

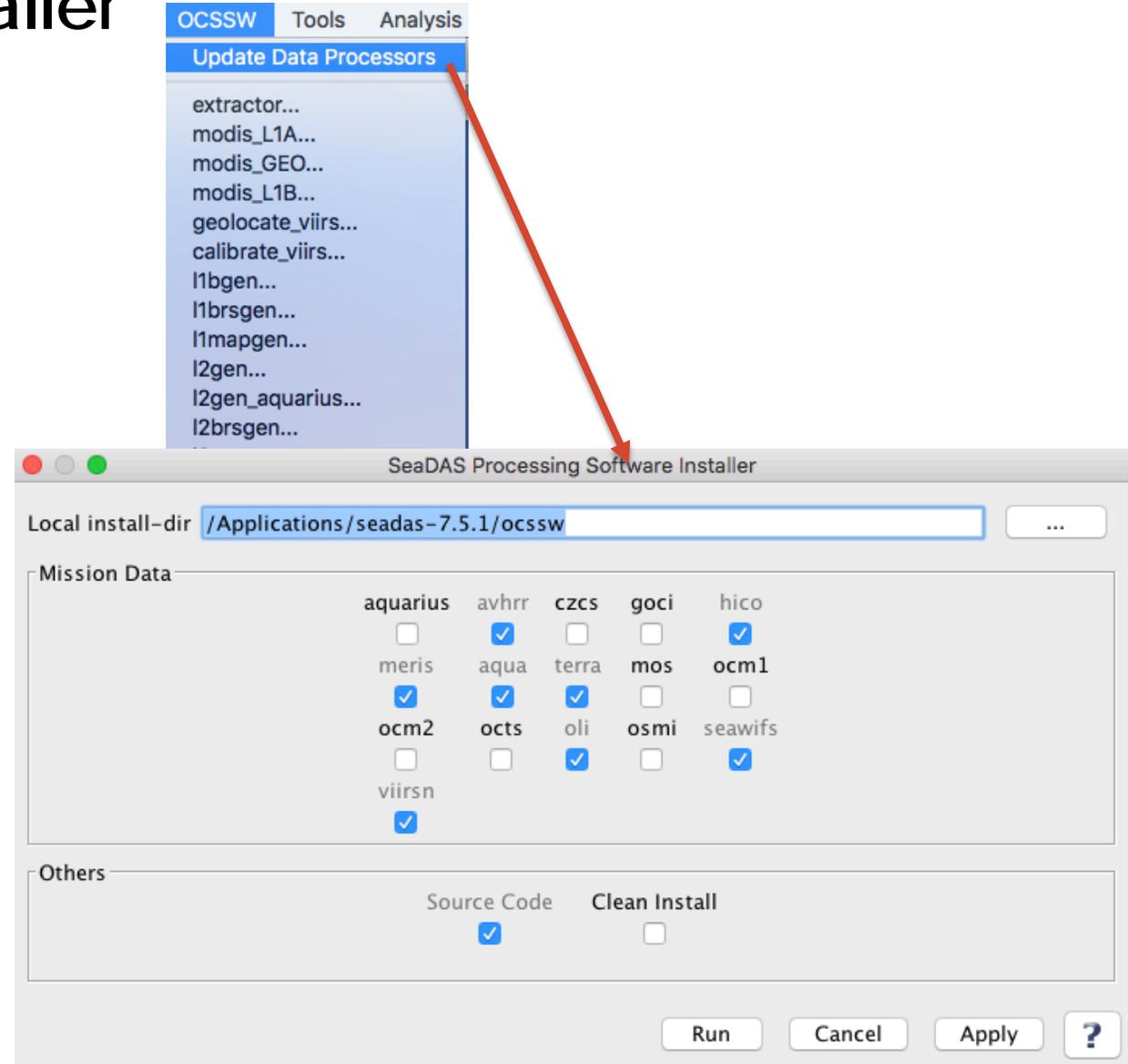
Demostración: Convertir datos Landsat 8 (OLI) N-1 a datos corregidos atmosféricamente N-2

