## GG 140 - The Atmosphere, the Ocean and Environmental Change with Professor Ronald B. Smith

## **Lecture 17 – Seasons and Climate**

- 2. General Circulation. Image credit: Brad Muller. <a href="http://wx.db.erau.edu/faculty/mullerb/Wx365/General\_circulation/general\_circulation.html">http://wx.db.erau.edu/faculty/mullerb/Wx365/General\_circulation/general\_circulation.html</a> (Accessed Oct. 12, 2011)
- 3. Annual Precipitation (Land). Image credit: H.L. Penman <a href="http://hercules.gcsu.edu/~sdatta/home/teaching/hydro/slides/global\_precip1.gif">http://hercules.gcsu.edu/~sdatta/home/teaching/hydro/slides/global\_precip1.gif</a> (Accessed Oct. 12, 2011)
- 4. Annual Average Precipitation. Image credit: Global Precipitation Climatology Project. <a href="http://www-das.uwyo.edu/~geerts/cwx/notes/chap10/global">http://www-das.uwyo.edu/~geerts/cwx/notes/chap10/global</a> precip.html (Accessed Oct. 12, 2011)
- 5. Zonal Mean Precipitation. Image credit: NASA and wikipedia user Atmoz. <a href="http://en.wikipedia.org/wiki/File:Monthly">http://en.wikipedia.org/wiki/File:Monthly</a> zonal mean precipitation.png (Accessed Oct. 12, 2011)
- 6. Annual Average Precipitation. Image credit: Oregon Climate Service. <a href="http://www.wrcc.dri.edu/pcpn/us\_precip.gif">http://www.wrcc.dri.edu/pcpn/us\_precip.gif</a> (Accessed Oct. 12, 2011)
- 7. Annual Precipitation. Image credit: Spatial Climate Analysis Service, Oregon State University. <a href="http://ponce.sdsu.edu/california">http://ponce.sdsu.edu/california</a> average annual precipitation.html (Accessed Oct. 12, 2011)
- 8. Annual Average Precipitation (Oregon). Image credit: Oregon Climate Service. <a href="http://www.wrcc.dri.edu/pcpn/or.gif">http://www.wrcc.dri.edu/pcpn/or.gif</a> (Accessed Oct. 12, 2011)
- 9. Annual Average Precipitation Alaska-Yukon. Image credit: Spatial Climate Analysis Service, Oregon State University. <a href="http://www.pitt.edu/~mabbott1/climate/mark/Images/AK-PPT-mm.gif">http://www.pitt.edu/~mabbott1/climate/mark/Images/AK-PPT-mm.gif</a>. (Accessed Oct. 12, 2011)
- 10. Annual Average Precipitation Arizona. Image credit: Oregon Climate Service. <a href="http://www.wrcc.dri.edu/pcpn/az.gif">http://www.wrcc.dri.edu/pcpn/az.gif</a> (Accessed Oct. 12, 2011)

- 13. Continentality. Image credit: Michael W. Binford. <a href="http://www.clas.ufl.edu/users/mbinford/geo2200/lecture\_questions/2010\_questions/global\_temp\_variation\_5ed.jpg.">http://www.clas.ufl.edu/users/mbinford/geo2200/lecture\_questions/2010\_questions/global\_temp\_variation\_5ed.jpg.</a> (Accessed Oct. 12, 2011)
- 14. Annual Range of Temperature. Image credit: NOAA OCS.
- 15. Seasonal Range in Temperature. Image credit: Alaska Geospatial Climate Animations. <a href="http://instaar.colorado.edu/QGISL/AGCA/images/tmp">http://instaar.colorado.edu/QGISL/AGCA/images/tmp</a> seasonal range.jpg (Accessed Oct. 12, 2011)
- 16. Ocean Currents and Climate. Image credit: Steven Dutch. <a href="http://www.uwgb.edu/dutchs/EarthSC102Notes/102TheOceans.HTM">http://www.uwgb.edu/dutchs/EarthSC102Notes/102TheOceans.HTM</a> (Accessed Oct. 12, 2011)
- 17. Biome: Relationship between climate and vegetation. Image credit: RH Whittaker <a href="http://www.marietta.edu/~biol/biomes/biome\_main.htm">http://www.marietta.edu/~biol/biomes/biome\_main.htm</a> (Accessed Oct. 12, 2011)
- 19. Seasons and Earth Orbit. Image credit: World Maps Online. <a href="http://www.worldmapsonline.com/LESSON-PLANS/6-changing-seasons-globe-lesson-15.htm">http://www.worldmapsonline.com/LESSON-PLANS/6-changing-seasons-globe-lesson-15.htm</a> (Accessed Oct. 12, 2011)
- 23. Earth Orbit. Image credit: unknown. http://www.personal.soton.ac.uk/ejr/DarkMed/ch5.html (Accessed Oct. 12, 2011)
- 24. Daily average solar insolation. Image credit: Pidwirny, M. <a href="http://www.physicalgeography.net/fundamentals/6i.html">http://www.physicalgeography.net/fundamentals/6i.html</a> (Accessed Oct. 12, 2011)
- 27. Shifting ITCZ. Image credit: Rajesh Kapadia. http://rajesh26.blogspot.com/2010 05 01 archive.html (Accessed Oct. 12, 2011)