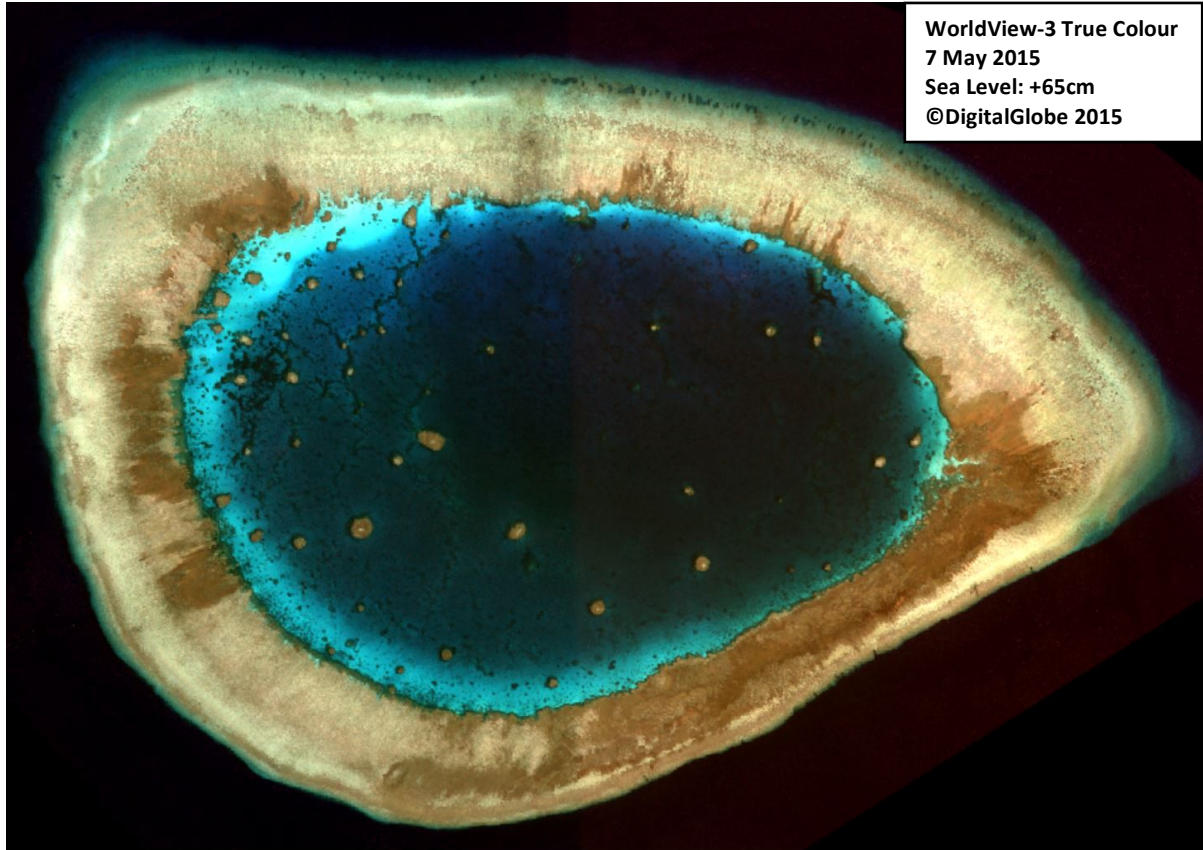


INVESTIGATOR NORTHEAST SHOAL

9°10'37.96"N, 116°27'38.43"E

Geographic area

Investigator Northeast Shoal is an oceanic coral atoll that has developed on top of a seamount in the eastern part of the Spratlys. It is located less than 58NM northwest of the island of Palawan and 130NM northwest of the island of Borneo. The closest shallow geographic feature is Royal Captain Shoal, 12.5NM southeast. Half Moon Shoal is the second closest, 17.4NM southwest. First Thomas Shoal and Bombay Shoal are next, over 30NM away, northwest and northeast of Investigator Northeast Shoal, respectively. This oval-shaped atoll extends 4.3km along its northwest-southeast axis and reaches 2.7km on its northeast-southwest axis.



