

ROBERT ISLAND (CRESCENT GROUP)

16°30'21.78"N, 111°35'6.29"E

Geographic area

Robert Island is located on a reef platform on the western side of the Crescent Group, a submerged atoll in the western part of the Paracels. It is located just 142NM southeast of the island of Hainan and 170NM northeast of Vietnam's mainland. The closest shallow geographic features within the Crescent Group are Antelope Reef, less than 1NM south, and Pattle Island, less than 2NM northeast. Outside the Crescent Group, the closest shallow geographic features are Discovery Reef, less than 12NM south and Vuladdore Reef, just over 22NM southeast. The reef platform of Robert Island extends 2.3km along its north-south axis and 1.2km along its west-east axis.

Land area above water

Robert Island is the only above-water land area on the reef platform. It extends close to 750m from north to south and 550m from west to east (0.34km^2) and is 1.4 times larger than the reef flat. It is vegetated (60% of the above-water area) right up to the edge of the 20m-wide ring of wide sand that surrounds it. However, large excavation marks are visible in the centre ($78,000\text{m}^2$ or 23% of the above-water land area). Narrow (5-10m) patches of above-water sedimentary rock are visible at the water's edge, along the southwestern and northern parts of the coastline.

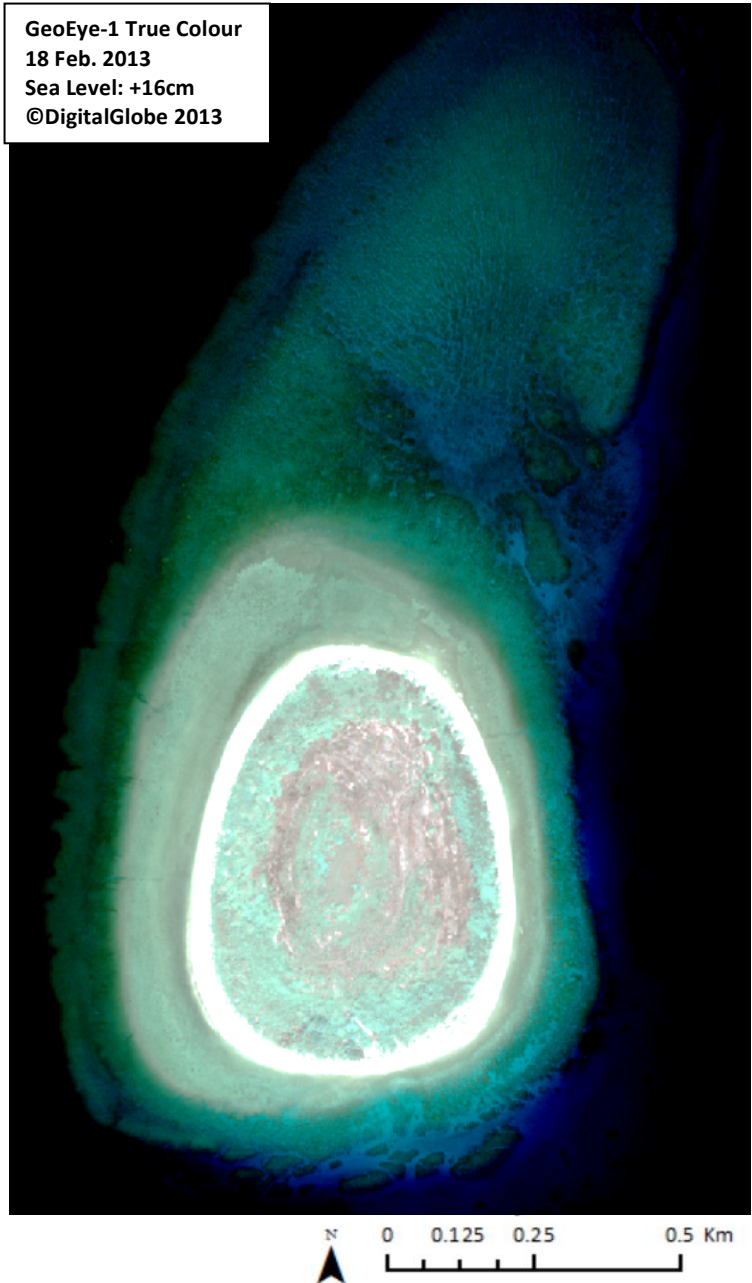
Human infrastructure

In the 18 February 2013 satellite image, no man-made structures are clearly visible, although there seems to be a road or track from the southern beach to the central area. Small buildings may be hidden by the vegetation. Two buildings are visible in this area in the 9 October 2014 satellite image viewable on Google Earth.

