

AN international team led by a Universiti Kebangsaan Malaysia (UKM) astronomer has discovered two active supermassive black holes.

The new black holes were hidden in two nearby galaxies called the ESO 121-G6 and NGC 660.

Comprising 23 researchers, the team led by Dr Adlyka Annuar also discovered small galaxies known as M51b and NGC 3486 that host one of the least luminous supermassive black holes in the universe.

The lecturer at UKM's department of Applied Physics is also a member of the Academy of Sciences Malaysia's Young Scientists Network.

UKM said the research was funded by the Higher Education Ministry's Fundamental Research Grant Scheme (FRGS).

Their discovery's scientific paper was published on July 29 in the Monthly Notices of the Royal Astronomical Society, a research journal in astronomy and astrophysics.

"The Nuclear Spectroscopic Telescope Array (NuSTAR) observed the faintest growing supermassive black holes in our cosmic backyard, and found that some of them are actually luminous 'monsters' hiding behind thick clouds of dust and gas."

UKM-led team discovers 'monsters' in space

said Dr Adlyka.

Growing black holes emit light across all the electromagnetic spectrum, from low energy radio to high energy X-rays.

These growing black holes appear faint and weak based on their low energy X-ray light emitted by the material they consumed.

However, emission at other light wavelengths (such as optical and infrared) suggests that they might be more powerful than we had earlier thought, she explained.

The two black holes located in the ESO 121-G6 and NGC 660 galaxies, she said, are heavily buried in gas and dust.

"The findings of this research raises the question of how many more 'monsters' have been hidden in plain sight even within the closest galaxies to us."



Star bright: Image of the NGC 660 galaxy in optical light and X-ray (green colour). - NASA/JPL-Caltech, SDSS.