Land area above water

There are no above-water land areas in the 7 May 2015 satellite image, or in the 17 and 31 March 2012 satellite images viewable on Google Earth.

Human infrastructure

There are no man-made structures visible on this reef as at 7 May 2015.

Intertidal and submerged area

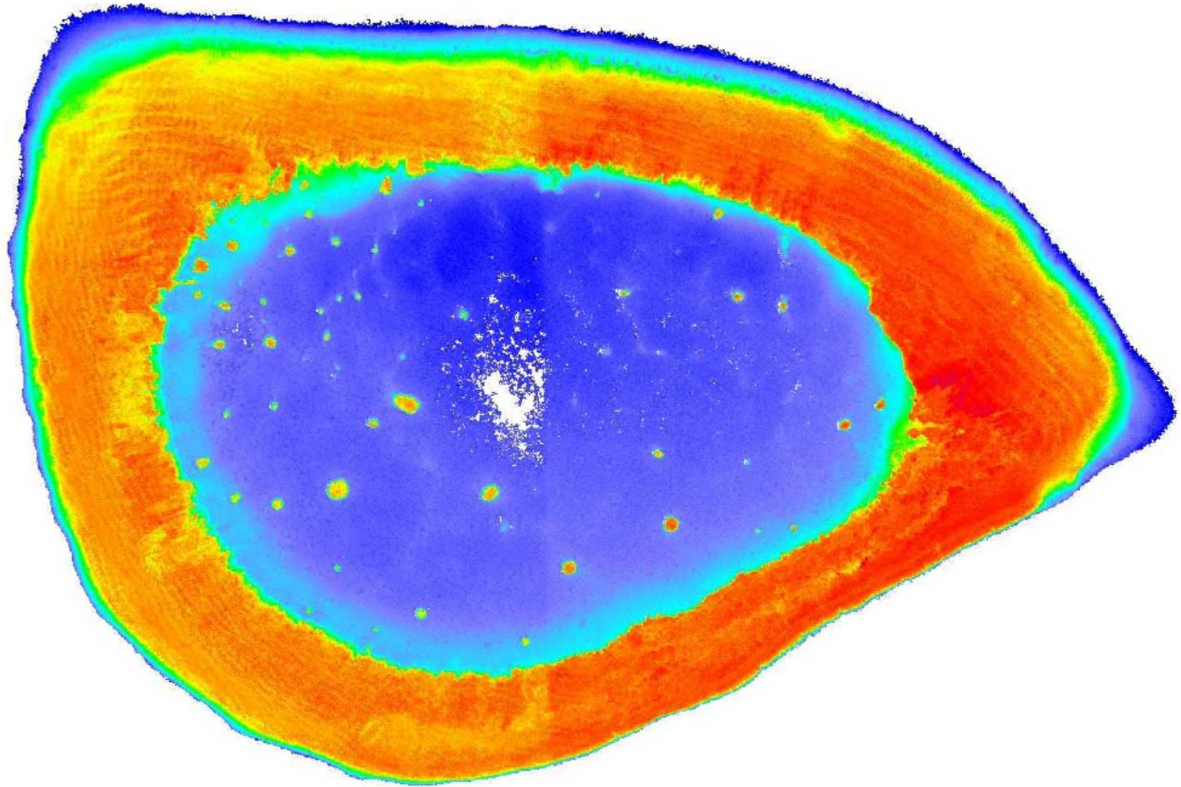
The aerial coverage of this atoll is 3.38km² comprising a reef flat of 1.81km², a lagoon of 1.25km² and a reef slope of 0.32km². The reef flat is a 6km-long band that separates the lagoon from the reef slope; it is generally 300-400m wide overall except in the northwestern side where it is around 500-550m and the southeastern side where it is under 200m. The reef flat is itself composed of two adjoining rings: the outer ring is located along the reef slope, is consistently 200-250m wide and is characterised by coral/algae cover. It is also the shallowest, generally 1.6-2m deep although there is a small shallower area (1.2-1.4m) on the eastern side of the reef. This shallow area and other small areas that are 1.76m deep or less (on the eastern and southeastern reef flat) are expected to uncover at Lowest Astronomical Tide. The inner ring of the reef flat is located along the lagoon. It is sand-dominated and of irregular width (wider on the western side). The eastern part of the lagoon is generally deeper (6-8m) with steeper banks than the western and southwestern sides where the sandy back reef slopes into the lagoon with a smaller gradient. The lagoon is characterised by a dense reticulate reef system that includes ribbons of connected coral heads and knolls. The visible part of the reef slope is narrow all around despite being wider on the eastern and northwestern ends where it extends not more than 130-150m. By contrast, it generally does not exceed 10-30m off the southwest-, south- and southeast-facing sides of the atoll. The great depth of the surrounding seabed suggests that the reef slope is likely to be very steep. No dredging marks can be observed on this atoll as at 7 May 2015.