Intertidal and submerged area

The aerial coverage of the overall reef platform is 1.64km^2 : the reef flat covers 0.24km^2 and the reef slope covers 1.06km^2 . The reef flat is narrow around Robert Island; at its largest, it extends just over 200m off the northwestern side and 50m or less off the southeastern side. It is 0.9-1.4m deep at Mean Sea Level (MSL), except along the coastline of Robert Island, where it is shallower. It is expected that the parts of the reef flat that are less than 1m deep at MSL will be exposed at Lowest

Astronomical Tide. The reef slope extends 100-300m all around, except off the northern side, where it extends over more than 1km and pronounced spurs and grooves are visible at a depth of 4-6m.

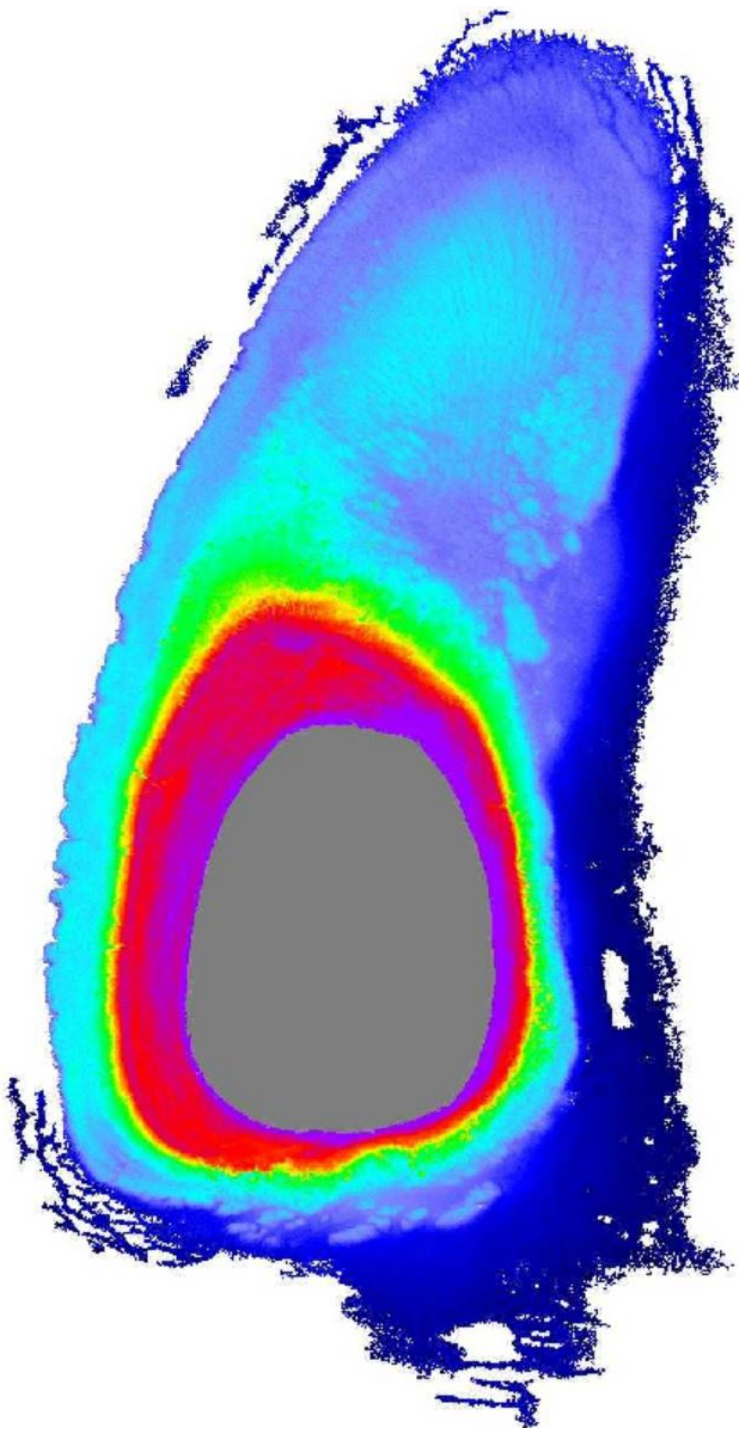


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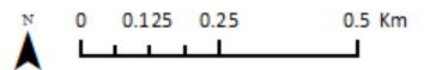
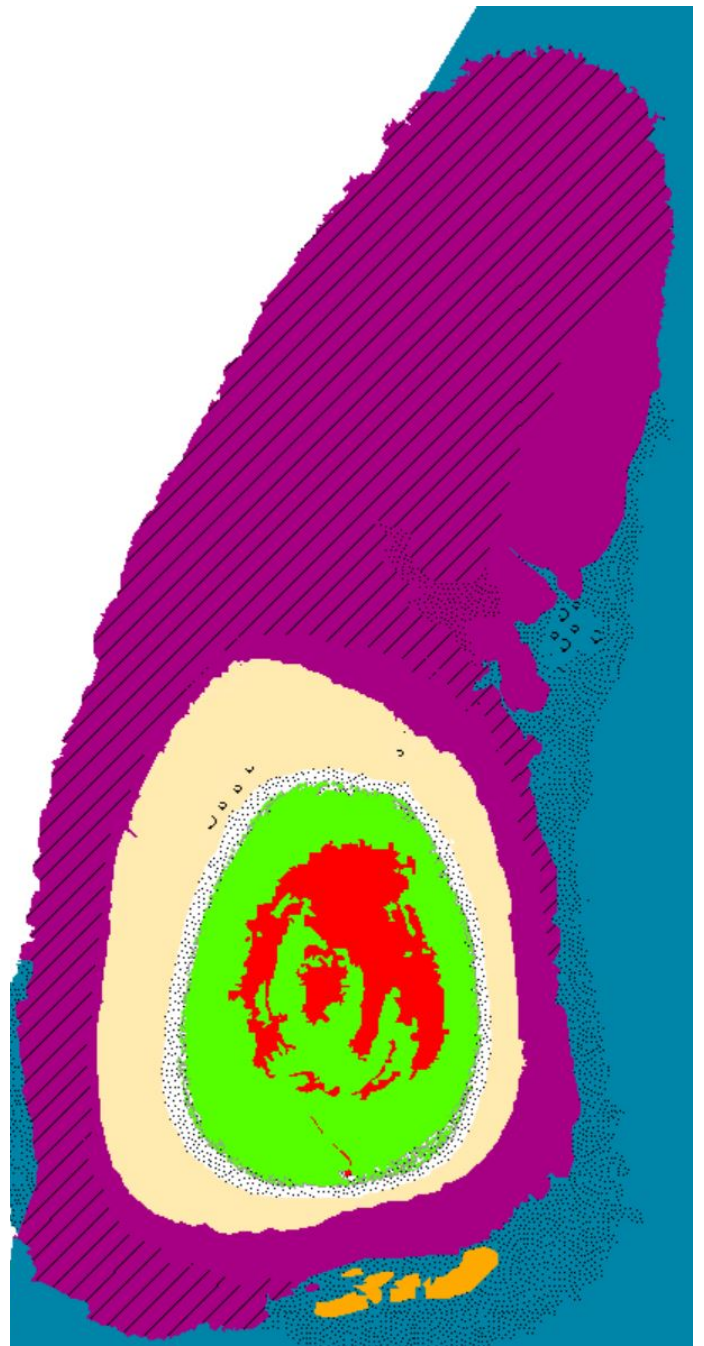
16°30'21.78"N, 111°35'6.29"E

Derived from GeoEye-1 satellite data captured on 18 February 2013 [Sea Level: +16cm]