Objetivo

- Aprender a usar l2gen en SeaDAS/OCSSW para convertir datos Landsat nivel 1 (L1) a datos corregidos atmosféricamente nivel-2 (L2)

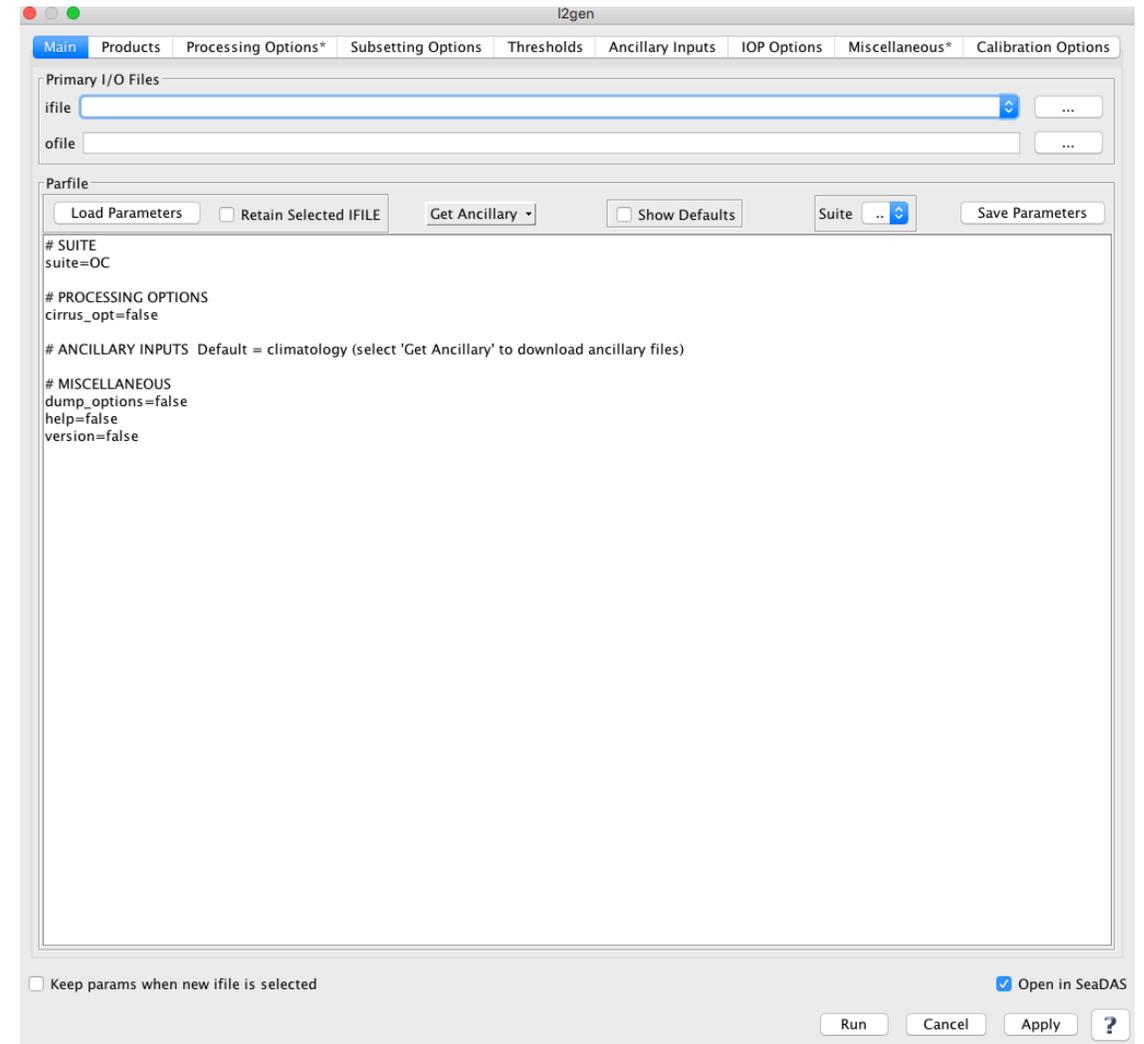
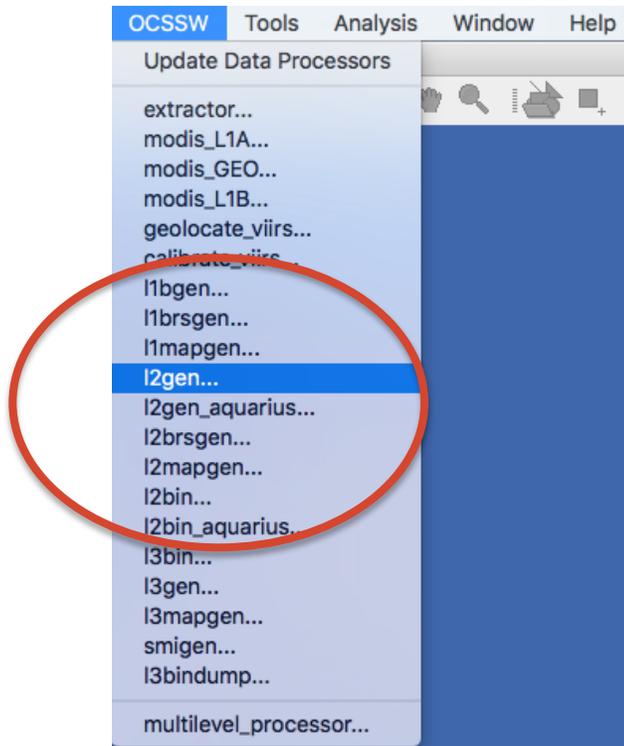
SeaDAS Processing Software Installer

