

# Surface-locking workflow

## Step #1

Run control with hourly,  
instantaneous output

```
FINCL2 = 'SHFLX', 'QFLX', 'LHFLX', 'FLUS',  
         'ASDIR', 'ALDIR', 'ASDIF', 'ALDIF'
```

## Step #2

Process locking data

Run multistep process surface-locking bash script – composites hourly surface data  
`bash template_psl_d.YYYYMMDD.control.RESOLUTION.MACHINE.sh`

## Step #3

Run surface-locking experiment adding  
following `user_nl_cam` entries

```
presc_sfc_flux_datapath      = '/path/to/sfc_locking_data/'  
presc_sfc_flux_file         = 'surface_locking_data_file.nc'  
presc_sfc_flux_type         = 'CYCLICAL'  
presc_sfc_flux_num_file_years = 1.0  
presc_sfc_flux_input_dtime  = 3600.  
pertlim                     = 0.1
```