INVESTIGATOR NORTHEAST SHOAL

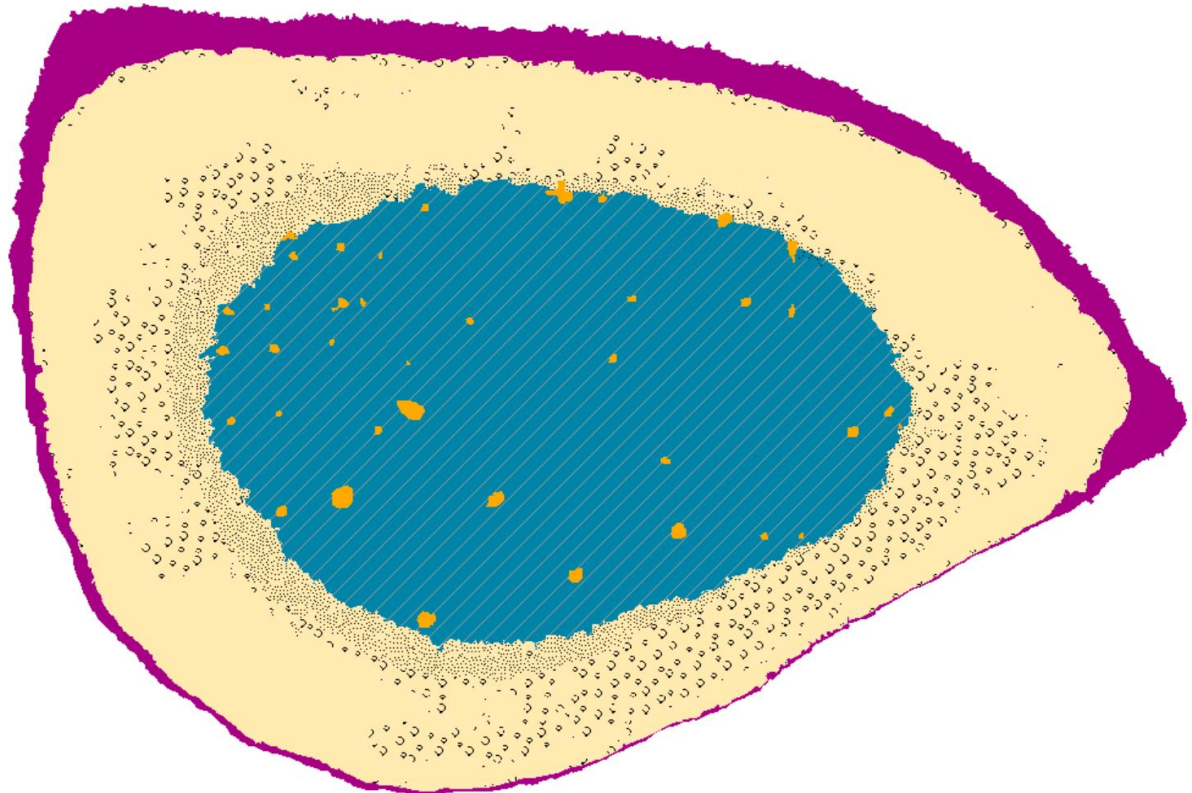
9°10'37.96"N, 116°27'38.43"E

Derived from WorldView-3 satellite data captured on 7 May 2015 [Sea Level: +65cm]