1. Descargar e instalar OCSSW en SeaDAS
2. En la barra superior hace clic en **OCSSW > Update Data Processors**
3. Clic en **Run**



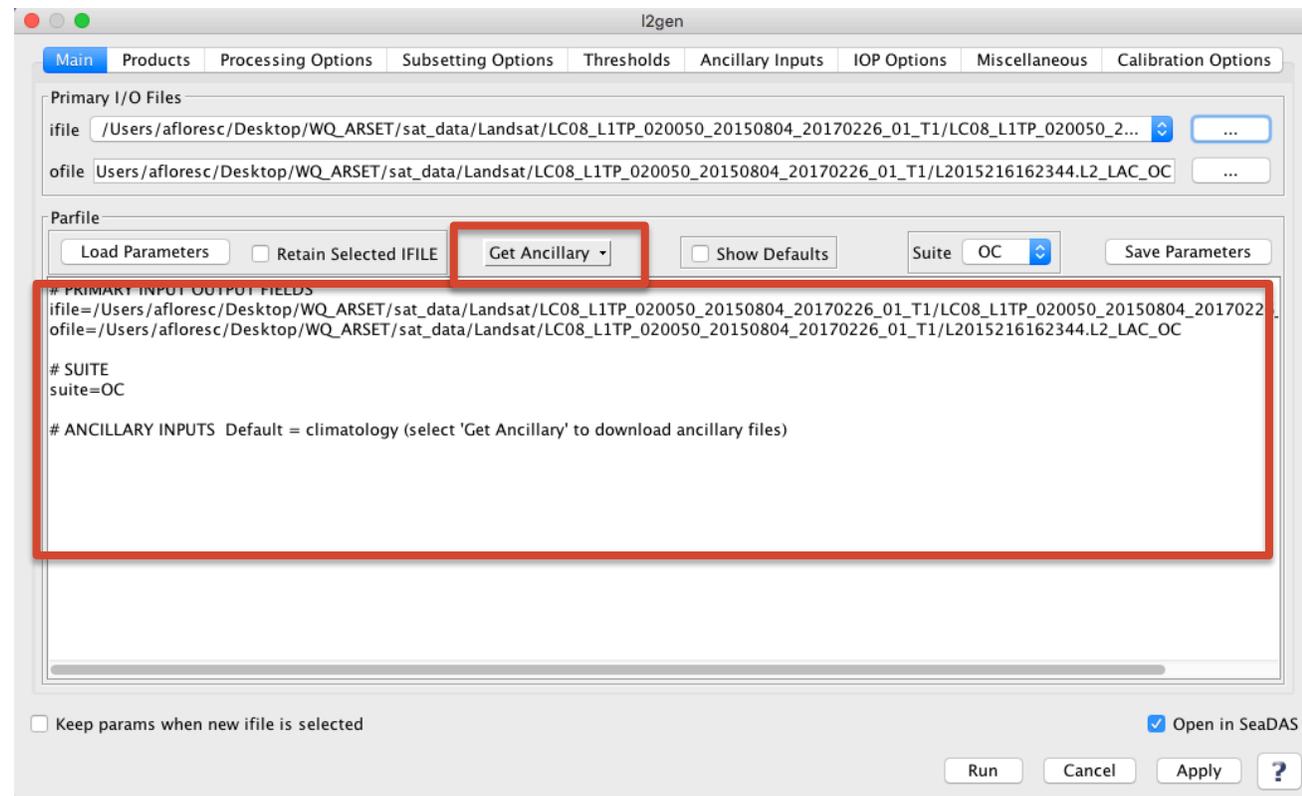
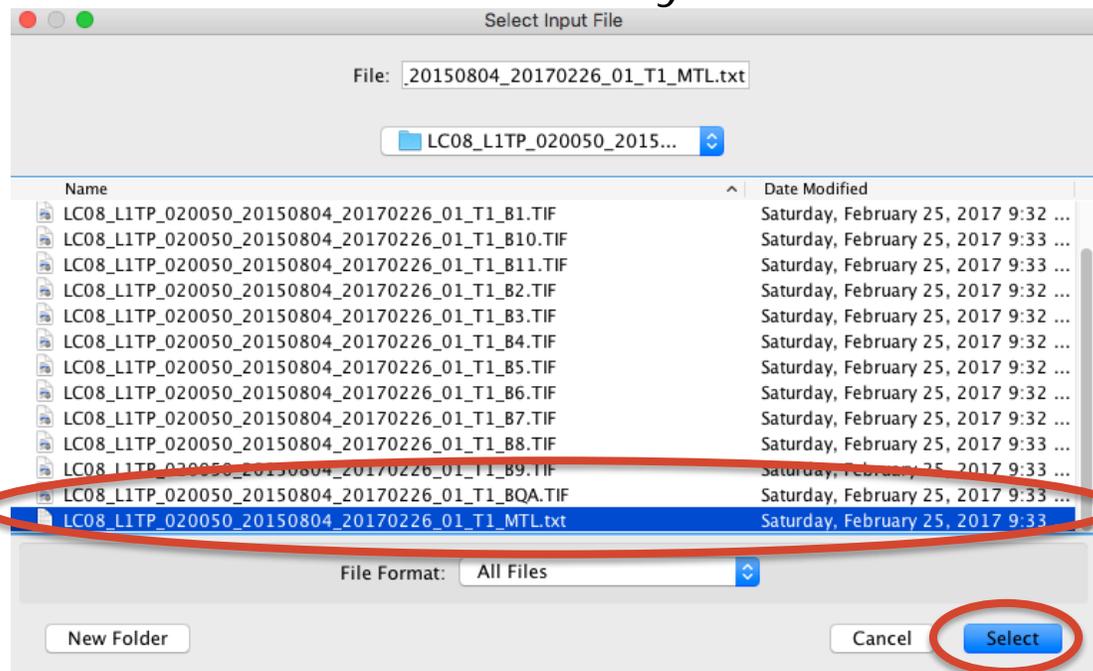
I2gen

