

Runoffs

sbc_rnf.F90

From sbc_rnf, read the runoff temperature into sf_t_rnf:

```
IF( ln_rnf_tem ) CALL fld_read ( kt, nn_fsbc, sf_t_rnf ) ! idem for runoffs temperature if required
```

Set the “heat”=t*waterflux added into rnf_tsc:

```
IF( ln_rnf_tem ) THEN ! use runoffs temperature data
  rnf_tsc(:, :, jp_tem) = ( sf_t_rnf(1)%fnow(:, :, 1) ) * rnf(:, :) * r1_rau0
```

trasbc

Add the “heat” to the temperature trend and distribute it in depth according to h_rnh

```
tsa(ji, jj, jk, jp_tem) = tsa(ji, jj, jk, jp_tem) &
& + ( rnf_tsc_b(ji, jj, jp_tem) + rnf_tsc(ji, jj, jp_tem) ) * zdep
```

tranxt

Include in the Asselin filter.

Sensible/LW Heat Flux

blk_oce_core

sbcssm.F90

In sbc_oce, sst_m is calculated from ts_n using eos_pt_from_ct if necessary:

```
zts(ji, jj, jp_tem) = ts_n(ji, jj, mikt(ji, jj), jp_tem)
...
IF( ln_useCT ) THEN ; sst_m(:, :) = eos_pt_from_ct( zts(:, :, jp_tem), zts(:, :, jp_sal) )
```

sbcblk_core.F90

Then this sst_m passed through sbc_blk_core as pst and used in blk_oce_core to calculate qns e.g.

```
zst(:, :) = pst(:, :) + rt0 ! convert SST from Celcius to Kelvin (and set minimum value far above 0 K)
...
zqlw(:, :) = (sf(jp_qlw)%fnow(:, :, 1) - Stef * zst(:, :)*zst(:, :)*zst(:, :)*zst(:, :)) * tmask(:, :, 1) ! Long Wave
```

So, river runoffs need to be in Conservative Temperature.