The new Brazilian synchrotron light source is currently in construction, with components installation planned to 2017-2018 and commissioning intended to early 2018. The alignment requirement is of 0.080 mm for girder translations in the beam transverse directions and 0.3 mrad for rotations. The girder-to-girder alignment will be made using laser trackers, both for network survey and precision positioning. The magnet-to-magnet alignment concept is to use dimensional tolerances to achieve an alignment by definition. This work will present preliminary results on girder design, vibration response, assembling and adjustment mechanisms, spatial positioning, and geometrical characterization.

- Girder manufacturing
- Bond strength test
- Concrete base geometry inspection
- Girder flatness: 0.009 mm
- Magnet-to-magnet alignment based on mechanical tolerances
- Girder-to-girder alignment simulation result
- Damping ratio of the girder: 0.26%
- Level deformation: 0.010 mm (220 N.m)
- Alignment mechanisms
- Adjustment mechanisms
- V mode: 268 Hz
- H mode: 152 Hz