5. Procesa un archivo de nivel 1 y lo convierte a nivel 2 al aplicar correccion atmosferica y usar algoritms predefinidos para generar productos de calidad del agua como Concentracion de clorofila



Configuración de L2gen

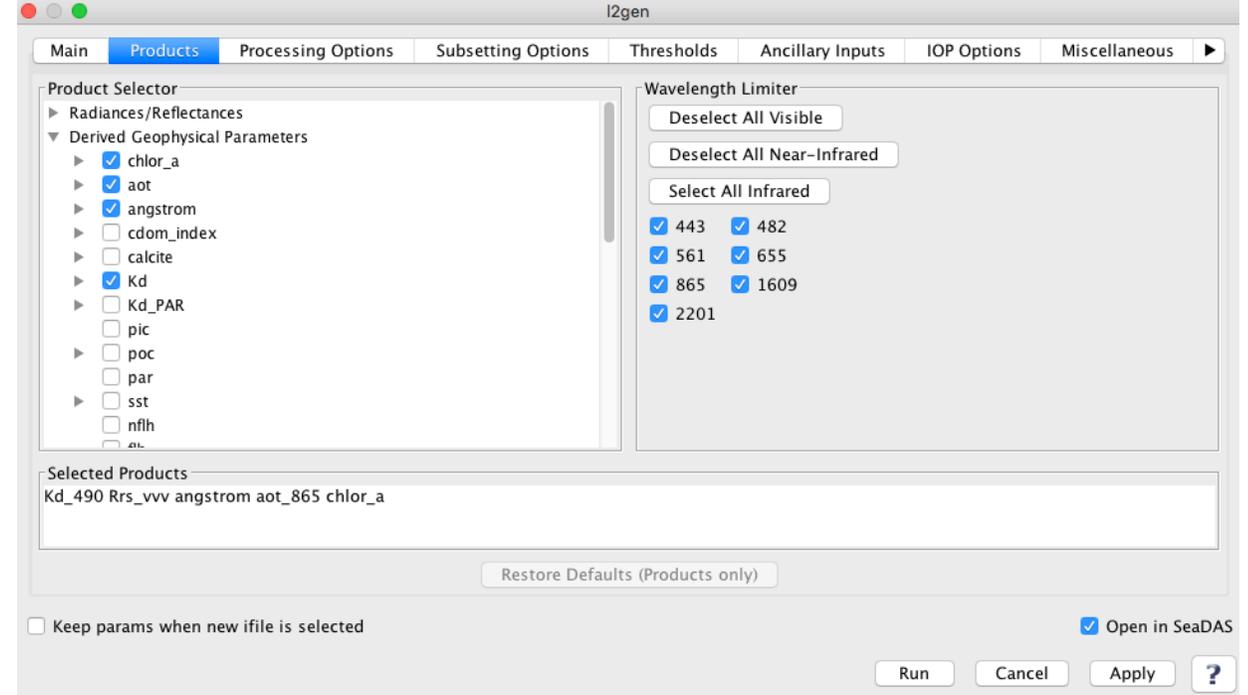
7. En la pestaña Principal (Main):
8. **Ifile** = Input file = Landsat 8 Metadata file: ****_MTL.txt**
9. Chequear que no se muestren errores en la ventana principal
10. Clic en Get Ancillary data



Configuración de L2gen

Productos

11. Los parámetros que serán producidos deben estar seleccionados
12. Verificar Radiancias/Reflectances
13. Verificar Derived Geophysical Parameters
14. Se usarán los parámetros pre-seleccionados por defecto



