***SOLSA ID 2A***

**Maintenance of the hyperspectral cameras VNIR AND SWIR**

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SOLSA VNIR and SWIR cameras were installed at TFS-INEL the 30th March with one-day training.

We present here information, which are important to maintain the cameras in laboratory but also on mine sites in particular important for future installation in New Caledonia.

**This text will be regulary up-dated with new information.**

SPECIM provides 2 years gratis technical support. After these two years a contract will be proposed. SPECIM answers all questions via a technical support platform.

The technical description of the two cameras is available on the CLOUD

The mail contact in Finland is Ana Aranda ([ana.aranda@SPECIM.FI)](mailto:ana.aranda@SPECIM.FI))

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Preliminary up-set of the VNIR and SWIR cameras (31st March 2017)

**GENERAL INFORMATIONS**

**VNIR**

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| Model: SPECIM FX10  Serial: 1200039  Date: 20.3.2017  Guarantee: 2 years for technical support  Acquisition software:  Processing software: ENVI  Spectral range: 400 – 1000 nm  Weight: 1,6 kg |

The FX10 camera is robust against humidity and dust and do not require specific maintenance. Be careful to not put your fingers on the optics. For cleaning alcohol or acetone and a soft tissue are required.

The focus is set manually. It depends on the operator. Use the following appropriate keys:

The white reference should be placed at the same level as the surface of the analyzed sample. We may buy also the grey reference for the darker lithologies of laterite drill cores. The offer should be sent to Monique.

VNIR do not need recalibration as no detector damages occurs as with SWIR.

**SWIR**

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| Model: SPECIM SWIR3  Serial: SN431048  Date: 1.2.2017  Guarantee: 2 years for technical support  Acquisition software:  Processing software: ENVI  Spectral range: 900 – 1700 nm  Weight: 12 kg |

The weight of this camera is explained by the presence of optical stabilization, heat pump and optics larger than in the VNIR. The camera is temperature stabilized.

If the heat pump is broken, return the camera to SPECIM.

The focus is set manually. Before accessing the optics, unscrew the protecting cover. Be careful to not put your fingers on the optics. For cleaning, alcohol or acetone are required.

The camera needs 5 to 10 minutes to be stabilized, prior to scanning. The reference should be analysed for each drill core.

**HALOGENS**

Six individual halogens are mounted to insure optimal lighting and **reflectance.**

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Provisional up-set of the 6 halogens (15W/lamp): 3 on one side of the gutter and 3 on the other side of the gutter, placed at about 45°: not optimal for full reflectance recovery.

The halogens must be placed on either side of the sample so that there is not shadow zone.

The incident light makes it possible to measure the reflectance.

**BAD PIXEL GENERATION by the detector of SWIR camera** will increase with time.

This imply a detector refreshing and recalibration at the manufacturer SPECIM (about 2 K€ + transport). In case continuous measurements with SWIR should be performed, a second SWIR camera should be on-site.