

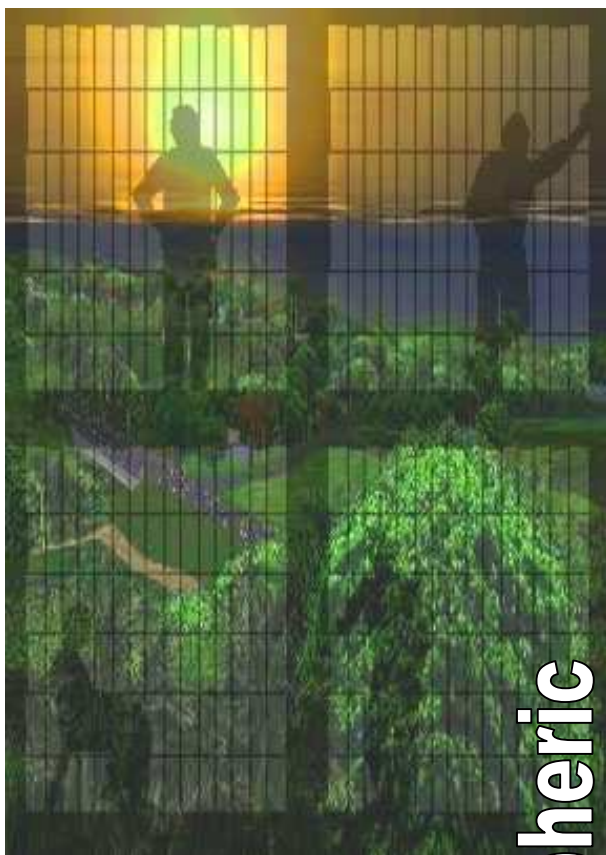
SE-ATMOSPHERE

MODTRAN

RADIATIVE

Lowtran

MP-RT-C



Clouds

Atmospheric

**SPECIFY ATMOSPHERIC CONDITIONS FOR
YOUR PHYSICAL SIMULATION**

ATMOSPHERIC CONDITIONS MODELLING TOOL

SE-ATMOSPHERE is a software tools that enables atmospheric conditions computation and modelling, by taking into account some typical parameters (localisation on the sphere, altitude, type of climate, weather, date, hour...). The software base contains a simple model of empirical propagation and can operate with module interface for other reference propagation codes.

SE-ATMOSPHERE features:

Exploitation of validated models for atmosphere like MODTRAN, LOWTRAN.

Well adapted for the spectral visible and infrared synthetic environment modelling

An easy and efficient user interface for the parameterisation of all the supported models

Errors prevention with a set of « default » parameters given to the user as function of his selection

A « crash recovery » process that steps back the computation at the time of the problem.

A database of pre-computed (thermal and radiative) atmospheric files available on demand

Selection of atmospheric codes:

Availability of SE-ATMOSPHERE in MODTRAN, LOWTRAN or EMPIRIC model versions

Easy edition of configuration files:

Simple GUI that avoids classical parameterization errors

Availability of batch version

Automatic data recovering in case of computer crash

100% compatibility in between Linux and PC versions

Selection of Global parameters :

date, latitude, longitude, global atmospheric model, average wind speed, ground altitude, ...

Time dependant parameters:

haze, clouds, rain, wind (speed and direction), visibility range

Sampling capabilities

Wavelength sampling of azimuth, elevation, range and altitude for the calculation of: solar/lunar irradiance, atmospheric attenuation and sky radiance.

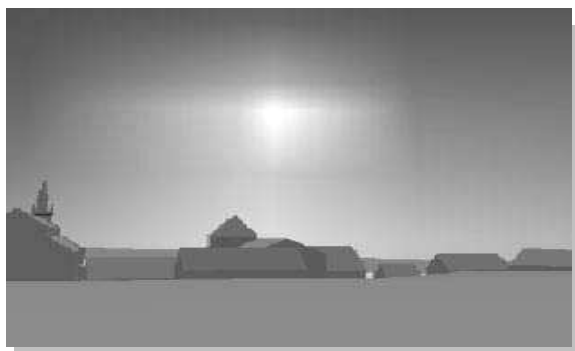
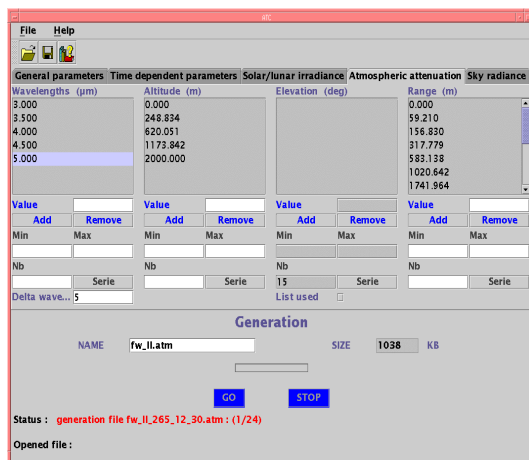
Availability of template configuration files for basic wave bands (visible, SWIR, MWIR, LWIR)

Import formats

User defined parameters
LOWTRAN, MODTRAN

Export formats

SE-WORKBENCH ATM format (for SE-THERMAL, SE-THERMAL-SHADOWS and SE-RAY-IR software)



Benefits:

Ease of use: Powerful JAVA interface

Reliability: JNI for communications between modules

High Efficiency: Allows generating many atmospheric databases

Modularity: compliant with future additional atmospheric modules

System requirements :

Windows NT™ to XP™

LINUX