Configuración de L2gen

Opciones de procesamiento: Processing Options

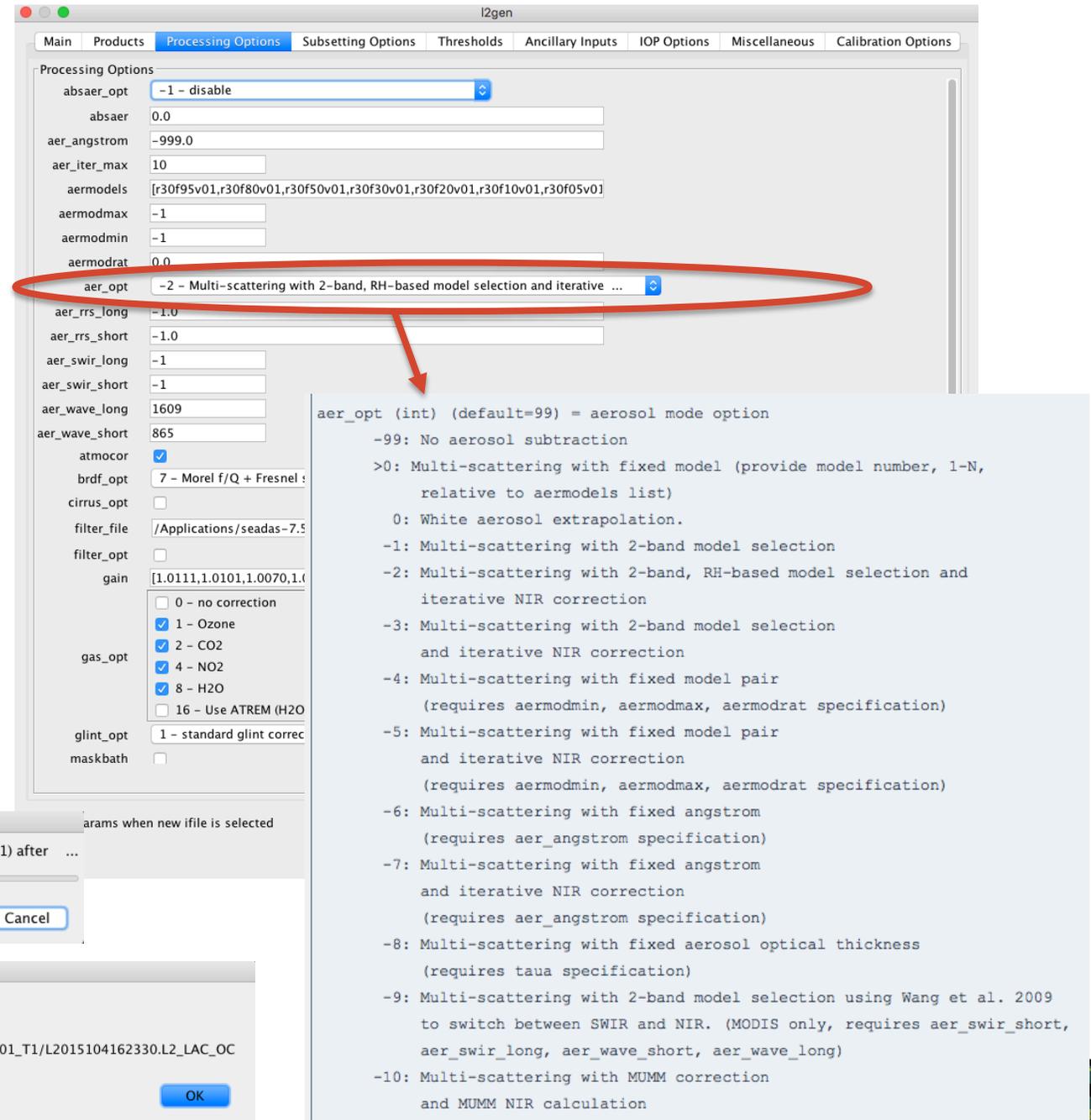
15. Si la imagen contiene cuerpos de agua con altas concentraciones de clorofila (i.e. floración algal)

Considerar cambiar

aer_opt :

