



Australian Government
Bureau of Meteorology

Tropical Cyclone *Hudah*

23 – 25 March 2000

Perth Tropical Cyclone Warning Centre
Bureau of Meteorology

A. Summary

A westward-moving Indian Ocean tropical low reached cyclone intensity prior to crossing 90°E. It was named *Hudah* by Mauritius RSMC at about 00UTC 25 March and went on to become an intense category 5 system eventually passing over Madagascar and then Mozambique causing considerable damage. The damage was particularly unfortunate as much the same area was impacted the previous month by *Leon-Eline*. There was no known impact east of 90°E.

B. Meteorological Description

An area of convection persisted on the 22 and 23 March in the vicinity of 16S 95-100E and showed signs of reasonable curvature. This area improved in organisation on the 24th and convection was particularly pronounced in southern quadrants. At 24/00UTC a DT of 2.5 was estimated based on a 0.5 wrap on the corresponding infrared image although cyclone intensity (DT=3.0) could be argued at this time based on microwave imagery. Subsequent visible images indicate a developing tightly bound circulation resulting in cyclone intensity being estimated by 24/06UTC. Figure 2 is the 24/0530UTC visible image that indicates a curved band pattern of at least 0.6 wrap (DT=3.0). By this stage the centre was near 15.7S 94E well inside the Perth TCWC Area of Responsibility.

Development continued through the 24th and microwave imagery at 24/23UTC (see Figure 3) show strong curvature indicative of an further intensification. The 24/2330UTC NRCS shows a well-defined speed minimum surrounded by stronger winds at about 15°S 90.6°E. The corresponding QScat does not show gales around the centre however the RSS QScat ambiguity and both suggest an area of gales near the centre with a maximum of about 45 knots, a little weaker than the T3.5 satellite analysis of 50 knots suggests. The corresponding BYU QS ambiguity analysis shows weaker winds but the quality of this data set is not known. Arguably on the basis of the microwave banding a DT=4.0 could be estimated.

The system appears to cross 90°E at about 25/03UTC when the SSMI shows strong curvature potentially indicating a CI of 3.5-4.0. The subsequent 25/0659UTC image shows a partial eye emerging indicating further intensification.

Hudah was steered along a westerly path from a strong ridge to the south moving at about 20-25 km/h.

It is not known why the Perth TCWC was not activated on the 24th prior to the system crossing 90°E as it did reach cyclone intensity. Possibly staff were recovering from *Olga* that finished on the 20th and given that the 25th was a Saturday may have also contributed to the system not being named. Once the system crossed 90°E it was immediately named *Hudah* by the Mauritius TCWC and was upgraded to a severe tropical storm on the 25th.

Details of *Hudah*'s lifecycle west of 90°E are available from the La Reunion's cyclone season summary for 1999/2000.

C. Impact

There was no known impact east of 90°E.

D. Observations

Nil.

Table 1. Best track summary for *Hudah*, 23-25 March 2000.

Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

Year	Month	Day	Hour (UTC)	Position Latitude °S	Position Longitude °E	Position Accuracy nm	Max wind 10min knots	Max gust knots	Central Pressure hPa	Rad. of Gales nm	Rad. of storm force winds	Radius Max. Wind (RMW)
2000	3	23	0	16.4	100.3	30	25	45	1000			
2000	3	23	6	16.2	99.1	30	25	45	1000			
2000	3	23	12	16.0	97.8	30	30	45	998			
2000	3	23	18	15.8	96.5	30	30	45	998			
2000	3	24	0	15.6	95.2	25	30	45	998			
2000	3	24	6	15.4	93.8	25	40	55	992	65		20
2000	3	24	12	15.3	92.7	25	40	55	992	65		20
2000	3	24	18	15.2	91.5	25	45	65	988	65		20
2000	3	25	0	15.1	90.4	25	50	70	984	65	25	15
2000	3	25	3	15.1	89.9	20	50	70	984	65	25	15
2000	3	25	6	15.1	89.2	15	55	80	976	65	25	15

Figure 1. Track of Tropical Cyclone *Hudah*, 23-25 March 2000. All times in UTC.
All times in WST.

