

Geospatial Technologies Project

Assessing the status of medical facilities in Syria
Al-Quds Hospital

April 2016



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Assessing the status of medical facilities in Syria

At the request of Physicians for Human Rights (PHR), the Geospatial Technologies Project of the American Association for the Advancement of Science is using high-resolution satellite imagery to examine medical facilities throughout Syria. The purpose of these assessments is to verify reports of damage and destruction to medical facilities gathered by PHR. PHR has been documenting attacks on medical facilities and personnel in Syria as part of its [Anatomy of a Crisis: A Map of Attacks on Health Care in Syria](#) project through traditional news media, social media, and PHR's network of ground contacts. Due to the violent conflict occurring across the country, it is difficult to verify reports of both the location and dates of damage. Satellite imagery analysis provides a means to perform this verification remotely.

AAAS has produced three reports on the issue. The first, [Assessing the status of medical facilities in Syria](#), was published in May 2014. Two addenda to the report, [Assessing the status of medical facilities in Syria: Addenda](#) and [Assessing the status of medical facilities in Syria: Addenda 2](#), documented the status of an additional 29 hospitals and were published in July 2014 and December 2014, respectively.

Al-Quds Hospital Bombing

On 28 April 2016, Médecins Sans Frontières (MSF) reported that the Al-Quds hospital in the As-Sukkari neighborhood of Aleppo had been hit by a direct air strike, causing extensive damage to the hospital and nearby buildings. Initial reports indicated that over a dozen patients and at least three doctors were killed in the air strike.¹ To assess the extent of damage to the hospital, AAAS acquired and analyzed two high-resolution images of the hospital (Table 1). These images are presented in Figure 1.

Table 1: Imagery analyzed

Date	Sensor	Image ID
25 April 2016	WorldView-2	10300100540DB200
29 April 2016	WorldView-1	102001004D1ADA00

Analysis

Analysis of satellite imagery reveals that a large debris apron appeared in the street in front of Al-Quds Hospital between 25 April 2016 and 29 April 2016. Debris aprons often indicate the presence of damage to the façade of a building that cannot be directly observed via satellite imagery. In addition, the building immediately adjacent to the hospital completely collapsed during the same time period. These findings are consistent with reports of the hospital being struck by large ordnance.

¹ <http://www.bbc.com/news/world-middle-east-36158947>

Figure 1: Damage to Al-Quds Hospital



On 25 April 2016 (top) Al-Quds Hospital (red box) appears undamaged. By 29 April 2016 (bottom), a debris apron is present in the street in front of the hospital (red arrow) and the building immediately adjacent had collapsed. Image ©DigitalGlobe | U.S. Department of State, NextView License | Analysis AAAS.