Bathymetry Map



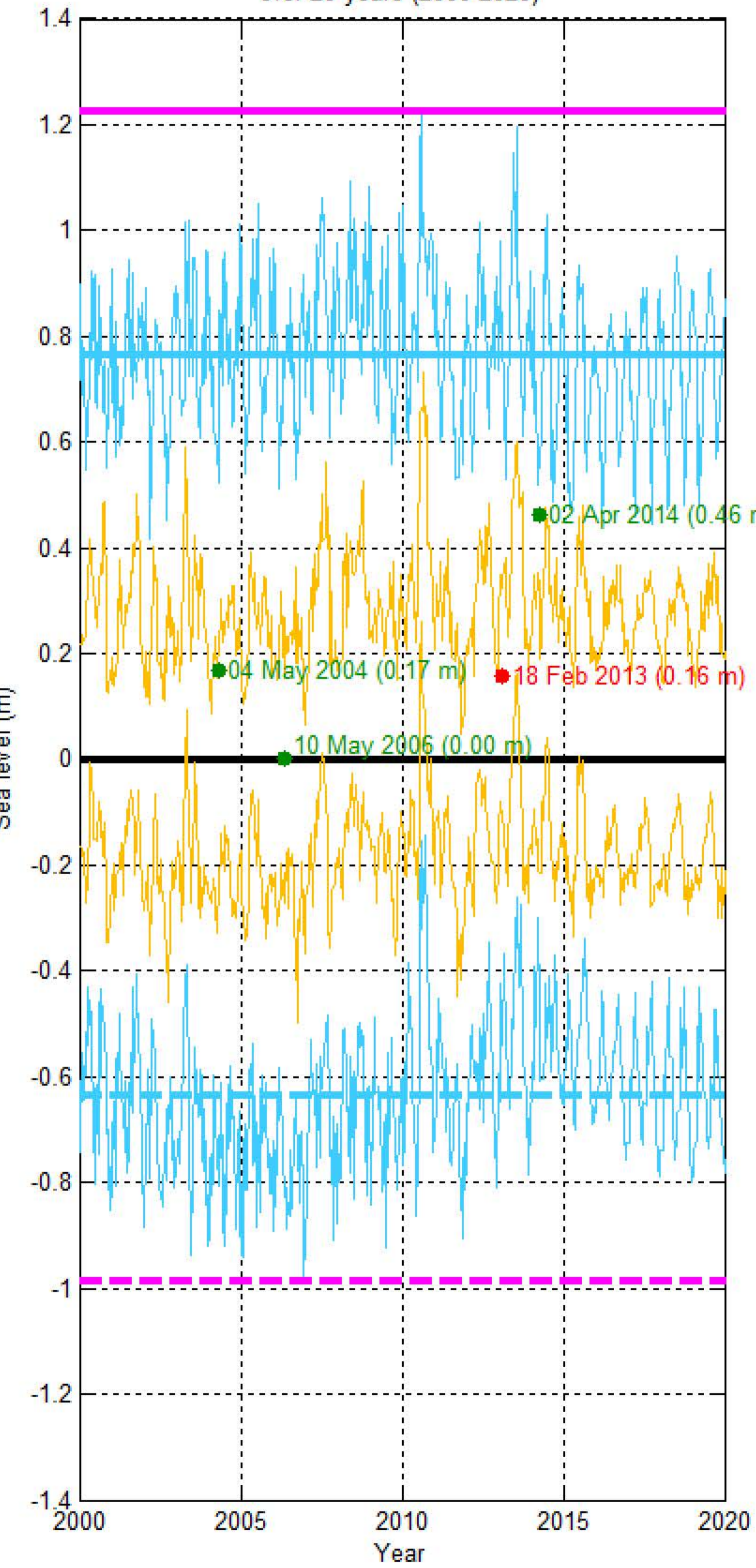
Habitat Classification and Land Cover Map