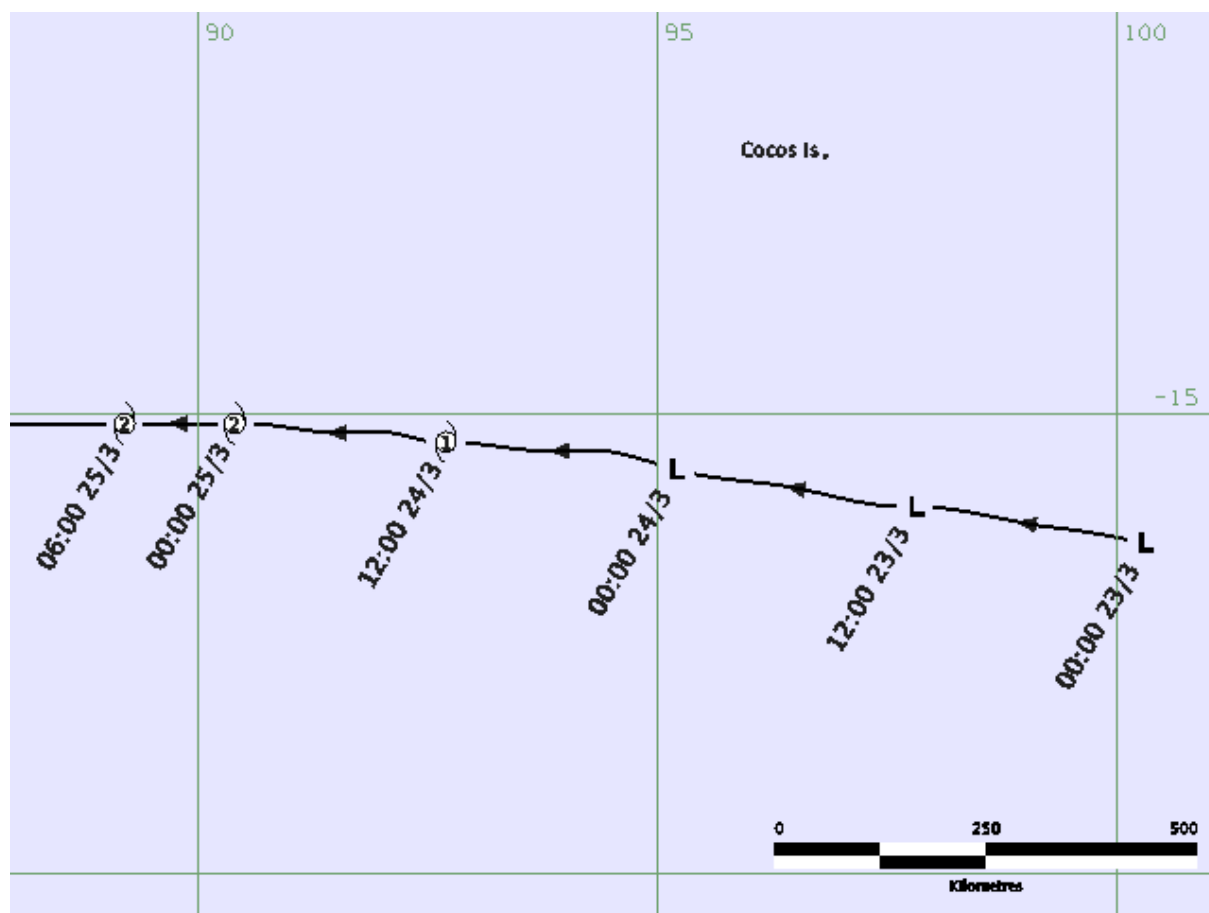
