HOW TO PERTURB BIOGENIC EMISSIONS IN CODE

(Thanks to Dr. Mauro Morichetti)

Got to : “module\_bioemi\_megan2.F”.

ORIGINAL:

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685 ! For isoprene, the emission factor is already read in from

686 ! wrfbiochemi\_d<domain> file; therefore, actual emissions rate

687 ! can be calculated here already.

688 ! (mol km-2 hr-1)

689 E\_megan2(is\_isoprene) = adjust\_factor(imgn\_isop)\*msebio\_isop(i,j)

690 IF ( E\_megan2(is\_isoprene) .LT. min\_emis ) E\_megan2(is\_isoprene)=0.

....

737 ! Calculate actual emission rate for species i\_spc;

738 ! also, convert units from (microgram m-2 hr-1) to

739 ! (mol km-2 hr-1)

740 E\_megan2(i\_spc) = EFmegan(i,j,i\_spc)\* &

741 adjust\_factor(i\_class)/spca\_mwt(i\_spc)

742 IF ( E\_megan2(i\_spc) .LT. min\_emis ) E\_megan2(i\_spc)=0.

MODIFY AS (e.g.for a 5% increase in emissions):

FOR ISOPRENE:

689 E\_megan2(is\_isoprene) = adjust\_factor(imgn\_isop)\*msebio\_isop(i,j**)\*1.05**

FOR ALL OTHER BIOGENIC EMISSIONS:

740 E\_megan2(i\_spc) = EFmegan(i,j,i\_spc)**\*1.05\*** &

741 adjust\_factor(i\_class)/spca\_mwt(i\_spc)