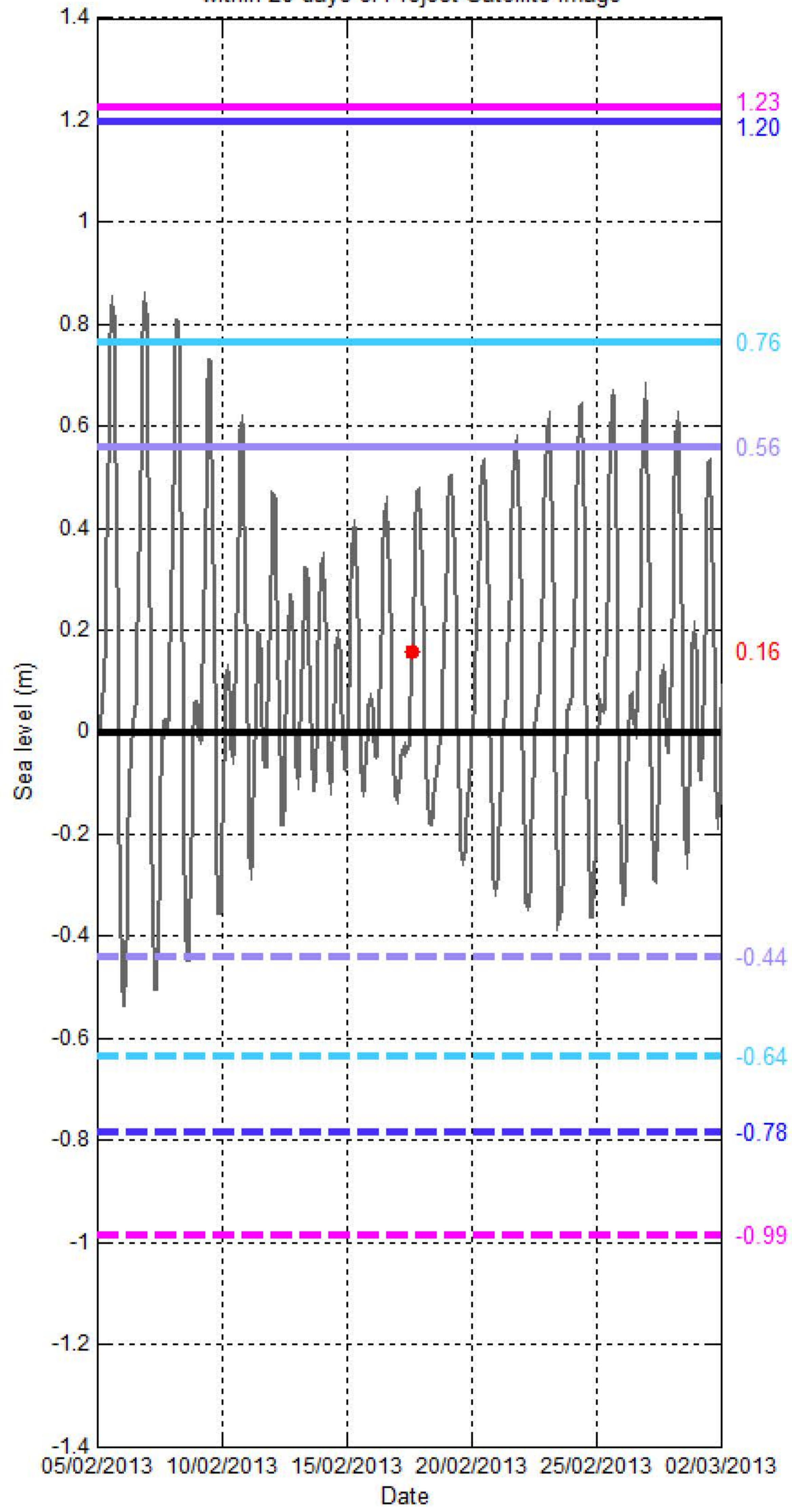
Sea level (SL) at ROBERT ISLAND (CRESCENT GROUP)

[16°30'21.78"N, 111°35'06.29"E]

