ATCOR	ACORN	FLAASH
Aerosol type detection	Yes	No	No
Adjacency effect	Yes	No	Yes
Haze removal	Yes	No	No
Cloud shadow removal	Yes	No	No
Cirrus cloud removal	Yes	Yes	Yes
Spectral smile correction	Yes	Yes	No
Preview of spectra	Yes	No	no
Spectral calibration	Yes	Yes	Yes
Inflight radiom.calibr.	Yes	No	no

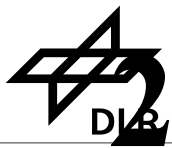
# 1. Advantages

<b>Thermal region</b>	<b>ATCOR</b>	<b>ACORN</b>	<b>FLAASH</b>
Surface temperature	Yes	No	No
Surface emissivity	Yes	No	No

<b>Mountainous terrain</b>	<b>ATCOR</b>	<b>ACORN</b>	<b>FLAASH</b>
Terrain height (DEM)	Yes	No	No
DEM illumination	Yes	No	No
Empirical BRDF correct.	Yes	No	No

# 1. Advantages

Feature	ATCOR	ACORN	FLAASH
Supported OS	Windows, Solaris, Linux, MacOSX	Windows, Linux	Windows, Solaris, Linux
Basic software	None (free IDL VM)	None	ENVI
Hyperspectral	Yes	Yes	Yes
Batch	Yes	Yes	No
Image tiling	Yes	No	No



## 2. Limitations of ATCOR

Spectral bandwidth  $> 2$  nm (because of 0.6 nm LUT database)

Airborne sensors: Total FOV  $< 80^\circ$  (i.e.,  $\pm 40^\circ$  wrt nadir)

Spaceborne sensors: multispectral: tilt  $< 50^\circ$

hyperspectral: tilt  $< 30^\circ$

CHRIS-Proba: tilt  $< 55^\circ$  (separate database)



# 3. Future Improvements

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## Quality layers

Land, cloud, shadow, water, haze, snow, saturated  
( “scene\_out\_hcw.bsq“ file, 1st version released)

## Quality Indicators

Confidence flags per pixel, e.g. *high, medium, low*,  
probability or accuracy

## Scene assessment

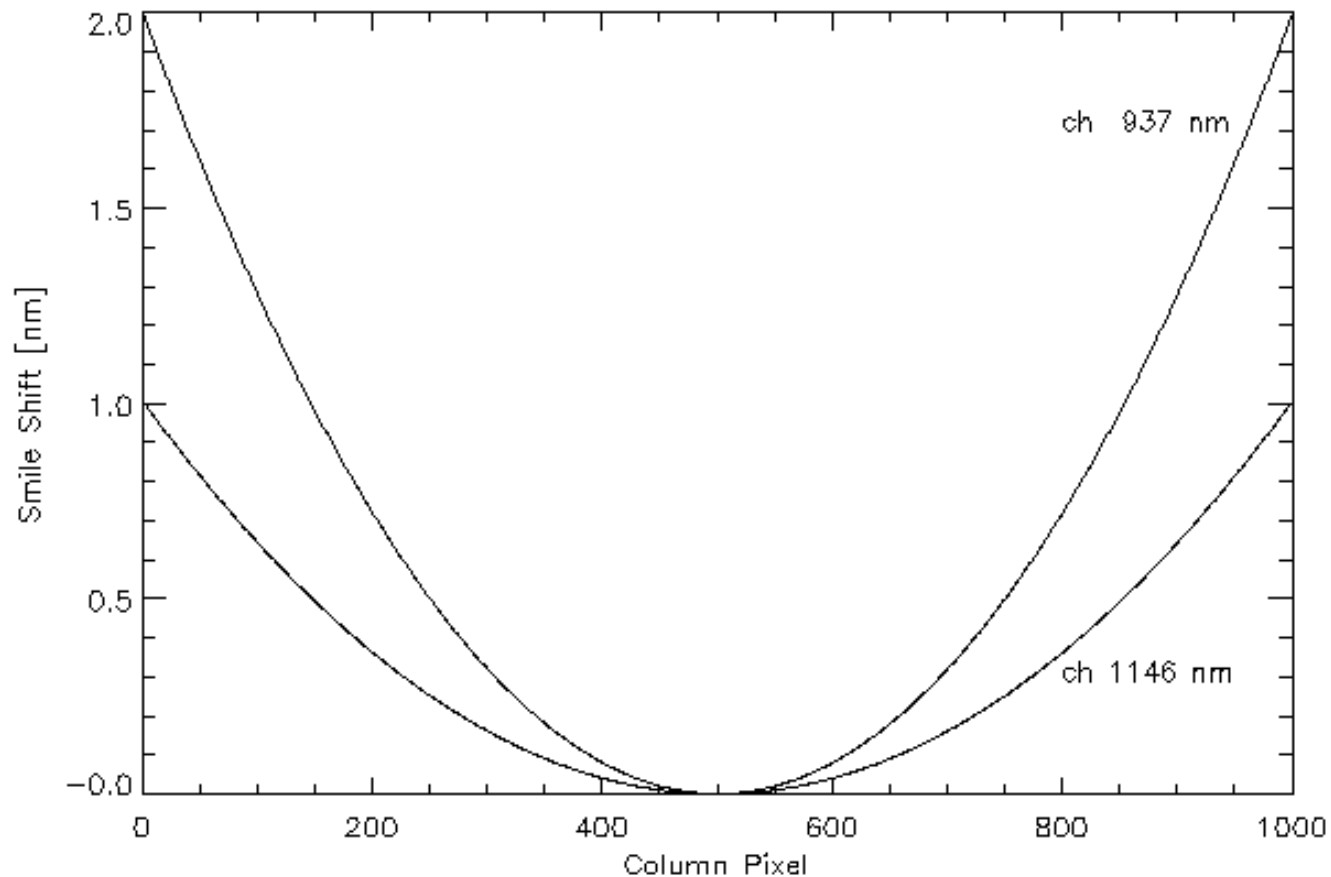
Cloud cover, cloud shadow, water, snow (percent)

## Quality of sensor calibration

# 3. Future Improvements

Retrieval of smile shift (pushbroom hyperspectral) from atmospheric features, i.e., spectral re-calibration if lab measurements are missing or sensor not stable

Calculation of 4th-order polynomial smile fit coefficients





# 3. Future Improvements

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Always Open to Suggestions from Users !