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To Whom It May Concern:

I suggest with confidence that Dr. Javier Peralta is a suitable candidate for the researcher position. I worked with Dr. Peralta for years as a collaborator when he was an International Top Young Fellow of JAXA (Japan Aerospace Exploration Agency) and I was a staff member of JAXA. The collaborative projects include: studies of Venusian atmosphere using JAXA's Venus orbiter Akatsuki, coordinated Venus observations using ground-based telescopes, and theoretical studies on planetary atmospheric dynamics. I know his research skills and personality well.

Dr. Peralta has profound knowledge on planetary atmosphere physics and remote sensing techniques. He has achieved excellent results in the atmospheric science of Venus, which is considered as an invaluable reference for understanding planetary atmospheres in general. The elucidation of the mechanism of Venus' atmospheric super-rotation would give clues to the dynamical state of the atmospheres of tidally-locked exoplanets also. Moreover, Venus is the only solar-system planet whose atmosphere can be observed by solar transit spectroscopy, implying an interesting comparison with exoplanet's central star transit observations.

Dr. Peralta has first analyzed multi-wavelength Venus images taken by ESA's Venus Express spacecraft to reveal atmospheric dynamics and cloud morphology. His skill in developing algorithms for data processing is superb: atmospheric waves at meso- to planetary-scales and large-scale circulations were identified by his own software. He has combined those spacecraft observations with ground-based observations. Scientists who can play key roles both in spacecraft missions and ground-based observations are rare. He is one of the most productive scientists in JAXA's Akatsuki mission. He participates in instrument teams and has made new discoveries about key dynamical processes driving the atmospheric super-rotation. His recent findings from these projects include wind fields in the deep cloud region, fast-traveling cloud discontinuities, and ubiquitous stationary cloud features that are not swept away by the background flow. He has also published excellent theoretical studies about atmospheric dynamics.

Dr. Peralta is proficient in ground-based observations and have organized coordinated ground-based observations. Talented amateur observers also participate in his projects. He has a great ability to lead international teams consisting of people with different backgrounds.

Dr. Peralta is active in communication with international science communities; he frequently gives talks at international conferences and visits foreign laboratories for discussion. He communicates closely with the instrument teams of ESA's Venus Express and JAXA's Akatsuki to deeply understand the characteristics of raw data and the hardware. I was impressed by his ability to organize research plans involving people from broad science fields and different countries.

Apart from research skills, Dr. Peralta is a good educator. He has co-supervised graduate students at JAXA and is giving advice to my graduate students at the University of Tokyo. He has prepared data and software for them, and explained ways of thinking and analysis methods. He can explain advanced knowledge by using simple words.

As shown above, Dr. Peralta has a sound research profile in planetary physics and spent years at an internationally renowned institute (JAXA). He has a broad interest in physics and astronomy. Last but not least, he has a cheerful and pleasant personality and pays careful attention to others. He has also contributed a lot to education and public outreach at JAXA. I consider he fulfills the requirements of the researcher position.

Sincerely,

A handwritten signature in black ink, reading "T. Imamura". The signature is written in a cursive, flowing style.

Takeshi Imamura

Professor  
The University of Tokyo