Bathymetry Map



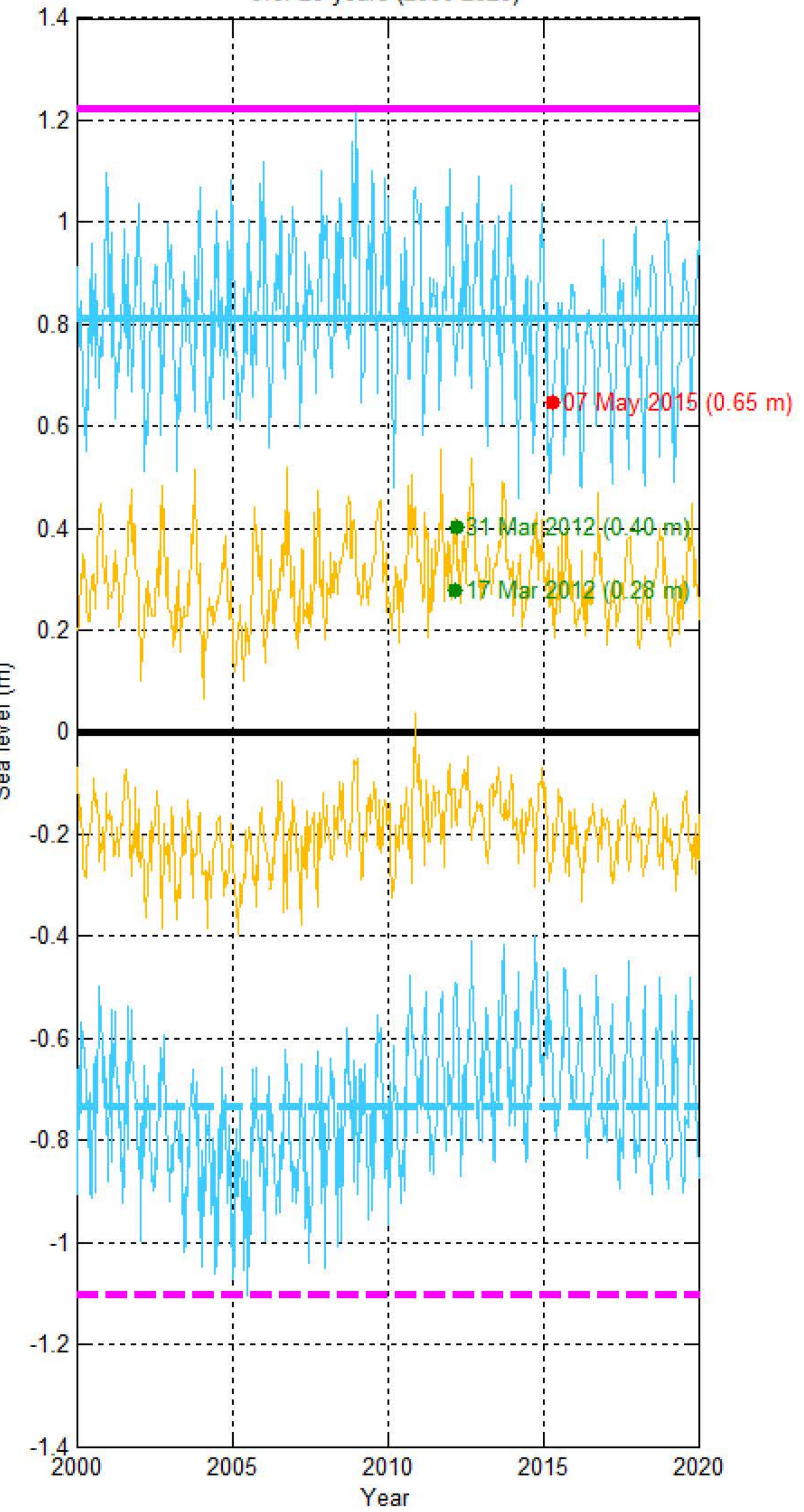
Habitat Classification and Land Cover Map