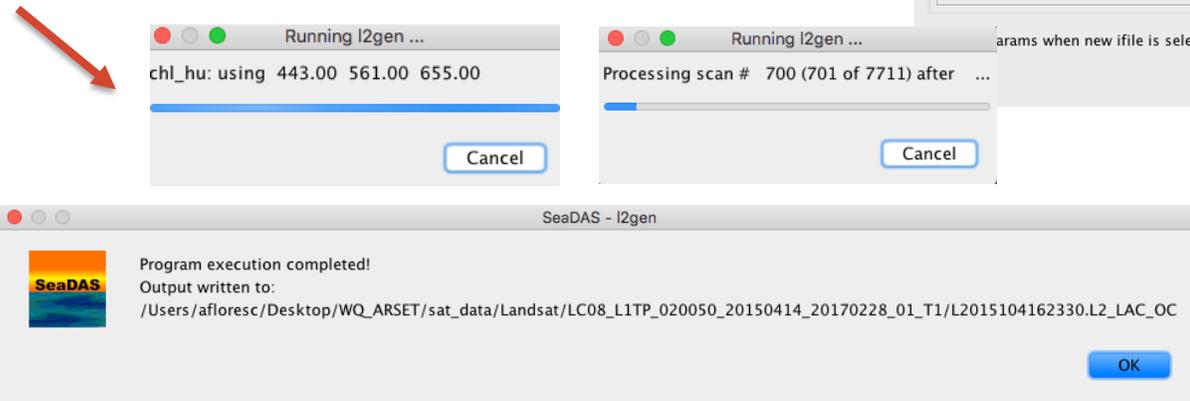
A valores de **-99**, **-6** y **-8**

16. Correr I2gen



The screenshot shows the 'I2gen' software interface with the 'Processing Options' tab selected. The 'aer_opt' dropdown menu is highlighted with a red oval. A red arrow points from this menu to a text box containing the following list of options:

```
aer_opt (int) (default=99) = aerosol mode option
-99: No aerosol subtraction
>0: Multi-scattering with fixed model (provide model number, 1-N,
    relative to aermodels list)
0: White aerosol extrapolation.
-1: Multi-scattering with 2-band model selection
-2: Multi-scattering with 2-band, RH-based model selection and
    iterative NIR correction
-3: Multi-scattering with 2-band model selection
    and iterative NIR correction
-4: Multi-scattering with fixed model pair
    (requires aermodadmin, aermodmax, aermodrat specification)
-5: Multi-scattering with fixed model pair
    and iterative NIR correction
    (requires aermodadmin, aermodmax, aermodrat specification)
-6: Multi-scattering with fixed angstrom
    (requires aer_angstrom specification)
-7: Multi-scattering with fixed angstrom
    and iterative NIR correction
    (requires aer_angstrom specification)
-8: Multi-scattering with fixed aerosol optical thickness
    (requires taua specification)
-9: Multi-scattering with 2-band model selection using Wang et al. 2009
    to switch between SWIR and NIR. (MODIS only, requires aer_swir_short,
    aer_swir_long, aer_wave_short, aer_wave_long)
-10: Multi-scattering with MUMM correction
    and MUMM NIR calculation
```



