

Tropical Cyclone *Annie* Sunshine Coast New Years Day 1963

An extremely rapid developing and complex cyclone made landfall on the Sunshine Coast early on New Years Day 1963. The sea level cyclone developed just to the east of a amplifying upper trough which formed a low at 500hPa (approximately 6km elevation) overland west of Bundaberg by 1100UTC 31 December 1962. Ultimately the sea level cyclone intensified as it moved under this upper low. Therefore this was a hybrid system more related to an east coast low but forming in a tropical environment. No warnings were issued due to the explosive development of the system and the lack of knowledge of such systems at the time. Numerical forecast models have difficulty predicting these small rapidly developing cyclones and a somewhat similar event near Ballina in March 2001 was not forecast well by numerical forecast models.

Houses were unroofed at Buderim, Landsborough, Mt Mellum, Flaxton and Maleny and banana plantations suffered considerably. Falling trees cut power and telephone lines. Campers lost tents and caravans were capsized and small craft wrecked. Luckily it crossed at low tide as the Moreton Bay tide gauge indicated a 0.76m storm surge. Flooded streams submerged road bridges.

Gale conditions were experienced on Fraser Island on the afternoon and evening of 31 December and at 9pm 31 December Double Island Point (near the southern tip of Fraser Island) reported a southerly wind averaging 40 knots. At 3am New Years Day the wind became calm indicating the centre of a cyclone passed over that station. This was followed by a Northerly averaging 60knots. In Figure 1 the rapid development of the complex cyclone is shown. At 1100UTC 31 December (9pm local time) a small low is shown developing south of Fraser Island while the main low centre was northeast of Fraser Island. Six hours later at 1700UTC 31 December (3am New Years Day) the centre of the first low was over the coast south of Fraser island while the main low had intensified and rotated around the first low and crossed the coast near Maroochydore on the Sunshine Coast. The radar echoes indicate a cyclonic circulation more aligned with the southern centre. From all accounts the mean winds may have almost reached category 3 intensity especially near the southern centre.

Rainfall

Although heavy rain was reported it was not extensive and there was flash flooding rather than riverine flooding. The heaviest falls in the 24hours to 9am 1 January 1963 were:-

- Rocky Vale 48 km SSE of Gympie 271.3mm
- Conondale 61 km S of Gympie 110.5mm
- Coolum Beach 106.7mm
- Eumundi 106.2mm
- Maleny 161.3mm
- Tewantin 127.0mm

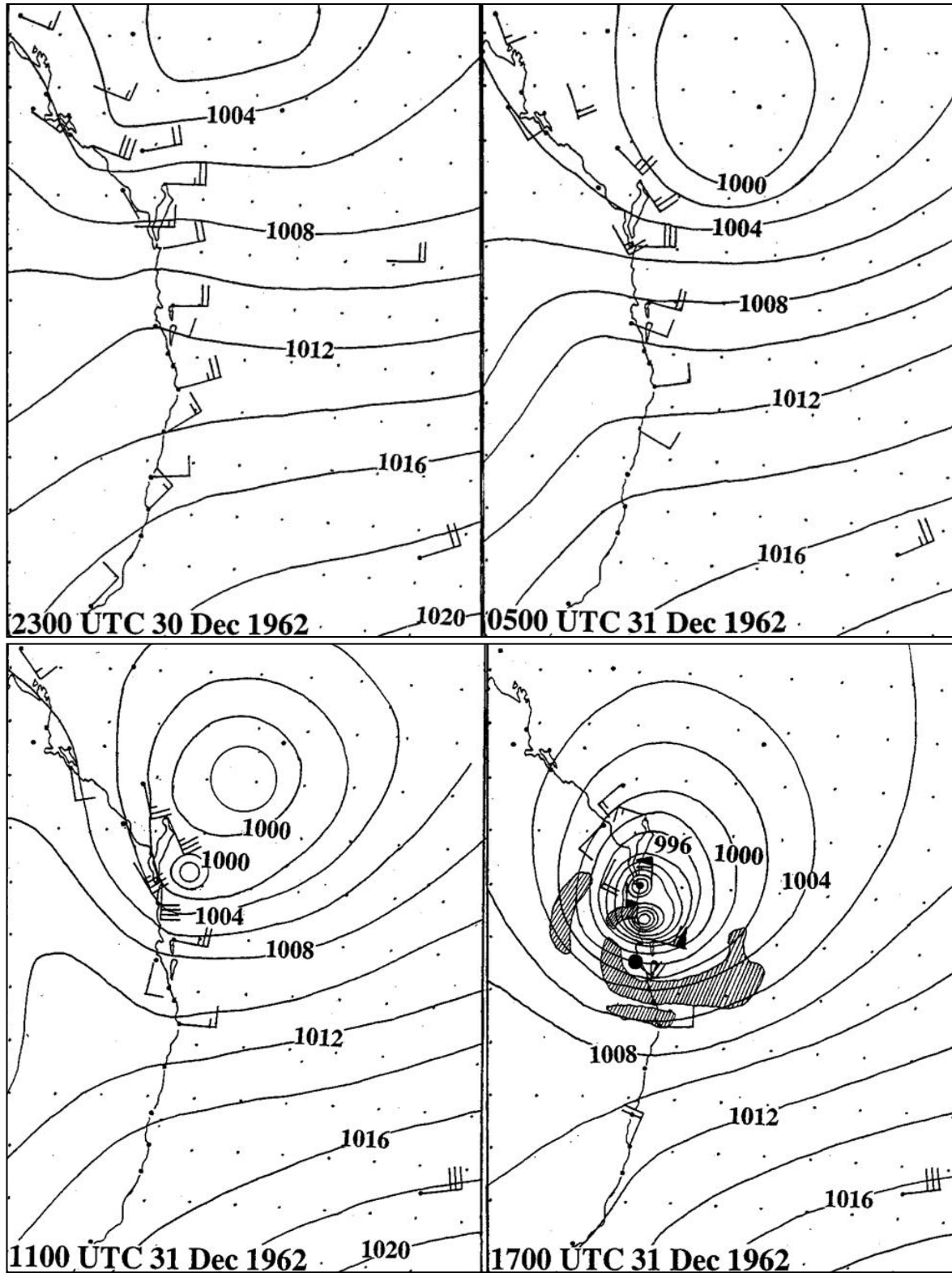


Figure 1 Mean Sea Level Pressure distribution and wind observations in top left for 2300UTC 30 December 1963 (9am 31 December local time), in top right for 0500UTC 31 December 1963 (3pm 31 December local time), in lower left for 1100UTC 31 December 1963 (9pm 31 December local time) and in lower right for 1700UTC 31 December 1963 (3am 1 January local time) with hatched areas indicating the location of radar echoes.