

## INCIDENT SUMMARY

On 2021-02-15, a rocket attack was conducted in Erbil, apparently targeting the US military base adjacent to the Erbil airport. The attack was claimed by Saraya Awlia al-Dam, a Shi'ite militia group, and was comprised of 14× Haseb-1/Fajr-1 rockets, an Iranian design derived from the Chinese Type 63 rocket.

These unguided, spin-stabilized 107 mm rockets weigh 18 kg and are typically cited as having an 8–10 km range<sup>7</sup> and flight speed of 380 m/s. They may be equipped with either High Explosive (HE), Fragmentation (HE-FRAG), or Incendiary (HE-I) warheads of 6.9 kg<sup>7</sup>. The rockets employed in the Erbil attack that were captured in security footage all appear to be of the HE-I type, showing a typical spray of incendiary streamers on detonation. The incendiary/phosphorus type 75 has a reported range of 8km<sup>7</sup>, suggesting a PoO about 1 km closer to PoO than reported by media sources (blue rings on map). The Haseb-1 are about the lowest-cost rockets generally deployed with a reported price of \$450–\$2,000 each<sup>7</sup>.

The impacts in the field (video) demonstrate worse grouping but better range expected from this class of munition: ≈9 km range and ≈400 m grouping<sup>7</sup>. The failure rate for this attack was about 50%.

Saraya Awlia al-Dam claimed to have launched 24× rockets, responding forces indicated that 14× had actually fired, 3× UXO were shown remaining in the 18× launch tubes shown: 1× array of 4×2 and 1× array of 5×2 tubes. Of 14 fired, 12× are accounted for (1× Erbil base impact is documented; reports indicate 3× hit the base).

## IMPACT SUMMARY



See <https://brt.llc/2021-02-15/Rocket-2021-02-15.kmz> for an interactive map.

Location	MGRS	Ct	Range	Summary
Point of Origin	38SMF0080003600	-14	PoO	Estimated from reports, 3× UXO recovered
Animal Market	38SMF0096904480	1	.8–1.5 km	1 killed, 1 injured, fire destroyed structures
Zeravani Base	38SMF0458506735	2	4–6 km	2× UXO recovered no injuries, no exact locations
Waziran	38SMF0914506792	1	8.9 km	1 injury reported
Field Impacts	38SMF0808209211	3	9–9.4 km	3× open field impacts – fire started
Naz City	38SMF0893707646	1	9.1 km	Destroyed shop windows
Erbil Base Fire	38SMF0737909996	1	9.2 km	1 killed, 9 wounded, fire destroyed structures
Naz Naz	38SMF0893707646	1	9.3 km	Impacted rooftop, punched hole in roof

Locations indicated provided by Talos Iraq.