



**NEW YORK UNIVERSITY**

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January 4, 2021

Re: Brazilian Participation Group Activities in Support of SDSS-IV

Dear Prof. da Costa:

I write to report on the activities of the Brazilian Participation Group (BPG) in support of the Sloan Digital Sky Survey IV (SDSS-IV), related to computational infrastructure at the du Pont Telescope at Las Campanas Observatory and deployment of a Catalog Archive Server mirror for the survey public data releases. These activities are provided as an in-kind contribution for membership to SDSS-IV, as defined in the BPG Memorandum of Understanding (MOU) for SDSS-IV.

In Spring 2016, the BPG installed and configured essential servers to be used in the SDSS-IV activities at the du Pont for the APOGEE-2 South survey. They provided documentation on their activities and on the maintenance of the system. They have proceeded to provide maintenance, upgrades, and troubleshooting since that time.

The physical servers (purchased by the University of Utah) consist of two Dell PowerEdge R730xd servers with 64 GB memory and 17 TB usable each. They are mirrored to provide a failover capability if the primary server under use fails. Each server has a set of virtual machines, configured for use by different elements of the SDSS operations software. They are monitored remotely using the NAGIOS monitoring system.

Accounts have been configured for the SDSS-IV operations software team. The necessary software infrastructure is installed to support the SDSS-IV operations software suite, including python distributions, postgres, nginx, modules, and a number of other supporting packages.

The APOGEE-2 South survey was originally planned to end September 8, 2020, but because of COVID-19 the end date was delayed to January 21, 2021. To accommodate this delay, the BPG agreed to extend its support. The servers remain critical until the end of January 2021, by which time the data and meta-data on the server will have been backed up off-site. The servers will be used for a few months after that time for less intensive purposes.

In addition, the BPG has provided a mirror of the Catalog Archive Server, distributing SDSS-IV data publicly. They plan to deploy this mirror for the final public data release, DR17, to be launched in December 2021.

This work has been performed professionally and promptly. The SDSS-IV operations software team and LCO observing team has expressed its satisfaction with the system and the maintenance provided over its lifetime. Overall, the BPG is on track to fully satisfy its MOU obligations and has contributed in critical ways to the overall success of SDSS-IV.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Blanton", written over a light gray rectangular background.

Michael R. Blanton  
Professor, New York University  
Director, Sloan Digital Sky Survey IV