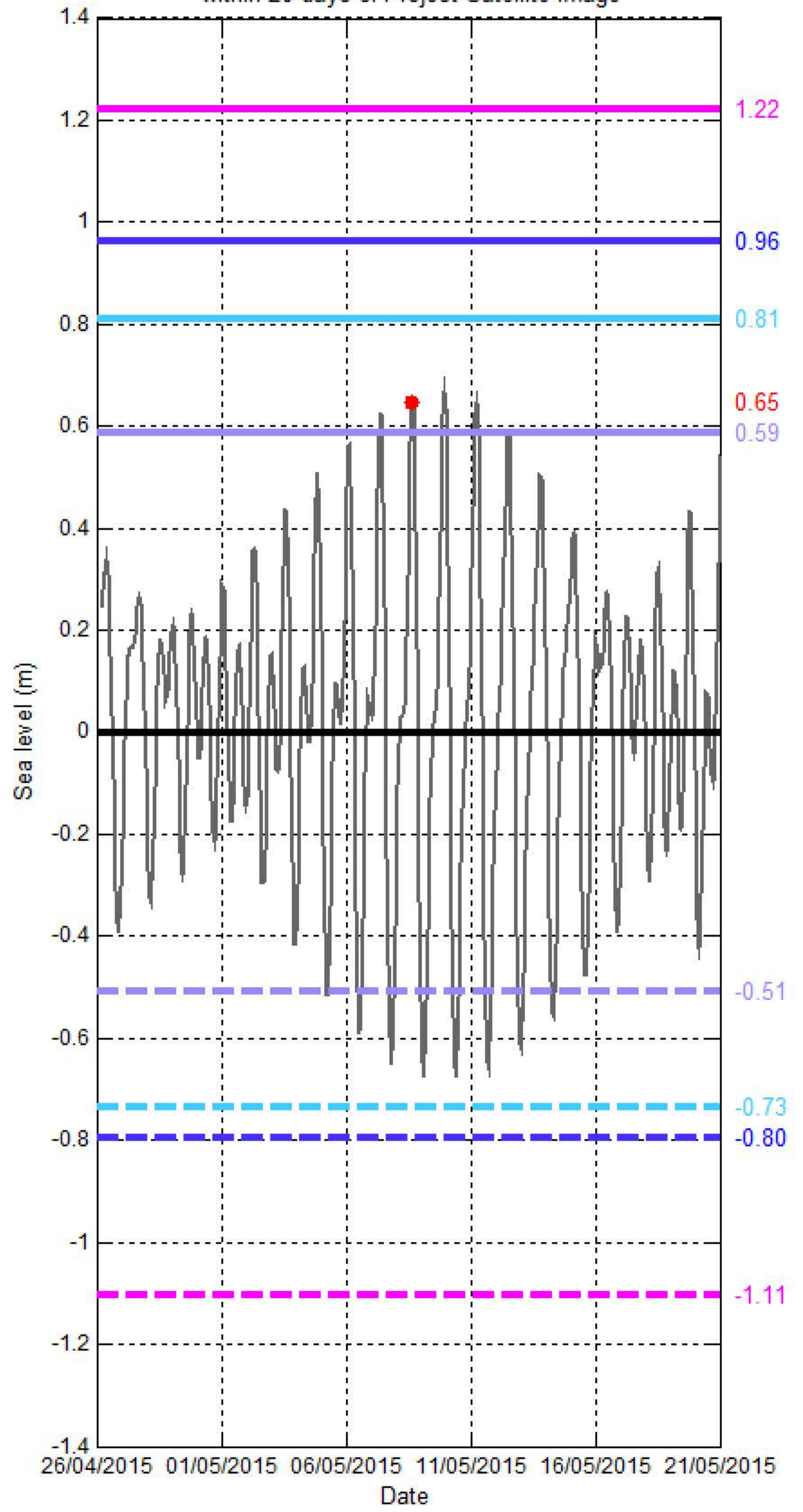
Sea level (SL) at INVESTIGATOR NORTHEAST SHOAL

[9°10'37.96"N, 116°27'38.43"E]

