+++ Twin vortices eastern IO +++ Equatorial convection across nearly entire IO +++

• Current Conditions/Previous Day Recap

Strong vortex east of the northern domain with the center near 10N, 85E (INVEST 92B, JTWC: medium potential for cyclone formation). A weaker vortex is located in the eastern South Indian ocean with the center near 10S, 95E. The models have been a bit too strong with the development of the southern vortex. The BOM wave decomposition shows that the enhanced convection and twin vortices are strongly affected by the wet phase of an Equatorial Rossby wave train.

A band of near-Equatorial convection extends across almost the entire Indian Ocean, mostly between 5E-Equator. The soundings at Gan and the RV Revelle are “onion” soundings typical in the wake of organized convective systems.

A patch of dry air has been over Diego Garcia for the past few days, although in the last day it became moist below 700 mb. There is a broad ridge between the easterly wave at ~57E and the southern Hemisphere vortex centered near 90E. The southern half of the southern array again is located along the boundary between dry trades to the south and wet westerlies to the north.
• Day 1 (0Z 25-Dec to 26-Dec)

Convection in a narrow band in the southern array. There is some disagreement in the models on whether the convection will be over Gan/Revelle or to the south.

Gan: Scattered convection, heavy rain possible. 0-10 mm accumulation.

Revelle: Scattered convection, heavy rain possible. 0-10 mm accumulation. Winds remaining near 20 knots from the west.

• Days 2-3 (0Z 26-Dec to 28-Dec)

Convection focused in a narrow band in the southern array, drier at Gan and the RV Revelle.

Cyclone formation is possible with the northern vortex.

Westerly winds remaining around 20 kts at the Revelle for the next few days.
Begin Forecast Graphics
Day 1: 0Z  25-Dec to 26-Dec

Total Precipitation (mm/h) and wind 850hPa

GFS forecast Precip for day 2 for: 20111226 from 00z
Day 2: 0Z 26-Dec to 27-Dec

IMD NEW DELHI WRF (27 Km) RAINFALL (mm) FORECAST (72 hr)
based on 00 UTC of 24-12-2011 valid for 00 UTC of 27-12-2011

Total Precipitation (mm/h) and wind 850hPa

GFS frcst Precip for day 3 for: 20111227 from 00z
Day 3: 0Z 27-Dec to 28-Dec

Total Precipitation (mm/h) and wind 850hPa

GFS fcst Precip for day 4 for: 20111228 from 00z
MJO (5 day means)

Equatorial Rossby (3 day means)

Kelvin (1 day means)

Day -1 to 3

Day 4-8

Day 0

Day 1

Day 2-4

Day 5-7

Day 0 of forecast is 23 Dec 2011