## Geophysical Investigations and Remote Sensing: Archaeological and topographical Interpretations

Silke Müth

The first two years of our project on Archaic and Classical Sikyon were devoted to non-invasive research. Next to the archaeological survey, main components were geophysical investigations (by Wolfgang Rabbel, Katharina Rusch and Harald Stümpel/Institute of Geosciences, Christian-Albrechts University, Kiel) and Remote Sensing (by Jamieson Donati/Institute of Mediterranean Studies, Rethymnon, Crete). These served for addressing on the one hand more general questions about Old Sikyon's topography like the precise location and borders of the settlement within the plain between the rivers Asopos and Helisson, the plateau and the sea, and some main structural features like harbour, city walls, city center and street system, and on the other hand, these investigations were meant to provide some first indications about single structures and buildings within the old city.

Written sources imply that Old Sikyon was a fortified city in the plain with an acropolis on the plateau and some free space between them, that the old city was located closer to the harbour than the Hellenistic one on the plateau and that the harbour town was separately fortified. Geomagnetic investigations confirmed the main lines of this pattern: the old city was obviously located east of the southern half of the plateau, its core being located close to the latter's southern spur and the more or less densely settled area stretching from there to the north-east until the modern train tracks and perhaps slightly beyond (Fig. 1). An industrial quarter might be located south-west of the settlement's core, close to the river Asopos, and one of the necropoleis lies beyond the north-western border. Indications for the ancient harbour were found by seismic measurements close to the southern limits of modern Kiato. Geomagnetic research yielded some first indications for the course of fortification walls and for a street network, which point to some main arteries running roughly in a right angle to each other (Fig. 1), although we might not expect a perfectly regular street network in a gradually grown town like Sikyon. In the northern area, there is evidence for a stripped-down line of wall in relation to a later extension of the settlement. More detailed resistivity, seismic and radar measurements helped to investigate some single structures, which might partly be identified with public or cultic buildings.

Remote sensing provided results concerning palaeochannels, Roman centuriation, possible parts of the fortification of the harbour town and other single structures that remain to be investigated further.

After the first two years of investigation, a topographical outline of the city of Old Sikyon including its borders, its internal structure and its harbour may thus be drawn and important first information about some of its buildings and quarters could be collected. In the next years, these investigations need to be complemented by excavations, which will be able to provide more detailed and chronological information on the various features.



Fig. 1: Approximate extent of the settlement of Old Sikyon and different areas belonging to it



Fig. 2: Harbour of Sikyon and probable course of the street linking it to the city