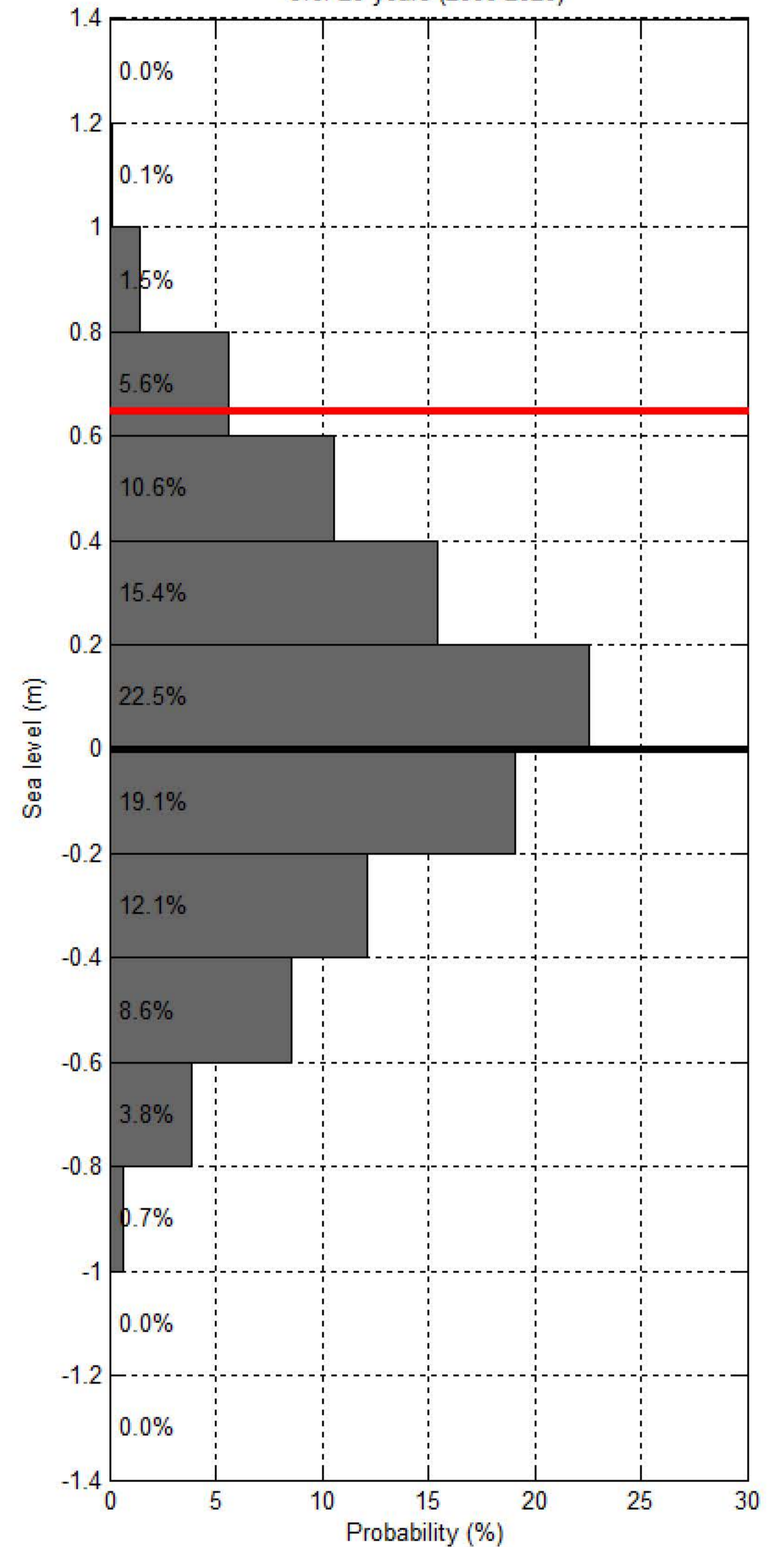
Sea level at spring/neap tide at INVESTIGATOR NORTHEAST SHOAL over 20 years (2000-2020)



Sea level at INVESTIGATOR NORTHEAST SHOAL within 20 days of Project Satellite Image



Probability of sea level at INVESTIGATOR NORTHEAST SHOAL 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