

**滞在型研究員報告書**  
**Activity Report for the NAOJ Visiting Fellows Program**

所 属 (Institution)	Indian Institute of Astrophysics, Bangalore, India
氏 名 (Name)	Mudumba Parthasarathy
研究課題名 (Research subject)	Chemical Composition of Evolved Stars
滞在期間 (Period of stay)	2016 年 6 月 1 日～ 2016 年 6 月 29 日
受入責任者氏名 (NAOJ host researcher)	Wako Aoki

1. 滞在型研究員として国立天文台滞在中に行った活動について簡単にお書きください。  
(Summarize your activities during the stay using the NAOJ Visiting Fellows Program.)

I have analyzed the Subaru HDS spectra of the post-AGB stars CRL 2688 and CC Lyr in collaboration with Prof. Wako Aoki-san. We compared the preliminary result obtained for CRL2688 with our previous studies and found that we need to carry out further analysis of the spectrum CRL 2688 with lower gravity model atmospheres. In addition to the study for stellar component of the spectra, we also need to complete the analysis of circumstellar molecular lines. The analysis of the spectra of CC Lyr clearly shows that it is a very metal-poor post-AGB star similar to HR 4049 and HD 52961. The CNO, S, Zn are nearly normal whereas the refractory elements are very much depleted. This star belongs to a rare class of very metal-poor post-AGB stars. I have also interacted with Mr. Tadafumi Matsuno-san (student of Prof Wako Aoki-san) in the study of Subaru HDS spectra of carbon-rich post-AGB supergiants. I also had chance to discuss about future observing plans with Chinese astronomers who visited to Prof. Wako Aoki-san on June 28-29. I gave seminar on the chemical composition of weak-G band stars on June 17.

様式 2 (Form 2)

2. 今回滞在型研究員として得られた成果について簡単にお書きください。  
(Summarize your research products from the stay.)

We had good progress in analysis and interpretation on the Subaru spectrum of the post-AGB F supergiant CRL 2688. A paper will be prepared based on the analysis and discussion during the stay by collaboration with Wako Aoki-san.

We have almost completed the basic analysis of the new Subaru spectrum of the very metal-poor post-AGB star CC Lyr. A paper will be soon prepared by Wako Aoki et al.

Tadafumi Matsuno-san has submitted abstract to the Annual meeting of the Astronomical Society of Japan held in September based on our discussion on circumstellar absorption found in a post-AGB star observed last year with Subaru.

この制度について何か御意見がありましたら、お書きください。  
(Please provide any comments about this program.)

This program is very useful for foreign researchers to collaborate, interact and exchange ideas with the NAOJ astronomers.