Subject: Vegetation in CRTM
From: Michiko Masutani <Michiko.Masutani@noaa.gov>
Date: Fri, 31 Jul 2009 14:25:34 -0400
To: Ronald Vogel <Ronald.Vogel@noaa.gov>
CC: Quanhua Liu <Quanhua.Liu@noaa.gov>

Ron:
I am trying to simulate radiance data from ECMWF model data.
In ECMWF model Vegetation is represented by 4 climatological parameters: vegetation cover of low vegetation, vegetation cover of high vegetation, low vegetation type and high vegetation type. I have attached the description og H and L vegetation.

In CRTM I found following definition. I wonder if you can help me to interpret ECMWF model information to CRTM.
Michiko

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! PUBLIC PARAMETERS:
!       1) The type of land surface using in the Surface%Land_Type field:
!
!                 Land type                Parameter Name
!         -------------------------------------------------------
!                  Invalid                 INVALID_LAND
!                Compacted soil            COMPACTED_SOIL
!                  Tilled soil             TILLED_SOIL
!                    Sand                  SAND
!                    Rock                  ROCK
!          Irrigated low vegetation        IRRIGATED_LOW_VEGETATION
!                Meadow grass              MEADOW_GRASS
!                    Scrub                 SCRUB
!               Broadleaf forest           BROADLEAF_FOREST
!                 Pine forest              PINE_FOREST
!                   Tundra                 TUNDRA
!                 Grass soil               GRASS_SOIL
!             Broadleaf-pine forest        BROADLEAF_PINE_FOREST
!                 Grass scrub              GRASS_SCRUB
!                  Oil grass               OIL_GRASS
!                Urban concrete            URBAN_CONCRETE
!                  Pine brush              PINE_BRUSH
!                Broadleaf brush           BROADLEAF_BRUSH
!                   Wet soil               WET_SOIL
!                  Scrub soil              SCRUB_SOIL
!            Broadleaf(70)-Pine(30)        BROADLEAF70_PINE30
!
!
!
!       2) The type of water surface using in the Surface%Water_Type field:
!
!           Water type        Parameter Name
!         -------------------------------------
!              Invalid         INVALID_WATER
!            Sea water         SEA_WATER
!           Fresh water        FRESH_WATER
!
!
!
!       3) The type of snow surface using in the Surface%Snow_Type field:
!
!                Snow type            Parameter Name
!         ------------------------------------------------
!
!                 Invalid             INVALID_SNOW
!                Wet snow             WET_SNOW
!            Grass after snow         GRASS_AFTER_SNOW
!              Powder snow            POWDER_SNOW
!                RS snow(A)           RS_SNOW_A
!                RS snow(B)           RS_SNOW_B
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!               RS snow(C)           RS_SNOW_C
!               RS snow(D)           RS_SNOW_D
!               RS snow(E)           RS_SNOW_E
!            Thin Crust snow         THIN_CRUST_SNOW
!            Thick crust snow        THICK_CRUST_SNOW
!              Shallow snow          SHALLOW_SNOW
!               Deep snow            DEEP_SNOW
!              Crust snow            CRUST_SNOW
!              Medium snow           MEDIUM_SNOW
!           Bottom crust snow(A)     BOTTOM_CRUST_SNOW_A
!           Bottom crust snow(B)     BOTTOM_CRUST_SNOW_B
!
!
!
!       4) The type of ice surface using in the Surface%Ice_Type field:
!
!                 Ice type           Parameter Name
!         ------------------------------------------------
!                 Invalid            INVALID_ICE
!                Fresh ice           FRESH_ICE
!             First year sea ice     FIRST_YEAR_SEA_ICE
!           Multiple year sea ice    MULTI_YEAR_SEA_ICE
!                Ice floe            ICE_FLOE
!                Ice ridge           ICE_RIDGE
!
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