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Title	GRB 130216A: possible radio counterpart is steady field source
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TITLE: GCN CIRCULAR  
NUMBER: 14248  
SUBJECT: GRB 130216A: possible radio counterpart is steady field source  
DATE: 13/02/21 20:15:01 GMT  
FROM: Alexander van der Horst at U of Amsterdam <A.J.vanderHorst@uva.nl>

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K.J.B. Grainge (U. of Manchester), R.P. Fender, T.D. Staley  
(U. of Southampton), A. Rowlinson, R.A.M.J. Wijers (U. of Amsterdam)  
report on behalf of a large collaboration:

"We have observed the Swift/BAT error circle of GRB 130216A (GCN 14229)  
at multiple epochs with the AMI Large Array and the Westerbork Synthesis  
Radio Telescope, at 15 and 4.8 GHz respectively. The radio source we  
reported in GCN 14234 was clearly detected at all epochs at this  
position: RA, Dec (J2000) = 04:31:34, +14:39:36 (+/- 2 arcsec).  
Our flux density measurements are given in the table below.

Epoch	Delta T	Freq.	Flux density
=====	=====	=====	=====
Feb 16.94-16.98	0.03 days	15 GHz	0.78 +/- 0.08 mJy
Feb 18.55-19.01	1.86 days	15 GHz	0.80 +/- 0.04 mJy
Feb 19.51-19.59	2.62 days	4.8 GHz	1.11 +/- 0.09 mJy
Feb 19.86-19.99	3.00 days	4.8 GHz	1.15 +/- 0.06 mJy
Feb 20.50-20.64	3.64 days	4.8 GHz	0.92 +/- 0.07 mJy
Feb 20.91-20.99	4.02 days	4.8 GHz	1.09 +/- 0.08 mJy

The source is constant in flux between our observing epochs and also  
within the 11-hour AMI observation. The spectral index between 4.8  
and 15 GHz is -0.3. There is no significant polarization detected  
in the combined Westerbork data, with a 3-sigma upper limit of 15%.

From these observations we conclude that this source is not the  
counterpart of GRB 130216A, but possibly a radio galaxy or AGN.  
Based on the combined 9C and 10C Surveys of Radio Sources  
(see, e.g., Davies et al. 2011, MNRAS, 415, 2708), we estimate that  
the probability for a source as bright or brighter than the one we  
detect to occur by chance inside the Swift/BAT error circle is 2%.

We would like to thank the AMI and WSRT staff for scheduling and  
obtaining these observations."