Weather Briefing 20150312

Winds from the NE gusting to ~20 knots setting up for this afternoon and early evening associated with the Santa Ana conditions in So Cal. These will die down by landing. Good operating weather. Some high thin cirrus may occur at landing time.

Main forecast problems are: (1) convection along the flight track; and (2) looking for TTL clouds.

**Convection:**

Current tropical wave at 5-10N has passed the flight track and is heading slowly westward. A strong positively tilted wave around the dateline is amplifying (can see the cold air pushing southward in the satpic near 30-40N). Neither GFS nor GEOS-5 model has initialized well – both showing convection near 140W and 5N for this time, and conditions are clearly suppressed there now. Both models show convection on our flight track at 12Z tomorrow. With the amplifying wave and associated front providing some lift, it is still likely that they are right for tomorrow morning, and we will see convection at 5-10N. Cloud tops are likely to be < 50kft, though the approaching wave means these may not be “routine” ITCZ systems for this time of year in the mid-Pacific.

The convective zone near the end of the flight track is quiet right now, but little “seeds” of convection can be seen in the area. Convection in this region has been to altitudes < 50kft.

**TTL Clouds**

I will update the convective influence product later today. I note, however, that ice water content is not forecast along our flight track (see the plots on the web page). Rather, that ice water content is associated with the slug of SH convectively influenced air west, south, and southeast of HI (and also some points west of the flight track at ~5N as well as the SPCZ which is out of our reach). GFS tropopause temperatures have backed off since the last forecast (gotten warmer). In general, we have had success in reaching TTL clouds just going for the coldest temperatures (which the current track does). Mark’s model also did well (I believe) in the first flight of this series in forecasting clouds. So, the details of what we should do at the far end of the track are not obvious, at least not to me.