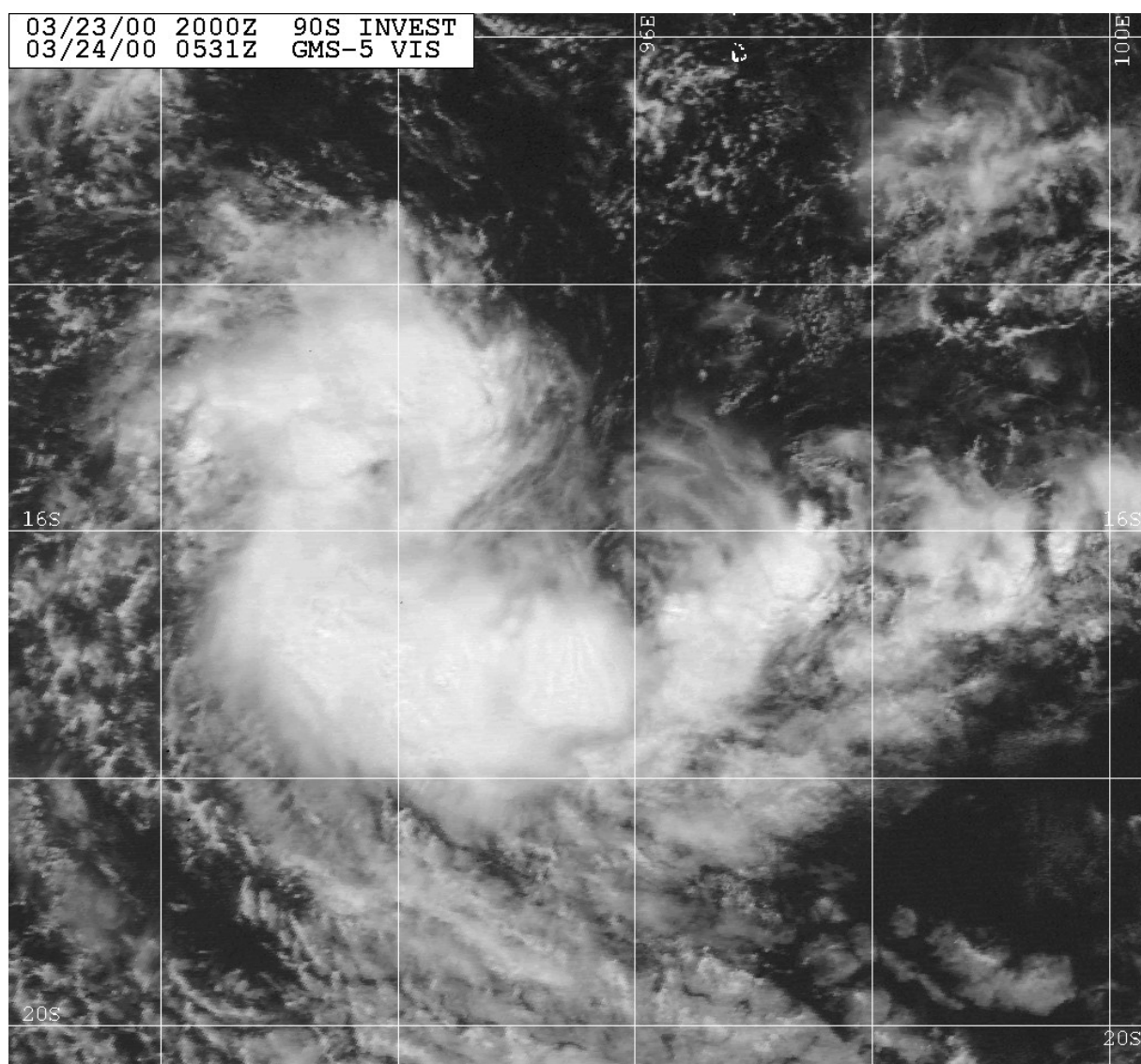