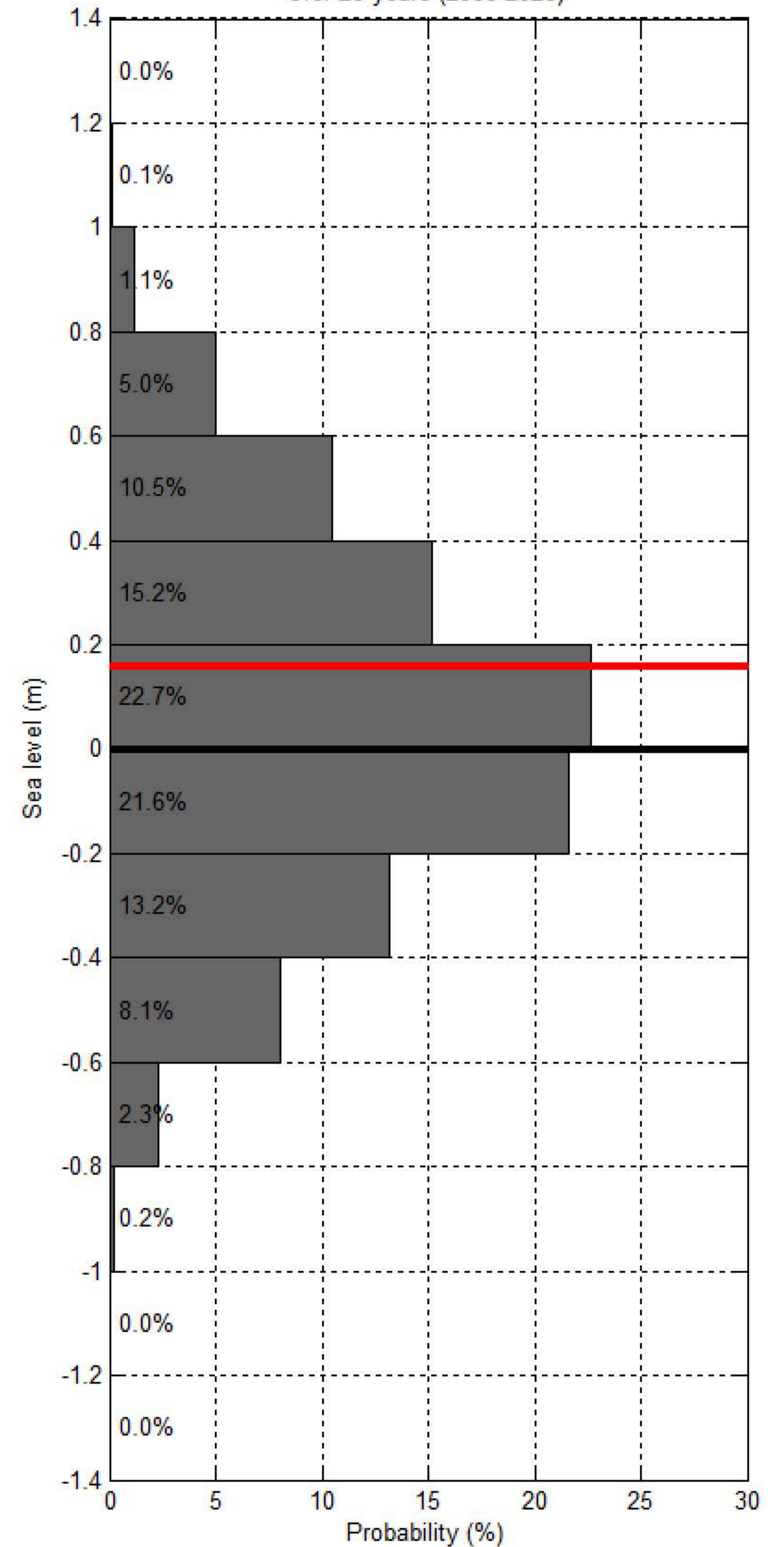
Sea level at spring/neap tide at CRESCENT GROUP- ROBERT ISLAND over 20 years (2000-2020)



Sea level at CRESCENT GROUP- ROBERT ISLAND within 20 days of Project Satellite Image



Probability of sea level at CRESCENT GROUP- ROBERT ISLAND over 20 years (2000-2020)



- Hourly sea level
- SL at spring tide
- SL at Mean High Water Spring
- SL at highest tide of the year
- SL at Mean Higher High Water
- SL at Highest Astronomical Tide
- Project Satellite Image
- Mean Sea Level
- SL at neap tide
- SL at Mean Low Water Spring
- SL at lowest tide of the year
- SL at Mean Lower Low Water
- SL at Lowest Astronomical Tide
- Google Earth and Landsat satellite images