OTHER PHYSICS HOOKS

This test case is to show how to include your own physics code into a MESA run. It loads a default 1 $M_\odot$ ZAMS model and runs until the mass fraction of center hydrogen drops below 0.5 (`xa_central_lower_limit_species(1) = 'h1' ; xa_central_lower_limit_species(1) = 'h1'`).

To tell MESA how to find your routines, you set pointers to them in the `star_info` structure at the start of the run. Do this in the `extras_controls` routine in your `run_star_extras.f`. Then during the run, your routines will be called from the MESA library at the appropriate times. The options to use these "other physics hooks" are first turned on (`s% use_other_eos = .true. ; s% use_other_kap = .true. ; s% use_other_mlt = .true.`, option for mesh turned on in `inlist_other_physics_hooks: use_other_mesh_functions = .true.`). Then the pointers are set to point MESA to the routines that contain your added code (e.g. `s% other_eosDT_get => my_eosDT_get ; s% other_kap_get_Type1 => my_kap_get_Type1 ; s% other_mlt => my_mlt ; s% other_mesh_fcn_data => other_mesh_fcn_data`). These routines, as they are now, call MESA's default functions, but those calls need only be edited out and replaced with your own FORTRAN code.