ESRF	**Experiment title:** Bacteriophage phi29 connector (b)	**Experiment number:** LS-1666
Beamline: ID41EH4	**Date of experiment:** from: 24 June 2000 to:25 June 2000	**Date of report:** 17 Aug 2000
Shifts: 6	**Local contact(s):** Sean McSweeney	*Received at ESRF:*

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Report:

During the assembly of the head of the double stranded DNA bacteriophages, a region called connector or portal plays an important role in the first steps of assembly and the packaging of DNA. This region is also involved in the process of DNA transfer into the host cell during viral infection. This region connects the head of the virus with the tail. Electron microscopy studies, based on two-dimensional projections, carried out by our collaborators a the Centro Nacional de Biotecnología (Madrid), show that the connector has a cylindrical shape with 12 subunits enclosing a 40Å diameter channel in the center. This has been already been confirmed by us in a previous crystallographic study. Each subunit is formed by the 35KD p10 protein. The aim of this project is to solve the three-dimensional structure of the whole particle, using as starting point the electron microscopy model and, if possible, derivative data.

This beam time was allocated to recover the time lost in a previous allocation due to a misalignment of the beam. Crystals with SeMet kept cold from the previous session did not diffract. Several co-crystals with Hg compounds were further tested, but with no fortune.
As a last resort, a MAD dataset was collected with new crystals soaked with TaBr. These crystals grow under new conditions. Although a good peak in the fluorescence scan was seen, the cluster was again disordered in the crystal.