Figure 2. Visible image at 24/0531UTC.

(image courtesy of US NRL: <http://www.nrlmry.navy.mil/>)



Naval Research Laboratory http://www.nrlmry.navy.mil/sat_products.html
<-- Visible (Sun elevation at center is 72 degrees) -->

Figure 3. Microwave (SSM/I 85GHz) image at 24/2336UTC.

(image courtesy of US NRL: <http://www.nrlmry.navy.mil/>)

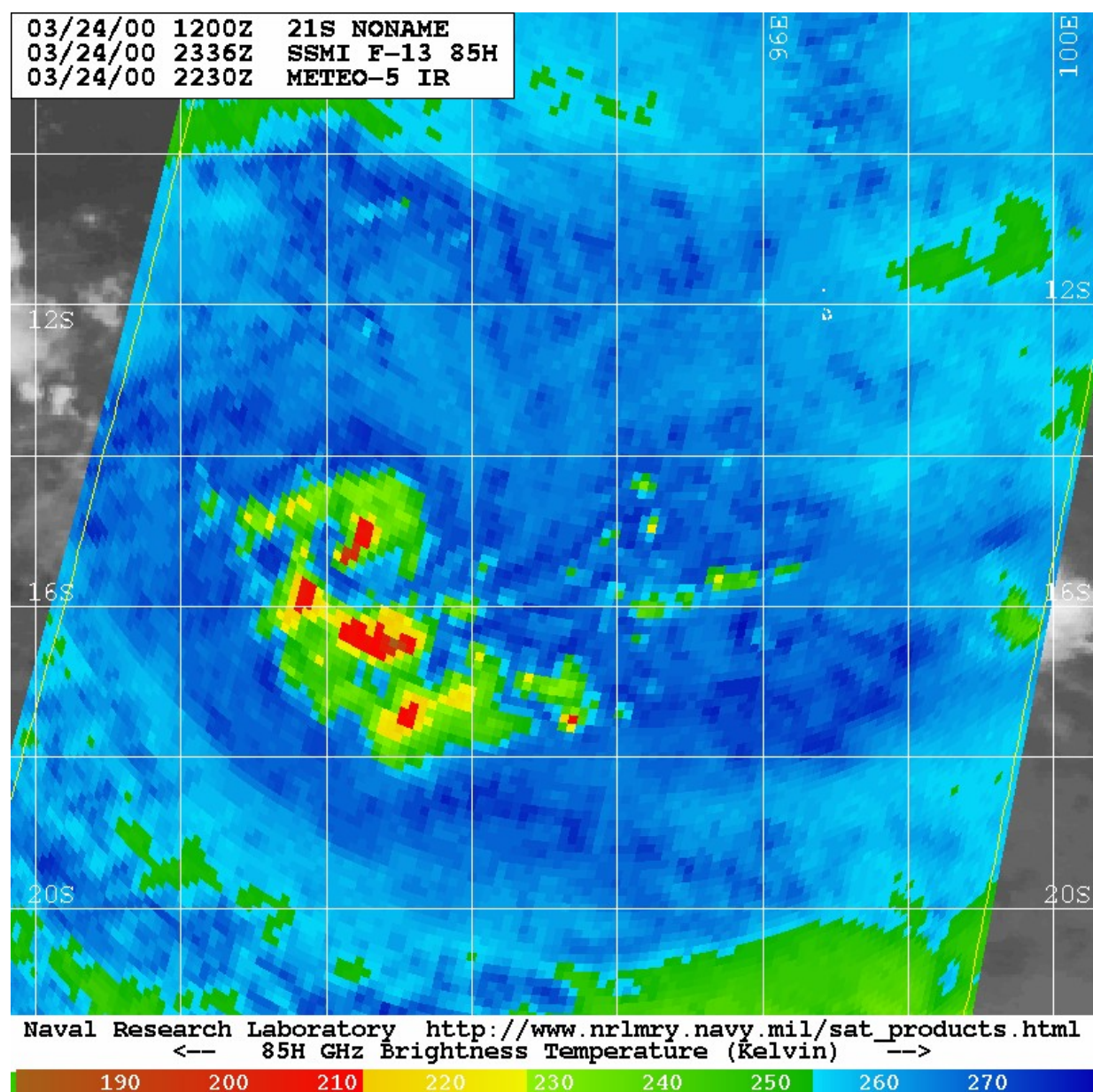


Figure 3. Microwave (TRMM 85GHz) image at 25/0659 UTC.

(image courtesy of US NRL: <http://www.nrlmry.navy.mil/>)

