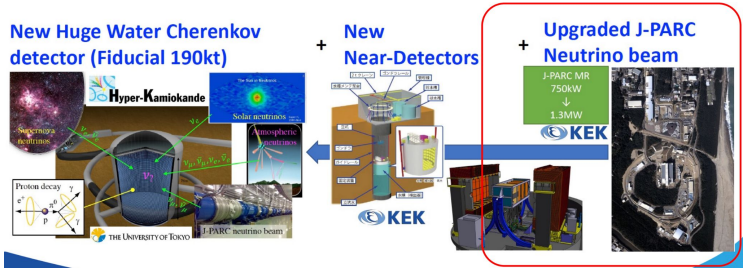
Hyper-Kamiokande

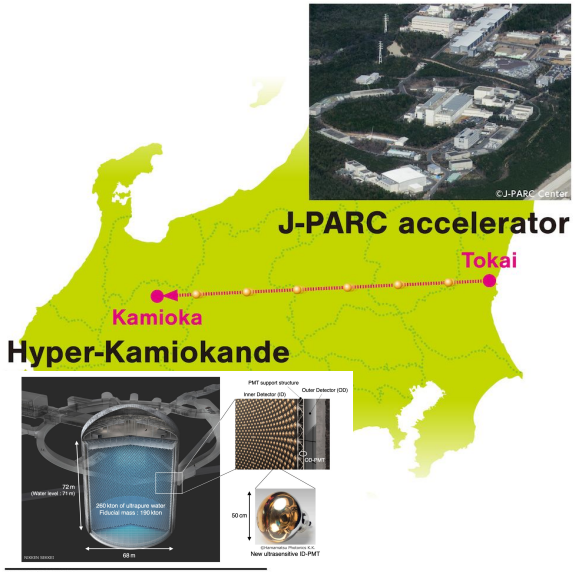


High level narrative

The physics case of Hyper-Kamiokande is well-known and low-risk. It has exceptional capability for long-baseline neutrino physics and nucleon decay and a broad program of astrophysical measurements, including the world most sensitive relic neutrino experiment.

Francesca Di Lodovico (King's College London), David Wark (University of Oxford, Hyper-K UK PI) for the Hyper-K UK Collaboration (Imperial College London, King's College London, Lancaster University, RAL/STFC, University of Glasgow, University of Liverpool, University of Oxford, University of Sheffield, University of Warwick)

Hyper-Kamiokande



IF Funding

£15.5 million over seven years from the Infrastructure Fund.

Project start date: 2021.

Original aim was:

~£20 millions over several years.

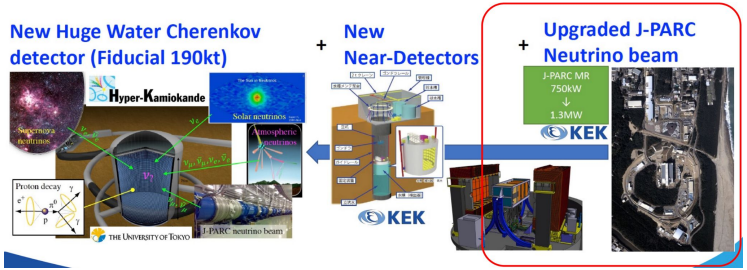
But the Outer Detector was deprioritised by STFC so we asked for £15.5M

Impact: loss of leadership and international reputation.

Timescale - Funds will end on March 2028. Hyper-K will start to take data in 2028, with full sensitivity. We will request Consolidated Grant Funds from April 2028.

Hyper-Kamiokande

From April 2028



Areas:

- Beam
- DAQ
- Calibrations

Detectors:

- Far Detector
- Near Detectors (ND280 and new detector IWCD)

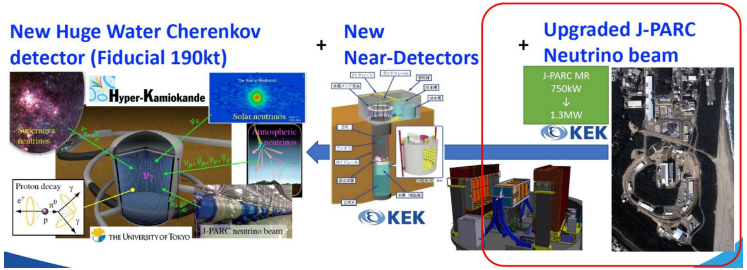
Consolidated Grant requests:

- **Personnel to support the beam, DAQ, calibrations.**
- Note: we already have too few people compared to our commitments and **need new people.**
- We aim to support the newly built detectors Hyper-K far detector, IWCD and continue to support ND280.

Impact of lack of funds:

- UK would default on all its commitments which are necessary to take data (beam, DAQ, calibration).
- Immense reputation damage.
- No Physics impact after all the work and construction.
- T2K: no ability to fully exploit the data from T2K.

Hyper-Kamiokande



Impact chain from April 2028

Decision / change

No CG or heavily reduced funds following experiment construction.

Immediate impact

UK unable to take and analyse data.

Capability impact

Reducing involvement in a major facility would greatly reduce training and educational opportunities.

Strategic impact

Loss of physics and benefit from experiment construction.

Reputational impact

UK leadership in neutrino physics is strongly damaged. UK reputation as a reliable partner severely damaged, and destroyed in Japan.

Recovery cost

Not possible to recover missed ability to analyse first time data.