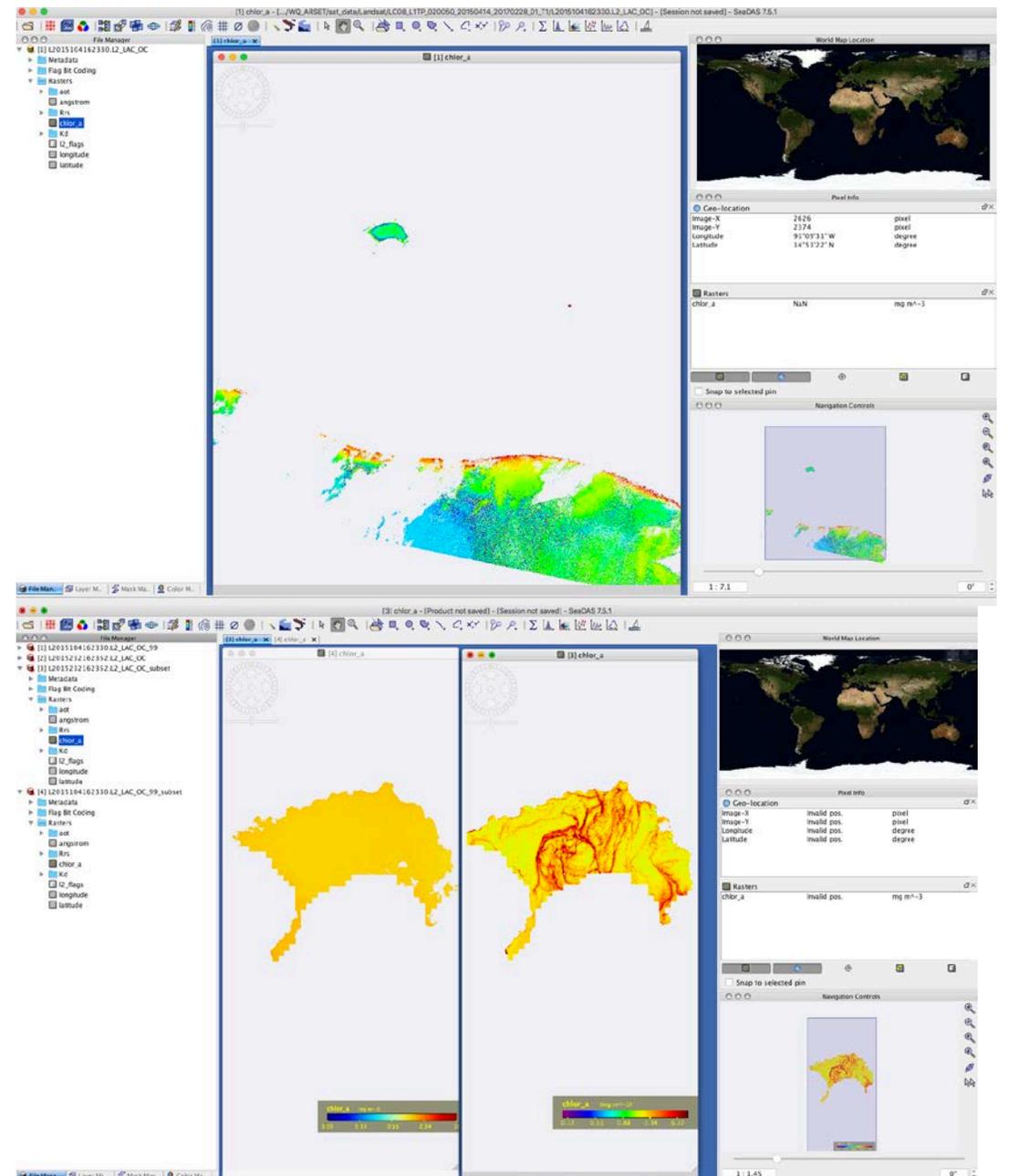
The top two screenshots show the progress of the I2gen execution. The first shows the command line: `chl_hu: using 443.00 561.00 655.00`. The second shows the progress bar and the message: `Processing scan # 700 (701 of 7711) after ...`. The bottom screenshot shows the 'SeaDAS - I2gen' window with a 'Program execution completed!' message and the output path: `/Users/afloresc/Desktop/WQ_ARSET/sat_data/Landsat/LC08_L1TP_020050_20150414_20170228_01_T1/L2015104162330.L2_LAC_OC`.

Open I2gen results

17. Cargar el resultado de **Chl_a**

- Acercarse al area de interes (Lago Atitlan esta al centro de la imagen)
- Añadir Land Mask
- Cambia el rango de la paleta de colores a "Set from Band Data"
- Puede hacer clic en el cuadro de color y elegir otros colores del menú desplegable

18. Despues, seleccionar la mascara de **CHLFAIL** y cambiar el color para ver las ubicaciones donde faltan datos





Gracias