



KEK

HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION

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To Whom it May Concern:

This is a letter in support of Prof. Giovanni Bonvicini's work on the Large Angle Beamstrahlung Monitor (LABM) for the SuperKEKB accelerator. I am in charge of photon-based diagnostics at SuperKEKB, and so have been working with Prof. Bonvicini on the LABM. The LABM represents a completely new method of measuring the collision parameters of a two-beam collider, and SuperKEKB will be the first collider in the world to be fully equipped with one.

In Phase 1 of SuperKEKB commissioning last year, the LABM underwent initial commissioning. There were no beam collisions at that time, but the LABM team succeeded in measuring background synchrotron radiation sources (that will largely not be visible in the final configuration of the collider), and demonstrating that the LABM system will work. Next year, we are commencing Phase 2 commissioning, with the first beam-beam collisions expected. This will be an extremely useful opportunity to fully commission the LABM and demonstrate its potential for collision monitoring. Phase 3 after that will mark the start of full physics data-taking, at which time it is expected that the LABM will be available for collision tuning.

SuperKEKB is designed to achieve a target luminosity of $8 \times 10^{34} \text{ cm}^{-2}\text{s}^{-1}$, which is 40 times greater than that of KEKB, the previous world record.

Reaching this design luminosity will be an extremely challenging endeavor, and the unique capabilities of the LABM will be required to reach that goal. We at SuperKEKB are extremely anxious that the LABM receive full support from all relevant funding agencies, so that it may continue development through to full implementation.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Flanagan', written in a cursive style.

John Flanagan
Professor, Accelerator Laboratory, KEK