

## **Agreement and rules of using the CCD data from TRT/TNT for asteroid search.**

### Introduction:

The NEO search plan of NARIT was announced by the Director several years ago and is one of the topics of NARIT's current Roadmap plan for the next 10 years. According to that, in 2018/2019 fiscal year, we started the project "Automated asteroid search with Thai Robotic Telescope Network" (PI: Dr. D. Mkrtichian) and recently set up software for automated asteroid search at **rigel** computer linked to **Chalawan**.

This software can analyze the CCD images coming simultaneously from many robotically working telescopes of NARIT for a "background" work on detection of moving objects (asteroids/comets)/ It can also do the asteroid search using the CCD data coming from GOTO project telescopes.

The detections of new asteroids/comets are occasional and unpredictable events, majority of bright (<16mag) asteroids were discovered in the ecliptic plane, the observations well above the ecliptic plane gives better chances for detection of new bright asteroids and comets on orbits inclined to orbits of planets of solar system.

The multi-longitude (multi-continent) TRT Network working under individual research programs all around the day and around all-sky areas is a good source of such images the program provides time series having more than 2 images. The images from 4K camera of TNT, on other hand are good for a detection of faint trans-Neptunian objects.

The work of the asteroid search software is only focused on the detection of moving objects on the images, and it should not use any photometric information about other objects in the field of view. After getting the asteroid detection report and a visual check of this detection there is no need to keep images in the temporary work directories except for a case when a new asteroid is detected and it is a need for preparation of the visual demonstration (blinking of images) of the discovery.

As the scientific results on these images "belong" to PI of proposals and to NARIT on other hand, it would be good to prepare some rules about the policy of using these data among TRT /TNO users.

Below, I wrote some rules for a discussion reasons and for improvements and suggestions.

### **Rules for using TRT images for asteroid/comet search**

1. The PI of the program can agree or not of giving permission for using his data. This agreement will be marked in the application to TRT time. If no, copies of images should be not forwarded to the temporary directory for asteroid search (TRT engineer's software setup).
2. In the case of discovery of a new asteroid, the PI of the proposal will be included to the list of co-discoverer in the MCP report.
3. After the analysis of images for the existence of the moving objects, copies of images in the temporary directory will be deleted within 2 days. The exception is for the case of discovery of a new asteroid/comet which needs to keep several images for preparation of science, public outreach, and press releases.
4. PI of asteroid search program and persons working with asteroid search software and the data cannot use any images for public outreach or scientific reports without permission from PI of the proposal to which be these images belongs.