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A Python client for the ATLAS API

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Software

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Summary

The Asteroid Terrestrial-impact Last Alert System (ATLAS) is an all-sky optical sky survey with a cadence of 24 to 48 hours (Tonry et al., 2018), and the ATLAS Transient Server (Smith et al., 2020) processes the alert stream to enable the discovery and follow-up of extra-galactic transients. The data from the ATLAS server can be accessed through a REST API, which has allowed the development of bots that need direct access to the data to help rank alerts and trigger follow-up observations of promising targets. Here we present the python client we have developed for the ATLAS API to help connect bots and scientists to our data.

Statement of need

`atlasapiclient` is a python client that facilitates the use of the ATLAS REST API. It provides a class-based interface to all the read-write utilities of the API and abstracts away the endpoint URLs and the token management. The `atlasapiclient` was initially designed to be used in our transient stream processing pipeline, particularly for the ATLAS Virtual Research Assistant (Heloise & genghisken, 2025), but it can now also be used to connect other astronomy projects to the ATLAS data and its stream. It is currently allowing the follow-up of ATLAS alerts by the Mookodi telescope in the South African Astronomical Observatory (Nicolas Erasmus et al., 2024), which has allowed automated triggering and classification of transients within 100 Mpc (e.g. (N. Erasmus et al., 2025), (Wet, 2025)), since early 2025. In the future this will allow us to connect our stream to other surveys and follow-up facilities (e.g. (Radhakrishnan Santhakumari et al., 2024))

We expect the API to evolve over time which could break the production codes that connect to the ATLAS servers. By having a dedicated client package that includes a full set of unit and integration tests we can release updates to the client that are compatible with the new API but do not require users to change their existing code. Decoupling the user's code form the implementation of the API therefore increases robustness from the users side.

Data Access

In order to gain access to the servers, prospective users will need to fill a Data Request Form including a short (no longer than 1 page) science case justifying their access needs (length of time; Read-only or Read-Write access). We have also included data policies compliant with the General Data Protection Regulation (GDPR).

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