New candidate supernova remnants in nearby galaxies

Maria Kopsacheili

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Team members
Panos Boumis $^1$, Ioanna Leonidaki $^{3,4}$, Andreas Zezas $^{3,4}$, Maria Kopsacheili $^{1,2}$

$^1$ IAASARS, National Observatory of Athens, Greece
$^2$ University of Athens, Greece
$^3$ University of Crete, $^4$ Foundation of Research & Technology, Greece
In Northern Hemisphere:
NGC 2403, NGC 3077, NGC 4214, NGC 4395, NGC 4449, NGC 5204

In X-rays: 37 detected SNRs
(Leonidaki et al. 2010)

In the optical: 67 spectroscopically confirmed SNRs (out of 95 photometrically detected SNRs. 165 SNRs are going to be studied) (Leonidaki et al. 2013)

In Southern Hemisphere:
NGC 45, NGC 55, NGC 1313, NGC 1672, NGC 7793

Previous studies of our group

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New candidate supernova remnants

The number of new candidate SNRs in our sample of galaxies

<table>
<thead>
<tr>
<th>Galaxies</th>
<th>NGC 45</th>
<th>NGC 55</th>
<th>NGC 1313</th>
<th>NGC 1672</th>
<th>NGC 7793</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate SNRs</td>
<td>207</td>
<td>143</td>
<td>127</td>
<td>4</td>
<td>162</td>
</tr>
</tbody>
</table>

← Distribution of candidate SNRs in the galaxy NGC 7793.
Comparison with previous studies

Comparison of our results for the galaxy NGC 7793 with previous studies (Blair, 1996, Matonick et al., 1997, Leonidaki, et al., 2013).

Number of photometric SNRs against the integrated Hα luminosity (Kennicutt et al. 2008), in spiral and irregular (Leonidaki, et al. 2013) galaxies.
Future goals

- Verification of shock excited nature of SNRs spectroscopically.

- Study of interaction between SNR population and surrounding interstellar medium (ISM).

- Multi-wavelength study.