

Qualification of SLR Stations in the ILRS

Study Group considered two questions:

1. What are the qualifications for stations to be admitted to, or remain a part of the ILRS network;
2. Should we classify stations based on performance

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The Study Group agreed on the following assertions:

1. exclusion of any SLR stations from ILRS participation might discourage that station from striving to improve its performance and might precipitate withdrawal of funding support;
2. although the terms of reference does not say that LAGEOS ranging is a qualification for participation in the ILRS, it was an oversight in the wording, and LAGEOS ranging is essential;
3. ILRS network stations should be designated as either "operational stations" or "associate stations" depending on whether or not they provide any "value" to the user community;
4. A core network of "high performance" stations should be established within the operational network and highlighted for the user community, and
5. A core station must have an operational GPS receiver that provides high quality data on a routine basis.



Operational Stations

Operational Stations must:

1. adhere to the ILRS data format, delivery and site log compliance requirements;
2. furnish data that is considered useful to the user community (data is regularly and continuously analyzed by at least one ILRS analysis center or one mission specific associate analysis center);
3. submit at least two months of LAGEOS data to the data centers for rapid evaluation and determination of preliminary station coordinates by the Analysis Working Group;
4. receive the endorsement of the Analysis Working Group based on the sufficiency of its data quantity and quality (see #2 above);
5. receive approval from the Governing Board

Associate Stations

Associate Stations fall into two categories:

- 1. Development or Engineering status and have not yet become operational; and**
- 2. Previously operational stations that have not produced useful data for a year or more and must requalify for operational status**



Core Stations

Core Stations must meet and in some cases exceed the ILRS guidelines for station performance in terms of annual data yield, data quality, and operational compliance.

Recommended Performance Criteria:

Annual Data Yield:

LEO satellites 1000 passes
LAGEOS 1/2 400 passes

Data Quality:

LAGEOS NP precision 0.5 cm
Short term stability 2.0 cm (STD of
the pass by pass biases)
Long term stability 1.0 cm (STD of
the monthly range biases for 8
last 12 months) of the

Operational Compliance

Data delivery within 24 hours
Specified data format
Current site and system information form (site log)



Core Network Membership

Recommended Performance Criteria are the primary factor in acceptance

Some flexibility for other factors such as geographic importance

Core stations highlighted on the ILRS web site and on network maps

Membership reevaluated each year by the Central Bureau

