# ESA/ESO collaboration to track potentially threatening near-Earth objects

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A collaboration has been set up between ESA and ESO, within the global effort by the United Nations and its Committee on the Peaceful Uses of Outer Space (UN-COPUOS).

The UN-COPUOS Action Team 14 put forward recommendations for an international response to the near-Earth-object (NEO) impact threat to form an International Asteroid Warning Network, which the UN General Assembly approved in October 2013.

The NEO Segment of ESA's Space Situational Awareness (SSA) aims to coordinate and combine information from different sources, and analyse them to predict possible impacts with the Earth, and assess danger, and analyse possible mitigations, including the deflection of a menacing asteroid. With the VLT, ESO's capabilities to observe very faint (but still threatening) NEOs complement ESA's efforts to discover and track these objects. The ESA/ESO campaign focuses on faint objects, with a high value on the Palermo scale, which cannot be observed with smaller telescopes, and on recently discovered NEOs, which are rapidly fading below the detection threshold for smaller telescopes before their orbit can be secured.

Technically, the campaign is implemented as a 'Target of Opportunity" program, in which observations can be queued on VLT's UT1 with FORS at short notice. The first observations targeted 2009 FD, which had been ranked among the top five objects on the NEODyS Risk List. The VLT observations, processed by the European NEODyS system and the JPL-based Sentry system, decreased its Palermo index from -1.8 to -2.6. The campaign currently has a telescope time credit corresponding to 15–20 recoveries per year.